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ART THROUGH A DIGITAL LENS: A STUDY OF THE EFFECTS OF NEW MEDIAS ON THE MUSEUM, ITS WORKS, AND THE PUBLIC.

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ABSTRACT

Over the last two decades imagery viewed on the internet has grown immensely. Museums, though slow to embrace it, have begun to upload digital images of their traditional artwork to their websites and onto their social media channels. In large measure, the COVID pandemic accelerated this move to engage audiences they feared would dissipate as museum doors closed. Moving digital images online though means giving over control to the protocol and systems of the internet, to profit-seeking corporations, and the volatility of social media platforms. The museum's long-established authority over artists, artworks, and exhibitions is usurped by power structures existing in capitalization, digitization, and optimization. A digital image of a traditional artwork moves away from its role as a copy of the original to become a new artefact in novel territory as a separate entity. An artwork on a social media feed is detached from the organizational and curatorial oversight of the museum and its work as a representative of the original work of art. It joins a stream of pictures in the ceaseless social media flow where it loses narrative and context to become instead a form of communication. It is also subject to unknowable algorithms designed by large conglomerates. Museums, with stretched budgets and limited staff, place their digital collections into these frameworks without considering what may be lost in efforts to "digitize". This research uses theories of digimodernism, hypermodernism, and mediation at the interface between viewer, screen, and original object to take a broad look at what digitizing means for the artwork and the museum. It offers suggestions and discussion on how museums can use their institutional abilities and public trust to be engaged and active in their communities in the age of the internet.

Keywords

museums, digital imagery, digital reproductions, social media platforms, algorithms, curatorial loss, digimodernism, hypermodernism, archives, internet

SUMMARY

Over the last two decades imagery on the internet has grown immensely. Museums, though slow to embrace it, have begun to upload digital images of their traditional artwork to their websites and onto their social media channels. In large measure, the COVID pandemic sped up this move to engage audiences they feared would disappear as museum doors closed. Moving digital images online though means giving over control to the protocol and systems of the internet, to profit-seeking corporations, and the volatility of social media platforms. The museum's long-established authority over artists, artworks, and exhibitions is usurped by power structures existing in capitalization, digitization, and optimization. A digital image of a traditional artwork no longer simply represents its original artwork but goes out into the world to become a new artefact in new space as a separate entity. An artwork on a social media feed is detached from the organizational and curatorial oversight of the museum and its work as a representative of the original work of art. It joins a stream of pictures in the ceaseless social media flow where it loses narrative and context to become instead a form of communication. It is also subject to hidden algorithms designed by large conglomerates. Museums, with stretched budgets and limited staff, place their digital collections into these spaces without considering what may be lost in efforts to "digitize". This research uses ideas of incessant change, instability, hyper speed and hyper individuality to assess the effects at the interface between viewer, screen, and original object. It takes a broad look at what digitizing means for the artwork and the museum. It offers suggestions and discussion on how museums can use their institutional abilities and public trust to be engaged and active in their communities in the age of the internet.

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ART THROUGH A DIGITAL LENS: A STUDY OF THE EFFECTS OF NEW MEDIAS ON THE MUSEUM, ITS WORKS, AND THE PUBLIC.

Introduction

Many years ago, before this thesis was even a sparkle in my eye, I was already captivated by the act of digitization of all sorts of things: forming and nurturing dating and relationships; milestone events like watching a funeral, wedding, or church service; and even the more quotidian task of talking to my mother on Facetime. Then COVID came along and provided a front seat to acts of digital interaction on an unimaginable scale. All the additional ways we were "experiencing the world" seemed to be weird, wonderful and possibly dangerous moves that both magnified humans' capacities and also decreased humaneness.[1] The space – this mediation – that opened up between my eyeballs and the event, object, or person "on the other side" seemed to me to possess incredible authority, ability, and changeability. It felt like new rules were forming in and for this space, and yet we were discussing them relatively little.

This space of mediation continued to guide my thinking and reading as I began doctoral research. It made me curious about the power that lie behind acts of digitization in the mediated space; authorities that are different than pre-internet and different than what was promised before the internet became the home to corporate greed and surveillance. I imagined that conducting relationships, education, or work entirely through a device, while presenting us with options – especially in the pandemic, might have consequences to human development. Possible issues like mistrust and information overload must be important considerations when everything is happening via a device. And then, early in the pandemic, I began to receive endless invitations to experience art online. Through online "exhibitions", "collections", curatorial tours, and artist talks, museums hoped to persuade me that the act of art viewing was coming to me like I was still there in the building. Many museum supporters were participating in these online events and were willing to try it rather than do nothing at

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[1] In April 2023 a Western University sociologist reported that all the time young people spent on their devices during COVID may have reduced their compassion, their ability to make eye contact, to read faces, and made them less kind. Fakiha Baig, "Sociologist says pandemic may have made Canadian youth less empathetic, meaner", *CTV News* https://www.ctvnews.ca/health/sociologist-says-pandemic-may-have-made-canadian-youth-less-empathetic-meaner-1.6362442 [Accessed April 20, 2023].

all. It was a reasonable response from museums and cultural institutions and their communities. Indeed, a significant number of museums that had been stingy with access joined the shift and threw open digital doors so that visitors could experience art that had been never been available.[2] This allowed museums around the world to potentially reach new audiences in novel ways through events like online workshops and virtual participatory walks through the galleries.[3]

Another eye-opening experience was found in joining the editorial team of a local arts collective, where one of my responsibilities was helping with online art exhibitions and online art openings. This new responsibility exposed me to the possibilities of posting art to a website for sharing to the world. The art openings attracted many dozens of supporters on Zoom and produced sensations of connection and encouragement in the pandemic. It was, inarguably for those participating, a community-building and community-sustaining exercise.

In order to post the images for the online exhibitions, we organized digital images of artwork gathered from artists, figured out file sizes, colouration, and questions of proportion, since sometimes in the process of sharing and uploading changes inexplicably occur that need remedying. Those changes that the machine was making with digital images of art resonated as I wondered what happens if neither the artist nor the artwork is available to answer questions about what the art should look like. We had wise and experienced mentors to guide us, as well as the artists around to ask but that is not always the case.

Additionally, we were trying to archive material related to the original arts collective: old photos and paraphernalia – newspapers, brochures, articles, and memorabilia. Archiving was new to us so we had to determine a database that could hold the variety of material required. It had to balance cost, accessibility for the whole team, ease of use, and policies that would not change midstream and leave us stranded with our information behind a paywall. Digitization of the material for uploading to the database was also a learning moment - how

[2] Lukas Noehrer, Gilmore, A., Jay, C. *et al.* "The impact of COVID-19 on digital data practices in museums and art galleries in the UK and the US." *Humanities & Social Sciences Communication* **8**, 236 (2021). https://doi.org/10.1057/s41599-021-00921-8 [Retrieved August 11, 2023].
[3] Myrsini Samaroudi, Karina Rodriguez Echavarria & Lara Perry, "Heritage in lockdown: digital provision of memory institutions in the UK and US of America during the COVID-19 pandemic", *Museum Management and Curatorship*, (2020) 35:4, 337-361, DOI: 10.1080/09647775.2020.1810483 [Retrieved August 11, 2023].

to photograph objects, label them, and in some cases understand them as already reproductions of originals. Here I am speaking of "originals" that are, themselves photographic copies of newpaper articles, art hanging on a wall, or of an event that happened in the art space.

But I continued to wonder if and how the looking at art through the mediated space of the computer or device changes the experience of art. I was keenly aware that there was no easy way to convey size and proportion to the online viewing audience. It was also difficult to capture the materiality of the artworks and any lengthy descriptions around the artwork interrupted the flow of the scrolling. Sometimes the image bled off the available viewing screen so that it was not possible to see the entirety of the art piece, again with no easy fix and varying wildly according to device. It seemed we were balancing making images available in some fashion and in order to engender community in the pandemic as a replacement for in-person exhibitions and openings. The online art was doing something very different than physical art and that distinction needed to be acknowledged. This thesis is born out of each of these incidents and encounters with art uploaded to the internet in some way.

Over the last few decades, museums have been digitizing their collections of art especially in institutions in what is commonly referred to as the western or global north. These museums were gradually taking digital images of their physical art pieces to place a small number on their website and onto social media. Many more were held in their databases for collections administration. With the onset of COVID, though, demand from within the organizations rose precipitously to have much more digital content available for the public to access.[4] Museum administrators wanted to maintain a presence in the minds of their communities. There was an impetus to remind constituents that the museum was "still here" by offering online exhibitions, artist's talks, lectures, gallery walk-throughs, and educational and curricular tools for teachers and students.[5] Digital images of the museum's artwork and the ability to upload those digital images were central to this desire to be virtually visited. For

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[4] Sheila Hoffman, "Online Exhibitions during the COVID-19 Pandemic", *Museum Worlds: Advances in Research* 8 (2020): 210–215. doi:10.3167/armw.2020.080115 [Accessed February 28, 2023].
[5] Hoffman, n.p.

most museums, the scales tipped from a slow trickle of digital images uploaded to the internet to a torrent of internet-based interactions in the last three years.

Understandably, COVID was a profoundly anxious moment for the arts – these are agencies and organizations which depend on in-person visitors. During the pandemic many institutions were closed for months at a time. Attendance plummeted over the course of the pandemic, with visitors only gradually returning in 2022.[6] It made sense at the time for museums to upload whatever they could onto their websites and to social media in a time of crisis. It was also an act of reaching out to provide comfort, aesthetic encouragement, and educational tools amid a worldwide event not seen in our lifetimes. As the pandemic recedes and life returns to normal it is a good time to step back and examine the space and action of digitization on the museum; to investigate their increasing use of online art "collections" and uploading of art images to social media.

The idea for this thesis also originates as research into catalogues raisonnés – a book or catalogue that provides a summation of all that is known about an artist, an artist's work, exhibition history, and writings.[7] These were, in the early 2010s, moving online and I was curious about their reception and accessibility, their place in research, and their potential for obsolescence even once they were digitized as pdfs or interactive websites. Further research and my interest in the mediating effects of the digital space moved me deeper into what happens to art in the digital space and as a natural outcome of that, how it affects the museum that holds the majority of art. So, while still considering questions of digital dissemination, perception, and demise, this thesis has become more particularly an examination of how the art object develops as a digitized image by and for the museum. After the digitized image leaves the museum's authority, it journeys as a digital representative of the museum on the museum's website and its social media feeds. This means that the digital image leaves the museum's control to be subjected to new authorities. My work, therefore, covers three broad

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[6] In a report by UNESCO for the year 2020, museums reported an 80% drop in revenues and 70% drop in attendance from 2019. The member states of the UN reported that were closed, on average, for 150 days in 2020. *UNESCO report: museums around the world in the face of COVID-19,* UNESCO, 2021. https://unesdoc.unesco.org/ark:/48223/pf0000376729_eng [Accessed February 28, 2023].
A British governmental survey of (British) museums released in January 2023 suggests that museums have continued to struggle into 2022 with visitor attendance still down 45%. Social media followers are up by 33% from 2019, though.
[7] New York Public Library website (archived) https://www.nypl.org/node/29583. [Accessed August 28, 2020].

areas – museums, art history, and the digital – and with the pandemic accelerating the use of devices for every/all sorts of interactions, this intersection becomes critical.

Like the digital image streaming by on social media, I found that the writing of this document began to take on the scrolling nature of social media. Ideas linked and merged, concepts bobbed and wove, until consideration was given to putting it together in a form that would not be the traditional monograph. Would it be possible, it was suggested, to mimic the effects of digitization, uploading, hyperlinks, hypermedia, and onwardness that computerization provokes, in a thesis? Ultimately this notion was abandoned because of time constraints but some of that incessance and onwardness of the flow remains in the unfurling of sections within the chapters.

Museums had been digitizing images before the pandemic, but the amount has increased. Museums are using social media and their websites to increase viewership, but the "online world" has become progressively more linked to huge conglomerates and inscrutable technologies that usurp the expertise and authority of the museum. So I begin my research with the museum and its historical work of holding objects for the public to come visit. This is followed by a look at the object, the traditional artwork around which the museum has existed. Finally, there is the digitization of the artwork into a digital domain. Digitization makes a high-resolution image of the traditional artwork which can move beyond the walls of the museum to act on behalf of the museum or as a completely detached art "object".

I site this work in museums in the Global North, in the lineage of institutions that have as their history the narrative of the development of museums in Europe, the United Kingdom, the United States, and by extension, Canada. This history is imperial, colonial, and echoes my own history as a Canadian-born settler and cisgendered student of art history. I also acknowledge that my family benefitted from treaty policies on the Canadian Prairies that gave land, promised to the Métis nation, instead to my great-grandparents to farm. Given that museums have spent the last few decades acknowledging and slowly trying to redress historical wrongs connected to colonization, misogyny, and racism, it is important that museums also begin to tackle economic, artistic, and social problems that arise from digitization while it is still novel.

The term "digitization" is used in two ways in this thesis as it relates to museums and each usage leads to an examination of the action of digitizing and its outcomes for the museum.[8] First, it describes the act of making a digital image of a traditional, physical art object. Second, it is the act of museums posting the digital image online.[9] These movements have consequences for the museum that have not been examined in direct fashion and certainly not with the quantity and quality of digitized art images now online. When there is a digital image of an object, the object remains in the museum while the digital copy exists as a series of ones and zeroes. The museum has a "copy" of an artwork able to travel out into the world as its digital representative. Essentially, the museum takes their physical art object and places a form of it into the online space, acquiescing to the forces outside the institution over which they have little control. New influences of capitalization, optimization, and computerization arise in digitization that demote the museum as holders of the artwork and relegate the artwork, in some senses as the "real" object.

What was once a piece of physical art is uploaded to a museum's website or social media feed to be viewed in the medium of digital devices like phones, tablets, and computers. The digital image of a physical art object is now subject to the technological systems on which it dwells. It is subject to the perceptions of a digitally reproduced image, and it is placed within a new framework of power that oversees digitization. The museum has been the traditional place to see and learn about art, but now the museums' own rush to put images of their objects online during the pandemic have hastened this shift to online viewing of art. Yes, it seemed necessary at the time, but like so many things digital, we tend to act first to embrace it, and plan to later figure out the details or determine if it was even a good idea. This thesis

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[8] I use the term, "museum" to indicate physical, publicly funded institutions which have a permanent collection from which they derive a cultural cachet and caretaking function. For this thesis, I focus specifically on traditional paintings moving to digital domains. Examining digitization of sculpture and material cultural objects would take another thesis.

[9] Early on in my research I noted there were some who describe two steps: *digitization* as turning something into code and *digitalization* as the processing of that code, but for the most part that has become an artificial division and faded in use. I will use the term *digitization* across this document to describe both actions. Marisa Enhuber "Art, space and technology: how the digitisation and digitalisation of art space affect the consumption of art—a critical approach", *Digital Creativity*, 26:2, 121-137, (2015). DOI: 10.1080/14626268.2015.1035448.
Johanna Drucker, also early on, divided them thusly: digitization is the "physical" pouring of texts and images of art into databases, while digitalization is the study of art history as mediated by technology.
Johanna Drucker, "Is There a "Digital" Art History?", *Visual Resources*, 29:1-2, 5-13, (2013). DOI: 10.1080/01973762.2013.761106.

forms a part of the contemplation of the systems of digitization and computerization[10] of art images to determine the spectrum of strengths and weaknesses of digitization for the museum when the museum uploads its images to social media and to the museum's own websites.[11]

The term, "social media" derives from the Web 2.0 designation and the "social web" that described the internet in the early 2000s as it moved from content delivered unilaterally to a more dialogical interaction.[12] Social media is defined as platforms that allow, encourage, and support communication and interaction between viewers and content creators.[13] At its core is the move from a traditional one-to-many transmission to a "many-to-many conversational model".[14] Content no longer only comes from organizations and institutions but is also generated, altered, and dispersed by users in a distributed, cooperative manner.[15]

Social media and to a lesser extent websites appear to increase access and participation for more people, but they also mediate between users and creators. Mediation exerts a form of power in determining what moves between platform users. Users plug into a system of policies and regulations which give over decision-making to platforms, and the platform capitalizes on this mediation. This mediation is not entirely new though as "platforms" that determine access and participation have always existed. Over the centuries, the church formed a platform for artisans and artists to display their work. It was the church leaders who determined what was made to adorn the sanctuary and who would do it. With the rise of museums, conquerors and empire-builders mediated what would be saved, commissioned, and exhibited. Aristocracy, too, through a system of patronage decided on art and artists. More recently, the privately-owned gallery, often called, "the white cube", has also become an arbiter of art, along with art critics and curators. Corporations, governments, and granting

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[10] I also use the term, "computerization" somewhat interchangeably, as it suggests a broader insertion into the technological environment.

[11] Example of strength – it may increase social media following; and weakness – there is a loss of curatorial oversight of the images.

[12] This is further discussed in the section, "The closed system of the book vs. the open system of the web", chapter 3, section 3.

[13] Dave D. Evans, *Social Media Marketing: an Hour a Day* (Indianapolis, IN: Wiley, 2012).

[14] Andrea Hausmann and Lorenz Poellmann, "Using social media for arts marketing: theoretical analysis and empirical insights for performing arts organizations." *International Review of Public Nonprofit Markets* (2013) 10:143–161 DOI 10.1007/s12208-013-0094-8

[15] Andreas M. Kaplan and Michael Haenlein, "Users of the World, Unite! The Challenges and Opportunities of Social Media." *Business Horizons* 53 (1) (2010): 59–68. https://doi.org/10.1016/j.bushor.2009.09.003.

agencies too affect how art is made and who experiences it by determining where money to fund artmaking goes.

The digitized space comes with broad abilities to further complicate and extend authority despite the promises of its early days to give freedom of access to and democratization of information for more people. It was hoped that the internet would allow anyone to do anything, anywhere and anytime; it would reflect a broader demographic and be far more inclusive. As part of the movement to be an online presence, museums also launched websites and joined social media platforms. But, digitizing art and moving it online moves the institutional power that the museum has traditionally held over production, access, distribution and archiving of art to new platforms over which the museum has minimal control. For example, the museum's archives have customarily enacted power by making decisions of inclusion and exclusion. When the museum moves to online "digital archives" it is, in part, a positive thing because larger numbers of people are able to access the information and imagery. Digital programming, educational resources and previously inaccessible artwork put onto a museum's website provide the possibility for more viewers to see and use the materials.[16]

But for the museum authority shifts away because power, privilege, and dominance has been derived, in part, from (with)holding information. Unfortunately, power does not then move wholly to the average citizen who views the images online either. It also shifts to another mediation system of platforms, digital technologies, and the computerization systems that control information dissemination and flow.

Some time ago, I upgraded the software on my phone which also updated the music app's sound system. It included advertising for three-dimensional "Dolby Atmos" sound which I

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[16] For example, the McMichael Collection in Kleinburg, ON has held 89 000 drawings produced in what was once known as Cape Dorset, now Kinngait, since 1990, when a fire destroyed another archive in the north. Authorities in Cape Dorset agreed the drawings would be safer in a gallery archive in the south. The drawings were virtually unseen until a few years ago when a project to digitize and upload them began. This gives the original holders in Kinngait, access to an increasing number of very high quality digital images of their holdings. The works are held on a separate website run jointly by the McMichael and the West Baffin Eskimo Collective.
The McMichael Collection, https://mcmichael.com/collection/inuit/ [Retrieved August 11, 2023].
Iningat Ilagiit, https://iningatilagiit.ca [Retrieved August 11, 2023].

had just acquired in the update. The concluding lines from the narrator of the advertisement struck me:

> Think about how it will feel the first time you hear all your favourite songs in Dolby Atmos. Imagine how it will change songs that haven't even been written yet. Music really is about to change forever.[17]

The clear promise is that the technology behind the sound delivery system of music alters the music made. What Apple was stating in a surprisingly overt way is that the platform of delivery inserts itself into the way music is created and in how the listener receives the changes. It is unusual to be explicitly told that a technology will re-engineer what goes on with the devices we use. The mediator, Apple Music, asserts that using their platform, their medium, changes the initial message. While they have always been "between" listener and music, now they are willing to declare it. The same holds true for art viewing. Apple's statement would be akin to Instagram declaring that to post your art to their platform is to understand it has changed your art and will also affect the art you will create in the future. Most artists and art-lovers would be aghast at this interference, but it happens every day through censorship, image control, and company policy.[18]

Some scholars worry that digital media are changing the message in too rapid and reckless a manner that we have yet to come to terms with, let alone comprehend. Digitization disturbs so many parts of our lives whether it is the effects of social media on our teens or the insistent and ongoing surveillance of machines or the way data is gathered or the capitalistic system it feeds.[19] Artificial Intelligence (AI) is also a rapidly growing area of exposure, with software that can create essays, write entrance exams, "make" art, and reproduce the human voice, much of it not yet subject to ethical or legal control.[20] AI is trained on vast amounts of

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[17] *Introducing Spatial Audio*, Apple Music, June 17, 2021.
[18] Each of these is discussed in this document.
[19] Jean M. Twenge, Jonathan Haidt, Jimmy Lozano, & Kevin M. Cummins, "Specification Curve Analysis Shows That Social Media Use Is Linked to Poor Mental Health, Especially among Girls", *Acta Psychologica* 224, (April 1, 2022). doi:10.1016/j.actpsy.2022.103512.; James Bridle, *New Dark Age* (London; Brooklyn, NY: Verso, 2019); Catherine D'Ignazio and Lauren F. Klein, *Data Feminism* (Cambridge, MA; London, UK: The MIT Press, 2020); Shoshana Zuboff, *The Age of Surveillance Capitalism: the Fight for a Human Future at the New Frontier of Power* (New York: Public Affairs, 2019).
[20] Douglas McCulloh, "Fauxtography. Lying with Photographs: An Analytical Framework", UCR ARTS: California Museum of Photography. https://lyingwithphotographs.com. [Accessed March 23, 2023].

data, much of it uploaded by everyday users posting images and text but it is also trained on art imagery uploaded by museums. Using forms of digital media gives much power to the platform – to corporations who own them. It also disperses power to the control systems that digital machines use.

Art, too, has mediating forces, not unlike what Apple Music, through "Dolby Atmos", was touting in the summer of 2021. For the artworld, and specifically museums, there are similar questions about the mediating effects of digitization. Art has often been perceived to be pure of interference, as if it came from the studio to the gallery, from artist's mind to spectator's eyes, with nothing to intrude on or mediate the "art experience." This is untrue. Gallerists look for art that sells and museums look for art that has already been deemed sellable: art that holds qualities of historicity, uniqueness, and rarity. Underpinning these desires are money and power. The two are inextricably linked and are powerfully mediating forces implicit in artmaking and art dissemination. Now, as art moves to digital spheres, money and power continue to exert influence. For example, putting large quantities of art images online makes museums complicit in the actions of big data and AI. Those processes scrape the internet for imagery and their tags in order to compile and analyze. Access to vast digitized amounts of artwork has led to the ability of AI to recreate "original" artwork in the style of well-known artists of the past, like Van Gogh, Picasso, or Monet. A large enough number of those artists' digitized artworks are available online so that they can be used as training sets for AI. The rise of non-fungible tokens (NFTs) are also a result of a growing familiarity and comfort with the digital sphere and images available through a screen. Art, money, and power are, though, huge topics and so for the purposes of this dissertation, I try to limit investigation to digitization of the traditional art object held in the art museum and how this new digital image shifts historical, institutional, and cultural power away from the museum to digital platforms with their systems of computerization, optimization, and capitalization.

Digitization of traditional artwork and their insertion into the digital space has a profound effect on museums, and because they hold most objects, they are the focus of this

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Ben J. Edwards, "Have AI image generators assimilated your art? New tool lets you check", September 15, 2022. https://arstechnica.com/information-technology/2022/09/have-ai-image-generators-assimilated-your-art-new-tool-lets-you-check/

investigation. For more than two centuries the museum has exhibited objects and the public has come to see the objects. Of course, it has not been as straightforward as it sounds but we are now in the midst of a massive shift in this formula. When a museum's objects are online, the objects are dematerialized, and the public can choose to be elsewhere looking at "art" on their devices. All the things that we associate with the museum, including its collection and archives, reappear as a series of bits and bytes on a screen, remotely available to all who have internet access. This has advantages for dissemination to communities outside of major centres where visits to galleries are difficult or impossible to do. Specifically, it is an important tool for educators, students, and researchers.

The traditional power of the museum has been embodied in its centralized, physical structure, its often-classical architecture, and its historical role as a site of expert curation, education, and knowledge.[21] When museums recreate their objects as digital images for development of online collections on their websites and as content for their social media feeds, they divest some of that authority to the ether.[22] The weight and history of the physical institution disintegrate because visits to a museum's website or an image posted by the museum to its social media feed do not carry the traditions and authority of its building nor the influence of its history. Moreover, placing the digitized images of traditional art on the museum website changes the use of a museum's photographic images from evidentiary documentation in the archive to "online collection". I argue that an "online collection" is not a space of curation but rather of filtration and communication.[23] The space of social media

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[21] Ken Arnold, *Cabinets for the Curious: Looking Back at Early English Museums* (Hants and Burlington: Ashgate Publishing, 2006).

[22] Susan Cairns, "Mutualizing Museum Knowledge: Folksonomies and the Changing Shape of Expertise." *Curator* 56 (1) (2013): 107–19. https://doi.org/10.1111/cura.12011.

[23] "Museum website" is a nebulous term but for the purposes of this dissertation, the definitions come from Styliani et al., who suggest that there are three possibilities for a museum website. The first is a "brochure website", which simply uses the website as a tool for giving information about location, hours, a map, or calendar of events all of which only directs you to go to the physical space. The second is a "content website" which adds in a database and perhaps a thumbnail image of objects, useful for researchers. Finally, there is the "learning website" in which the website itself provides something of a pseudo-visit to the gallery. It offers added value, giving contextual links to objects (hyperlinks, hypertext, and hyperimagery) and multiple points of entry.
These definitions, while coming from an entirely different era in terms of digitization, still hold true. The "learning website" is the focus of this thesis, as it is able, with its higher quality images and broader information, to make relationships with the viewer separate from the physical museum. Sylaiou Styliani, Fotis Liarokapis, Kostas Kotsakis, & Patias Petros, "Virtual museums, a survey and some issues for consideration", *Journal of Cultural Heritage*, 10 (2009): 520-528; 520.

does not allow for the expertise of curators to execute their usual functions. Artwork that is normally presented as a part of a comprehensive story in an exhibition overseen by a museum professional becomes an image on a grid of the museum website or a fleeting square on a social media app. Once there it serves best as a tool of communication. It is no longer an historical object controlled by the museum but is rather a fluid piece of contemporary society.

Further, the well-understood and analyzed physical space of the museum is given over to the far-less scrutinized space of computerization. Computerization is defined in the OED as "converting a system, device, etc. to be operated by a computer". Merriam-Webster suggests it is to "carry out, control, or produce by means of a computer". Computerizing or digitizing artwork, such that it becomes a product of a computer or device rather than viewed in a gallery is relatively new in museum history. Once it is computerized or digitized — placed into the device, the museum's digital image of an artwork is subjected to technologies' systems of digital interfaces, the digital logic of optimization, and ongoing capitalization by large corporations. As the digital images leave the museum via technological devices, the museum's powers of choice and dissemination also depart. Instead of becoming free to "all" as once promised by early internet enthusiasts, the museums' use of digital images on their website and social media become subordinate to things like website obsolescence, social media company policies, and algorithmic manipulation. The process of computerization is also a space of optimization, of digital logic that is a reduction to the unit, to the measurable, to the monetizable. The museum's traditional power is consigned to the decisions of companies that host website platforms, design software, and make content decisions, all in pursuit of capitalization.

There are certainly advantages to creating digital imagery of artworks by a museum. Access is increased for those who have devices and the internet. Museums can seem to be more participatory, more interactive, and more open to more groups of people when they post images to social media. Museums can communicate with many people through social media and their own website about upcoming events and exhibitions and may hope to reach

younger audiences by using digital media.[24] And again, the ability to access digital resources from anywhere is, for educational purposes, also a very meaningful advantage. It is precisely the spaces that open up beyond these benefits which I address in this document. So much about computerization has, over the last decades, been greeted with optimistic goodwill and a fervour about how things will improve with the latest innovation.[25] And there is no doubt that digitization and technologies have provided us with a variety of advantages ranging from more people able to work from home to social connections for communities that find each other via common interests, histories, or needs. Museums, though slow to develop interactive websites and create social media content[26] are now caught up in doing so and, again, the pandemic provided the impetus to move more quickly. Museums are investing in social media and websites at a terrific pace in order to increase their exposure and reach viewers, and many plan to expand the work of communications departments and website developers.[27]

Literature Review

1.   Introduction

As noted earlier, this thesis lies at the intersection of three very broad areas: museum studies, art history, and digitization. Though I focus on digitization of art images *by* the museum and the onward effects of that *for* the museum, digitization in museums is a vast and interconnected topic. One category is communicative, front-facing digitization in uses like websites, social media, gallery kiosks, downloadable content, accessible archives, apps, and

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[24] A 2021 study of Italian adolescents showed that 95% were on a smartphone and that the pandemic had increased their daily usage. Fifty-nine percent admitted to being on their smartphone more than before COVID, with 46% admitting to now using their smartphone more than three hours per day.
Bozzola, Elena et al. "The Use of Social Media in Children and Adolescents: Scoping Review on the Potential Risks." *International journal of environmental research and public health,* vol. 19,16 9960. (12 Aug. 2022), doi:10.3390/ijerph19169960
[25] G. Wayne Clough, *Best of Both Worlds: Museums, Libraries, and Archives in a Digital Age*. (Washington, D.C.: Smithsonian Institution, 2013).
[26] Nancy Proctor, "Digital: Museum as Platform, Curator as Champion, in the Age of Social Media", *Curator: The Museum Journal* 53, no. 1 (January 1, 2010): 35–43. doi:10.1111/j.2151-6952.2009.00006.x.
[27] Alberto Garlandini, "Museums and Heritage in the Digital Age". *SCIentific RESearch and Information Technology Ricerca Scientifica e Tecnologie dell'Informazione*, vol 11, issue 1 (2021): 11-18.
DOI 10.2423/i22394303v11n1p11
Kristin Tillotson, "How Museums Learned to Stop Worrying and Love the Digital World", *TCA Regional News,* Mar 06, 2016. https://www.lib.uwo.ca/cgi-bin/ezpauthn.cgi?url=http://search.proquest.com/wire-feeds/how-museums-learned-stop-worrying-love-digital/docview/1772038988/se-2.

maps.[28] A second category is in the structural digitization at the back end of the museum in the use of online databases and collections software, known as digital asset management (DAM) systems. DAM covers a broad, mostly commercial space with hardware and software solutions for museum employees to manage the objects and information that a museum holds. This can include processes for overseeing intellectual property and rights, security and tracking, search, and retrieval, as well as condition reports. Some have looked at how museums can manage their digital assets and the economic repercussions or opportunities for capitalization that these digital image rights represent.[29] Thirdly, as technologies are recognized as essential to the mission of the museum, scholarship on digitization within the museum has boomed.[30] This includes broad and well-researched subjects like digital

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[28] Researchers analyzed the use of tools, like computer kiosks and wearable devices on visitor satisfaction in the early 2000s, while others looked at consistent and standardized virtual access to objects across platforms in Canada. Dirk vom Lehn & Christian Heath, "Accounting for New Technology in Museum Exhibitions", *International Journal of Arts Management,* vol 7, no. 3, 11-21.
B.J. Soren, "Best Practices in Creating Quality Online Experiences for Museum Users", *Museum Management and Curatorship* 20, no. 2 (June 1, 2005): 131–48. doi:10.1016/j.musmancur.2005.03.001.
[29] Interestingly, museums often hire a strategic consultant first to decide what sorts of requirements they have for file and metadata management, workflow, tracking or access before meeting with companies' vendors to purchase a DAM. It is an expensive and time-consuming process that must work well for a long time. Museum's budgets generally do not extend to rapid or constant replacement. "Digital Asset Management and Museums", Date modified: 2017-08-27 https://www.canada.ca/en/heritage-information-network/services/collections-management-systems/digital-asset-management-museums.html [Accessed March 14, 2023].
Enrico Bertacchini & Federico Morando, "The Future of Museums in the Digital Age: New Models for Access to and Use of Digital Collections**,** *International Journal of Arts Management,* (15) 2 (Winter 2013): 6-72.
[30] R. Parry, "Digital Heritage and the Rise of Theory in Museum Computing." *Museum Management and Curatorship* 20 (4) (2005): 333–348. doi:10.1080/09647770500802004
R. Parry, *Recoding the Museum Digital Heritage and the Technologies of Change* (London: Routledge, 2007).
R. Parry, The End of the Beginning*," Museum Worlds*, 1(1) (2013): 24–39. doi:10.3167/armw.2013. 010103
Accenture. "Digital adoption: How workforce development nonprofits can accelerate employment and entrepreneurship outcomes at scale", 2017. https://www.accenture.com/t20170206T201908Z__w__/us-en/_acnmedia/PDF-42/Accenture-Digital- Adoption-Report.pdf

pedagogy and outreach, [31] online-visitor studies[32], "smart" tourism,[33] and the "right to access" art.[34]

Finally, there is the holding and archiving of "born digital" material, i.e., artwork created in and for a digital environment. The International Council of Museums' (ICOM) director of Internet Strategy and Technology summarized the difficulties in 2015 in simply trying to pin down what an exhibition of digital art is, and the difference between it and the "ad hoc" presentation of digital material (texts, catalogues, website material) in a museum space. It becomes quite legalistic as he tries to untangle online contexts from art on a screen in the museum space. But there is no mention by the director of digitizing the museum's own physical artwork to launch onto the internet.[35]

2. Early computerization, before images

Initially, digital tools used by the museum focused on communication and categorization using textual exchange of information, rather than image sharing. This was probably due to

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[31] Diana Saiki, "Interacting online: A content analysis of museum education websites". *Journal of Learning Design,* [S.l.], v. 4, n. 1, (Feb. 2010): 52-62. doi: http://dx.doi.org/10.5204/jld.v4i1.69 [Accessed March 13, 2023].
Herminia Din, "Pedagogy and Practice in Museum Online Learning." *Journal of Museum Education* 40, no. 2 (2015): 102–9. doi:10.1179/1059865015Z.00000000086. [Accessed March 13, 2023].
Cordelia Chong and Diantha Smith. "Interactive Learning Units on Museum Websites." *Journal of Museum Education* 42, no. 2 (April 3, 2017): 169–78. doi:10.1080/10598650.2017.1301626.
[32] John Falk, "The Museum Visitor Experience", ed. Gail Anderson, *Reinventing the Museum* (Lanham; New York: Toronto; Plymouth, UK: Altamira Press, 2012).
S.F. Fantoni, R. Stein, & G. Bowman, "Exploring the relationship between visitor motivation and engagement in online museum audiences". In J. Trant and D. Bearman (Eds.). *Museums and the Web 2012*: proceedings. Toronto: Archives & Museum Informatics.
http://www.museumsandtheweb.com/mw2012/papers/exploring%5Fthe%5Frelationship%5Fbetween%5Fvisito r%5Fmot
Mette Skov, "Hobby-Related Information-Seeking Behaviour of Highly Dedicated Online Museum Visitors", *Information Research* 18 (4): 1–14, 2013. https://search-ebscohost-com.proxy1.lib.uwo.ca/login.aspx?direct=true&db=asn&AN=93263456&site=ehost-live.
[33] Xia Wang, , Xiang (Robert) Li, Feng Zhen, and JinHe Zhang "How Smart Is Your Tourist Attraction? Measuring Tourist Preferences of Smart Tourism Attractions via a FCEM-AHP and IPA Approach", *Tourism Management* (2016) 54: 309–20. https://doi.org/10.1016/j.tourman.2015.12.003.
[34] Tak, Alejandra Alonso and Pazos-López, Ángel, *Socializing Art Museums: Rethinking the Publics' Experience* (Berlin, Boston: De Gruyter, 2020). https://doi-org.proxy1.lib.uwo.ca/10.1515/9783110662085
Association of Art Museum Directors. *Professional practices in art museums,* 2011.
https://aamd.org/sites/default/files/document/2011ProfessionalPracitiesinArtMuseums.pdf
International Council of Museums (ICOM*ICOM Code of Ethics for Museums, (*Paris: International Council of Museums (ICOM), 2017). https://icom.museum/wp-content/uploads/2018/07/ICOM- code-En-web.pdf [Accessed March 10, 2023].
[35] Cary Karp, "Digital Heritage in Digital Museums", *Museum International* 66 (1–4) (2014): 157–162. doi:10.1111/muse.12069

the limited capacities of computers and devices to host and disseminate high-resolution imagery. I extrapolate this from digital humanities research over the last decades which demonstrates that computational analysis of literature and text-based information is many years ahead of art historical image-based research. Early study in art history focused only on text-based assessment of historical records, word-descriptions of art, and the textual information held in databases to think through digital art historical questions. Some were imagining systems of art description that could be searchable in order to assist academic enquiry back in the 1980s, but these were more hopeful than helpful at that point.[36] Indeed, until very recently there was broad scepticism at the ability of the digital for art historical research because of a lack of good quality imagery and the insufficient capacity of computers to analyze images. Various senior curators and academics in the field mused that there were good questions and no data or lots of data and no substance to the queries.[37] It is only over the last five to ten years that computers and the devices we carry have been able to store and transmit vast amounts of data. Thus, for any user, but perhaps especially for museum workers and researchers it is relatively novel to be able to view and use very high-quality, digitized images of art objects online. For researchers, important scholarly questions are mounting as image analysis improves. For museum workers there are constant concerns about digital management and organization, and the obsolescence of technical equipment. And now all of this has been accelerated by the spectre of COVID and the rapid changes it engendered in digitization policies.[38]

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[36] Nadine Walter, "Computerization in Research in the Visual Arts", *Art Documentation, Bulletin of the Art Libraries Society of North America*, Spring, 1991.
Joan L. Kirsch, and Russell A. Kirsch, "Storing Art Images in Intelligent Computers", *Leonardo 21*, no. 5 (1988): 47-54. https://www.muse.jhu.edu/article/600592.
[37] Claire Bishop suggested that "computational analysis, in the context of art history, carries the possibility of perpetuating 'uncritical assumptions about the intrinsic value of statistics'", Murtha Baca, Anne Helmreich & Melissa Gill "Digital Art History", *Visual Resources*, 35(2019) 1-2:
1-5, DOI: 10.1080/01973762.2019.1556887
See also Lawrence McGill, *The State of Scholarly Publishing in the History of Art and Architecture* (Houston: Connexions, Rice University, 2006). http://cnx.org/content/col10377/1.2/
Ballon, Hilary and Mariet Westermann, "Art History and its Publications in the Electronic Age", OpenStax CNX, September 2006. https://cnx.org/contents/M8V1ll5b@1.6:E_iuB2in@3/Introduction [Accessed February 17, 2023].
Johanna Drucker, "Is There a "Digital" Art History?".
Thomas W. Gaehtgens. "Thoughts on the Digital Future of the Humanities and Art History", *Visual Resources*, 29:1-2 (2013), 22-25, DOI: 10.1080/01973762.2013.761110.
[38] Hoffman, "Online Exhibitions during the COVID-19 Pandemic".

In an early anthology, edited by Katherine Jones-Garmil, there are opening questions and insight into what adopting databases, digital collections, and public access might "do" to the museum. Jones-Garmil includes issues like a lack of awareness of the computer's potential, as well as a brief nod to an ongoing "lack of understanding of the implications of these technologies".[39] Additionally, she voices more concrete, administrative concerns like worries about theft of images, equipment obsolescence, tech staff needs, and the expectation that "the digital" is an ongoing operational cost rather than a one-time capital cost. Guy Herman also notes the rolling complexities of technology and equipment strategies that "work" and that endure.[40] Maxwell Anderson wonders about a loss of visitors to people who choose to view art on the web.[41] Ten years later another anthology addresses technologies in the museum and the increase in the presence of digital tools is already evident in articles about visitors bringing their own devices into the museum, the difficulties for small museums to keep up, and digital uses for education and outreach.[42] And the book, *Creating a Winning Online Exhibition: A Guide for Libraries, Archives, and Museums*, covers a large number of basic topics like choosing a database, learning HTML, and gives sample photos of online exhibitions for institutions gradually addressing a new digital medium.[43] Ross Parry, in 2013, was already suggesting that the museum was post-digital, meaning that technologies in the museum were already normative; that the questions were not whether to invest in new digital tools but rather how to do so and the new relationships that would ensue.[44]

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[39] Katherine Jones-Garmil, ed., *The Wired Museum: Emerging Technology and Changing Paradigms* (American Association of Museums, 1997), 56. Jones-Garmil (36-37) also outlines the growth of a pivotal organization, Museum Computer Network (MCN), which began hosting annual conferences in 1968 focused on standardizing museum information in hopes of sharing collection information across eventual networks. It continues to provide information, communication, and support to digital museum workers into the present. https://mcn.edu/about/ [Accessed March 8, 2023].

[40] Jones-Garmil, 52. Guy Herman, "Shortcuts to Oz: Strategies and tactics for getting museums to the Emerald City", in *The Wired Museum: Emerging Technology and Changing Paradigms*, ed. Katherine Jones-Garmil, (American Association of Museums, 1997), 66-91.

[41] Maxwell L. Anderson, "The Byte-Sized Collections of Art Museums" Leonardo 29 (3) (1996.): 242-243. http://muse.jhu.edu.proxy1.lib.uwo.ca/article/607262.
Sheila K. Hoffman, "Online Exhibitions during the COVID-19 Pandemic".

[42] Herminia Din, and Phyllis Hecht, *The Digital Museum : a Think Guide* (Washington: American Association of Museums, 2008).

[43] Martin R. Kalfatovic, *Creating a Winning Online Exhibition : a Guide for Libraries, Archives, and Museums*. (Chicago: American Library Association, 2002).

[44] Ross Parry, "The end of the beginning: normativity in the Postdigital Museum", *Museum Worlds* 1 (2013): 24+. https://link-galecom.proxy1.lib.uwo.ca/apps/doc/A396615598/AONE?u=lond95336&sid=bookmark-AONE&xid=11bec806. 37. [Accessed April 23, 2023].

Some academics have written about the positive features of adopting digital tools and the ways they can assist to communicate with the public. Michelle Henning discusses the history of media in the gallery including lighting, interactivity, and multimedia in exhibition design over the last century and the usage of computers in the gallery. She notes that computers allow artists and curators to expand their offerings to more people in more ways, creating a plurality of voices across times and spaces.[45] Tula Giannini and Jonathon P. Bowen also suggest the museum gains when it opens its doors to the digital convergence of media (sound, film, text, video) in a single landscape. They believe that when the museum uses digital media like AI, virtual reality (VR), and artificial reality (AR) it forms stronger relationships with the community.[46]

As digital imagery and the devices on which to see them have increased exponentially, the possibilities of placing a museum's collection online too have grown, with a wide variety of scholarly research on associated topics. But even in 2000, Paul F. Marty proposed the creation of a "museum over the… Web" and the future abilities of online exhibitions, as did Antonio et al.[47] Ross Parry also adds considerable expertise on the history of museums' early technologies, as well as including a discussion of trust, authenticity, and aura when art is reproduced on a screen.[48]

Early forms of "social media-style" digitization with public audiences included uses like blogs, wikis, and discussion forums.[49] And very quickly scholars noted that there was an ability to make the content one's own by reuse and annotation.[50] Nancy Proctor astutely

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[45] Michelle Henning, "Legibility and Affect: Museums as New Media", eds. Sharon Macdonald & Paul Basu, *Exhibition Experiments* (Malden, Massachusetts: Blackwell, 2007).

[46] Tula Giannini & Jonathan P. Bowen, *Museums and Digital Culture; New Perspectives and Research* (Cham, Switzerland: Springer Publishing, 2019).

[47] Paul F. Marty, "On-line Exhibit Design: The Sociotechnological Impact of Building a Museum over the World Wide Web", *Journal of the American Society for Information Science* 51, no. 1 (0 0, 2000): 24–32. doi:10.1002/(SICI)1097-4571(2000)51:1<24::AID-ASI5>3.0.CO;2-J.
Angeliki Antoniou, et al., "Methodology for Design of Online Exhibitions", *Journal of Library & Information Technology*, Vol. 33, No. 3, (May 2013): 158-167.

[48] Ross Parry, *Recoding the Museum*.

[49] Luciana Lazzeretti, Andrea Sartori & Niccolò Innocenti, "Museums and social media: the case of the Museum of Natural History of Florence", International Review of Public Nonprofit Markets (2015) 12:267–283. DOI 10.1007/s12208-015-0136-5

[50] S. Hinton & M. Whitelaw, *Exploring the Digital Commons: An Approach to the Visualisation of Large Heritage Datasets*, 2010. http://www.bcs.org/content/conWebDoc/36049.

pointed out that once there would be opportunity to share museum materials for personal use on platforms like Facebook, Flickr, YouTube, and Twitter, the information would be beyond the museum's control.[51] Additionally, she writes that curation would shift and change as more content was moved online but that curators would have to remain focused on making the object meaningful and pertinent to current circumstances. She hoped it would engender conversations that are diverse, rich, active, and ensure "ongoing quality, relevance, and future of the discourse."[52] Otherwise, research on social media usage by organizations is generally in the broader fields of business, public relations, and not-for-profit applications.[53]

3.   After image upload

Some investigation exists on images taken of artwork in the museum. And even as early 2007, researchers warned of and gave suggestions for how to engage the distracted device user in the museum.[54] A recent article by Ben Shapiro and Rogers Hall summarizes the act of collecting digital images from a museum as a form of "personal curation". The researchers though, investigate images taken *by visitors* of objects in the museum to both collect and post on social media, while I focus on images hosted and posted by the museum on their own feeds. Shapiro and Hall also examine the formation of personal digital archives and the use of Instagram as a way to build knowledge about a particular, personal interest of the museum visitor.[55] This is connected to research into digital collaboration, where visitors produce content and the museum shares in it.[56]

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[51] Nancy Proctor, "Digital: Museum as Platform, Curator as Champion, in the Age of Social Media".
[52] Proctor, 41.
[53] Kaplan & Haenlein, "Users of the World, Unite! The Challenges and Opportunities of Social Media."
Marc Lim Weng et al., "Past, present, and future of customer engagement", *Journal of Business Research* 140 (2022): 439-458.
Hausmann & Poellmann, "Using social media for arts marketing: theoretical analysis and empirical insights for performing arts organizations."
Chris Elsden et al. "Recorded performance as digital content: Perspectives from Fringe 2020", In *Performance in a Pandemic* (London; New York: Routledge, 2021, 62-75).
[54] J. Schroyen et al, "Beyond mere information provisioning: a handheld museum guide based on social activities and playful learning", *Nordisk museologi* 1 (2007): 30-45.
[55] Ben Rydal Shapiro & Rogers Hall. "Personal Curation in a Museum", *Proceedings of the ACM Human-Computer Interaction*, Vol 2, No.CSCW, Article 158 (November 2018). https://doi.org/10.1145/3274427
[56] Cary Karp, "Digital Heritage in Digital Museums."
M. Pulh & R. Mencarelli, "Web 2.0: Is the Museum-Visitor Relationship Being Redefined ?", *International Journal of Arts Management* (2015) 18 (1): 43–51.

Around the same time as Proctor pointed out that people would share images of museum objects online and curational control would be lessened, museum educators Bayne et al. wrote that museums must be aware that simply redeploying art objects online launched the object into a space that changed its inherent meaning.[57] This article is important for its initial recognition that digitization places the art object in a new domain, but, intriguingly, there has been almost no follow-up in the literature on turning physical art into digitized code. The focus on digitized art objects returns, instead and consistently, to arts education.[58] A 2015 article also investigates digital art space as a way to democratize art collections and allow for better access to art but again with an emphasis on educational outcomes. Marisa Enhuber also observed that it potentially increases engagement between museums and their audience and mentions more social use as platforms like Facebook and Pinterest improve.[59] There is also some concern given to how social platforms will usurp co-creation between user and museum, as well as how they may privilege large museums. My research goes on to examine the ways that social media platforms and website hosts also insert themselves between museum and viewer to monetize interactions and administer relationships.

4.   Collecting

Both personal collecting and social media have the same tendencies to be subjective, individual, and seemingly random. The contemporary museum has its roots in the ancient act of collecting. As Elsner and Cardinal suggest – Noah's ark may be the first recorded example of a person gathering things together for a purpose.[60] In the early modern era, as travel became easier, or even possible, wealthy aristocrats and the bourgeoisie travelled around Europe, and the eastern Mediterranean.

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[57] Siân Bayne, Jen Ross, & Zoe Williamson, "Objects, subjects, bits and bytes: learning from the digital collections of the National Museums", *museum and society*, Jul. 2009. 7(2) 110-124. https://journals.le.ac.uk/ojs1/index.php/mas/article/view/136/151 [Accessed February 22, 2023].
[58] Dragana Pavlović, "Digital Tools In Museum Learning–A Literature Review From 2000 To 2020", *Facta Universitatis, Series: Teaching, Learning and Teacher Education* (2022): 167-178.
[59] Marisa Enhuber, "Art, space and technology: how the digitisation and digitalisation of art space affect the consumption of art—a critical approach".
[60] John Elsner & Roger Cardinal, *The Cultures of Collecting* (Cambridge, MA: Harvard University Press, 1994), 1.

Figure 1: Woodcut of the Wünderkammer room, from *Dell'historia naturale*, Naples, 1599. https://wellcomeimages.org/indexplus/obf_images/28/12/be8869b0f865940a8fcf7d6dbaf3.jpg

They collected vast troves of objects, gathering paintings, sculpture, drawings, architectural detritus, and zoological specimens to bring back home. This collection is sometimes referred to as a Wünderkammer. (fig.1) Wünderkammern, or "wonder cabinets", proliferated from about 1550-1750, across Europe,[61] and Samuel de Quiccheberg, librarian to Albrecht VI, Duke of Bavaria, wrote what may be considered the first museum treatise in 1565, laying out how and why collections should be gathered, studied, displayed, and used to educate.[62] He believed that the objects were a practical aid to textual knowledge. In viewing the interrelatedness of objects and their breadth, he thought, they serve their greatest purpose of teaching and learning.[63]

The social media stream that many of us "curate" each day is a reincarnation of that impulse. It is personal, highly filtered and designed, often targeted specifically for friends and family. This is in some ways at odds with the aims and desires of the large collecting institutions. Their interest and mandate are to gather, curate, thematize, educate, and guard. This safe-keeping action has been one of their most powerful characteristics over the last two hundred years or more, playing a paternalistic, authoritarian role in the decisions of art-

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[61] Steven Lubar, *Inside the Lost Museum : Curating, Past and Present* (Cambridge, MA: Harvard University Press, 2018). https://doi.org/10.4159/9780674982901.

[62] Samuel de Quiccheberg, *The First Treatise on Museums, Samuel de Quiccheberg's Inscriptiones, 1565*. trans. & eds. Mark A. Meadow & Bruce Robertson (Los Angeles: The Getty Research Publishing House, 2013). From the introduction by Bruce Robertson, vi.

[63] Ibid., Bruce Robertson, viii.

making, art-collecting, and art-interpretation.[64] Now into the twenty-first century museums have been seen, at the very least, as extremely authoritative: "museums are the most trusted source of information, ahead of books and television news… as providers of independent and objective information."[65]

5.   Museum history

The museum grew out of that *Wünderkammer* compulsion to accumulate. Indeed, many museums are the recipients of objects from private collections, like the Ashmolean (f.1683) at Oxford University.[66] The work of researchers James Clifford, Susan M. Pearce, Sharon Macdonald, and many others place collecting as an age-old activity that spans the childlike, the institutional, the familial, and the imperial.[67] These early *Wünderkammern* moved, over time, from the personal objects of wealthy collectors into public spaces. Many eventually became state-run, public museums, especially in the U.K, and Europe.[68] Unsurprisingly then, the museum also inherited some of the early traits of the *Wünderkammern* including the private collector's desire to exert authority. The authority of the collector continues in the museum's power to decide what is worth collecting and to determine systems of cataloguing. More intriguingly, and not unlike the original collectors who brought things home from

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[64] Carol Duncan, "The Art Museum as Ritual", in *The Art of Art History*, Donald Preziosi, ed. (Oxford: Oxford University Press, 1998), 425.
Michaela Giebelhausen, "Museum Architecture: A Brief History", in *A Companion to Museum Studies*, Sharon Macdonald, ed. (Malden, MA ; Oxford : Blackwell Pub., 2006), 227.
Tony Bennett, "Civic Seeing: Museums and the Organization of Vision", in *A Companion to Museum Studies*, Sharon Macdonald, ed. (Malden, MA ; Oxford : Blackwell Pub., 2006), 265-266.
[65] Matthew MacArthur, "Can Museums Allow Online Users to Become Participants?" in *The Digital Museum*, eds. Din & Hecht, 59.
[66] It was donated by Elias Ashmole (1617-1692) but is almost entirely the collection of John Tradescant the Elder and John Tradescant the Younger, father and son. The elder was a gardener who traveled to collect plants. The son catalogued his father's work, along with Ashmole. Marjorie Swann*, Curiosities and Texts: The Culture of Collecting in Early Modern England* (Philadelphia: University of Pennsylvania Press, 2001), 12, 40–54.
Edward P. Alexander, Mary Alexander, & Juilee Decker, *Museums in Motion: An Introduction to the History and Functions of Museums* (Lanham, MA; Boulder, CO; New York; London: Rowman & Littlefield, 2017), 61.
[67] James Clifford, "On Collecting Art and Culture", in *Predicament of Culture: Twentieth Century Ethnography, Literature, and Art*, (Cambridge: Harvard University Press, 1988), 215-252.
Sharon Macdonald, ed., *A Companion to Museum Studies* (Malden, MA ; Oxford : Blackwell Pub., 2006).
Susan Pearce, *Collecting in Contemporary Practice* (London: Sage, 1998).
Elsner & Cardinal, *The Cultures of Collecting.*
[68] Jeffrey Abt, "The Origins of the Public Museum", in *A Companion to Museum Studies*, ed. Sharon Macdonald, 115-134.

abroad, museums also bestow a new context and a new meaning on objects.[69] Museums reconstitute objects, replacing traditional, social, or religious frameworks for the objects with the milieu of the museum. Donald Preziosi declares the items not only "transported" but "transformed".[70] Additionally, as museums gained power and expanse throughout the nineteenth and twentieth centuries, they commissioned works that "fit" the museum in size, subject, and pertinence. They grouped and displayed art in order to reinforce notions of universal, chronological, and progressive cultural monumentality.[71]

Museums have also instructed visitors in unifying national stories,[72] surrogate religious education, and the "elevation of manners and morals".[73] Many have also been part of creating continued bastions of exclusivity, informed in part by museum studies courses like the one at Harvard, which ran from the 1920s to the 1950s. Instruction was based in developing "the most exacting standards of an elite… this course promoted the interests of a narrow cult of collectors, critics and fellow museum professionals". [74] This further illustrates the divide between the museum as "an elite temple of the arts [and as] a utilitarian instrument for democratic education".[75]

Through the last half of the twentieth century, writers like Douglas Crimp and Brian O'Doherty provided context on the broad museum issues as modernism gave way to post-modernism. The museum tried to become less a place of "neutral" and expert instruction and pushed to become more dialogical and mutual.[76] Crimp examines issues of power and

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[69] Much has been written about museums and excellent general histories abound, including books by Tony Bennett, David Carrier, Alexander et al.
Edward P. Alexander, Mary Alexander, & Juilee Decker, *Museums in Motion: An Introduction to the History and Functions of Museums* (Lanham, MA; Boulder, CO; New York; London: Rowman & Littlefield, 2017).
Tony Bennett, *The Birth of the Museum* (Abingdon, Oxon, UK; New York: Routledge, 1991).
David Carrier, *Museum Skepticism: a History of the Display of Art in Public Galleries* (Durham: Duke University Press, 2006).
[70] Donald Preziosi, "Art History and Museology: Rendering the Visible Legible", *A Companion to Museum Studies*, Sharon Macdonald, ed., 50.
[71] Michaela Giebelhausen, "Museum Architecture: A Brief History", *A Companion to Museum Studies*, Sharon Macdonald, ed., 230.
[72] Preziosi, "Art History and Museology: Rendering the Visible Legible", 51.
[73] Jeffrey Abt, in *A Companion to Museum Studies*, 130.
[74] Tony Bennett, "Civic Seeing: Museums and the Organization of Vision", 264.
[75] Eilean Hooper-Greenhill, "The museum in the disciplinary society", in *Museum Studies in Material Culture*, S. M. Pearce, ed. (Leicester: Leicester University Press, 1989), 63.
[76] Brian O'Doherty, *Inside the White Cube (*Berkeley, Los Angeles, CA; London, UK: University of California Press, 1976).

authority ongoing in institutional museums based on the Michel Foucault's archaeology of modernism and its onward movement toward a theory of postmodernism.[77] Crimp discusses Foucault's replacement of the modern era's characteristics of tradition, influence, source, and origin with new concepts of limit, transformation, discontinuity, threshold, and rupture. Crimp believes this epistemological shift includes the museum as an institution of confinement and activates art history as a discursive form.[78] It is nearly a decade before others like Eilean Hooper-Greenhill and Susan B. Pearce take up Foucauldian applications to museums.[79] It should be noted though that others pushed back against comparing museums with other state institutions like prisons. Steven Conn points out that while there are similarities in power held through official oversight and record-keeping, the museum cannot be said to be associated with imprisonment.[80]

Hooper-Greenhill also goes on to elucidate a "post-museum" age in which the museum no longer cleaves to its position as the knowledge holder but rather encourages and understands visitors as participants in constructing new knowledge. She focuses on using the museum's expertise, its objects, and exhibition methods in combination with personal and cultural experiences of the visitor.[81] This has unleashed a stream of volumes on the possibilities of visitor-centred museology.[82]

The shift to seeing visitors to the museum as collaborators also aligns with the sociological research of Pierre Bourdieu. He saw the museum as a comfortable place for those with social capital already in place, but Bella Dicks expands on Bourdieu to suggest that a visit to the museum integrates past experiences and stories with what is on view to make it more accessible.[83] This new participatory museum moves past its history as an

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Douglas Crimp, *On the Museum's Ruins* (Cambridge, MA; London, UK: The MIT Press, 1993).

[77] Crimp, 27.

[78] Crimp, 47-48.

[79] Hooper-Greenhill, Eilean., *Museums and the Shaping of Knowledge* (London: Routledge, 1992).

S. Pearce, *Museums, Objects, and Collections: A Cultural Study* (Leicester: Leicester University Press, 1992).

[80] Steven Conn, *Do Museums Still Need Objects* (Philadelphia: University of Pennsylvania Press, 2010), 3-4.

[81] Hooper-Greenhill, Eilean. *Museums and the Interpretation of Visual Culture* (London: Routledge, 2000).

[82] Andrea Witcomb, *Re-imagining the museum: Beyond the mausoleum* (Psychology Press, 2003).

Graham Black, *The engaging museum: Developing museums for visitor involvement* (Psychology Press, 2005).

John H. Falk & Lynn D. Dierking, *The Museum Experience Revisited* (London; New York: Routledge, 2013).

[83] Pierre Bourdieu & Alain Darbel, *The Love of Art,* with Dominique Schnapper, trans by Caroline Beattie & Nick Merriman (Les Éditions de Minuit 1969; Cambridge, UK: Polity Press, 1991).

authoritarian, colonial institution to become a place of knowledge exchange. It focuses more on social change and innovation, becoming less about the objects in the collection and more about the community.[84]

Museums also become, with digitization, a system of two sites: the online and the physical. Caroline Wilson Barnao comments that museums must understand that they are moving from being a physical "storehouse" to an endlessly shifting organization where the public is "multiple".[85] The museum moves to overseeing, in effect, two sites with the physical and the online. With the digital site there is the ability to potentially expand access to art imagery and archival information for a broader audience. Wilson-Barnao also begins to address the datafication of users when they interact with the museum on platforms where third parties monitor viewers' activities and movements.

6.   Archiving

The museum's archives are part of the rise in institutional archiving, which began in earnest in the early nineteenth century. Thinking specifically of the expansion of the British empire, imperial growth needed and found power in keeping records to create a framework of control and management. Administrators wanted to know what and who was where.[86] Thomas Richards notes that colonial bureaucracies were "data intensive". Working from Foucault and Edward Said, Richards also states that the "administrative core of the [British] Empire was built around knowledge-producing institutions like the British Museum, the Royal Geographic Society, the India Survey, and the universities."[87]

For the museum, knowledge production also occurs in the archive – in the material evidence and documentation around the artwork. Control of the records about the objects adds yet more symbolic and actual layers of classification and colonization to a museum's

Bella Dicks, "The Habitus of Heritage: a discussion of Bourdieu's ideas for visitor's studies in Heritage and Museums", *Museum and Society*, , 14(1) (March 2016): 52-64.

[84] H. Eid & M. Forstrom, Eds., *Museum Innovation: Building More Equitable, Relevant and Impactful Museums* (London; New York: Routledge, 2021), xx. https://doi-org.proxy1.lib.uwo.ca/10.4324/9781003038184

[85] Caroline Wilson-Barnao, *Digital Access and Museums as Platforms*. (Oxford, U.K: Routledge, 2022), 6,

[86] Gayatri Chakravorty Spivak, "The Rani of Sirmur: An Essay in Reading the Archives," *History and Theory* 24, 3 (October 1985): 263.

Thomas Richards, *The Imperial Archive: Knowledge and the Fantasy of Empire* (London and New York: Verso, 1993).

[87] Richards, 4.

power. Archiving reinforces the cultural dominance that the museum already derives from having objects in its collection and in taking objects out of their original contexts – with permission or not. The collection and the archive as a dual force form the "museum" and join the larger projects of modernity, like scientific classification, from the seventeenth century onwards.[88]

Therefore, museums contain and control objects of cultural importance. Arjun Appadurai outlines the exchange of cultural goods and what it means for collecting, colonizing, valuation, and commodification of the object. He writes, "our own approach to things is conditioned necessarily by the view that things have no meanings apart from those that human transactions, attributions, and motivations endow with them".[89] He argues for giving objects back a "social life" beyond concerns of trade value and monetization. These concepts extend to issues like repatriation of museum objects. For example, museums have struggled to understand notions of the "sacred" for indigenous communities for whom beliefs like intactness, movement, and reproduction of objects can vary profoundly from the museum's (as an embodiment of western, European/North American traditions).[90] The need to assess their collections and attempt to return objects increasingly presses on museums, and a few have used digital repatriation – a sharing of access by the museum of digital files and imagery with the artwork's originating community. I will examine this practice as it too is about the work of art departing the physical collection to become a digital image moving about online. In this case it is a digital artefact disclosed by the museum to putative "partners".

7.   Images and copies

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[88] Iain Chambers et al., eds., *The Postcolonial Museum: The Arts of Memory and the Pressures of History* (Farnham, UK; Burlington, US: Ashgate Publishing, 2014).
Tony Bennett, "Thinking (with) Museums: From Exhibitionary Complex to Governmental Assemblage", in *The International Handbooks of Museum Studies,* S. Macdonald and H. Rees Leahy, eds. (Chichester, West Sussex: John Wiley & Sons Ltd., 2015). https://doi-org.proxy1.lib.uwo.ca/10.1002/9781118829059.wbihms101
Janet Marstine, ed. *New Museum Theory and Practice: An Introduction* (Oxford: Blackwell, 2010).
[89] Arjun Appadurai, "Introduction: Commodities and the Politics of Value", in *The Social Life of Things: Commodities in Cultural Perspective*, Arjun Appadurai, ed. (Cambridge: Cambridge University Press, 1986), 5.
[90] Chip Colwell, "The sacred and the museum: repatriation and the trajectories of inalienable possessions", *Museum Worlds* 2 (2014): 10+. https://link-gale-com.proxy1.lib.uwo.ca/apps/doc/A396615798/AONE?u=lond95336&sid=bookmark-AONE&xid=55e8de15.

This research is an investigation of digital imagery and so it begins with, well, the image. Photographic reproduction was seen early on as a way to recreate life without the "intervention of an interpreter, a code or a tradition".[91] Photographic copies became a way to store and disperse an image of an artwork in the archives, in a book, and eventually on a website. In 1860, *Scientific American* audaciously claimed that the new medium of photography would have people enjoying novel experiences through photographic reproductions, all without leaving home: "With a pile of pictures by their side, which cost almost nothing, [even the humblest Americans] can make the European tour of celebrated places, and not leave the warm precincts of their own firesides."[92] The expansion of the use of images and art images in particular has also had a tremendous effect on popular culture, mass media, and in notions of remediation and copying. John A. Walker provides a history of "reproduction" as a translation from one medium to another: a process change, dependent on a "code" or set of tools. He notes that with each shift, the tools have become easier to access and simpler to use.[93]

There was a feeling of transparency to the medium that seemed to erase the systems between viewer and maker.[94] Photos and photographic equipment were relatively portable and the results felt instantaneous.[95] And soon they were everywhere. Susan Sontag summarizes many of the traits of the photograph – scalable, retouchable, aging, exchangeable, seemingly knowledgeable, and able to package the world.[96] She also prophetically notes that it is so widespread that the photograph is a "social rite, a defense against anxiety, and a tool of power."[97] I examine social media as an extension of her concerns about portable, reproductive technologies.

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[91] Charles Rosen & Henri Zerner, *Romanticism and Realism: The Mythology of Nineteenth Century Art* (London: Faber and Faber, 1984), 99.
[92] *Scientific American*, 1860, quoted from Maxwell L. Anderson, "Museums of the Future: The Impact of Technology on Museum Practices", *Daedalus* 128, no. 3 (1999): 129–62. http://www.jstor.org/stable/20027570, 150.
[93] John A. Walker, *Art in the Age of Mass Media* (New York, Abingdon, UK: Routledge, 1994), 72.
[94] Michelle Henning, *Photography: the unfettered image*.
[95] Thomas Skaife, *Instantaneous Photography* (London: Henry S. Richardson, 1860), 8. https://www.google.ro/books/edition/Instantaneous_photography_mathematical_a/o20DAAAAQAAJ?hl=en&gbpv=1&printsec=frontcover [Accessed March 31, 2023].
[96] Susan Sontag, *On Photography* (New York, London, Toronto, Sydney, Anchor Books Doubleday, 1977), 4.
[97] Sontag, 8.

W.J. T. Mitchell imagines that an image demands a relationship with the viewer and in that relationship imparts new values on the viewer, "forcing us to change our minds." Our worlds expand as images rework how we encounter other things and people.[98] Humans make images but the images, in Mitchell's reasoning, go on to have a life of their own.[99] I investigate this new life as photography becomes entirely digitized especially because digital images are capable of such incredible vitality/virality. They spread, morph, travel, and insinuate.

Walter Benjamin launched a thousand discussions and remains central to any exploration of the impact of reproductive technologies, like photography, as well as aura. Others like Edgar Wind and John Berger continued to probe what happened as art escaped the museum walls as physical copies.[100] Alan Sekula and Okwui Enwezor expand the power of the reproduction as evidence, as archival matter, and as art inspiration.[101] Werner Schweibenz's article sparked exploration of the meanings of copies of artworks, and the absence or extension of aura. He specifically noted the move from concrete reproductions to the effects of the digital copy on viewers out in the world.[102] And then there is the "poor image" or copy of Hito Steyerl, who focuses on the pirated version of film. Some of it is slightly dated, since images are less "poor" as transfer quality and quantity of file size have increased exponentially since 2007, but her allusions to commodification and the conscripting of users as producers is prescient.[103] All of this comes to bear as the conversation expands outward to encompass digital reproduction in things in this thesis like immersive experiences, NFTs, and manipulation of digital images.

It is the photos of André Malraux, though, with his black and white images of sculpture arrayed around him that sparked the examination of photography of artwork *that travels*.

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[98] W.J.T. Mitchell, *What do pictures want?* (Chicago: The University of Chicago Press, 2005), 92.
[99] Mitchell, 105.
[100] Walter Benjamin, in *Illuminations*, Hannah Arendt, ed. (New York: Schocken Books, 1969).
Edgar Wind, *Art and Anarchy* (London: Faber and Faber, 1963).
John Berger, *Ways of Seeing* (London: British Broadcasting Corporation, 1972).
[101] Allan Sekula, "The Body and the Archive", *October* 39 (1986): 3. https://doi.org/10.2307/778312.
Okwui Enwezor, *Archive Fever: Uses of the Document in Contemporary Art* (New York; Göttingen: International Center of Photography; Steidl Publishers, 2008).
[102] Werner Schweibenz "The Work of Art in the Age of Digital Reproduction", *Museum International*, 70 (2018):1-2, 8-21, DOI: 10.1111/muse.12189.
[103] Hito Steyerl, *The Wretched of the Screen* (Berlin: e-flux, Inc., Sternberg Press, 2012).

Walter Grasskamp's analysis of Malraux and his *musée imaginaire* was pivotal to figuring out what Malraux attempted and helped me to think about the diverging of images of artwork as a reproduction and images of artwork as a potential artwork-in-itself "out in the world". This separation is an important distinction and yet almost impossible to do as images become digital or when the artwork is ephemeral and goes on to exist only as documentation.[104]

8.   Art history

Finally, this thesis also has its roots in digital art historical research and one of the earliest discussions of investigation in this field is the periodical, *CHart*, or "Computers and the History of Art". It brought together (mostly British) experts for discussions of what and where digital art history might go as a research discipline.[105] In North America, the former head of Digital Art History at the Getty Research Institute, Murtha Baca, was also convening fora on digitizing art history in the late 1990s and early 2000s and she reflected on the progress.[106] There was such ongoing uncertainty and scepticism about technology and the discipline that only a decade ago the Kress Foundation sponsored a survey to examine the perceptions of digital scholarship in art history.[107] This comprehensive investigation covered pedagogy, tools, publishing, innovation, partnerships – any ways in which "the digital" might impact the future of the discipline of art history. Results suggested that many still saw it as unnecessary or unhelpful. All this to say that the research into the digitized art object and the museum is, in the lineage of humanities subjects, almost brand new, with much room for exploration.

To close off the literature review, I note that many of the writings on digitization and the museum often move very quickly into pragmatic explorations of the "how" with very little

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[104] Walter Grasskamp, *The Book on the Floor: André Malraux and the Imaginary Museum* (trans. by Fiona Elliott from *André Malraux und das imaginäre Museum*, 2014; Los Angeles: Getty Research Institute, 2016). See also: Michelle Henning, *Photography: the Unfettered Image*.

[105] Anna Bentkowska-Kafel, Trish Cashen, & Hazel Gardiner. "Digital Art History : A Subject in Transition*"*, *Computers and the History of Art Series,* Volume 1, Bristol, U.K.: Intellect Books, 2005. http://web.b.ebscohost.com.proxy1.lib.uwo.ca/ehost/ebookviewer/ebook?sid=b7de5d71-a0cd-48e3-9cff-43896ca90100%40sessionmgr102&vid=0&format=EB

[106] Murtha Baca & William Tronzo, "Art History and the Digital World", *Art Journal*, 65:4 (2006):51-55, DOI: 10.1080/00043249.2006.10791227

[107] Diane M. Zorich, "Transitioning to a Digital World: Art History, Its Research Centers, and Digital Scholarship Journal of Digital Humanities", Kress Foundation, May 2012. https://www.kressfoundation.org/Resources/Sponsored-Research/Research-Items/Transitioning-to-a-Digital-World [Accessed February 28, 2023].

discussion of "why". Indeed, while researchers and museum workers acknowledge that there was slow development of technologies in the museum, they do not caution a similar mindset for future developments. In that rapid turn to the more practical details, they are still quick to suggest a utopian future of possibilities. Many, like Giannini and Bowen, implore the museum to embrace "digital life and art" in order keep up with the surrounding culture.[108] The pandemic caused museums to posit that any art posted to a gallery or museum website and to social media, especially when the doors are closed, as a good thing. I examine what happens beyond the optimism and goodwill of the computerization of art images.

Theoretical Frameworks

1.   Power

This research assesses where power lies as the museum turns its images over to online spheres. I both resonate with the work of Michel Foucault and believe that his theoretical framework on the shifts in modes of power across the centuries are foundational to how we see our world today. His work on the development from sovereign oversight through social regulation and onto disciplining control forms a strong basis for how I perceive the pervasiveness of digitization of much of life's structures, especially during and even after COVID.[109] As we turn each moment to screens and devices, we become the disciplined body who feels "the oppressive presence of physical compulsion".[110] This is vital to my conception of digitization as devices come to inhabit more and more of our time and our attention. They are part of a system of control that expands – or perhaps more accurately shrinks inward – the system that Foucault described: "…Mechanisms of command become ever more "democratic", ever more immanent to the social field, distributed throughout the brains and bodies of the citizens".[111] He calls this new form of control, "biopower" where the body and its social life is regulated from within. "Life has now become . . an object of power.''[112] This

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[108] To be fair, for administration and inventory control, computerization has been able to accomplish much in the way of organization and classification. Tula Giannini & Jonathan P. Bowen, "Digital Culture", and "Museums and Digitalism", in eds. Tula Giannini & Jonathan P. Bowen, *Museums and Digital Culture; New Perspectives and Research* (Cham, Switzerland: Springer Publishing, 2019).

[109] Michel Foucault, *Discipline and Punish; the Birth of the Prison (*New York: Vintage Books, 1995).

[110] Jeffrey T. Nealon, *Foucault Beyond Foucault* (Stanford, CA: Stanford University Press, 2008), 35.

[111] Michael Hardt & Antonio Negri, *Empire* (Cambridge, Massachusetts: Harvard University Press, 2000), 23.

[112] Michel Foucault, ''Les mailles du pouvoir'', in *Dits et écrits* (Paris: Gallimard,1994, 4:182–201), 194. Taken from Hardt & Negri, *Empire*, 24.

form of interior regulation feels like a choice, becoming society wide as each person accepts it, internalizes it, and reinitiates it.[113] In reality though, choice is a function of the practices of power and knowledge that take charge of life to optimize, control, and modify it. This process is pervasive, active, and profound, and yet also superficial and rapidly moving. Unlike for earlier societies, this exercise of power no longer carries the threat of death but instead takes command of our lives.[114] Hardt and Negri summarize it thusly:

> Society, subsumed within a power that reaches down to the ganglia of the social structure and its processes of development, reacts like a single body. Power is thus expressed as a control that extends throughout the depths of the consciousnesses and bodies of the population—and at the same time across the entirety of social relations.[115]

Gilles Deleuze, writing after Foucault, indicates that the next iteration of power is via societies of control. These are not the physical regulations emblematic of sovereign control, nor the administrative watchdogs of the disciplinary society, but rather work through information and via computers.[116] The first two, Foucauldian systems had physical manifestations – institutions, buildings, like prisons and state archives, followed by bureaucracies, paperwork, policies, and procedures. Now though, the controls are decentralized, dematerialized, "the agency that maintains power is neither visible nor stable. Power no longer resides in these monuments, and command and control now move about as desired."[117] Power in this new space no longer operates by confining people but rather works through "continuous control and instant communication". Institutional, place-based oversight gives way to home-based, internet services, like virtual healthcare, online education, web banking, as well as e-commerce and cyberwork. [118] In this system it becomes virtually impossible to function without an email address, smartphone, or credit card. Byung-Chul Han writes that we are not shut out of the system but rather shut *into* it.[119]

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[113] Hardt & Negri, 24.

[114] Gary Gutting & Johanna Oksala, "Michel Foucault", *The Stanford Encyclopedia of Philosophy* (Fall 2022 Edition), Edward N. Zalta & Uri Nodelman, eds. https://plato.stanford.edu/archives/fall2022/entries/foucault/.

[115] Hardt & Negri, 24.

[116] Alexander Galloway, *Protocol* (Cambridge, MA; London, UK: The MIT Press, 2004), 3-4.

[117] Critical Art Ensemble, *Electronic Civil Disobediences and Other Unpopular Ideas* (New York: Astronomedia, 1996), 7-9.

[118] Gilles Deleuze, *Negotiations, 1972-1990* (New York: Columbia University Press, 1995), 175. In conversation with Toni Negri, 1990.
Nealon, *Foucault Beyond Foucault*, 67.

[119] Byung-Chul Han, *Psychopolitics* (London; New York: Verso, 2017), 24.

When museums post their digital collections, they become a part of ongoing contact and perpetual oversight. While their power as an institution in the traditional sense slips away, they engage with corporations and companies who are now the brokers of systems of control. Viewers who see museum images online have entered media that desire to observe and manipulate them. Importantly, Deleuze also characterizes this mode of management as dominated by "cybernetic machines and computers to control society."[120] This marks a significant moment in which computers are seen as an important component of and in a changing society. Perhaps they even broker power, though Deleuze steps back from that possibility, preferring to say only that computerization is a part of the changes.[121]

2. Computerization/Digitization

Digitization affects flow of capital and intensifies the effects of mass computerization according to Seb Franklin.[122] Franklin provides a framework to demonstrate that capitalism and computerization (digitization) are intertwined with each acting to enforce and reinforce the other. He summarizes the socioeconomic changes over the last 50 to 100 years and submits that much of the transformation can be attributed to, though not wholly beholden to, computerization. Capitalism is at the root, with its need to valorize everything but computerization/digitization provides a way to intensify it.[123] Digitization takes the real fact of discrete sampling and quantization (an assignment of value, like, say, pixels on a colour-scale) and begins to administer the world in that fashion. It functions similarly to how the clock broke down time into measurable units and helped to discipline the bodies of labourers in an earlier time.[124] Moreover, as this becomes applicable to all social life, all things that the human does contain the possibility for uniform valuation. We become calculable, quantifiable, even "intelligible as an investment".[125] This creeping neoliberalism entangled

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[120] Deleuze, *Negotiations*, 175.
[121] Ibid.
[122] Computerization is defined as a move to converting information to a digital device. *Oxford Dictionary of English* (ODE) (Oxford University Press, 2005).
[123] Seb Franklin, *Control: Digitality as Cultural Logic* (Cambridge, Massachusetts: The MIT Press, 2015).
[124] Franklin, 11. I also am deeply indebted to understanding the historic changes wrought by capitalism through books like:
Nick Dyer-Witheford, *Cyber-Marx; Cycles and Circuits of Struggle in High-Technology Capitalism* (Urbana, Chicago, Springfield, IL: University of Illinois Press, 1999).
Jonathan Crary, *24/7: Late Capitalism and the Ends of Sleep* (London, UK; Brooklyn, NY: Verso, 2014).
[125] Franklin, 16.

with digitization ultimately makes an "apparently seamless application of specific technical principles to the general fields of human thought, activity, and interaction."[126] The human becomes part of digital logic.[127] And it is into this system that museums also insert themselves when digitizing holdings to put images on social media and their websites. They contribute to the monetization and optimization of the viewer, the image, and themselves.

Though much of the previous frameworks depends on a post-structuralist methodology, to complete this project I will also discuss systems like Alan Kirby's "digimodernism" and Gilles Lipovetsky's "hypermodernism".[128] These additional constructs carry on the post-modernist project by not just deconstructing but also beginning to proffer some opportunities and solutions to the paradoxes and flux. Lipovetsky certainly offers a new form of freedom in the contingency. He writes that access to education and increasing information, learning to live with others' individuality of choice, can all lead to a more open, accepting society with citizens who are involved, attentive, moral, and engaged. While I think that sort of optimism may be outdated now as those systems of the society of control become ever more a part of neo-liberalism, Lipovetsky and Kirby's thinking on obsolescence, ephemerality, novelty, hyper-narcissism, evanescence, and haphazardness inform much of my writing on social media.[129]

3. Mediation

As noted in the introduction, it was the mediated space that lies between the viewer and the object of art that has always gripped me. Broadly speaking, I draw ideas from theories of mediation, remediation, and specifically the interface that is the computer/device/screen. Mediation is a term that goes back to Karl Marx and Friedrich Engels, who used it to describe opposing forces in a cultural or social arena which are reconciled by a third,

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[126] Ibid., 34.
[127] Ibid., 33.
[128] Alan Kirby, *Digimodernism* (New York, London: The Continuum International Publishing Group, Inc., 2009).
Gilles Lipovetsky, *Hypermodern Times* (Cambridge, UK ; Polity, 2005).
Timotheus Vermeulen & Robin van den Akker, "Notes on Metamodernism", *Journal of Aesthetics & Culture*, 2:1, (2010). DOI: 10.3402/jac.v2i0.5677
[129] An additional resource to this: Jonathan Crary, *Scorched Earth: Beyond the Digital Age to a Post-Capitalist World* (London, UK; Brooklyn, NY: Verso, 2022).

arbitrating object. For them the mediator was capital or labour, proscribing relations between an exchange-value and a social/cultural value of an object.[130]

Importantly, Marshall McLuhan thought it was the *form* of communication that is the mediator. For him a message delivered in paper or via television altered how the message was thought. A book forms thinking that is chronological, linear, and separated from other people, while electronic media (for him: television, radio, film) is more direct, immediate, spontaneous, and interdependent on other users and other media.[131] This will be clearly seen as I develop an analysis of how devices direct the messages or, indeed, insert themselves as change-makers in how art functions once it is encountered via a screen.

Building out of earlier ideas of mediation, Alexander Galloway proposes the "interface" as that space between the eyes and the device, and the way he sets up the action in that space informs how I see the mediated space. Before Galloway though, Lev Manovich wrote a pivotal book on new media in which he enfolds the techniques and characteristics of newer technologies into perceptions of older ones in a new "cultural logic". He suggests that a web browser has come to replace the "cinema and television screen, the art gallery wall, library and book, all at once, the new situation manifested itself: All culture, past and present, came to be filtered through a computer, with its particular human-computer interface."[132] He believes that it shapes how users think as it divests different media of their distinctiveness: "the interface imposes its own logic on them."[133] More particularly, he notes that while art always had a content-form or content-medium dialogue, it now must include, in the making of digital art, a content-interface process. I would suggest that this also applies to any art seen on a screen. He writes that art through an interface contains an informational component (an interaction with quantified data) alongside an aesthetical quality that must be considered as it changes the work "dramatically". The interface is embedded within the work, in a sense, creating a new experience for each viewer.[134] "Content and interface merge into one entity, and no longer can be taken apart."[135] Again, Manovich is talking about "digital art" but

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[130] James Arnt Aune, *Rhetoric and Marxism (*Boulder: Westview Press, 1994).
[131] Marshall McLuhan, *Understanding Media: The Extensions of Man* (Cambridge: MIT Press, 1994).
[132] Lev Manovich, *The Language of New Media* (Cambridge, Mass: MIT Press, 2001), 64.
[133] Manovich, 65.
[134] Ibid., 66-67.
[135] Ibid., 67.

because I will show that viewers come to see the art onscreen as "real" and separate from its original in the gallery, I believe this same model applies to art viewed on a screen, regardless whether it is digital or physical in origin. The screen itself informs the art emanating and how it is received by the audience.

Alexander Galloway confronts Manovich, calling Manovich's interface too formal, too tied to the tools and not enough to the social effects. Manovich, he proffers, examines "the semiotics of software" rather than wade into political or state concerns.[136] And ultimately, for Galloway, Manovich creates a framework for new media, for digitization that points backward to the dawn of cinema.[137] Galloway moves on to describe the computer as a portal for affect not, as previous media iterations have been, affective instruments in themselves which invoke human emotion (painting, cinema, photography): "Maybe this is why we do not cry at websites like we cry at movies."[138] He also notes the difference between media (as objects or substrates) and practices of mediation (as middles or interfaces).[139]

Finally, Galloway determines that a computer does not "facilitate or make reference to an arrangement of being, it remediates the very conditions of being itself."[140] A computer operates as an ethic, he indicates, because it operates on the level of a process and computation, as a method with general principles for practice. We do not come to know a world but instead we partake in how unique, abstract definitions are executed to form a world. "And this is the interface effect…the computer is not an object, or a creator of objects, it is a process or active threshold mediating between two states."[141] This theory of the interface has influenced how I view all interactions between the art object, digitized, and the viewer: as at a dynamic threshold, a doorway, a liminal space between the original object, its digitized copy, and the person looking. That interstitial space negotiates, alters, and re-forms the traditional art object into something entirely new all while remaining seemingly transparent as good windows do.

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[136] Alexander Galloway, *The Interface Effect* (Cambridge, UK; Malden, MA: Polity Press, 2012), 7.
[137] Galloway, *The Interface Effect*, 9.
[138] Ibid., 12.
[139] Ibid., 16.
[140] Ibid., 21.
[141] Ibid., 23.

Moreover, it is from Galloway that I derive a description of the use of screens as both a definition and a synecdoche for the larger machines they represent. Computer screens, phone and tablet screens, televisions, bank machines, refrigerators, coffee makers, car dashboards all have or are screens. They are what Vilém Flusser called "'significant surface' – a two-dimensional plane with meaning embedded in or delivered through it."[142]

4. Archival Theory

Archival theories also direct my thinking on power, place, and materiality. I base this on the understanding that the archive is a physical and symbolic act of authority for institutions like the museum and has a genesis and history in the same founding principles of capturing, holding, and shaping past, present, and future stories, and objects for cultures. Foucault's writing on the archaeology of knowledge outlines where the power lies for him as it relates to those who hold and form knowledge. He begins with a deconstruction of the field of operations for the "document", suggesting that these historical items that are traces of the past have always been interrogated by historians for accuracy, for the "language of a voice since reduced to silence" but that now the importance of the document lies in how historians organize, divide, distribute, order, "arrange… between what is relevant and what is not, discovers elements, defines unities, describes relations…"[143] Foucault believes this creates a belief in "general" history: a history which seeks cohesion through "a system of homogeneous relations" linking things through causation.[144] This is an incredibly potent description of how power is given over to a system of collecting historical artifacts to manufacture a sense of the past, in the present and for the future.

Additionally, for Foucault the archive is not a library of all things, nor the collection of every text of a society as we often picture it. Rather, it is a "system of discursivity" determining the possibility of what can be said.[145] Any group may have this discursive system embedded within it and overseeing that which is said, written, and saved. Foucault used the example of academic disciplines that have "systematic conceptual frameworks that

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[142] As quoted by Galloway, 30.
[143] Michel Foucault, *The Archaeology of Knowledge*, (Abingdon, UK: Routledge Classics, 2002; orig. Éditions Gallimard, 1969), 7.
[144] Foucault, *The Archaeology of Knowledge*, 11.
[145] Foucault, 128-130.

define their own truth criteria".[146] I have readily imagined the museum, the archive, and the artworld have defended and augmented powers inherent in administration of knowledge, documents, and "truth".

A contribution to this work, early on, came from Jacques Derrida as he described Sigmund Freud's archive. Derrida wrote that in the very act of recording, in seeking to represent the world, we are making it "the technical structure of the archivable content even in its very coming into existence and in its relationship to the future. The archivization produces as much as it records the event."[147] Derrida recognizes the contingent nature of the archive to influence, even create and re-create the original content, all the more so in the act of saving. The archive is shaped by political, social, and *technological* forces.[148]

What this is not

While there is an ever-increasing volume of digital artworks "born digital" and designed to be stored and displayed through digital means, my work focuses on the traditional arts, executed on canvas, paper, wood, etc., that are then documented and transitioned into digital form, usually to be used on websites and social media. I do, though, look at a few examples of digital art not so much because of their medium but because they offer an excellent observation on the effects of digitization. When the medium offers a message about the medium, the medium must be examined.

Additionally, though this thesis is about technology, art, and museums, it is not about museums using specific technologies like virtual reality (VR), augmented reality (AR) or apps to enhance their exhibitions or to extend knowledge while in the museum. Though those tools are closely related to my topics, including them would expand the scope of this thesis far beyond what is possible within the framework of this document.

As noted in the literature review, thinking and writing about digitization, art, and the museum, while still relatively new, is an enormous subject area with much interconnection

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[146] Marlene Manoff, "Theories of the Archive from Across the Disciplines". *Libraries and the Academy*, (Vol. 4, No. 1 (2004), pp. 9–25), 18.
[147] Jacques, Derrida & Eric Prenowitz, "Archive Fever: A Freudian Impression", *Diacritics* 25, no. 2 (1995): 9–63, 17. https://doi.org/10.2307/465144.
[148] Manoff, 12.

and expansion. Unsurprisingly, limiting proved difficult and so I do touch on non-fungible tokens (NFTs), which are also closely linked to perceptions of digitized, traditional art, and rolled into my subject area as an intriguing development in the ongoing monetization and digital dispersion of art *by museums*. The entire spectrum of NFTs, though, is too large a scope for this document and indeed will provide a vast research topic for dissertations by future scholars. Similarly, artificial intelligence also surfaced in the last year as a tool for artmaking and potentially (inevitably) for art analysis and curation. I touch on it because AI uses museums' digital images to train data sets but leave examination of it to others because it too is an enormous issue for prospective academics.

Museums move to digitize objects

With the COVID pandemic, museums threw open their digital doors to online presentation of their artwork. Museums had been slow to join the digital age and loathe to share images of their art online as the internet expanded around them. Until very recently most museums provided no images on their websites, or very poor-quality images. There were some good reasons for this: legal issues of ownership and copyright, the cost of reproducing images, and the means to do so. However, the pandemic created an almost complete shift to the digital that most thought was still years away. Concerned that they would lose their communities, museums made digital images more available and to find images, the communications and outreach departments of many museums turned to their archiving and publishing teams for photos of their collections to create online content. As images filled websites, intriguingly, almost all museums have come to call the images of their online artwork, the "collection". In museum parlance, however, the collection has always referred to the actual, physical art whether it is on exhibition, sitting in storage, or out on loan. Museums had used the term "collection" on their websites' tabs before, but it was usually a textual summary pointing the viewer toward the museum's physical contents. Unique or famous pieces might have a photo of them available to view on the website but very few museums had more than a few images of their collection posted.

It should be noted though that some museums had fully embraced digitization of their holdings for uploading to their websites in the last decade, well before the pandemic. Institutions like the Tate (U.K.), British Museum (London, U.K.) and the Van Gogh Museum

(Amsterdam) had long placed an emphasis on building a digital strategies team.[149] This was often in conjunction with a policy to increase access to the images of the collection. The Metropolitan Museum (New York), for example, launched an "Open Access Initiative" in 2017 which aimed to place:

> all images of public-domain artworks and basic data on all accessioned works in its collection available for unrestricted use under Creative Commons Zero (CC0). Now anyone can download, share, and remix images and data about artworks in The Met collection.[150]

The Louvre, too, has been rolling out a variety of digital policies since 2006, with their online "collection" now hosting more than 480 000 images.[151] They began by updating their audio tours with Nintendo 3DS gaming consoles back in 2006 which caused quite a stir but was felt to be a positive step to attract younger visitors. Additionally, it was a far better tool for navigating the 15 acre "labyrinth" that is the museum.[152] Other digital innovations included touchscreens in the galleries and interactive exhibitions. And as early as 2013, the Museo Nacional de Prado stated that it had created digital images of more than 80% of its holdings.[153]

It must be noted that for these major institutions there are still digital image rights withheld by the museum. Permissions must still be sought for any sort of commercial use of the images, but for educational purposes, and as always, for researchers, teachers, and students, access to such a vast treasure of images is priceless.[154]

As the pandemic rolled out, and where museums did not have a large number of available images already uploaded, the communications departments could often find some images in the archives because, in the past, when a museum took a photograph of an artwork it has not

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[149] Wilson-Barnao, 77.

[150] MetMuseum, https://www.metmuseum.org/about-the-met/policies-and-documents/open-access [Retrieved August 15, 2023].

[151] "Propriété Intellectuelle: Structure générale du site internet", Musée du Louvre, https://www.louvre.fr/mentions-legales [Retrieved August 12, 2023].

[152] "The Louvre Goes Digital", *France Today*, https://francetoday.com/culture/museums-galleries/the_louvre_goes_digital/ [Retrieved August 12, 2023].

[153] L. Simón, Fernando Ramos, & Silvia Cobo Serrano, "Licenses and Access to Digital Content in Museums Pursuant to the New Directive on Information Re-Use Prado, Louvre and N. Gallery", *Procedia, Social and Behavioral Sciences* (2013), 147: 91–97. https://doi.org/10.1016/j.sbspro.2014.07.123. [Retrieved August 15, 2023].

[154] Musée du Louvre, https://collections.louvre.fr/en/page/apropos [Retrieved August 15, 2023].

been part of the "collection". It was rather an archival document providing information about the artwork. The photos of the artwork enter the archives as added value to what is known about an object. They serve as a witness to and evidence and identification of an artwork, but it is not an artwork-in-itself.[155] As museum staff pour digital images of their traditional artwork onto websites and call them the "collection", it expands the term "collection" from the physical assembly of art in the museum to include what was once documentation destined only for the archive. This act takes a digital document and turns it into an artwork by placing it in the museum's "collection". Further, as the digital document shifts designations and standing within the museum's holdings, authority is redistributed between the original and the digital copy. Carassai and Takehana reinforce this: "The digital seems to function more and more as a true reality principle."[156]

These photographs have been seen as indexical, as pointing back to the original in a "truthful" way but not as an equivalent object. When the museum though, takes a high quality, digital image of a two-dimensional artwork and puts it on their website, the image may come to stand-in for or even alongside of the artwork itself. Museums place the digitized images on their website under a tab or title marked, "Collections" and so it becomes much more difficult to argue for the original artworks' "site specificity, their dependence on their owners, and their uniqueness" because the digital duplicate is so "like" the original.[157] Both are hosted by the museum administrators and given standing in the "collection". To viewers they feel like peers; the two objects become equivalent. The inimitability of the real art object fuses with its high-quality digital image and the two may become synonymous.[158] Further, according to tech researcher and writer, Nicholas Carr, who in 2017 combed through

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[155] Miguel Escobar Varela, "The Archive as Repertoire: Transience and Sustainability in Digital Archives", DHQ: *Digital Humanities Quarterly*, 10 (4) 2016.
See also: Michelle R. Warren, who calls a digital copy in the archive a "prosthesis". Michelle R. Warren, "Introduction: Situating Digital Archives", *Digital Philology* 3, no. 2 (Fall, 2014): 169-177; 174. https://www.lib.uwo.ca/cgi-bin/ezpauthn.cgi?url=http://search.proquest.com/scholarly-journals/introduction-situating-digital-archives/docview/1644721431/se-2.

[156] Mauro Carassai & Elisabet Takehana, "Introduction: Futures of Digital Studies." *digital humanities quarterly* 6.3 (2012). http://www.digital- humanities.org/dhq/vol/6/2/000109/000109.html

[157] Felix Thürlemann, *More than One Picture; An art history of the hyperimage* (Los Angeles: Getty Research Institute, 2019), 88.

[158] Felix Thürlemann notes that this sort of dichotomous thinking has been going on in classrooms for more than 100 years, with professors using slides and speaking of the images as if they were looking at the original object, 87.

research on how the device usurps our attention away from actual, physical things. He wrote: "By design, [devices] grab and hold our attention in ways natural objects never could."[159] So, both in naming and in process and perception the image comes to stand alongside of or even stand-in for the artwork itself.

These blurred meanings of terms that museums use shift and alter what the digital image of the artwork is meant to do out in the world. Is it still acting as part of the archive, i.e., part of the documentation *about* the artwork, or is it now performing as a sort of extension or part *of* the artwork: a corresponding equal? Felix Thürlemann acknowledges that since reproductions became possible, the space of art has been split into two categories: original and reproduction, that are sometimes no longer even associated. Art copies enter the stateless, ever multiplying world of reproductions that "obey new rules".[160] So, as the museum makes a high-quality, digital copy and posts it to the collection, the digital artwork is first seen as an equal, then as more interesting or appealing, and finally off in the world, following its own set of rules but also subject, in each case to oversight and authorities that in digitization move from the museum to corporations. Using the steps just outlined, the next chapters of the thesis will follow those three branches.

THREE BRANCHES

First, I will examine this history of reproductions as the artwork is first copied as a photograph or a low-resolution (lo-res) digital image and begins to test the constrictions of the museum. This section includes some context about the museum and its mediating hold on imagery, including a look at archiving and its influence on artmaking, exhibitions, and digitization. The second section will look at the characteristics of a digital image as it performs on websites and social media as a representative of the museum to gain attention.

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[159] Nicholas Carr, "How smartphones hijack our minds", *WSJ*, Oct. 6, 2017. https://www.wsj.com/articles/how-smartphones-hijack-our-minds-1507307811. [Accessed September 22, 2022]. See primary research at: Seungyeon Lee, Myeong W. Kim, Ian M. McDonough, Jessica S. Mendoza & Min Sung Kim, "The Effects of Cell Phone Use and Emotion-regulation Style on College Students' Learning", *Applied Cognitive Psychology* 31, no. 3 (May 1, 2017): 360–66. doi:10.1002/acp.3323. Adrian F. Ward, Kristen Duke, Ayelet Gneezy, & Maarten W. Bos, "Brain Drain: The Mere Presence of One's Own Smartphone Reduces Available Cognitive Capacity." *Journal of the Association for Consumer Research,* 2017, 2:2, 140-154.
[160] Thürlemann, 87. Thürleman is referencing the new rules of the hyperimage, which includes new meanings that form as images mix to form new groups. More on the hyperimage follows later in the document.

Finally, I will look at the digital image as it separates entirely from the museum to become a product of the internet, and subject to the effects of computerization and digitization. Naturally, these categories are impossible to fully separate, so that, like branches, there is some overlap or interweaving of subject matter. Hopefully, though, this gives coherence to what will unfold.

Chapter 1
Branch A: Chapter 1 - Branch A: objects, reciprocations, reproductions, the museum context, digitally immersive experiences

1. The object in the museum

The object is a thing: *the* thing with which the museum is associated. Art becomes digitized and immersive, but what of the object in the museum to which we have journeyed for more than two centuries? Certainly, many of those objects do not belong in a museum. There are ongoing and fierce debates over representations of ritual and religion whose meaning is lost or enshrined or deliberately altered by its emplacement. There is an arrogance in the ways in which certain, very large museums declared themselves "Universal Museums" some 20 years ago, mostly in an effort to shield themselves from demands for repatriation.[161] They claimed that certain of the leading museums of the world safeguard human history and its material culture for all by containing a breadth of objects spanning the entire story of "us all".[162] They felt, or hoped, that the claim that they hold objects in trust for more than any single community protects them from accusations of continued colonizing.

Thus, at some gut level there is a sense that the objects matter; actions taken by museums back this up. Donald Preziosi calls objects "astonishing" in their ability to reflect their roles in "the social, political, and psychic life of individuals and nations".[163] He views objects as a way to see oneself reflected, as in a mirror, able to pull pieces and ideas together to form the

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[161] International Council of Museums, "Declaration on the Importance and Value of Universal Museums", *International Council of Museums* (Paris: ICOM, 2004), 4.
[162] Martin Bailey, "We serve all cultures, say the big, global museums: World's leading institutions release a declaration on restitution", *The Art Newspaper*, December 31, 2002. https://www.theartnewspaper.com/2003/01/01/we-serve-all-cultures-say-the-big-global-museums-worlds-leading-institutions-release-a-declaration-on-restitution. [Accessed August 3, 2022].
[163] Donald Preziosi, "Art History and Museology: Rendering the Visible Legible", 52.

subjective self. Intriguingly, he also notes that, while each object represents a whole host of objects left behind and of places it no longer dwells in, it is also wholly unique and one of a kind, invaluable, and matchless.[164] It is both sample and singular, oscillating, he notes, between "referential and differential".[165] This may be the reflection of a particularly poetic art historian, having all the "feels", to use current jargon, but others have also wrote about this sensory effect.[166] Art historian Bendor Grosvenor writes about watching a conservator begin to remove dirt from a painting by Sir Peter Lely, from the late 1670s,

> On the Lely, our first revelation was a hand of such delicacy, it almost appeared to move, as it greeted the light for the first time in centuries. I don't mind admitting there have been times when it has felt as if we've been joined in the studio by the artist, and at that moment, Lely was with us."[167]

This sense of aliveness can sometimes extend from the collection to the physical, archival documentation that supports the artwork. The documentation often includes personal records and memorabilia of the artist and so they also hold that sense of connection between the viewer and the artist. The digitized form of reproduction, though, suspends the sense of a living art object. When Susan Yee found herself delighted and moved to be in the archive of Le Corbusier, amongst his drawings and writings, she wrote: "will we still crave some pilgrimage…will we be able to feel the human connection through digital archives? Will we care?"[168] That sense of loss or of melancholy for the beholder is centred on a real, extant object, often housed in a museum. And that often also means it is out of reach to the observer, and more importantly to the culture to which it belongs.

2.   Digital Reciprocation- how museums use digital images to guard their objects

Museums collect things of value heavily weighted toward the western European story, but they also gather items from other cultures. There has been an ongoing discussion over returning objects to their cultures of origin, but there is also a digital component that

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[164] Ibid., 53.
[165] Ibid.
[166] See also Michael Ann Holly, *Melancholy Art (*Princeton; Oxford: Princeton University Press, 2013), in "Digital Immersive Experience".
[167] Bendor Grosvenor, "The conservation studio is the coalface of art history—but not all 'restorations' can be solved with acetone", *The Art Newspaper*, August 7, 2022, https://www.theartnewspaper.com/2022/08/08/the-conservation-studio-is-the-coalface-of-art-history. [Accessed August 7, 2022].
[168] Sherry Turkle, ed. *Evocative Objects: Things we think with* (Cambridge, MA: The MIT Press, 2007), 35.

demonstrates the continued value of material objects over digital ones. It is possible to have objects "digitally repatriated" when actual repatriation seems to gain no ground or is painfully slow. Carl Hogsden and Emma Poulter argue that this is not so much a form of *repatriation* because the object goes nowhere but rather a granting of digital access to information. Some indigenous groups have seen this as an initial, positive step toward at least knowing what objects are "out there" in the colonial museums of the world.[169] Hogsden and Poulter call this "digital reciprocation" rather that any sort of real repatriation but suggest there are some positive things that can happen when digital objects are shared in a network. They give examples of sharing of information about Maori objects between European museums and institutions in New Zealand that allowed the aboriginal communities to access:

> digital representations of museum artefacts and associated documentation, including labels, catalogue cards and inventories, as well as voyage and crew data, biographies, and other archival sources related to the voyages [of Captain Cook in the late eighteenth century].[170]

With this information, the Maori can reconstitute the objects as part of their story. They do this by giving the object back its place in the narrative of how it came to be: "[t]hey [the users] will always want to tie it [a digital object] back to where it fits in our world, and that is how we will want others to see it, so they understand our world".[171] Thus it also helps European researchers to have a more nuanced grasp of the objects in their possession. Hogsden and Poulter see this as making it possible for a museum to work with both a real object and a digital object to create purpose and meaning for the things they hold, as well as addressing some of the authoritarian asymmetry in colonial relations.

One example of this is the *Reciprocal Research Network* (RRN) which is a collaborative website of objects from the Northwest coast of British Columbia. It is a project of the Musqueam Indian Band, the Stó:lō Nation/Tribal Council, the U'mista Cultural Society, and the Museum of Anthropology, which is based in Vancouver.[172] Together they supervise objects posted to the website from founding partner museums in Canada, the U.S., and the

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[169] Carl Hogsden & Emma Poulter, "The real other? Museum objects in digital contact networks", *Journal of Material Culture*, 17(3), (2012): 265–286.
[170] Ibid., 281.
[171] Ibid., 281.
[172] Reciprocal Research Network, https://www.rrncommunity.org/pages/about#whos_involved. [Accessed June 18, 2023].

U.K. The objects are uploaded as digital images and anyone can make an account, save images, and create collections. The emphasis is on research, with over 150 000 items available to see. Along with an image of each object is a description, history of use, provenance, physical information, where it comes from and where it is located now. The whole thing is overseen by a steering committee made up of representation from the three Indigenous groups and the Museum of Anthropology and the wording is respectful of their cultural inheritance and knowledges:

> Together, they support collaborative, socially responsible, and interdisciplinary research across local, national, and international borders… facilitating communication and fostering lasting relationships between originating communities and institutions around the world… This collaboration ensures the needs of the originating communities as well as museums are taken into account at all stages of the development.[173]

Additionally, there are community liaisons from the three co-developer communities who are active in "usability testing, support, and to provide feedback" allowing the RRN to be "built with great participation and input".[174] So, while there has not been a mass return of physical objects to these groups from the museums, control of their digital images, knowledge dissemination, and sharing of ongoing research has been returned to them.

Another example in Australia demonstrates some expansion of policies with regards to museum materials leaving the institution. Digital archives in mobile trailers tour central Australia, arriving with internet access to make information available to those, especially aboriginal groups, for whom it is normally unreachable. Other digital projects in Australia aim to provide an "alternative archiving structure" that is non-hegemonic and sensitive to the indigenous ways of handling cultural material.[175]

For some groups, significant and essential knowledges must remain hidden away from eyes, limiting viewing to those who are entitled. At the Vanuatu Cultural Centre and National Museum, the information was coded so to create access restrictions depending on gender, family, village, island of origin, as to how much or how little archival information is

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[173] Ibid.
[174] Ibid.
[175] Haidy Geismar, "Museum + Digital =?", in *Digital Anthropology*, eds. Heather A. Horst and Daniel Miller (London; New Delhi; New York; Sydney, Australia: Bloomsbury, 2012), 273-279.

available to the viewer in accordance with ancient hierarchies and belief systems. This database, along with hard copies of recordings, written texts, audio tapes, photographs, film, and slides, reside in a special, locked room. Accessibility, entrance, and safe keeping are all decided by local elder administration.[176]

So, when done respectfully and carefully, there are some hybrid methods of digital sharing that work, but the Hogsden and Poulter paper on digital reciprocation is ten years old and it remains difficult to find many examples of digital reciprocation in the last decade.[177] Research continues to focus on exchange of actual objects; citizen engagement and interaction; or bringing previously ignored groups into the museum. And to reiterate, museums still choose too often to keep the original and share a digital copy rather than repatriate the original and hold a digital version, as hoped. As Joel Taylor and Laura Kate Gibson point out, digitization has not created the democratic accesses and interactions that were part of the early optimism of new technologies. Power imbalances persist in impacting heritage projects. It can be grounded in inherent exclusion of non-expert views, or in subtle, or seemingly unintentional historic policies and procedures.[178]

Digital reciprocation may produce some new partnerships, collaborations, and (limited) access, but it still manages to reinforce the idea that the real object is what matters. The physical object is what governments, agencies, and cultural groups demand be returned because it has something about it which makes it valuable to its constituency. Perhaps it is

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[176] Geismar, "Museum + Digital =?" 272-273.

[177] Research continues to focus on exchange of actual objects; citizen engagement and interaction; or bringing previously ignored groups into the museum, not true forms of digital reciprocity. And to reiterate, museums still choose too often to keep the original and share a digital copy and repatriating the original as expeditiously as hoped.
P. Hetland, P. Pierroux & L. Esborg, eds. *A History of Participation in Museums and Archives: Traversing Citizen Science and Citizen Humanities* (London, U.K.; New York: Routledge, 2020). https://doi.org/10.4324/9780429197536;
Daniel C. Swan & Michael Paul Jordan, "Contingent Collaborations: Patterns of Reciprocity in Museum-Community Partnerships." *Journal of Folklore Research* 52 (1) (2015): 39–84. https://doi.org/10.2979/jfolkrese.52.1.39; Barbara Glowczewski et al., "Relations and Products: Dilemmas of Reciprocity in Fieldwork", *The Asia Pacific Journal of Anthropology* 14 (2) (2013): 113–25. https://doi.org/10.1080/14442213.2013.768697;
Calvin Pohawpatchoko et al., "Developing a Native Digital Voice: Technology and Inclusivity in Museums", *Museum Anthropology* 40 (2017) (1): 52–64. https://doi.org/10.1111/muan.12130.

[178] Joel Taylor & Laura Kate Gibson, "Digitisation, Digital Interaction and Social Media: Embedded Barriers to Democratic Heritage", *International Journal of Heritage Studies: IJHS 23* (2017) (5): 408–20; 410-411. https://doi.org/10.1080/13527258.2016.1171245.

the sense that a digital object is a tool to examine the past (as the Reciprocal Research Network demonstrates) while the original is the past itself.[179] And it is the physical object that so many museums continue to hang on to. Almost weekly, for example, repatriation of the object is the topic of an article in *The Art Newspaper*. Additionally, as an action, digital reciprocation still centres on educational and research uses for the digitized image and digitized archive of the museum, only providing tertiary effects for the viewing public. This digital sharing has less effect on the average person or average museum spectator, and so let us move on to examine the effects of digitized images online for the casual museum viewer.

3.   Reproduction- Photography

Walter Benjamin thoroughly summarized the fears, concerns, and excitement of the photograph as a reproducing technology as it approached its first century of use. He noted that the reproduction lacks the effects of time and space: patina, flaws, even ownership and what that might endow. But he also understood the things that photography adds: magnification, slow motion, and perhaps most importantly, the ability to travel. It "enables the beholder to meet the original halfway…in the form of a photograph…"[180] And, to make a "plurality of copies".[181] Benjamin also emphasized that reproducibility would free art from ritual and tradition, from the pursuit of "pure art".[182] Indeed, one could say that Benjamin perfectly understood what this newish medium brought to the field of documenting works of art for evidentiary purposes and what (minor) losses there might be to original artwork.

   The digital copy, though, goes even beyond what Walter Benjamin foresaw a reproduction of art does when he wrote about photographing art. Benjamin addressed black and white photography which was never a threat to originals. As noted earlier, it never offered something more than the representational, a way to catalogue, to remember, to document or evidence something about the original. Again, digital reproduction supersedes the original in

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[179] Jenny Newell, "Old objects, new media: Historical collections, digitization and affect", *Journal of Material Culture* 17(3) (2012): 287–306; 291.
[180] Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction" in *Illuminations*, 214.
[181] Benjamin, 215.
[182] Ibid., 218.

vital ways of naming ("the collection"), attention,[183] and quality. Photography simply did not have that power.

The photograph as well as the archive share a linked and intertwined history, one developing with the other throughout the colonial years of the nineteenth century. Photographs have proven to be a formidable addition to the ability of the archive to exert power of ownership and of holding information. From early in its invention, according to Alan Sekula, photography was considered an ideal form of/for archiving. Photographs were imbued with the power to provide evidence and give summation of proof, "the truth of appearances, about the world reduced to a positive ensemble of facts, to a constellation of knowable and possessable *objects*."[184] Indeed, Sekula notes that photography developed alongside capitalism as a positivistic tool for measurement and calculation of the body, the land, and the mind. Used by anthropologists, biologists, criminologists, industrial managers, etc., it is a communicative medium which struggles with the split in its scientific and aesthetic endeavours. It, too, depends on the discursive conditions from which it is produced, "invariably accompanied by, and situated within, an overt or covert text… never purely photographic…the dominant spatial code in the Western pictorial tradition…"[185]

Okwui Enwezor, in his examination of the trend to create works of art which reference, deconstruct, or question the photograph in the archive, also calls the camera "an archiving machine" able to make every photo an archival object.[186] Enwezor believes that each photo contains the "principle of uniqueness", based on the Foucauldian notion of "statements".[187] This allows Enwezor to see the photograph as the analogue for what occurs, creating the "indisputable fact of its subject's existence… the bedrock of photography and film".[188]

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[183] Again, Nicholas Carr wrote that the digital (the device) cannot compete with natural objects. Nicholas Carr, "How smartphones hijack our minds", *WSJ*.

[184] Alan Sekula, The Traffic in Photographs", *Art Journal* (Spring 1981), 15. Italics are Sekula's.

[185] Sekula, 16-17.

[186] Okwui Enwezor, "Archive Fever: Photography between History and the Monument" in *Archive Fever: Uses of the Document in Contemporary Art* exhibition catalogue (Göttingen, Germany; New York City: Steidl Publishers, 2007), 12.

[187] "The archive is first the law of what can be said, the system that governs the appearance of statements as unique events. But the archive is also that which determines that all these things said do not accumulate endlessly in an amorphous mass, nor are they inscribed in an unbroken linearity, nor do they disappear at the mercy of chance external accidents; but they are grouped together in distinct figures…" Michel Foucault, *The Archaeology of Knowledge and the Discourse on Language* (New York: Pantheon Books, 1972), 129.

[188] Enwezor, 11-12.

Photography engendered a madness to document, to frame the world as a photo or in a photo, all connected to a desire to archive. And, according to W.J.T. Mitchell, photographs contain a surplus value as a commodity.[189] Once again there is the suggestion of a partnership with capitalism as images introduce new values and take meaning into new territories.[190] Mitchell suggests that images are "slippery", able to move about, unlike their earthbound subjects.[191] They are also harder to valuate as will be discussed with "aura".

Reproductions have been around for more than one hundred fifty years. They have changed the ways we perceive the original and become new art forms in their own right. They also foreshadow digital imagery beyond the museum. André Malraux, in the mid-twentieth century, like Benjamin, was excited about the idea of photographic reproductions of artworks. (fig. 2) He conceived of the photographic documentation of an artefact and exploration of the reproduction as a potentially new art form. His manner also anticipates the mix-and-match, alter-and-edit of the use of images found online. He, too, saw the appeal of mass engagement and probably would have embraced the internet. As a publisher of art books, he joined an industry that reached back as early as 1835, to record and collate art images in a single place, a book, and to make it more widely accessible.[192] But he seems to have also recognized that the reproduction of images of works of art created an aesthetic and artistic object in itself, separate from any previous connections to the object or its owner. In a series of art books that were published between 1947 and 1954, he formulated the concept of the *musée imaginaire*, in which he juxtaposed photographs of sculptures to make associations and connections across cultures and times.[193] Malraux paid little attention to the history or origin of an art image, preferring to place things beside each other that reflected a similarity in style and shape.[194] He anticipated the de-emphasis on historical context and social function in pursuit of an entirely aesthetic experience that is expected with the dissemination of art

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[189] W. J. T. Mitchell, *What Do Pictures Want? The Lives and Loves of Images,* 76–106.
[190] As noted in advertising, where images demand attention. Mitchell, 81.
[191] Mitchell, 84.
[192] Walter Grasskamp, *The Book on the Floor*, (Los Angeles: Getty Publishing, 2016), 40. Grasskamp discusses the artist, Franz Hanfstaengl who established an art publishing company in Munich in 1835.
[193] Grasskamp, *The Book on the Floor*, 39.
[194] Malraux's *Le Musée imaginaire de la sculpture mondiale* was published by Gallimard in 1952. A version of this text was published a year later, in English, as André Malraux, *The Voices of Silence*, trans. Stuart Gilbert (Garden City, New York: Doubleday, 1953).
Grasskamp, 49ff.

and art information.[195] With his ease and noted skill in visually mixing, matching, and laying out images, there is a correlation with the curation process, and more importantly, to the current fusion that social media encourages.[196] A clear resemblance to the assemblage of disparate images that social media and websites create will be seen through this study.

Figure 2 *Malraux's Shoes*, 2012 (https://commons.wikimedia.org/wiki/File:Adams_2012_malraux_%282%29.JPG)

André Malraux used striking images of sculptures, shot in high contrast and in black and white to point to similarities between vastly different times, cultures, and geographies. Black and white photographs have a great ability to reduce things to an equivalency. Colour is removed, shadows and light are enhanced so that the shape and form remain. Indeed, many social media influencers also cleave to this sort of "brand recognition", shooting only in black and white, or sepia, or always framing in a particular style so that their work is immediately recognizable. Malraux also understood this and worked with photographer Roger Parry, who backed the photographic subject with a bright circle of light, which had the effect of putting the sculpture almost into silhouette. As Grasskamp notes, this "expressive use of dramatic lighting created a new pictorial language for the 1950s…"[197] It also made the combinations of artwork that Malraux viewed as "similar" easier to pair. Parallels and comparisons popped out that may not have been so straightforward to see in real life or with

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[195] Dew Harrison, "Digital Archiving as an Art Practice", in *Digital Visual Culture: Theory and Practice*, eds. Anna Bentkowska-Kafel, et al. (From the series, "Computers and the History of Art"; Bristol, UK; Chicago, IL: Intellect, Vol.3, 2006), 102.

[196] Grasskamp, 68. Malraux also saw his task as an educational one. He hoped to bring glimpses of the work of other cultures to the people of France. Moreover, as an art book publisher, he seemed to immediately understand that bringing images of art to the masses was a new and excellent source of revenue.

[197] Ibid., 62.

colour photographs. Malraux was matching types of photos, creating relationships between images that he and the photographer designed and created in the studio, but not aligning actual works of art with comparisons of actual form, materials, sizes, intention, etc. The physical art object was reduced to a high-contrast, black and white image of itself so that it could be compared to something completely unlike it in meaning, origin, geography, and (possibly) material. Malraux was not comparing two art pieces, rather, he was comparing highly stylized photographic reproductions of two art pieces. All of this sounds very like what is discussed when imagery is let loose online with concerns regarding content over quality, original meaning, or historical context.
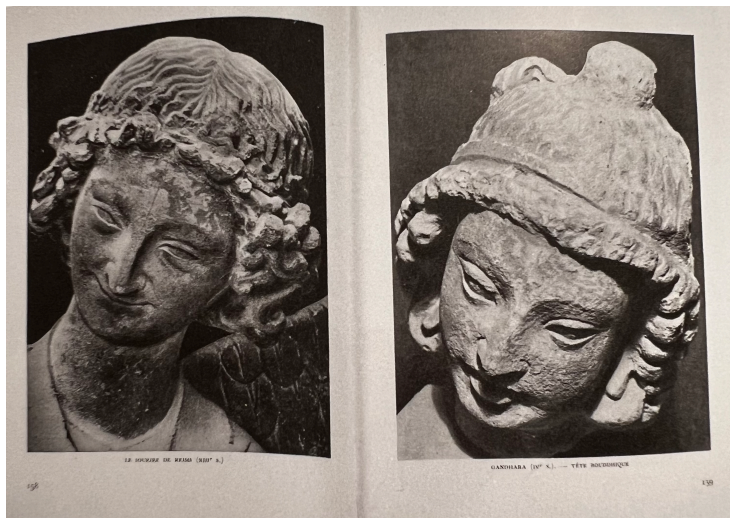
Figure 3: André Malraux, *Les voix du silence*, 1951. Juxtaposition of a Buddha head and a Gothic head. Taken from Walter Grasskamp, *The Book on the Floor*, The Getty Research Institute, 2016, 86. Photograph by S. Kopp.

Malraux hoped his purchasers would learn something about foreign objects (like Indian sculpture) through comparison with something familiar (Romanesque architecture). He brought catalogues of artworks into their homes of art that most people would never see and he did it in a highly attractive and approachable fashion, again anticipating art diffused through the internet. His readers were not in the presence of the art itself and may or may not have felt inspired to seek out the original. What is different though than art viewed online is that black and white images of sculpture in a book do not confuse readers into thinking that the photograph is, or is equivalent to, the original piece of art. Nor does it seem like Malraux intended it to be equivalent. He was disseminating art appreciation in a new and attractive package. Since the image is in black and white, in a book, and not movable, alterable, or

approachable, there is no confusion as to the image of the sculpture being the sculpture itself. It is simply different.[198]

In this comparison, then, it si possible to see how reproduced images of any kind, when detached from the source material begin to evolve their own stories and characteristics, becoming "new" objects with new audiences. There is, though, one other characteristic that the original is said to possess and which the reproduction has struggled to manage: the aura.

4.   The aura of the original

Each new mode of reproduction brings a moment of confusion, concern, excitement, and consolidation. Humans have always had an ambivalent relationship to the reproduction or copy of an "original", varying with era, culture, and original object. For example, a painting in Venice of *St. Luke's Madonna*, was held to be "original", because the Venetians believed it was painted by St. Luke in the first century, in the actual presence of Mary.(fig. 4) "Original" to the Venetians meant being in the presence of the subject. Only the painter *present with* Mary could capture her likeness and therefore give it the authority of an original: a reproduction could never be authentic. So, with a certain logic, the original is the original by virtue of its being painted in the presence of the subject; anything after it cannot be authentic because the original subject is not there.

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[198] The black and white photograph is well known as a flattener of distinctions. At nearly the same moment that Malraux was creating his books, and with an awareness of his work, the "Independent Group" in Britain staged "Parallel of Life and Art" at the ICA (Institute of Contemporary Art) London. They took dozens of black and white photos of objects- art, household items, and cultural artefacts, and mounted them all over the galleries. There was no perceived difference between the objects photographed because they were all given the same treatment – the idea of creating a "family likeness" via the medium of image of objects (not the objects themselves) was in alignment with the work of Malraux. Alex Kitnick, "The Brutalism of Life and Art", *OCTOBER 136,* Spring 2011, pp. 63–86, 75.
See also: Malraux's *Le Musée imaginaire de la sculpture mondiale/ The Voices of Silence*, 82-84.
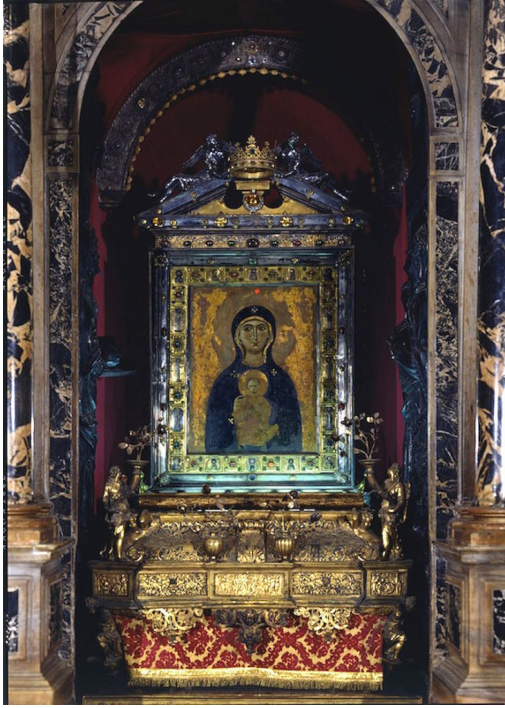
Figure 4 *Madonna Nicopeia,* Byzantine school,
early twelfth century, tempera on wood panel.
https://www.savevenice.org/project/madonna-nicopeia

When the *St. Luke's Madonna* icon was returned to Venice in the late twentieth-century it still carried with it the psychological power to represent and watch over the city for the citizens as it had many centuries before.[199] They continued to feel that this was the original with the ongoing power of Mary present in its very painting. This need for veracity of the object pursues us into the present so when Walter Benjamin suggests that there is a loss of "aura" in the copy some part of us resonates. The digital copy plays with aura in its ability to mimic the original and yet take the original, as Benjamin suggested, out into the world as its reproduced proxy. Further, some argue the copy can increase the original's aura by existing, by informing the world of the original's existence, by performing a surrogacy or even stealthily superimposing the copy over the original.[200] Werner Schweibenz suggests that as the copies improve in quality they form a series of versions, a series of ever-improving

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[199] Hans Belting, *Likeness and Presence* (Chicago: The University of Chicago Press, 1994), 4. This icon was seized from the Byzantines in a battle in 1203. It was thought to protect Byzantines in battle and Venetians hoped for the same powerful protection. *Save Venice*, https://www.savevenice.org/project/madonna-nicopeia [Accessed June 23, 2023].

[200] Werner Schweibenz referencing Martina Dlugaiczyk, "Aura für alle. Kopien als Denkmuster - Kulturtransfer zwischen Ostasien und Westeuropa," in *Die Ausstellungskopie: Mediales Konstrukt, materielle Rekonstruktion, historische Dekonstruktion,* A. Tietenberg, ed. (Köln: Böhlau, 2015), 95-112.

techniques.[201] Perhaps, the thinking goes, if the reproduction is so good, so realistic, and if it replaces the original in a space, it is possible for the aura to accompany it.

Bruno Latour agrees and considers that the incredibly high-quality reproduction of Veronese's, *The Wedding at Cana*, in Palladio's refectory in Venice, makes "no difference" to the viewer compared to viewing the original in the same space.[202] (fig. 5) In fact, he creates a fictional character who stands in front of the original *Wedding,* now held in the Louvre, and mourns that the experience cannot match being back in Venice in the space of the superb reproduction.

Figure 5: Reproduction of Veronese, *Wedding at Cana*, 1562-63. Image from FactumArte: https://www.factum-arte.com/pag/38/a-facsimile-of-the-wedding-at-cana-by-paolo-veronese

Latour writes that the fictional viewer feels that the reproduced image is perfectly matched in space, lighting, placement, framing, and that the context of the original space gives the digital reproduction the aura of the original. Latour proposes that once the difference in production techniques between "n" (the first copy) and "n+1", as happens with digital reproductions, is negligible; when each subsequent copy is exactly like the reproduction before it the aura moves along to the "copies". Latour compares it to making multiple illuminated manuscripts in the medieval era, wherein each iteration, while technically a copy,

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[201] Werner Schweibenz, The Work of Art in the Age of Digital Reproduction", *Museum International*, 70:1-2 (2018): 8-21; 15. doi: 10.1111/muse.12189

[202] Bruno Latour & Adam Lowe, 'The Migration of the Aura, or How to Explore the Original Through Its Facsimiles,' in *Switching Codes: Thinking Through Digital Technology in the Humanities and the Arts*, eds: T. Bartscherer & R. Coover (Chicago, IL.: University of Chicago Press, 2011), 275-297.

was thought of as an exemplar. After checking against an original manuscript for errors, the aura travelled along to each new version of the codex.[203]

5. The aura is a modern construct

Logically, it seems then that the aura can be engendered or cooked up by a mix of "perfect" reproduction and the original location. Though Latour writes that even the location is a complicated blend of reproduction and facsimile. The refectory where the Veronese hangs is not what it was when Veronese painted it for the space in the sixteenth century – much has been lost, changed and/or redone, not to mention it is no longer a dining hall for monks. The space of an artwork is always in a state of production and reproduction, so that aura and originality are continually open to reinterpretation. Indeed, if aura is attached to one's memory or one's sense of an object, it is logical that the aura can be created and recreated by circumstance regardless of the presence of the "original".

Aura seems to lie in the mind of the beholder, in the wallet of collectors and gallerists, and even more definitely in the space of rising individualism and capitalism in the modern era. According to Martin Heidegger, in modernity art becomes aesthetic. He writes that it begins to be correlated as an experience and once it is an experience it becomes centred in the human: "an expression of human life".[204] This is an evolution from earlier times when art and sculpture were done anonymously for patrons, popes, and patriarchs. There was no thought of lauding or crediting "the author" – it was not "centred in the human". There was no cult of the creator and there was no notion of veneration of the object-maker as a person. The object, like the Veronese painting in its monastical setting, was created for contemplation, for religious impact, or for glorification of powerful lords and leaders. It was not there to be possessed by any others. The awareness of it was through religious or state power, perhaps to connect one's soul to a biblical story or to remind the viewer of the omnipotence of authorities, from God on down. But with increasing individualization in the last three centuries and with the intensifying effects of monetization, there is the growing belief that an experience with a piece of art is both possible and warranted. It comes with a conviction in

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[203] Latour & Lowe, 283.
[204] Martin Heidegger, "The Age of the World Picture", *Off the Beaten Track* (Cambridge: Cambridge University Press), 57.

possession, in a subjective moment of connection that has nothing to do with religious fervour, or with a commitment to a larger cause, or to a broader community. Aura, or more appropriately "awe" before modernity, was only about how a work opened you into a wider faith story or allegiance to a powerful ruler. It was supposed to lead to sensations of belonging, fear, repentance, wonder, etc. It was not about the centrality and consciousness of self to which we now cling.

Aura is part of the rise of the human-centric belief system of the Enlightenment. It is only through the emerging of what Foucault calls the "epistemological consciousness of man as such" that a person can begin to name an aura in the sense that Benjamin gives it.[205] Before modernity one saw things not as a consumer or as an independent being but as a part of a larger, human story in which one participates. There was almost no comprehension of personal agency in awe or wonderment.

Again as part of an argument for understanding "being" in the modern era Heidegger suggests that rising consciousness also extends to an awareness of culture, of human-centric activity, of "care and cultivation of man's highest goods".[206] Heidegger notes that in other times the Greeks, for example, saw themselves as a "subject" only in the sense of a creature known or identified by others not as the subjective "me".

> Rather, man is the one who is looked upon by beings, the one who is gathered by self-opening beings into presencing with them. To be looked at by beings, to be included and maintained and so supported by their openness, to be driven about by their conflict and marked by their dividedness, that is the essence of humanity in … Greece… Greek humanity is the receiver of beings…[207]

This understanding is markedly different from the present. Heidegger considers that in modernity the human becomes the being to which things are brought, is the thing to which other things are related, is "the norm-giving domain".[208] Humans do this quite consciously, Heidegger argues. This position is human-created, human-maintained, human-secured, and thus it becomes our worldview, indeed, our 'view of the world'. And in this, he says, the

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[205] Michel Foucault, *The Order of Things* (New York: Vintage, 1973), 309.
[206] Heidegger, "The Age of the World Picture", 57.
[207] Ibid., 68.
[208] Ibid., 69.

world becomes a picture. Everything is a view and human beings see themselves at the centre of this view: the human is the "primary centre of reference".[209]

Science has become the method used to explore and establish this "self" in the world, taking the self as referent. Scientific discoveries now move the experience of awe from the divine to the earthly. The sublime no longer points toward God, instead it involves human action. It is science that finds, in Heideggerian terms, the gigantic and the microscopic: airplanes that cover huge distances, atomic physics to explain the miniscule.[210] Regardless, humans are at the centre of/discovery of the large and the small, and all that is "awesome".

Therefore, given that humans now view themselves as centred on/centre of all processes all that remains of the traditional notions of divine-inspired awe are the historical and sentimental aura attached to objects. Aura attaches to things that have survived, that illuminate human history, and that point to or connect us to other humans who have created things of great beauty, importance, or function. Aura is a recognition of the hand or centredness of the human being (the artist or the patron or the countless others who have appreciated the object) at the core of these objects. But in addition, it is the rarity, value, or mystery of an object that begins to stir aura; begins to generate longing. Then it is in the act of pulling the object toward the self that makes the self the point of reference in the recognition of "the care and cultivation of man's highest goods."[211] There are "goods", but they are the "highest" only in relation to the proximity and desire of "man". For the object to matter, to be important, it must first be chosen and procured by "man". And it is in that act that aura is engendered. Awe is created by and for an external focus, while aura is manufactured by a whiff of nostalgia combined with desire and acquisitiveness.

6.   Aura versus digital copies

Aura plays nicely with rising capitalism in that action of the self: yearning, obtaining, drawing objects to self. Recently, a Banksy screen print (235 of 500) entitled *Morons* (2006) was purchased for $95 000 (USD). It was then burned up on YouTube, and a digitized

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[209] Ibid., 71.
[210] Ibid., 71-72
[211] Ibid., 57.

version of the video sold for $412 000 (ETH 228.69[212]) in digital tokens (non-fungible tokens, "NFTs"). (fig. 6) The original screen print of *Morons* showed a Christie's auctioneer pointing at a framed painting on the auction block with the text, "I can't believe you morons actually buy this shit". [213] The group that purchased the screen print purported to be art and NFT enthusiasts connected to the blockchain project "Superfarm". They called themselves the "Burnt Banksy Crew" and stated that they hoped to transfer the value of an original Banksy to the NFT in the action:

> By doing this the value of the physical piece will be moved onto the NFT and being the only way you can have this piece anymore. The goal here is to inspire, we want to inspire technology enthusiasts and we want to inspire artists. We want to explore a new medium of artistic expression.[214]

[212] https://gigamart.com/collections/0xdfef5ac9745d24db881fef3937eab1d2471dc2c7/1 [Accessed May 11, 2023.]

[213] Cristina Criddle, "Banksy art burned, destroyed and sold as token in 'money-making stunt'", *BBC News*, March 9, 2021, https://www.bbc.com/news/technology-56335948. [Accessed July 16, 2022].
See also: Carol Diehl, *Banksy: Completed*, (Cambridge, MA: The MIT Press, 2021).
Alessandra Mattanza & John Brandler, *Banksy*, (Munich: Prestel, 2021).
In April 2023, another screen print of *Morons* was up for auction at Sotheby's. Numbered 161/500 from 2006, it was estimated at £18 000 to 22 000. https://www.sothebys.com/en/buy/auction/2023/banksy/morons?locale=en

[213] Jamie Redman, "A Group of Crypto Proponents Burned an Original Banksy 'Morons' Print and Turned It Into an NFT", *BitCoin News*, Mar 4, 2021. https://news.bitcoin.com/burned-original-banksy-morons-print-nft/ [Accessed June 24, 2023].

[214] Redman.
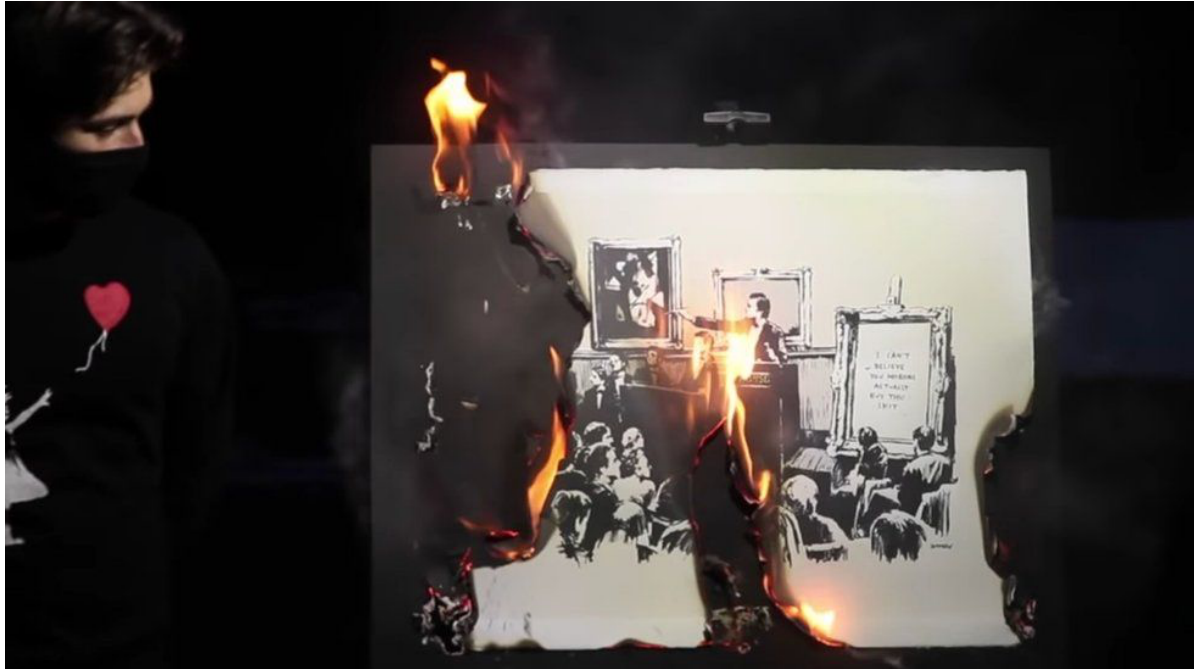
Figure 6: BurntBanksy, *Banksy Art Burned*. (2021) BBC News. BURNTBANKSY/YOUTUBE.
https://www.bbc.com/news/technology-56335948

Banksy has also shredded his own artwork in the past, suggesting via a quote from Picasso that the "urge to destroy is also a creative urge".[215] However, most of what Banksy does is ironic, satirical, and mocking of establishment, particularly the artworld. Normally it seems Banksy might enjoy the act of burning up an image that mocks the traditional art market since that was the original intent of the image. But in this case the purchasers seem only to want to increase the value of their own purchase and to draw attention to media (blockchain technologies and tokenized, digital art) in which they are invested.[216] It is exactly this consumeristic, materialistic move that Banksy often addresses and disarms with his art. He prefers to caricaturize, even moralize, and certainly criticize political and social current events, not simply partake in them in a naked attempt to make money.[217]

Surely, along with transferring value to the new digital "burning" copy of the Banksy, there is also an attempt to resettle the aura to the new copy as well. Indeed, aura has always

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[215] ABC News, Oct 7, 2018. https://www.youtube.com/watch?v=GM4s_VdHJxE
[216] As of May 2023 Superfarm does not appear to have any NFTs either live, upcoming, or sold. They have also rebranded as "Superverse". https://superfarm.com/drops?tab=live
[217] Ulrich Blanché & Rebekah Jonas, *Banksy : Urban Art in a Material World*, trans. by Rebekah Jonas. (Marburg: Tectum Wissenschaftsverlag, 2016), 190.

contained valuation. Benjamin wrote that the aura of an artwork lies in its uniqueness in time and space, permanence, and sense of distance from the viewer. Characteristics, it seems, of aloofness, unreachability, and unattainability which make it seem special.[218] Further, John Berger notes that it is the copies which give the original a value in the capitalistic sense. The flood of copies—images—gives the original object nostalgia and a price tag: "If the image is no longer unique and exclusive, the art object, the thing, must be made mysteriously so."[219] The Banksy "diversion" attempts to move the original's aura, or to "transfer" over to the digital copy by destroying the original. When the only thing remaining is the digital version, the meaning, the specialness, the uniqueness of the original can be arguably said to now reside with its only remaining kin – the digital version. As *The Art Newspaper* lately wrote, "Many digital copies of old works have been sold for large sums—in some cases the physical original has even been destroyed to transfer its "essence" to the copy…"[220]

It has been argued though that a copy cannot have an "aura".[221] The original art requires journeying to it, it has a presence and that was part of its aura, its force, its character, its exceptionality. The copy could not have an aura because its job was/is to move around in the world to signpost the way back to the original. However, as Latour demonstrates, when there is a high quality, museum-sanctioned, digital copy of a traditional art object: an "n+1" copy, and when it is possible to view it on our devices (in which, according to Carr, there is trust and credence) the original is no longer "exceptional".[222] The original is set aside and no longer matters because the image on the device is fully acceptable. Copies are "fine", seeing them on a screen is "fine", too. The digital reproduction is also not unique in time nor space and it is not permanent. These "copies" fully travel to where the viewer is, there is no need to

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[218] Benjamin, "The Work of Art in the Age of Mechanical Reproduction", 215-218.

[219] John Berger, *Ways of Seeing*, 23.

[220] Ben Munster, "NFT twist is latest development in saga of contested 'Leonardo' painting hidden in Swiss vault", *The Art Newspaper*, July 12, 2022. https://www.theartnewspaper.com/2022/07/12/nft-twist-is-latest-development-in-saga-of-contested-leonardo-painting-hidden-in-a-swiss-vault?utm_source=The+Art+Newspaper+Newsletters&utm_campaign=d048086c11-EMAIL_CAMPAIGN_2022_07_15_01_51&utm_medium=email&utm_term=0_c459f924d0-d048086c11-62222806 [Accessed July 16, 2022].

[221] Trung Pham, "The Artist's Perspective: Original Works of Art in the Digital Era", International Journal of the Image 5 2(2014): 1–6.
http://search.ebscohost.com.proxy1.lib.uwo.ca/login.aspx?direct=true&db=aft&AN=96952525&site=ehost-live. Also John Berger, *Ways of Seeing*.

[222] Carr, "How smartphones hijack our minds".

go to them as Benjamin required of copies. The digital image literally comes to us on command on devices carried in our pockets. A satisfactory image is no longer something to pilgrimage to, but rather something that comes toward the onscreen viewer feeling replete. Aura cannot be engendered in these circumstances and is destroyed.

Even more so, a non-fungible token (NFT) purports to carry the weight of the original as an irreplaceable (non-fungible) object. This means, of course, it *is* the original and therefore may have an aura according to Benjamin. However, an NFT is also fully reproducible by anyone who can copy/paste. The only difference is that only the owner of the *original* digital object has the rights to buy and sell it. Therefore, it is not unique in time and space and it does not require traveling to it. The aura then, is reduced to the desire to make money by having an original "something". Simply put, "aura" is attempted by calling something novel and fabricating exclusivity. If someone can be convinced that an object (physical or digital) contains the characteristics of Benjamin's aura – uniqueness in time and space, permanence, and distance from the viewer – it can also be said to have some kind of value. Aura equals monetary appraisal. It is possible that people struggle with digital art because they do not know how to value it. Crypto whizzes can tell the public that an NFT is valuable but finally it is very difficult to sense its uniqueness, history, or materiality – things that give it its aura, and so it is complicated to describe a worth. There is an unstable definition of significance when the original is digital because the digital is unreliable as well.

Ultimately, it seems that any trace of Benjamin's aura is well and truly destroyed by the digital image. Either there is no travelling to an original because the original only exists in the ether (an NFT), or digital copies – reproductions viewed on devices – travel to you and reduce the impact and the inimitability of the original by acting as equivalent peers. And if aura is tied to value, but aura slips away because it is not a physical work of art, then value must inevitably, and in the long term, follow. NFTs, as they are at present, suggest a fool's game, played by techies for whom it is, indeed, just a game.

There is, though, one place where some of the characteristics of aura remain and that is in and around the museum. Perhaps it is because it is the museum that contains the works which have the allure of the original, and it may be that some of that effect is transferred or shared between the two. Certainly, some studies have shown that viewers feel their experience is

enhanced by viewing an original when it is in the museum, as compared to looking at a reproduction in the museum or an original seen outside the museum.[223] When the artwork is digitized and viewership looks online, the digital copy can cause "a loss of aura and institutional authority, the loss of the ability to distinguish between the real and the copy, the death of the object and a reduction of knowledge to information."[224]

As the image is made digital, it is important to understand how the museum has engendered power over the last century or so.

7.   The sacred and elite gallery

As the digital image departs the museum, the museum faces enormous changes to its power structure. As noted several times throughout this thesis, the museum is the traditional space for art over the last two centuries, increasing its hold over, and mediating decisions regarding, art and artists over the last two centuries. Like the awe and aura, the museum has nurtured a sense of the sacred to convey its permanence and its authority. Reverence and sacrosanctity have not entirely disappeared from galleries and art spaces even in a time of growing emphasis on making museums welcoming. Brian O'Doherty argues that museums have used their spaces to create a context of purity and eternality that has been held to be "sacred" across more than a century, and, he adds, they demonstrate dubious tendencies to generate the holy where there is none. The museum becomes a closed system, he argues, wherein "some of the sanctity of the church, the formality of the courtroom, the mystique of the experimental laboratory joins with chic design to produce a unique chamber of esthetics."[225] This "unique chamber" contains art that has never been untainted nor timeless, neither pure nor eternal – consistently and constantly it is battered, altered, decontextualized

[223] M. Huang, H. Bridge, M.J. Kemp, A.J. Parker, "Human cortical activity evoked by the assignment of authenticity when viewing works of art", *Frontiers in Human Neuroscience* 5: 134 (2011) doi:10.3389/fnhum.2011.00134.
Y. Noguchi, M. Murota, "Temporal dynamics of neural activity in an integration of visual and contextual information in an esthetic preference task", *Neuropsychologia* 51: 1077–1084. doi:10.1016/j.neuropsychologia.2013.03.003.
David Brieber, Helmut Leder, & Marcos Nadal, "The Experience of Art in Museums", *Empirical Studies of the Arts,* 33:1 (2015): 95-105.
[224] A. Witcomb, "The materiality of virtual technologies: A new approach to thinking about the impact of multimedia in museums", in *Theorizing digital cultural heritage: A critical discourse,* Eds. F. Cameron & S. Kenderdine (Cambridge, MA; London: The MIT Press, 2010), 35.
[225] Brian O'Doherty, *Inside the White Cube*, 14.

and recontextualized; meanings are added and subtracted. Additionally, Pierre Bourdieu suggested that it was the connoisseur who brought their "pure gaze" to the space.[226] So why this tendency for gallerists, curators, and museum directors to continue to nurture an inviolability within the art space even though it is not conceivably "sacred"?

Museum leadership has cultivated a sense of elitism and unassailability for the museum — it must remain a bastion of high culture. This stretches back to the Enlightenment when there was a growing field of experts and professionals. This body exerted the power to choose what was art and to determine what was worthy of institutional collecting and archiving as part of the governing and colonial powers. Large, impressive, and formal works were hung in large, impressive, and formal buildings. By the middle of the twentieth century, this power had slipped into the gallery itself. Colonial powers were on the wane, central governance merged into capitalistic and corporate control, and the power of the space of the gallery simply grew. Art and its institutional space were drained of colour, architectural detail, and even history itself. Brian O'Doherty writes that "the Ideal gallery subtracts from the artwork all cues that interfere with the fact that it is art."[227] Eventually, the white cube created a space perceived to be so pure that it made even the viewer superfluous. This, he believes, led to the "installation shot", the photograph taken of the room with art hanging or placed. It was used to show art to its public who felt, ironically, eliminated as a presence in the gallery. The installation photograph becomes a metaphor for the gallery space.[228] A reproduction of a whole room of art comes to stand in for the art itself, alienating the viewer. The photo is used to show the viewer what an ideal space is like when filled only with art but no humans. This, it proffers, is the ultimate art experience, the archetypal moment for art is the absence of the viewer, with only a window on the existence of art.

Throughout the latter half of the twentieth century, those who decided what that art would be and how it would be exhibited became singular figures of immense power. Artists, like those in the New York School, gallerists who lined 57th St., in New York, art critics like

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[226] Pierre Bourdieu, "The historical genesis of the pure aesthetic", *The Rules of Art* (Cambridge: Polity Press, 1996), 285–312.
[227] O'Doherty, 14.
[228] Ibid., 15.

Clement Greenberg, and more recently rock-star curators, replaced the previous powers of church, state, and aristocracy.

Greenberg believed, for example, that increasingly over the last two or three centuries, art was becoming a thing that must show itself as art, give evidence that it was art in an almost scientific manner. As it became stripped of the features that try to trick us– three-dimensionality, creation of a picture-space – and became more about paint, canvas, and structure of frame and supports, art became gradually purer. It became capable of proving it was art by showing the systems that make it an artwork.[229] Along with the purity of the gallery space, these trajectories made art harder and harder to access for the common viewer, for those without the knowledge to "crack the code". These actions repelled the average, potential observer, creating yet more reason to find art, the art market, and the art institution inaccessible and elitist.

Why do these spaces demand a quiet, clean, chaste place unmarred by people, children, noise, food, and signs of time and decay?[230] There is a similarity to classical concerts in which silence, cleanliness, and a dress code reign. While it is true that many museums are trying to throw open their doors to new constituents, to create a sense that they are part of the community and a gathering space, many still find the rules, the art, and the system impenetrable. Whether it is parking, entrance costs, or a holdover from the days when art was purposefully opaque to easy meanings, accessible narratives, or aesthetic attraction, museums remain a difficult threshold for many, including potential museum staff, to cross.[231] A recent

[229] Clement Greenberg, "Modernist Painting" (1965) Reprinted in *Modern Art and Modernism: A Critical Anthology*, eds, Francis Frascina & Charles Harrison (New York: Harper & Row, 1982), 5-10.
[230] In fact, though the purpose is slightly different, the trend to clean and empty spaces is only encouraged as we move toward larger and more immersive artwork. Projections and experiential art forms call for minimal wall ornamentation or detail that distracts. Ane Pilegaard, "Proximate interiors: When exhibition design activates museum architecture", *The Design Journal*, 26:2, (2023): 310-328. DOI: 10.1080/14606925.2022.2152931
[231] Museum staff continue to be overwhelmingly white and male, according to the Mellon Foundation survey, published in 2022. Using data from 328 museums representing 30 000 individuals, the study shows that new hires are more widely representational, but it is a very slow process. Happily, gender balance reflects that across museum positions women now represent 60% of all staff. While on the increase, BIPOC staff constitute only 36% of all staff in 2022. Leadership from diverse groups is also on the rise, from 18% in 2015 to 27% in 2022. All numbers represent a survey of American museums.
Liam Sweeney, Deirdre Harkins, & Joanna Dressel, *Art Museum Staff Demographic Survey 2022*, Mellon Foundation, Ithaka S.R., 2022.
https://assets.ctfassets.net/nslp74meuw3d/6gnnNJOBeDbYImaDPNnyT9/3221a846b1706bd73c552b2eb5931b5e/art_museum_staff_dem_survey_2022.pdf

study demonstrated that nearly 40% of American adults feel unwelcome in an art museum. And that number is derived *apart from* interest in the content, relevance, opening hours, or transportation links.[232] That is a large barrier to overcome.

8.   The mediating space of frames

Figure 7: S.F. Morse, *Exhibition Gallery at the Louvre*, 1832-1833. Terra Foundation for American Art, Daniel J. Terra Collection. Image from: https://www.seattleartmuseum.org/exhibitions/morse

Down through history, the spaces that art sat in -- the churches, cathedrals, palaces, through to the domestic spaces of the growing middle class in the late Middle Ages, and the art galleries of the twentieth century – influenced the art that was made. O'Doherty suggests that these spaces formed and still form frames for the art and how art is seen and perceived by the viewer. The place also forms context and concept for the artmaker. Finally, "place" also literally wraps the art to shape or frame the art. In the "White Cube", O'Doherty

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[232] A survey of 1 385 people showed that 552 of them (39.86%) had an "attitude affinity" of less than 62. "Attitude affinity" measures, on a scale of 1-100, how welcoming a person perceives an organization to be. Below 62 it is felt that the person will not visit because they have low or no affinity for the organization. Colleen Dilenschneider, "Data & Analysis: Why Cultural Organizations Are Not Reaching Low-Income Visitors (DATA)", *IMPACTS Museum Market Research*, May 18, 2016. https://www.colleendilen.com/2016/05/18/why-cultural-organizations-are-not-reaching-low-income-visitors-data/

references a particular Samuel F.B. Morse piece, *Exhibition Gallery at the Louvre, 1832-1833*, (fig.7) wherein paintings are shown arranged cheek-by-jowl, rising high to the ceiling and down to the floor. He surmises that each painting was understood, each separated as they were by a thick frame, to be an individual window into that world. The frame stabilizes and limits the expanse of the image and to where the viewer's eye can roam.[233] It is as much about the edge of the image as it is about the image. In the twentieth century, art literally lost its frame, and the extent to which a painting was framed became the limits of the gallery space in which it sat. The context and concept were becoming the same thing, or as O'Doherty says, "As modernism gets older, context becomes content. In a peculiar reversal, the object introduced into the gallery "frames" the gallery and its laws."[234] O'Doherty examines the actual frame of the artworks and the systems that were used to hang them. He writes that the physical props that hold up the artwork itself -- from "old master" wooden frames to the disappearance of the frame with the Impressionists – that the frame contributes, or reflects, changes in the making of art, in its meaning and its interpretation. The frame might disappear, in which case the wall performs as the frame, or even the entire gallery becomes "the frame" for the painting. One might say that the walls matter more, or less, depending on the era. Walls may be creating the context as in the modernist gallery or only supporting the framed images in more traditional spaces.

As frames, museums certainly perform upon art, though O'Doherty suggests they exerted peak influence in the mid-to-late twentieth century when the frame of white galleries became so pronounced as to "seal" the art, enclosing, and excluding it from any sort of intervention, including the need to be seen by the viewer.

Another thing that framed and formed images was the message they needed to convey to passersby. In churches, cathedrals, public buildings, art, and sculpture was mounted to inform citizens, cajole doubters, or overwhelm the masses. They were formed and framed to speak to people, to draw them in in some way, whether physically, intellectually, emotionally, or spiritually. The image addressed the viewer/person within a space designed to do so. But as the twentieth century unfolded, the white cube gallery came to work in such

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[233] O'Doherty, 18-19.
[234] Ibid., 14-15.

a way as to prefer the message have nothing to do with the human body or that a person needs to be present to receive, perceive, or interact with the art's signal.

a.   Digital frames

When traditional art is seen online, the image is decontextualized, without place, without scale and without curatorial oversight. The art is inserted into a new space, which, like the church, museum, or gallery of the past, creates its own contexts and meanings. Boris Groys believes that the frame moves from the institution to the internet, "defictionalizing" the work of art that museums and institutions have worked so hard to create. All the information is "out there", online, muddying the message of the museum.[235] On social media, it is a reverse of the installation photographs of the gallery that O'Doherty discusses. Art is available for reinvention as an object on a social media feed. Instead of showing the art empty of the human, as in the white-cube gallery installation photos, art on a social media feed informs the world of your presence with the art. You, the person, are entirely present and the emphasis is on the experience of the person posting, not on the space and message of the artwork.

b.   Derrida and the parergon

Jacques Derrida also speaks of frames writing in *The Truth in Painting*.[236] Much of the book is devoted to his examination of the interstitial space of "the frame" which I see as applying to the mediating space of digitized art. Derrida uses the sentence, "I am interested in the idiom of painting", to wonder and wander through all the possible grammar and definitions and sentence structure of these eight words, only to declare the need to further deconstruct phrasing, parameters, and historical references, and to examine the author of the phrase. And even once that is done, he suggests one would start again to ask new questions of the phrase, to push and pull towards further complexities. Derrida emphasizes what is around the work, the *parergon*, "context", as being:

> … neither work (*ergon*) nor outside the work (*hors d'oeuvre*), neither inside nor outside, neither above nor below…it gives rise to the work. It is no longer merely around the work, that which it puts in place -- the instances of the frame, the title, the

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[235] Boris Groys, *In the Flow* (London, U.K.; New York: Verso, 2016), 174-175.
[236] Jacques Derrida, *The Truth in Painting*, trans. Geoff Bennington, Ian Macleod (London, Chicago: The University of Chicago Press, 1987). Original version: *La verité en peinture* (Paris: Flammarion, 1978.)

signature, the legend, etc. -- does not stop disturbing the internal order of discourse on painting, its works, its commerce, its evaluations, its surplus-values, its speculation, its law, and its hierarchies. [237]

Derrida proposes that the "work of art" comes with containment and conveyance, with context and content always already spilling into and out of the work of art. Moreover, his deconstructionist ways resist procedure, determination, stability, and the binary. Derrida prefers to delve into marginalia, footnotes, and the support structures of art, as much as the work itself.[238]

There is, therefore, both a physical aspect to the frame/mediation/context of art, as well as a non-corporeal, interactive, and informational facet. With digitized artwork and using the concepts that Derrida sets up, I can scrutinize the computer, screen, keyboard, device, internet, and the platforms upon which the information is received. These set up new frames, new spaces of mediation for art and art-viewing. But as Boris Groys writes, all manner of usual frames dissolves online:

> … on the Internet art and literature do not get a fixed, institutional framing, as they did in the analogue-dominated world. Here the factory, there the theatre….On the Internet art and literature operate in the same space as military planning, tourist business, capital flows, and so on; Google shows, among other things, that there are no walls in the space of the Internet…thus framing becomes deinstitutionalized.[239]

Groys suggests that the viewer frames the information with their own computer or device, completely redefining the experience of art and literature developed "in real life" over centuries. The non-physical side of the change in frame is also psychological, emotional, economic, and cultural.

When art is on the internet, between the power of corporate oversight and the subsuming cascade of voices and imagery, the structures, the frame, the space, and context around digitized art is louder and more distracting than ever. Art risks being lost to the power and size of "the frame". It is not dissimilar to the effects of the white cube many decades ago to

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[237] Derrida, *Truth in Painting*, 9. Parergon is a Greek word literally meaning, "beside, or additional to the work" from Rafael Schacter, *Ornament and Order: Graffiti, Street Art and the Parergon* (New York: Routledge, 2014), NP.

[238] Kieran O'Halloran, *Posthumanism and Deconstructing Arguments* (London, New York: Routledge, 2014), 50.

[239] Groys, *In the Flow*, 174.

become a mediating space for what is shown, to whom it is shown, and why it is shown. Just as viewing art in an austere gallery changed the viewer and the art that was exhibited, so too does digital viewing begin to exert similar powers to modify art, artists, and audiences.

Viewing art has always been about passing through filters, through mediating influences, and through defining contexts. The physical act of going into a museum, with its security, admissions desk, fees, and sense of exclusiveness, creates a frame of meaning and layers of "frame" or parergon, as Derrida suggests. And as Derrida demonstrates, it is in these surrounding frames that much can be understood about the central object.[240] Investigating and interpreting these frames sharpens focus on art. Understanding how they influence art is a powerful act.

To view art requires fortitude, endurance, funds, and bravery. For many, it is too much. And for them, perhaps, the structures, the supports, the frames of other forms of art consumption might seem less dense. For some, going to an immersive experience held, not in a museum but in a casino, or a conference centre, or a theatre, or going online to peruse a website might be the contexts that provide entry to art, or art-related topics. Regardless, this thesis is part of the ongoing work to understanding what new mediations the digital creates after centuries of understanding the structures that surround art in a museum.

c.   The Tower of Babel and Derrida's deconstruction

Derrida's deconstruction is also an excellent way to finish off an examination of the mediating influences of the frames of art. Derrida summarized deconstruction, (though summarizing was not something he preferred to do), with this phrase: "Deconstruction only has one rule: allow the other (what is different, the not-me) to speak."[241] One might look at the state of art on the internet today and say that everyone is speaking. The social media platforms, the influencers, the institutions, are all trying to speak over each other. Perhaps society is so "deconstructed" that we have returned to what Jonathan Haidt sees as a new,

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[240] Simone Heller-Andrist, *The Friction of the Frame: Derrida's 'Parergon' in Literature* (Tübingen, Germany: Franke Verlag, 2012), 11.

[241] A quote from Martin McQuillan in: Kieran O'Halloran, *Posthumanism,* 52. From M. McQuillan, 'Introduction: Five Strategies for Deconstruction', in M. McQuillan (ed.), *Deconstruction* (Edinburgh: Edinburgh University Press, (2000b)), 1–43.

"tower of Babel". Haidt suggests that the Biblical story of the famed tower, in which the peoples of the world came together to build a city, with a tower that attempts to reach God, very aptly applies. God responded that if:

> … they have begun to do this, then nothing they plan to do will be impossible for them.   Come, let us go down and confuse their language so they will not understand each other.' So the Lord scattered them from there over all the earth, and they stopped building the city.[242]

Haidt believes that social media, around the year 2010, changed its systems architecture to become potently viral. The systems of "likes", "retweets" and "share" that were created, enabled rapid polarization, especially in the United States. And, like the Tower of Babel, people stopped understanding each other and became virtually scattered.[243] Users began to see only that which they "like"; echo chambers formed; and anything oppositional ignored or unseen.

Derrida's hope for deconstructionism – that "others" would be given opportunity to speak — had been happening online up until the change in the systems architecture. As people have become more isolated from each other though, there is no one left to listen. Derrida did not foresee the inversion of the internet of free speech to again return to a space where only a few would speak, to become solidly once again the domain of the loudest, the wealthiest, or the whitest.

Deconstruction is a wonderful tool for asking difficult questions and for prompting deep examination into concepts, the never-ending "why". However, in our profoundly transactional, highly individualized present, the answer to "why" is usually, "it makes money", and we are left open to fragmentation, to an actual, real loss of understanding – of each other and of the issues that others face. I cannot tell how many times I have tried to turn away from Instagram, exhausted by the frantic, hyperbolic amplification of a surplus of issues. So many things demand my eyeballs, my attention, my sympathy, and my concern, that I am overwhelmed. The unusual, paradoxical thing, though, is that there are competing

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[242] From the Bible, Genesis 11:1-9, New International Version.
[243] Also discussed in section Chapter 3, section 6. Jonathan Haidt, "Why the past 10 years of American life have been uniquely stupid", *The Atlantic*, April 11, 2022.
https://www.theatlantic.com/magazine/archive/2022/05/social-media-democracy-trust-babel/629369/ .
[Accessed August 1, 2022].

inward desires to both turn it off and also keep scrolling. And that is something rarely said about print media.

9. The new, digital context for art imagery

Intriguingly, the historic, stacked art of the salons and the single object in the white gallery still exist in some way when the object is online and digitized. It is possible that when the art image is isolated on a museum's website, there is something of its origin as a wall-hung art object. It stands alone, to some extent, accompanied by text, and overseen by all the systems of the institution. Many curatorial decisions went into the hanging of the art and some vestige of that may remain when items are uploaded into "online exhibitions". Yet, one is the art object, original, contextual to the space of artwork; the other is an image of it, a product of it, a document of it, placed in another, independent space. Furthermore, as that image goes on to be disseminated by social media it joins the tide of imagery in which social media images swim, with almost all of the institutional context and well-understood mediation, swept away.

Even museum workers tend to rank museum objects in a hierarchical way, placing the physical object above the digital object in importance. This leads the author of one investigation to suggest that there should be work done to separate and appreciate each individually.[244] But doing this further entrenches the belief that the two things are no longer representative of each other; each has formed their own sphere of influence and need to be treated individually. If so, then each requires planning, curation, and ongoing budgeting, all of which make it, in effect, double the expense. Moreover, were there to be funding for digital objects, I would argue that the emphasis should not be on considering these as museum objects but rather as research and educational supports for the physical and material cultural objects. This privileges the way that digital objects function best and how they are best understood and understood by the largest number of people.[245]

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[244] Nicole Meehan, "Digital Museum Objects and Memory: Postdigital Materiality, Aura and Value", *Curator,* 65(2022): 417-434. https://doi.org/10.1111/cura.12361.

[245] See the literature review for the mountain of research available on pedagogical use of digital museum resources compared to exhibitions of digitized art. A quick Google search offers up 209 million responses to "digital art exhibitions" while "digital art education" yields 1.56 TRILLION possibilities. It is not a scientific experiment but still a telling result. [May 16, 2023.]

Therefore, a digitized image of art cleaves it from its material art object and the physical space of the museum. It is no longer the thing that a museum holds. Malraux wrote of the power of the museum to create art out of religious, Romanesque sculpture, in most cases divesting objects of their function.[246] The museum's power to recreate an object, endowing it with new features and meanings is now done in and by the digital sphere away from the museum. When art is online, the transmission of art is not in the space of the museum but in the space of the internet, subject to technological controls and digital economics. The image comes to be contextualized by the *space* in which it is viewed as much as in any formal examination of the artwork as a "pure, isolated" object. The digital medium is remaking art in the similar ways to the white cube galleries of the last century. The digital space affects art by removing it from its original context and space. It changes the "frame": how the art is viewed, where its boundaries lie, and how it "plays" with the art and objects around it.

10.   Digital space and the museum

    a.   The digital as a non-place

If Jonathan Haidt provides a way to think about the internet sociologically — how it feels for humans — another way of thinking about the digital space is to consider it geographically or spatially as a non-place. According to the anthropologist Marc Augé, writing in the early nineties, non-places include airports, shopping malls, and highway restaurants. They are defined as spaces without identities and where those moving through share minimal social and referential commonalities. There is a lack of history, of shared experience, a place we do not live in, but rather pass through. There is anonymity. "A world thus surrendered to solitary individuality, to the fleeting, the temporary and ephemeral".[247] Another characteristic might be loneliness, though Augé is careful not to judge. So, despite not interrogating the digital at all, Augé's view of non-places accurately describes life on the internet at present. It, too, is anonymous, a criss-crossing of individuals without anything to unite them, a lack of shared identity. For example, museums share and tour large exhibitions that journey from place to place. These shared "shows" give them a collective identity and may damage the distinctive

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[246] Malraux, *Museums Without Walls*.
[247] Marc Augé, *Non-Places: An Introduction to Supermodernity*, trans. John Howe (London, UK; Brooklyn, US: Verso, 1995), 63.

character of any one museum by diminishing a sense of cultural and geographic singularity. Similarly, the internet, as a "non-place" and art placed into can become bland, inconspicuous, and obscured from its place. It is much harder for a museum to have a presence, to find one's target market, to have a message that is clear, concise, discoverable, and controllable online.

b.   Museums and digital copies

Many treat the internet's stuff as mostly freely accessible, and this notion also affects museums. When museums post digital images of art from museums online or on a social medium platform, the images may be screen-captured, altered, and saved for other uses, much to the consternation and even panic of museums. These institutions have spent generations invested in locking down both the original art piece as well as its photographic reproductions. Museums have been notoriously stingy with duplication rights until the very recent past. It is in large measure thanks to a worldwide pandemic that more institutions have put high quality images on their websites, in order to continue to be present to their viewing public. But this has never been their instinct. It has been quite common to search out an artwork online and find that its home institution is not in the top search results. And the images posted may range wildly in colour, size, quality, and origin, making it difficult to determine what the original may be like. So, the move of museums to put higher quality, more accurate images of their artwork online is a welcome one for researchers, teachers, and the casual internet looker.

c.   Museums early experimentation with digitization: a brief history

When it comes to nurturing the idea that art imagery can move to an online environment, there are some American institutions with far-reaching influence working with mostly American museums.[248] Various groups fund both the digitization of art imagery and produce scholarly publications analyzing the shift. The Andrew Mellon Foundation encouraged the publishing of art historical information to online platforms, with grants going back to 1994, when they financed the investigation of digitizing images to an electronic space.[249] Very

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[248] Note, though, that these initiatives have been for digital catalogues, not for websites nor for social media investment.
[249] The Andrew Mellon Foundation. https://mellon.org/grants/grants-database/grants/association-of-art-museum-directors-educational-foundation-inc/39800607/

quickly they joined the launch of *ARTStor*, which, along with other partners, brought high quality art images online.[250] The Getty Foundation[251] has also been subsidizing investigations in art history research and preservation since 1984,[252] and those involving digitization and digital study since 1997.[253] Under the Getty Foundation's umbrella, the Getty Research Institute has also supported the growth of digital art history through onsite research and the hosting of scholars since approximately 2010.

The Getty Foundation also launched the "Online Scholarly Catalogue Initiative" (OSCI), in which money was given to nine major American museums to launch digital catalogues from their own collections. From 2009, these nine groups worked together to determine what this would look like, what challenges would need to be overcome, and what the future might look like for digitized art collections.[254] By the time the reporting period ended in 2017 and the report filed, the museums were fully committed to the idea and execution of online catalogues for their collections. This final OSCI report is a cogent and clear blueprint for how to create online catalogues as well as a pivotal contribution to the advancement of the publication of digital catalogues within museums. These are cohesive *catalogues* though, more akin to their book counterparts than website "collections" or digitization for social media.

> d.   Digital image licensing

As digitization became more common over the last twenty years, museums hoped to increase what had been a small part of their income — providing imagery for licensing purposes — to make more money from digital image licensing (DIL). This has not come to pass. The work and money required to digitize and then administer the process has never yielded much income for museums. One study suggests that those museums that focus on providing medium resolution imagery for educational purposes, allowing scholars full access to 300

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[250] ARTStor, https://www.artstor.org/about/mission-history/

[251] It is important to establish that there is a difference between "The Getty Center"- which includes Getty Museum, Getty Research Institute, and Getty Research Foundation, all of which are not-for-profit organizations, originally endowed by John Paul Getty; and the entirely separate, corporate, "Getty Images" which was documented in an earlier footnote.

[252] The J.Paul Getty Trust. http://www.getty.edu/foundation/about/

[253] The J. Paul Getty Trust. Online Grant Database. http://www.getty.edu/foundation/grants/?query=%22Digital%22&page=3&rpp=50

[254] Getty Foundation, "Museum Catalogues in the Digital Age." *A final report on the Getty Foundation's Online Scholarly Catalogue Initiative*, 2017. http://www.getty.edu/foundation/initiatives/past/osci/osci_report.html

DPI quality, while limiting any other sort of use, may be the best. It gives the museum a positive reputation but slows high resolution imagery flowing out to the internet and then on to companies that create merchandise that rivals the museums' own.[255]

> e.   The digital image is/is not the art object

Digital reproductions of art may cause people to confuse or elide the categories as noted earlier with the archive and the digital image of the museum's collection. Certainly, advertising, editorials, writers, and viewers may not think about, or care, if they refer to the digital image as the art itself, or as something which is part of the museum collection. In July 2022, for example, the *Globe & Mail* published an article about the debut of an immersive Van Gogh show in Atlantic City's Hard Rock Casino. The article hails this as another step toward entertainment venues showing fine art to the patrons, "putting eyeballs in front of some of the world's great works of art". It then goes on to describe a 30 000 square foot display of more than 300 of Van Gogh's works, digitally reproduced and projected onto screens, walls, and floors. The exhibit's art historian hopes that this brings in people who are usually intimidated by museums to rather experience art in this way. The article describes what the exhibit of the digitally reproduced Van Gogh is like, and the next paragraph begins with:

> Other casinos are doing likewise. The Bellagio Gallery of Fine Art in Las Vegas has displayed works by Picasso, Monet, Warhol, Titian, and Van Gogh. The Palms Casino Resort features modern art pieces from Jean-Michel Basquiat, Richard Prince, and Andy Warhol… MGM… Antony Gormley, Richard Long and Henry Moore…[256]

There is no discernment made between the digitally immersive experience as a reproduction, in fact as a new production of work *using* art inspired by Van Gogh, and the actual, real, physical Van Gogh, et al., that hang on the walls of hotels and casinos. The original or new parts of these new digitally immersive experiences may be in the technology they use, but it is not new works of art they are projecting. It does not support artists working at present. They are recycling reproduced images now in the public domain, meaning they do not have to pay artists' fees.

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[255] Patricia H. Huang, "Managing Digital Image Licensing Services in Art History Museums", *The Journal of Arts, Management, Law and Society*, 50:45 (September 2020): 220-233.
[256] Wayne Parry, "Beyond buffets and slots: Casinos turn to fine art", *The Globe & Mail*, July 12, 2022.

Further, the word "exhibit" is also used, normally referencing original artwork hanging/ displayed, not commercial productions and projections of those pieces. It is a surprising and yet unsurprising conflation between two different things and further emphasizes that digital reproduction is more easily "confused" with original art. People do not consider them differently and separately. Another excerpt from the article observes:

> The Hippodrome Casino in London in 2013 appointed a digital artist in residence… Many guests are intrigued once they realize the breadth of the collection… it helps create new art lovers… maybe the next time they are in New York they'll want to… see the actual Starry Night… That will be a win.[257]

There is an illogical treatment of what is original art by this article's writer and in the quotes from the hotels' curators. It seems that the even the hotels' curators do not discriminate between digitized entertainment referencing traditional art — created for commercial purposes — and original artwork made by an artist. Like Malraux creating beautiful new art books, the digitally immersive experience seems to generate a new category. Malraux saw himself as a publisher, a designer, and wanted to create an accessible way to create a "collection of art" for the average person. Walter Grasskamp writes that, "Malraux could rightly claim that his *musée imaginaire* marked a paradigm shift for traditional modes of collecting".[258] Malraux was intrigued by reproductions and their "liberation from location", bringing photographs of art, altered, enhanced, and paired for comparative purposes, to viewers. Malraux understood the allure of the unpretentious art experience, the "un-museum" experience of an art book. He also understood the moneymaking possibilities in a series of subscription art books.

Further, merging the experience and museum and/or the experience and the art can create an "attractional" component for the technology. Elisa Mandelli credits Tom Gunning and André Gaudreault for creating the concept of "attraction".[259] They define the cinema of attractions as "a cinema that displays its visibility" and go on to say, "the cinema of attractions directly solicits spectator attention, inciting visual curiosity and supplying

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[257] Ibid.
[258] Grasskamp, 4.
[259] Tom, Gunning, 'Attractions: How They Came into the World', in *The Cinema of Attractions Reloaded,* ed. Wanda Strauven (Amsterdam: Amsterdam University Press, 2006), 31–40. As seen in: Elisa Mandelli, *The Museum as a Cinematic Space: The Display of Moving Images in Exhibitions* (Edinburgh Studies in Film and Intermediality. Edinburgh University Press, 2019), 79-80.

pleasure through an exciting spectacle." This attraction provides pleasure based on shock and "strong "sensations…engaging viewers on an emotional and embodied level, stimulating visceral and sensory reactions.""[260] Mandelli wonders though if this movement to experience over knowledge-based visitation in the museum privileges the affective and emotive experience over the rational dimension.[261] Hooper-Greenhill further suggests that this onslaught of the senses diminishes personal interpretation in favour of an emotional one, silencing questions, and quelling debate. She even wonders if this, in an inverse move, restores the museum's authoritarian voice. Visitors fall quiet to the overwhelming expression of [Gunning's] "attraction".[262]

This echoes Guy Debord's concept of the "spectacle". Debord writes that society becomes impoverished as interactions between people are mediated and administered by capitalistic processes which cause divisions between labour expended and good produced. Pursuit of spectacle diminishes thought and leads to a loss of the concept of critical reality. It also separates us from each other.[263] The spectacle of modern society and its capacity to "amuse ourselves to death" leaves us incapable of voicing opposition.[264] Hilde Hein has real concerns when the success of an endeavour is measured by the intensity and seeming reality of the experience — how entertaining it is — rather than something deeper like awakening analytical thought.[265] I imagine there is also a threat to the museum's existential reason for being when in pursuit of experiential and immersive art exhibitions they begin to mimic their own imitators. Confusion arises with and among iterations of real Van Gogh art, or immersive Van Gogh experiences, or real Van Gogh artwork with added technological features, and so on. The museums' only goal becomes entertainment and "experiences". To be entertained becomes the only real goal for its visitors.

Robert J. Stein uses the analogy of three poles to describe the mission of the museum as he sees it at present. First is the educational pole, the long-standing, historical mission of the

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[260] Elisa Mandelli, *The Museum as a Cinematic Space…*
[261] Mandelli, 78.
[262] Hooper-Greenhill, *Museums and the Shaping of Knowledge*, 214.
[263] Guy Debord, *Society of the Spectacle*, trans: Ken Knabb (London: Rebel Press, 2005), 6-8.
[264] A reference to the title and subject of Neil Postman's book, "Amusing Ourselves to Death". Neil Postman, *Amusing Ourselves to Death: Public Discourse in the Age of Show Business* (New York: Penguin Books, 1986).
[265] Hilde S. Hein, *The Museum in Transition: a Philosophical Perspective* (Washington: Smithsonian Institution Press, 2000), xi.

museum. Second comes the marketing and popular experience – entertainment – that modern audiences require. Third encompasses the scholarly, research base of the museum. Stein suggests that museums too often swing wildly between the three, rarely getting the balance right.[266] Adding in the digital I would advise, does not establish a fourth pole but is rather a method that overlays all three. Unfortunately, it can skew understanding of the three missions noted above, overly emphasizing "the digital" as a goal, rather than as an ongoing tool to aid the other three.

Chapter 2
Branch B: the digital copy of an artwork moves out in the world as a representative of the museum

1. The digital immersive experience

Digital reproductions of artworks move out into the world in ways both familiar (repurposed on t-shirts, posters, and calendars to make money) and less familiar. Immersive art experiences are created from traditional artists' works and include lavish productions of the pieces by Van Gogh, Paul Cezanne, Claude Monet, and Gustav Klimt. In 2022 alone, Canada had three touring events devoted to Van Gogh, generating confusion as to which one purchasers bought tickets for and forcing a few to amalgamate.[267] There are also immersive experiences for Frida Kahlo, Claude Monet, and Pablo Picasso. All of these are created by private corporations and all of them cost a lot of money to attend.[268] As the CBC noted, "Sometimes there's the option of taking drop-in yoga class, sometimes not. But spectacle and light edu-tainment are all but guaranteed."[269] Digital images of artists' works are projected onto walls, floors, screens, and ceilings.

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[266]Seph Rodney & Robert J. Stein, *The Digital Future of Museums: Conversations and Provocations*, eds. Keir Winesmith & Suse Anderson, (Abingdon, Oxon: Routledge, 2020), 31-32.

[267] Leah Collins, "Baffled by all the immersive art exhibits happening across Canada? Here's a guide for you*", CBC Arts,* May 18, 2022. https://www.cbc.ca/arts/baffled-by-all-the-immersive-art-exhibits-happening-across-canada-here-s-a-guide-for-you-1.6457865. In the US, in January 2022, there were five companies touring a Van Gogh event: *Beyond Van Gogh: The Immersive Experience*; *Van Gogh: The Immersive Experience*; *Van Gogh Alive: The Experience*; *Imagine Van Gogh*; *Immersive Van Gogh*., "Immersive Van Gogh exhibits paint a new way of experiencing art", *PBS NewsHour.* https://www.youtube.com/watch?v=kq4lf2rswEw&ab_channel=PBSNewsHour. [Accessed June 8, 2022.

[268] Thirty to 40 dollars per person for *Immersive Klimt* in Toronto in June 2022. https://www.immersiveklimt.com/toronto/#about

[269] Leah Collins, "Baffled by all the immersive art exhibits happening across Canada?"

Malraux cut the reproduction loose from its original so it could become a new way to combine and reproduce traditional art. The producers of digitally immersive experience may be said to do something similar. Like Malraux's art books, the digitally immersive experience might also feel more accessible for those who are disinclined to go into a museum. Perhaps it feels less pretentious – more like a movie than a trip to a cultural institution. The desire to mount these experiences, and their success, may also be related to the pandemic. After two-plus years of isolation and constant interaction with personal-sized screens, there are many people who want to do things, who want to see things, and who want to be in experiences with greater numbers of people. When it seemd that everything done was a two-dimensional encounter – communication, relationships, work, study, worship, funerals, weddings, celebrations, entertainment – on a screen, the urge to be immersed in anything can only grow. Though it might seem like seeking out yet more immersion in screens, we leave our homes to find entertainment, crowds, and things that not only capture our eyes, but also moments that immerse our ears and our skin and, probably soon, our sense of touch and smell, in new experiences. Alongside text, music, and swirling colours, the question I have been asked, and certainly ask myself is, what is its effect or interaction with, traditional artwork?

The companies creating these, like Malraux did, take "old" art and seek out ways to make it feel new, approachable, and contemporary. They also figure out ways to make money from it. Will people who go to them then feel compelled to go see the art that inspired the immersive experience? Will they want to go to a museum of any kind? Very little research has been done on this, but it seems, by anecdotal evidence, to be unlikely. It is a new way to be entertained, to see an interpretation of art that is appealing to our digital age. For a (hopefully) post-covid people, who have spent a lot of time staring at screens, it can simply feel good to now leave the house and be immersed, with others, in something that has colour, sound, text, and motion. Perhaps it is its immersive effects that make it so beguiling. One can share in it with friends in a similar way as going to a movie together. All the senses are

engaged, the encounter is relatively short, the information is bite-sized and easily absorbed, and then it is over.[270]

The digitally immersive experience, like Malraux's artbook, might be seen as simply a new form of reproduction, like streaming a Moliére play, or playing a Beethoven sonata through a speaker at home. It reignites an old form and there are no concerns about those kinds of re-presentations of theatre and music (except when the form fails to convey the artistry/ content/ creativity imagined of the original). However, art historians and art's elite seem to demand that visual art remain in its original form, untouched, aura intact, the space and time across which it has travelled subsumed by the singularity of the art.

Perhaps it is because, as Michael Ann Holly imagines it, art is one of the few things, unlike original music or theatre performances, that historians can study that comes to us from another point in history. Art is "as materially present in this world as it was in the world from which it came."[271] This lends the art a melancholic air, she argues, "what we encounter there is the living, pulsating afterlife of the past."[272] Whether you are captured by that romantic argument or not, there is no doubt that art suffers, or is advantaged by, its continuing existence. Much of the treasured, classic music survives as notations on a page. Original folios and codices live on in museums and archives as original objects from another age and for bibliophiles are an object of veneration. Still, we "allow" that both of these forms can be easily and comfortably copied and distributed, but the power of the original (and the dismissal of copies) hovers over art. Moreover, the artwork is already the product, in comparison to a play or music which must be performed in order to become a product. Duplication of a performance transmitted to an audience of many is expected. Books are also meant to be reproduced and disseminated. Artwork is singular and generally reaches a single person or small group of people at any one moment. This limits an artwork's reach. Digitally immersive experiences create performance and duplication out of a single artwork, bringing it more in line with the expectations of a theatrical or musical reproduction.

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[270] Again, it must be noted that these experiences are expensive. Some complain about the cost of going to a museum, but in London, Ontario, *Museum London* is free, while the Van Gogh immersive experience ranges from $25 to $40 to see the thirty-five-minute video, depending on time of day. (As of November 2022.)
[271] Michael Ann Holly, *Melancholy Art*, xi.
[272] Ibid., xiii.

In art, though, the singular object remains. The original is still present, somewhere in the world. One cannot go see Shakespeare perform at the Globe Theatre in London, U.K., nor sit with Mozart while he plays his compositions on a keyboard. But it is possible to go to a museum to see a Van Gogh. The two – the digital copy and the original – continue to exist in the same time. Comparisons of like with reproduced-like occur in ways other art forms do not allow. Perhaps it is like seeing a band or singer live compared to listening to the "same" music coming from your home speaker or earbuds. They are such different experiences as to be incomparable — though some will prefer one over the other and sometimes the music will lend itself to one medium or another. It could be that one enhances the other — each one adding to the pleasure of the music as a whole. Perhaps it is the same for a digitally immersive experience and original art: they are very different things and must be considered in tension or even in relationship; one complementing the other.

Arthur Danto suggests that art is "embodied meaning" but, crucially, adds that it is the audience that brings the interpretation. He suggests that it is only in how *it is received* that any sort of term "art" can apply: it is the viewer that activates an object into art. The viewer brings understanding, through the contextual and cultural knowledge, to the embodied meaning the artist sought. These processes produce art.[273] Hermeneuticist J.D. Hirsch considered that *meaning* emanates from the intention of the writer/artist and is static. Then the *significance* comes to the work via the reader/viewer. It is in the bringing of personal associations like values, concerns, and perspectives of the reader/viewer that significance increases and changes across time. According to Hirsch, the reader/viewer must be aware of both these things — objective meaning and personal, subjective significance — as they interact with the work.[274]

Consequently, immersive experiences lack that artistic 'meaning'. Unlike the traditional art space, there is no singular artist behind them bringing a novel idea and proffering this as the best way to express the concept. It is an amalgam of technologies, designers, and a production company playing with older art to put it into a form. For argument's sake, it is

[273] Arthur C. Danto, *What art is* (New Haven and London: Yale University Press), 128-133.
[274] Vincent Leitch, "Introduction to Theory and Criticism." *The Norton Anthology of Theory and Criticism*, ed. Vincent Leitch (New York: W.W. Norton & Co., 2001). 19-20.

interesting to muse whether Van Gogh might have used video had he lived one hundred years later. He may have revelled in the capacity to convey the roiling expanses of skies in a medium that captures motion.[275] It is arguably possible to say that some of his hopes for his paintings are newly communicated by this reinvention. However, art is also about the interaction of the artist with a medium that the artist best feels expresses their concepts at that time then a digital immersive experience does not do that.

Robert Smithson, the land artist, understood that if he were to layer in technology from the start, considering both the "original" and the way it would be documented as part of the artwork itself, his artwork would contain concepts that "move" across time into the future. He used this idea in his creation of large artworks placed in nature, like *Spiral Jetty* (1970). He wanted there to be evolution and decay in the pieces, allusions to the scientific notion of entropy, to which he referred in his 1966 paper, "Entropy and the New Monuments". Smithson appreciated and used the effects of time that the law describes.[276] Additionally, he comprehended that photographing the pieces were, and would continue to be the way that most of the public interact with his art, giving access to pieces that were quite remote and difficult to reach. He believed that the photographs were, in essence, a part of the work. As one writer puts it, "Smithson's goal both for radical art and for himself depended on the dissemination of ideas via the printed page, through writings, photographs and film."[277] All of it was a part of the concept and all of it expected to travel out into the world. Cunning and prescient, he grasped that in the modern age a sculpture in the middle of nowhere could have a life separate from itself, through reproductions and other simulacra, which is how most people would see the work. This gap between the real world and its translation into a gallery via photographs, maps or whatever became an abiding theme.[278]

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[275] Van Gogh, according to letters to his brother, appreciated the motion of turbulent skies, particular colours of skies and fields, and the enormity of landscapes. *Letters to Theo Van Gogh*, No. 898. https://vangoghletters.org/vg/letters/let898/letter.html

[276] John G. Hatch, "Nature, Entropy, and Robert Smithson's Utopian Vision of a Culture of Decay", *Meanings of Abstract Art: Between Nature and Theory*, eds: Paul Crowther & Isabel Wunsche (NY; Abingdon, U.K.: Routledge, 2012), 158-159.

[277] Michael Kimmelman, "Sculpture from the Earth, but Never Limited by It", *New York Times,* June 24, 2005. https://www.nytimes.com/2005/06/24/arts/design/sculpture-from-the-earth-but-never-limited-by-it.html

[278] Ibid.

This "additional" material is both art and about the art in some circular and expansive fashion. The artwork becomes a chain of consequences. In their book, *Re-Collection*, Jon Ippolito and Richard Rinehart propose that art is launched into the world where things will happen to it and with it. Stories will be added to its original story. They write,

> The artwork has always been not just a piece of pure paint and canvas but a thing inset into history, place, and events. It belongs to a flow of time enacting upon it, changing with ownership, storage, story, and viewer. The artist begins with an idea and sets it into the world to convey that idea but almost immediately, these other things layer themselves upon it and…art changes from a singular object to a series of events.[279]

Jorge Luis Borges also examines reproduction or re-imagination of an old art in his short story, "Pierre Menard" (1935), in which the narrator eulogizes his colleague, Pierre Menard. Menard hasattempted to write *Don Quixote* by thoroughly immersing himself in the time of Miguel Cervantes (1547-1616) and then writing the novel as if for the very first time.[280] The passages quoted from the *Quixote* that Menard writes turn out to be identical to passages from the original, but the author assures us that we are reading an entirely new version.[281] Borges is playing with what the reader brings to the "new" version. To read Menard's words, understanding that he is a twentieth-century writer who went to great lengths to place himself in the seventeenth century, *Quixote* feels like a very well executed work of historical fiction. Cervantes' original novel, *Don Quixote*, by comparison then, is the reflection of a man from his own time. The intervening three hundred years, therefore, do not change the words, they change the reader. More importantly, what changes are the reader's understanding of who the author is, what the author brings to the words, and when the author wrote the words. When reading anything, certain things are assumed about the context and chronology of the author – things that have influenced the work held in the hands at that moment as a finished manuscript.

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[279] Jon Ippolito, Richard Rinehart, *Re-Collection* (Cambridge: The MIT Press, 2014), 11.

[280] Jorge Luis Borges, "Pierre Menard, Author of the Quixote", in *Collected Fictions* (trans. Andrew Hurley, London, UK: Penguin Books, 1998; original: *Historia universel de la infamia*, Emece Editores, 1935), 88-95.

[281] *Don Quixote* is a wonderful and ironic choice for Borges to choose to examine reproduction, copies, and translation. According to Angela Ndalianis, Cervantes, in his own time, played with a blurring of fact and fiction, the copy and the original, issues that were of interest to his sixteenth century readers at the dawn of the modern era. Technologies like the printing press and a movement from the country to the city transformed society. Cervantes' novel took on some of these new challenges. Angela Ndalianis, *Neo-Baroque Aesthetics and Contemporary Entertainment* (Cambridge, MA: MIT Press, 2004).

To return then to Smithson's *Spiral Jetty*, the artwork is no longer the "same words". The artist is both Cervantes AND Menard. Smithson's *Spiral Jetty* is both art from 1970, and the photograph I see of it in a gallery in 2022. It is travelling across time, with the "original" decaying in its place, as Smithson had imagined it, but able to tell multiple stories across time. Smithson messes with Hirsch's theory of a fixed authorial intent because Smithson's intent is that the artwork continue to restate itself across time and space – to be constantly rephotographed as a part of the work, engaging new modes and new audiences into the future.

The original works of Van Gogh, like Cervantes' *Quixote*, contain and transmit their historical era. They conduct into the present the world in which Van Gogh painted, the supplies available for him to use, the styles, the themes, and the landscapes of that time. That information is in mind when peering at his paintings. But then, unlike the Menard version of *Quixote*, digitized Van Gogh works demonstrate the intervention of time by using a contemporary lexicon. Digitally immersive experiences imply that more is required. They indicate, it seems, that traditional art cannot newly speak to twenty-first century minds. It is as if the production companies assume that our senses are accustomed to the colours, light, motion, sound, and speed of visual culture, and indeed, now *require* an immersive experience to appreciate art from another time.

Again, this contrasts with the "Pierre Menard" experiment. Borges considers that Menard, despite his efforts, ends up producing the identical thing because it is the reader who brings the difference. Borges proposes that everything about the novel except the words has changed so the words do not need to. A new time and new viewers create new understandings. Borges would probably advocate for going to a museum to see a Van Gogh because the present context brings the novelty and the freshness: everything around that piece of art has changed. The art will iterate or retell new tales, new ideas, and new concepts with each showing and with each person who interacts with it. Digitally immersive experiences take another route.

It seems that digitally immersive experiences are splitting into two separate things. One is art-based spaces, the other is entertainment-based experiences which use recycled or reinvented traditional art. There are now dedicated "immersion halls" — spaces given over to

a steady stream of immersive experiences. They are advertised as "the first experiential entertainment multi-plex, aiming to cultivate community and creativity through large-scale events and exhibitions of all art forms".[282] One Canadian company, "Lighthouse ArtSpace", is opening outlets across North America. In Toronto the venue is at 1 Yonge St., formerly home to the printing presses of the *Toronto Star*. Lighthouse ArtSpace promises to use the unique architecture of their different buildings and to highlight the history and surroundings of each site. These are, as the description notes, multipurpose places available to rent for one's own meeting, wedding, or party; or to purchase a ticket to see a rotating sequence of immersive experiences, from one about libraries to King Tut. This company does not make the immersive shows but rather purchases them from production companies mostly centred in Europe. Interestingly, the owner of the Lighthouse ArtSpace suggested that the future of his spaces, with these forms of entertainment, could change the way movies are made. He wondered how amazing "Mission Impossible" would be as an immersive experience, for example, citing how movies are now watched at home in a way that is very similar to how cinemas function. Thus, creating an immersive movie would draw people out of their homes to immersive movies. It is a three-dimensional IMAX for the twenty-first century. The owner is clearly interested in a future with films, citing the possibility of linking up with the Toronto Film Festival, hosting Steven Spielberg movies, or repurposing Hitchcock films.[283]

It is an interesting angle for him to take. He distinctly seems to see a future for the immersive experience in going after "moving pictures", not in necessarily continuing to use traditional art. Despite the almost endless source material found in traditional art that is now in the public domain, he suggests that more benefit, more excitement will be in viewing movies in an immersive way. It is a way to get people off watching movies on their own couches – which is very similar to theatrical experiences –and instead into his venues to watch a movie in which it could feel like full immersion. Does he think that two-dimensional art does not have the same longstanding allure as an immersive experience, compared to a movie? Or that one simply replaces the other? Will digitized art run its course as a lighted,

[282] Lighthouse Artspace, https://www.lighthouseartspace.com/artspace/toronto#:~:text=Toronto-,EXPERIENCES,exhibitions%20of%20all%20art%20forms. [Accessed June 20, 2023].
[283] "Persevering Despite the Lockdown: Interview with Founder of Starvox Entertainment", Lighthouse Immersive website, December 1, 2020, https://lighthouseimmersive.com/persevering-despite-the-lockdown-interview-with-founder-of-starvox-entertainment/ [Accessed August 2, 2022].

moving, textual, narrated experience and retreat to the gallery? Or perhaps there is simply not enough content, or enough of a narrative, or a sense of the curated experience of the museum exhibition to hold the public's attention for long. Perhaps there will be the realization that the curatorial oversight is missing; curation that can make certain exhibitions seem like the work of a genius - someone who brings together the unexpected, the unrelated, and the unknown to tell us a story. Much like what is seen in the movies.

a.   Digitally immersive experiences and their influence

Immersion halls take digitally immersive experiences further away from an homage to traditional art and toward entertainment, more broadly. They will continue to influence what artists make over the next years. Their clear success, along with the rise in popularity of experiential entertainment and experiential art, like that of Yayoi Kusama or Pipilotti Rist, means there will continue to be an increase in large scale, multi-media art. Indeed, as noted in the previous section, while immersion halls take it in one direction, whole museum spaces are given over to digital art, like *SuperBlue*, a corporately-owned museum in Miami, running immersive art exhibitions.[284] They are housed in an old industrial space with approximately 30 000 sq feet of exhibition space.[285] *SuperBlue* commissions well-known artists to create custom works for their spaces in Miami and London.[286] At present in Miami they have art by creator-superstars like Es Devlin, James Turrell, and *Pulse Topology*, an installation by Mexican-Canadian artist Rafael Lozano-Hemmer. Lozano-Hemmer has created an immersive biometric artwork consisting of 3,000 suspended light bulbs, each of which pulses and shimmers to the heartbeat of different participants (current attendees? Viewers? Previously solicited contributors? The description is uncertain). *SuperBlue* also hosts private events and has a café.[287] This seems to merge the immersion hall, in which works are leased for tour to landlords, and the museum, which commissions or purchases art.

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[284] Superblue, https://www.superblue.com [Accessed January 24, 2023].

[285] Daniel Cassady, "Experiential art space Superblue (finally) opens in Miami", *The Art Newspaper*, 20 May 2021. https://www.theartnewspaper.com/2021/05/20/experiential-art-space-superblue-finally-opens-in-miami

[286] *Superblue* London "quietly" closed its doors after only one A A Murakami show, in October 2022. The owners say they are looking for a different venue. Kabir Jhala, "After a single show, Superblue has quietly closed its London space", *The Art NewsPaper*, 11 October 2022 https://www.theartnewspaper.com/2022/10/11/after-a-single-show-superblue-has-quietly-closed-its-london-space. [Accessed May 17, 2023].

[287] Superblue, https://www.superblue.com/miami/ [Accessed May 17, 2023].

The line between what is a museum and what is an events venue continues to merge and part depending more on history and intent (mission and vision) than in actual execution. *SuperBlue*, is a private venture from the owners of PACE Gallery and began as PACEX. They admit that selling tickets is a way to make money from experiential, immersive, three-dimensional art, rather than selling art as is their practice through their commercial gallery.[288]

Other combinations of "art" and immersive experience are fledging. The Las Vegas/Los Angeles- based *Museum of Dream Space* franchises are, like *SuperBlue*, privately-owned, but do not show art so much as provides experiences for the sensation of immersion and opportunity for Instagram-worthy imagery. Self-described as "the first digital art museum in the United States", they have five rooms of lights, fabric, giant mushrooms, and a giant moon. One room does contain work by a named artist, Adam Rellah, of cartoonish characters with glowing eyes and pulsating, lighted lips. All of it, the assistant manager says, is inspired by Yayoi Kusama and the popularity of her mirror rooms.[289] It is interesting to note that it has a "manager" and not a curator.[290] This again suggests closer relationship to private galleries than to public museums, though Pace Gallery, for example, uses terms like "director" and "curatorial director".[291]

Stepping even further away from the traditional museum space, *Museum of Dream Space* seems to be part of a move to create spaces for Instagram opportunities, rather than being a "museum" in any sense of the usual term that might indicate it has historical objects, valuable or original art, and educational and research opportunities. Greater Detroit, for example, according to one website, has seven spaces, some called "museum" for the sole purpose of

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[288] Justin Kamp, "How Pace Gallery Helped Turn Experiential Art into an Industry", *Artsy.net,* Sep 3, 2020. https://www.artsy.net/article/artsy-editorial-pace-gallery-helped-turn-experiential-art-industry. [Accessed June 20, 2023].

[289] Jason Bracelin, "Dazzling digital art experience opens in Las Vegas," *Las Vegas Review-Journal,* January 29, 2021. https://www.reviewjournal.com/entertainment/arts-culture/dazzling-digital-art-experience-opens-in-las-vegas-2269087/

[290] These experiences are also not cheap. *Superblue* is up to $39 (USD) per adult, while *Museum of Dream Space* is about $50 with terrible reviews on TripAdvisor (1.5 on 22 reviews). Ten separate visitors describe it as an incredible waste of time and money at 10 minutes to see the whole thing. I was not able to visit their website as my security settings prevented me! I must also note that the internet and I were confused because, coincidentally, a University of Western Ontario professor Sharon Sliwinski, has launched an online project called *Museum of Dreams. Museum of Dreams* is a "research hub dedicated to exploring the social and political significance of dream life." https://www.museumofdreams.org/about [Accessed May 18, 2023].

[291] Pace Gallery. https://www.pacegallery.com/staff/ [Accessed May 18, 2023].

taking selfies/Instagram shots.[292] They are spaces with funky furniture, neon lights, signage, ball pits, colourful walls that provide backgrounds for photos. Terms like "immersive", "experience", and "museum" are used interchangeably to indicate what is simply an opportunity for lots of picture-taking and social media posting. The artist and the work of art, and the task of object storage and exhibition is removed entirely from them. I would suggest that it is the digitally immersive experience of artists like Van Gogh that opened the floodgates. Perhaps the power of the selfie and the Instagram-worthy photo would have driven the rise of these places but digitally immersive experiences opened the doors to selling imagery and spaces and the ability to charge a lot of money.[293] Digitally immersive experiences like Van Gogh further commercialize the act of attending a "museum", legitimize taking photography while there, and drive promotion of it on social media. It is a perfect storm of capitalization where the consumer does much of the work of supporting the business, advertising the business, and feeding social media platforms.

b.   Artists and immersive art

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[292] They are called: "Detroit Selfie Museum"; "Good Day Selfie Museum"; "The Pose Experience"; "Room to Grow Experience"; "Selfie Museum of Detroit"; "Selfie Shop"; and "Snapshots Selfie Studio". The last two names are probably the most honest. https://www.metroparent.com/things-to-do/attractions/selfie-museums-metro-detroit/ [Accessed May 20, 2023].
[293] The "selfie museums" in Detroit range from $20-40 USD per adult. https://www.metroparent.com/things-to-do/attractions/selfie-museums-metro-detroit/ [Accessed May 23, 2023].

Figure 8: Pipilotti Rist, *Pixel Forest*. Louisiana Museum of Modern Art, Copenhagen. Photo: Martin Sauter https://wordpress.org/photos/photo/57661e915c/

In comparison, some artists like Pipilotti Rist and David Hockney have been working with video and screens for decades in order to speak through current technologies. Swiss-born Rist has been making video art since the 1980s and has added in sound, light, and other material in an experimental way as these became possibilities. Some of her works resemble the current touring immersive experiences. For example, in *Pixel Forest* (2016) (fig. 8), she recreates the sensation of entering the screen to wander in a video image. Rather though than being directed by the all-powerful, surveiling forces "behind and beyond" the screen, the visitor chooses the path, the way through, the manner of understanding more independently. The twinkling lights simulate the actions of motor neuron pathways and synapses. "[L]abia-shaped lampshades strung on thousands of suspended wire strands" pulse as if reaching (female) orgasm, mimicking its undefinable, distributed, and unsited sensation.[294] Further, the "partnership of mind, eye, and hand – conception, envisioning, touch" that suggest an artist's work are also very much present.[295]

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[294] Anna Katz & Karlyn Olvido, *Pipilotti Rist: Big Heartedness, Be My Neighbor,* exhibition catalogue (Los Angeles Contemporary Museum of Art, 2021), 3. https://www.moca.org/storage/app/media/PDF/Pipilotti-Rist-Brochure.pdf

[295] An apt description of what painting is for the late New Yorker art critic, Peter Schjeldahl, but also a comprehensive summary of the requirements for any piece to be considered "art". Peter Schjeldahl, "The Polymorphous Genius of Wolfgang Tillmans", *New Yorker*, October 3, 2022. https://www.newyorker.com/magazine/2022/10/10/the-polymorphous-genius-of-wolfgang-tillmans

Rist creates these to ignite conversation about feminism, bodily functions, violence, and humour. She views video as a way to break down barriers, to highlight, expose, and pierce the slim membrane between inside and outside of the body, the home, and the conscious.[296] She has said that she wants her video work to be "like women's handbags, with 'room in them for everything: painting, technology, language, music, lousy flowing pictures, poetry, commotion, premonitions of death, sex, and friendliness.'"[297] While the art Rist creates makes wonderful photos, selfies, and social media likes, the main purpose for the artist is that the viewer is in them, experiencing them. In opposition, "selfie museums" focuses on the end product: the photo and the social media feedback.[298] Digitally immersive, commercial experiences lie somewhere in the middle. They offer both a spectacular "experience" and the dopamine hit of having people like your images on social media.

Figure 9: *David Hockney: Bigger & Closer* (*not smaller & further away*). Evening Standard, February 2023 *https://www.standard.co.uk/culture/exhibitions/david-hockney-bigger-and-closer-not-smaller-and-further-away-lightroom-new-exhibition-b1061952.html*

Speaking even more directly to the commercial, immersive experiences, in the winter of 2023, London, U.K. hosts an exhibition of David Hockney's work, entitled, *David Hockney:*

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[296] Katz & Olvido, 2022.

[297] Calvin Tompkins, "The Colorful Worlds of Pipilotti Rist", *The New Yorker*, Sept.7, 2020. https://www.newyorker.com/magazine/2020/09/14/pipilotti-rists-hedonistic-expansion-of-video-art

[298] "Looking for the coolest places in metro Detroit and Ann Arbor that are guaranteed to take your selfie game up a notch? "Selfie museums" have been a hit for years, and there's plenty of them to explore. A visit to one of these photogenic attractions allows teens and families to use bright backdrops and "like"-worthy scenes that are made to capture the perfect picture." *MetroParent.com*. https://www.metroparent.com/things-to-do/attractions/selfie-museums-metro-detroit/ [Accessed May 23, 2023].

Bigger & Closer (not smaller & further away). [299] (fig.9) There is a strong similarity to the digitally immersive experiences of traditional art already discussed. Hockney uses the concept to invigorate his own practice. This latest work will be projected onto screens in a specially designed, four-storey space. Additionally, his own words will accompany the 50-minute show. He also narrates his artistic process, which helps to understand "the way he looks at the world, and the way he understands art", according to the show's producer, along with the capacity to watch him painting, with a feeling of "real time".[300] Further, a composer has been commissioned to create music for the event.

Hockney was asked how he felt about the "other" immersive experiences, to which he responded, "'They are just using Van Gogh and Monet, and they're dead. They can't add anything to it,' he quips. 'Well, I'm still alive, so I can make things work better.'"[301] Hockney rightly indicates that nothing of the art or artist can be added on to a digitally immersive experience of Van Gogh, it is only on the technology side that innovation, creativity, and vision can be developed. The original artistic eye and imagination are long gone. Hockney has also always explored the latest advances, embracing the iPad when it was brand-new to create art on tablets for exhibition, so creating an immersive experience is, for him, an authentic expression of his own artistic research. He is engaged with the process of bringing his art to life in a new way.

Perhaps the comparison between digitally immersive experiences and immersive art in a museum can be summarized by seeing the former as a purely entertaining event. It happens to the viewer in a single direction — nothing is expected in response except enjoyment. Like fireworks it induces "ooohs" and "aaahhs" but it is not for the engagement of provocative thoughts and ideas, nor for expansion of minds to hear challenging rhetoric, alternative politics, or subversive countercultural messages. It is a shallow form of spectacle for amusement and commercial profit.

2.   Entertainment economy

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[299] T.F. Chan, "David Hockney to launch immersive art show in London in January 2023", *wallpaper.com*, November 25, 2022. https://www.wallpaper.com/art/exhibitions-shows/david-hockney-announces-immersive-art-exhibition-london
[300] Ibid.
[301] Ibid.

All these things, though, whether "artist-based" and in a museum, or a storefront in suburban Detroit, are part of what some call the "entertainment economy". We have moved from agrarian to industrial to service economies and beyond. Goods and services are no longer enough to satiate, "experiences" are required to add value. As B. Joseph Pine and James H. Gilmore write:

> To realize revenue growth and increased employment, the staging of experiences must be pursued as a distinct form of economic output. Indeed, in a world saturated with largely undifferentiated goods and services the greatest opportunity for value creation resides in staging experiences.[302]

From Apple stores to boutique hotels, offering basic service no longer suffices – there must also be something more, whether it is a "Genius Bar" or "heavenly beds". Even the climbing wall in an MEC (Mountain Equipment Co-op) store caters to an experience, recognizing it enhances value and lures customers. Joe Pine and James Gilmore use the example of the Geek Squad as a perfect illustration – from their uniforms to their vehicles to their visit to your home, they are engaged in providing an experience that tops (and expands) the service anyone else could provide.[303] And of course Disney has exemplified that for nearly 70 years.

Emerging technologies and rising affluence have also fueled this search for experience that adds to service. Pine and Gilmore write that experience has four realms: entertainment, educational, escapist, and aesthetic which combine to form a uniquely individual encounter.[304] According to that definition, the museum's mandate has always been to provide an experience, by virtue of its exhibitions, its space, and its ability to amuse, inform, divert, and transmit the visual. In the late 1990s and early 2000s, though, museums began to turn increasingly to attractions, to the spectacular: "a glittering, show-stopping monument or environment that would attract viewers to enter the more austere spaces of the traditional public gallery."[305] And now the demand is that it also be personal, individualized, and consumable. Seph Rodney wonders what this looks like when each visitor comes with a

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[302] B. Joseph Pine II, & James H. Gilmore, *The Experience Economy, Updated Edition* (Boston: Harvard Business Review Press, 2011), ix.
[303] Pine & Gilmore, xii.
[304] Ibid., 46.
[305] Lachlan MacDowall & Kylie Budge, *Art After Instagram; Art Spaces, Audiences, Aesthetics* (London; New York, NY: Routledge, 2021), 1.

societal pressure to feel like the "center of his or her solipsistic reality".[306] The museum must potentially overcome longstanding structural, administrative, and institutional conceptions to move forward, with new forms of curatorial practice, visitor engagement, and museum management in order to meet the expectations of visitors who anticipate a more personal encounter.[307] Rodney gives the example of the Tate Britain which, back in 2005, created a customizable "Create your own collection" campaign. This was before broad digitality and so they had brochures with twenty different tours each around different, amusing themes like "I'm hungover" or "I've just split up" and then direction to six appropriate works. Visitorship increased 22% in the first month and 50% over six months. Some expressed frustration at the loss of pedagogical and curatorial management since it was "imaginary" curation performed but attendance suggests this new form of customization works.

Today, the broad use of devices (mobile phones) allows for the sort of customization that the platform that the *High Museum* in Atlanta uses.[308] (fig.10) After clicking on "Plan Your Visit", there is another link through to "Heartmatch", a website which helps you decide on what to see by swiping right or left to indicate works you want to see or do not want to see. As each image appears, a swipe to the left responds with "nope", while a swipe to the right says, "liked". If it goes in the "liked" category, the next instruction is to "take a selfie with me and share it with #HighMuseum". Then you can "see your map" or "keep swiping". If you choose "nope" too many times, a prompt appears asking, "Are you sure? Maybe you would like me better if you saw me in person." And then more "Keep swiping". Finally, the map shows your chosen works for your personally designed tour.

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[306] Seph Rodney, *The Personalization of the Museum Visit : Art Museums, Discourse, and Visitors* (London; New York, NY: Routledge, 2019), 129.
[307] Ibid.
[308] High.org & heartmatch.org [Accessed May 25, 2023].
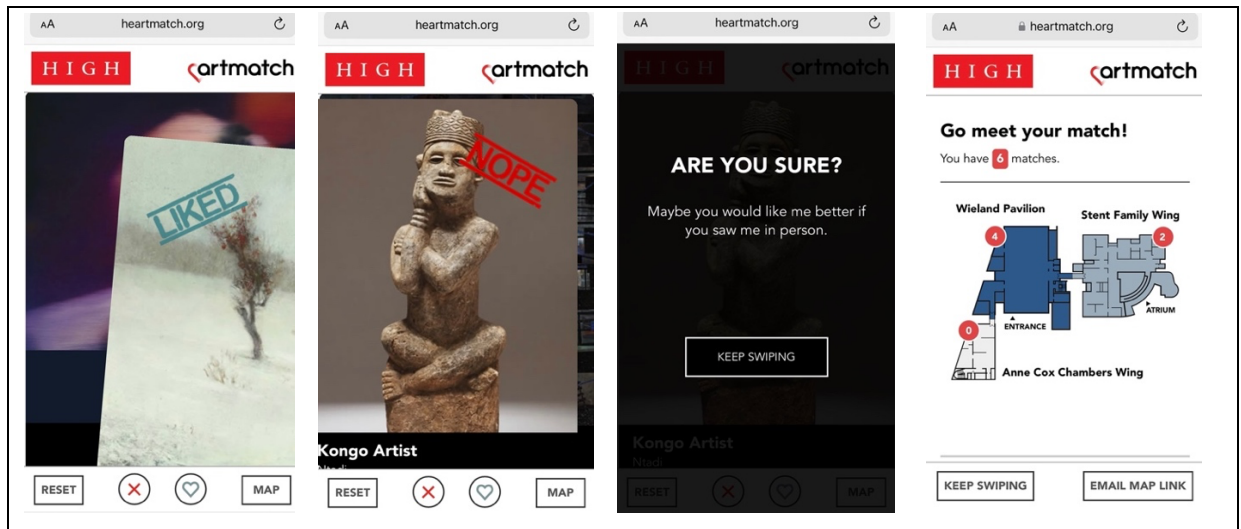
Figure 10: Series of screengrabs from the High Museum planning tool, heartmatch.org. Images are by the author.

This reduces the work of art to a small square on a device devoid of any sort of information beyond a title and artist's name. No size, scale, context, year, material, or info is provided. The decision to like or not is based on a momentary view. There is no doubt "snap" pronouncements are often made based on very little evidence. The point of museums, though, has been to provide insightful, thoughtful, measured, and deliberate interactions with art. Putting their art into apps like these seems to deliberately extinguish those long-held and meaning-making objectives.

3. Gamification

Beyond gratifying entertainment and individualizing impulses for the museum visitor, these trends also gamify art and art viewing. Like dating apps, swiping left and right quickly sorts and categorizes. In addition to the educational value of games in the gallery which have been acknowledged for some time now,[309] this digital game gathers information about the viewer with each motion of preferential left or right. This could be a way to allow you to see the art you wish to see in a museum, but it is also an acquiescence to further technological interference adding layers between visitor and art object.

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[309] Susan E. Edwards & David T. Schaller, "The Name of the Game: Museums and Digital Learning Games", *The Digital Museum: a Think Guide*, eds. Herminia Din & Phyllis Hecht,

Like so many issues, using digital tools like these produces mixed results. Some researchers suggest this is an excellent move for the museum to make, increasing in-person attendance, audience engagement, and educational value:

> No longer are museums expected to merely provide communication platforms to share collections, publish research and communicate with visitors; they are expected to go beyond traditional, analogue modes of museum practice, and respond to the movement towards participatory engagement. Web users are now active creators and participants in the development and analysis of available knowledge, rather than simply consumers of information.[310]

Others, as will be highlighted throughout this document, see a darker side to ongoing and deeper immersion with technologies. For example, it can feel like the work of comprehending an art object and its context falls on the visitor to the gallery, rather than to the knowledge holders like curatorial staff: "

> such [use] requires the individual to undertake significant cognitive responsibility over their own decision-making, often in areas that are not related to their expertise, while personalisation practices shapes and limit the information the individual is exposed to."[311]

It is time to turn particularly to the art image uploaded to the worldwide web. Some of the consequences already touched upon will be seen from new perspectives as the investigation moves away from a focus on the museum and toward a deeper investigation of social media and the life of the online image.

4.   The life of a digital copy: characteristics of digital photos of art online

Digitized images put up on museum websites further deepens all the issues that arose with photographic reproduction and more. It begins with the electronic medium in which the digital copy is hosted. From computer protocols to software algorithms to digital copying and digital ownership, each of these things influences how the digital replica is perceived by a viewer. Additionally, the transitory and inherently ephemeral nature of the digital medium works against the usually traditional nature of the physical museum. Where the institution imparts sensations of permanence, longevity, and authority, the internet tends to convey

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[310] Oonagh Murphy, "The changing shape of museums in an increasingly digital world", *Connecting Museums*, eds. M. O'Neill & G. Hooper (London; NY: Routledge, 2020), 203. https://doi-org.proxy1.lib.uwo.ca/10.4324/9781351036184
[311] Suse Anderson, "Some Provocations on the Digital Future of Museums", *The Digital Future of Museums,* eds. Keir Winesmith, Suse Anderson (London; NY: Routledge, 2020), 18.

temporality and obsolescence. This is especially acute when one thinks of where the digitized images of art may show up. Social media, especially the image-driven platform, Instagram, is the place of choice for museums and for artists to display their works. Instagram is a constantly flowing stream of images in which a work from a museum's collection may pop up amongst posted photos of lunch, dog tricks, dancing couples, and fashion tips. The carefully curated institutional exhibition in which a group of experts poured long hours of expertise and effort are instead given over to a constantly changing barrage of images. Professional curation within the museum disappears online in pursuit of a quality of "seen-ness" and of "likes". Images from the museum become a fleeting presence in the stream of photos going by, and the flow that may or may not provide a reference to the museum's collection.

The act of seeing something online also detaches the image from ownership by museum, gallery, and artist. The instant that one sees something on "my" screen, the image no longer belongs to the museum (or any other "owner"), rather the viewer comes to see the image as belonging to them. And if it is not perceived as actual ownership, then it is certainly something felt to be openly accessible, able to be screen-grabbed and/or saved and/or reused.

The controversial artist Richard Prince, for example, takes imagery that others have posted to make his own art. A few years ago, he screen-captured images and comments off Instagram, blew them up, added more comments and sold them for around $100 000 per work. The portraits were mostly of celebrities and "beautiful people", the majority of whom did not complain.[312] Prince has for decades worked with concepts of appropriation and the outer edges of copyright law to examine ownership, authorship, and creativity.[313] As a mark

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[312] Cait Munro, "Richard Prince Steals More Instagram Photographs and Sells Them for $100,000", *Artnet News*, May 26, 2015, https://news.artnet.com/art-world/richard-prince-steals-instagram-photographs-sells-100000-301663 . [Accessed September 22, 2022].

[313] MacDowall & Budge, *Art After Instagram; Art Spaces, Audiences, Aesthetics*, 116.
And Prince has certainly long struggled with what is borrowing, what is influence, and what is appropriation. In 1982, Prince and Barbara Kruger transcribed a conversation they had for *Bomb* magazine. In it, Prince says,

> At first it was pretty reckless. Re-photographing someone else's photograph, making a new picture effortlessly. Making the exposure, looking through the lens and clicking, felt like an unwelling . . . a whole new history without the old one. It absolutely destroyed any associations I had experienced with putting things together. And of course the whole thing about the naturalness of the film's ability to appropriate…
> **BK** What about now?

of our age though, the only way we currently determine if something is too like something else is through a lawsuit for copyright infringement. Because he won an earlier lawsuit where he very lightly altered someone else's photographs, he may think he has a good understanding of the limits of his use/borrow/ screengrab system of taking other people's images from social media. He freely discusses the minimal intervention he performs on the work.[314] Again, he has not faced any sort of real consequences except to make a lot of money from putting his name onto other's images.[315]

5. Social media characteristics

Instagram is custom-made for the art world: you get a quick flash of an image with virtually no text or explanation. There's no need to read. It's perfect for people with zero attention span, zero education and zero interest in learning about anything – perfect in other words, for the art collectors of today.

Adam Lindemann[316]

The social media stream harkens back to the cabinet of curiosities of previous centuries. It is the "dematerialized *Wünderkammer*". It advocates for and encourages a magpie desire to bring things together, whether they are "alike" or not, beautiful, or not, valuable, or not. And who defines these comparatives; who decides what is similar, pleasing, or precious? Like early collectors who went abroad, gathered what appealed to their eyes and returned home to lay it out, play with it, move it around, and classify it according to their own whims, social media offers similar opportunity. We virtually travel the world with a device to our eyes, seeing and hearing an astounding and previously unimaginable quantity and array of visuals and audio. The device and social media platforms now exist for photography, demanding a steady supply of photos. This constant need creates people who take photographs and look

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RP Now it's harder to talk about. Appropriation had a lot to do with being faithful . . . beating yourself up really. Now its become more sophisticated, more adulterated. . .

Barbara Kruger & Richard Price, "Interview", *BOMB Magazine* Spring, 1982, https://bombmagazine.org/articles/all-tomorrows-parties/ [Accessed September 24, 2022].

[314] Richard Prince, "New Portraits", Gagosian Gallery, 2015, https://gagosian.com/exhibitions/2015/richard-prince-new-portraits/ [Accessed May 29, 2023].

[315] MacDowall & Budge, *Art After Instagram; Art Spaces, Audiences, Aesthetics*, 116-117.

[316] Adam Lindemann, "Adam Lindemann Reviews the Art World On Instagram", *Art Observed*, June 17th, 2014. Lindemann is an American investor, writer, art collector, and art dealer. http://artobserved.com/2014/06/adam-lindemann-reviews-the-art-world-on-instagram/ [Accessed January 26, 2023].

for opportunities to take photos. The photos exist only because there is a platform for them and places for the purposes of photography and selfies.[317]

Further, we now copy/paste/screengrab/download/upload/edit/save/forward at will. While museums have been deeply uncomfortable with sharing imagery in the past, they are gradually providing high quality images to enhance both their own reputations, as well assuring that more accurate images of their artwork are the ones optimized for search engines. Still, once those images are placed on the internet, they can also be downloaded from the internet by the viewer/user. They are available for re-use, mis-use, and dis-use, and certainly for recombination as Richard Prince so gamely demonstrates.

6.   Social media and its effect on art: Kusama

For nearly a decade, museums have been slowly loosening their grip on the strict injunction on photography in the galleries.[318] Some of it was due to a losing battle with mobile phones and technologies. Some of it was due to a recognition that social media provides a platform for the museum and, conversely, the museum provides material and space for users to upload content to the platforms. This is evident in the work of Instagram-friendly artist, Yayoi Kusama, who became a surprising, worldwide hit on social media a few years ago. Most of her new fans had no idea that she was an elderly artist with long decades of celebrated artmaking. Her polka-dots, reflective spheres, and immersive spaces were exactly what makes a great "I was here" photo for the feed. Line-ups, sold out shows, timed visits, and the FOMO ("fear-of-missing-out") sensations that were raised by her art have arguably instigated a wholesale change in how museums market/create exhibitions. The trend has become allowing and then actively encouraging museum-goers to take selfies in front of art and museum signage and using targeted hashtags to create desire (FOMO) for those seeing other people's images on social media platforms.

Researchers recently examined 964 images posted to Instagram using the hashtag "#eternalkusama" from a Kusama exhibition at the Hirshhorn Collection at the Smithsonian in Washington running 2022-2023. They grouped them according to subject matter (one of

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[317] Elisa Serafinelli, *Digital Life on Instagram* (Bingley, U.K.: Emerald Publishing, Ltd., 2018), 43-44.
[318] MacDowall & Budge, 9.

five different objects displayed) and applied a qualitative description to the action in each image. The researchers found that the most frequent descriptors were object, standing, performing, re-curating, selfies, information, and interpretation.[319] Unsurprisingly, the study suggested that visitors look for experiences and informal learning. They post photos that they are in, both to enhance their own reputation and to boost the appeal of the object they are standing with; it is reciprocal. The study also showed that immersive artwork provoked more engagement with social media.[320] It concludes by suggesting that museums can use these findings to understand how to create and promote exhibitions that appeal to viewers' interests. Museums should, by extension, pick work to display that is visually and dimensionally appealing to visitors. That, though, caters to the hyper visual, the aesthetically pleasing, and the interactive, as well as setting aside curatorial intention and knowledge. It suggests avoiding complex, difficult material because it does not play nicely on social media. One can see that this may bring the museum a few steps closer to people but does the inverse hold true? Does the growing openness to social media and to personal photography mean that digital reproductions, in all the ways museums are attempting, bring people to the museum? And is increased attendance better than less attendance?

In 2018, Beyoncé and Jay-Z recorded a video in the Louvre. They used the facility as a vivid backdrop to their song "ApeShit" and it was seen as an act of authority and re-insertion into spaces that have rarely included people of colour. The museum seemed to benefit, too, because there was a massive increase in visits the following year. But in January 2023 the Louvre announced that they will limit visits in 2023 to 30 000 people per day – significantly down from the 45 000 per day in 2019. It is a level not seen since the early 2000s but has

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[319] "*Objects* refers to photos of artworks visitors take in the exhibition. *Standing* is distinguished from *performing* by how visitors contextualize themselves with exhibition objects; *performing* includes mimicry and interaction. *Re-curating* occurs when visitors re-frame the exhibition to express their aesthetics or creativity, such as taking a photo from a different angle, adding filters, or enlarging a particular portion of the work. *Selfies* are self-portraits focusing on an individual's face, making the exhibit a backdrop *Information* includes exhibition titles, wall texts, snapshots of exhibition news articles, and exhibition spaces. *Interpretation* occurs when visitors produce images related to what they saw in the exhibition (e.g., fashion items or other objects featuring Kusama's iconic pattern) or recontextualize images external to the exhibition (e.g., SpongeBob)."
Jinyi Kim & Myeong Lee. "Evaluating Visitor Engagement through Instagram: A Case Study of One with Eternity: Yayoi Kusama in the Hirshhorn Collection." *Proceedings of the Association for Information Science and Technology* (2022) 59 (1): 729–31. https://doi.org/10.1002/pra2.705.
[320] Kim & Lee, n.p.

been rolled out to enhance visitor enjoyment.[321] So if the museum wanted to burnish its reputation by attaching itself to superstars and to other platforms, it may have worked too well. The Louvre seems to have decided that rampant visitors are not a path worth pursuing related to wear and tear on the building and labour costs.

In their pursuit of Instagram-friendly posts and hashtags, museums also run the risk of diminishing the power of the actual artwork. The recently acquired *Infinity Room* by Kusama at the AGO requires pre-registration, a line-up, strict instruction, followed by a precise, sixty-second visit in the smallish cube, after which an attendant knocks on the door and time is up. The hassle probably turns some people away, but if you do go through the process to enter the room, there is a keen awareness of time and a bit of a scramble to decide how to use the minute. Most choose to take photos (purses and bags are not allowed in but phones/cameras are encouraged) and look around a bit to feel the effects. But if the intent of the infinity room is to pause to consider this as an embodiment of Kusama's lifelong struggle with mental illness and to ponder notions of the eternal, as the name suggests, there is neither time nor encouragement to do so. In pursuit of social media likes for the museum and the need to deal with the effects of social media success from Kusama exhibits, the time and space needed to grapple with any larger meanings dissipates. Indeed, the visit to the museum becomes secondary to the primary experience of posting photos to social media as proof of attendance.[322] Did you see something if there is no social media post to prove it? And did attending matter if there are no follow up likes?

Museums are places where viewers are usually encouraged to linger with artwork. The requirements and arrangements for *Infinity Room* reduce the possibility for leisurely exploration of the space. Though it is meant to be an art exhibition, the art becomes ancillary to the experience in the space. Perhaps a visit to an "art space" whether a digitally immersive experience or a museum gallery, can be placed on a continuum from a purely sensory experience to a rigorous, philosophical engagement with art. Digitally immersive experiences

[321] Vincent Noce, "Louvre will begin significantly limiting daily visitor numbers", *The Art NewsPaper*, 6 January 2023. https://www.theartnewspaper.com/2023/01/06/louvre-will-begin-limiting-daily-visitor-numbers-to-create-more-pleasurable-viewing-experience
[322] Amanda Hess, as quoted in Tama Leaver, Tim Highfield & Crystal Abidin, *Instagram* (London: Polity, 2020), 160.

address emotional and physical encounters – light, motion, music, and colour. One hopes that in museum exhibitions there is careful interplay between thoughtfulness, intellectual encounter, and, additionally, emotional response. At a Kusama exhibition at the ICA-Boston, the curators seemed to be hoping for this sort of profound interaction, as well, taking Kusama beyond digital sharing to learn something of her purpose and intention. They stated that:

> her work represents something deeper than [Instagram spaces]. Kusama isn't discussing hedonism. Instead, her work is about "obliteration." "What's interesting to me is that the repeated sharing of photos online echoes the deeper themes of Kusama's work, things ... about repetition, human connectivity, life, love, death," Respini said. "And these ideas seem to have a hold on our contemporary zeitgeist." Medvedow added that the museum's mission is to ensure that Kusama — who "was important for 50 years before there was Instagram" — is treated with the respect the artist deserves.[323]

Perhaps another key feature of a gallery visit involves time: time to wander, time to sit (if seats are provided), time to return to something that catches the eye, time to decide on a path through the building, time to read texts, or discuss with a companion. Certainly, in the digitally immersive experience the time, the leisure to explore, to meander, to wait, to determine, is removed. The digitally immersive experience delivers a package of images and music over approximately 30 minutes with limited ability to pause or to return to something. Agency is removed and given over to the production company, the timed ticket, and the continuous movement of images. Kusama exhibitions (and other, artists' immersive experiences) when treated like digitally immersive experiences may engender the same perceptions of loss of agency, relentless movement, and a hollowing-out of ideas.

7.   Artists use social media in artmaking

Some artists are engaging with social media platforms, like Instagram, to create supplementary experiences alongside the art exhibition. In the summer of 2022, Takashi Murakama worked *with* Instagram to provide augmented reality images for his exhibition at

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[323] Iris M. Lewis, "In 'Love Is Calling,' Mirrors Reflect the Instagram Era", *Crimson.com*. The Harvard Crimson, 24.
S2019. https://www.proquest.com/docview/2298410089?accountid=15115&parentSessionId=B8%2FPKNqfT7
LNKUZ01QD6ZR8bJd732ueEUVOeZ8StNoM%3D&pq-origsite=primo

The Broad in Los Angeles.[324] On the approach to the museum, via Instagram filters, floating flowers became "visible" overhead in the recognizable Murakami-style. (fig.11) This was, according to the website, reflective of Murakami's abiding interest in new technologies, connecting a new medium to his existing, physical work, like sculpture, painting, wallpaper, and immersive installations.[325] This also corresponds to the work of David Hockney in his exhibition, *David Hockney: Bigger & Closer (not smaller & further away,* though in this case, Murakami liaises directly with the social media corporation *Meta* to produce something that also expands *Meta'*s user base. It is a more directly commercial use and merges tech and social media.

[324] The Broad museum, https://www.thebroad.org/art/special-exhibitions/takashi-murakami-stepping-tail-rainbow. [Accessed November 12, 2022].

[325] "For Takashi Murakami, the explosive interest in the metaverse and in virtual and augmented realities (AR) constitutes a societal and cultural sea change. Developed as part of the special exhibition with the artist, in partnership with Spark AR, Instagram, and BUCK, Murakami uses AR experiences to connect his paintings and sculptures with these emergent realities and technologies.
Inside and outside of The Broad, experience AR features that exist on top of and in relation to the physical world. Through the Instagram app, Murakami characters step out of their physical forms and into a ghostly digital existence, harbingers of what is yet to come for Murakami's work and thinking (update your Instagram app to the latest version to use)."
https://www.thebroad.org/art/special-exhibitions/takashi-murakami-stepping-tail-rainbow
See also: "The Broad Announces Two Spring Special Exhibitions Takashi Murakami: Stepping on the Tail of a Rainbow and This Is Not America's Flag, Opening May 21, 2022", *The Broad*, Press Release, February 14, 2022.
https://www.thebroad.org/sites/default/files/pressroom/The_Broad_Spring_2022_Exhibitions_Press_Release.pdf. [Accessed November 12, 2022].

Figure 11: Takashi Murakami / Kaikai Kiki Co., Ltd. All rights Reserved. © https://www.thebroad.org/art/special-exhibitions/takashi-murakami-stepping-tail-rainbow

Many artists use social media to display, curate, and sell their art in a necessary and commercial interaction with the platforms. Some artists also reflect on social media in their art practice to examine what social media is doing to us, for us, and with us. American artist Ben Grosser created an extension tool for Facebook called *Safebook* (2018), which removes all video, text, audio, and images from Facebook's website, leaving only the squares, colours, and "empty containers" where the content was. One can still navigate, things will still pop-up, expand, and contract in a very comfortable and ordinary way, (Grosser notes that we know these sites' interface all-too-well), but there is nothing to read, see, hear, or comment on. Grosser proposes that the only safe way to negotiate social media is when there is no actual content. "Is it possible to defuse Facebook's amplification of anxiety, division, and disinformation while still allowing users to post a status, leave a comment, or confirm a friend… is complete removal of all content the only way a social media network can be

'safe?'"[326] It is a stark revelation of the power of these sights to form us – that there is recognition of them even in an absence of any text – their graphics and navigation burned into eyes and fingertips by years of exposure. And the broader suggestion that their content must be empty to prevent harm is confounding. We inhabit these social media sites as we do our own homes, and they inhabit our minds.

Figure 12: Ben Grosser,
Safebook.
https://bengrosser.com/projects/
safebook/
Screengrab by S. Kopp.
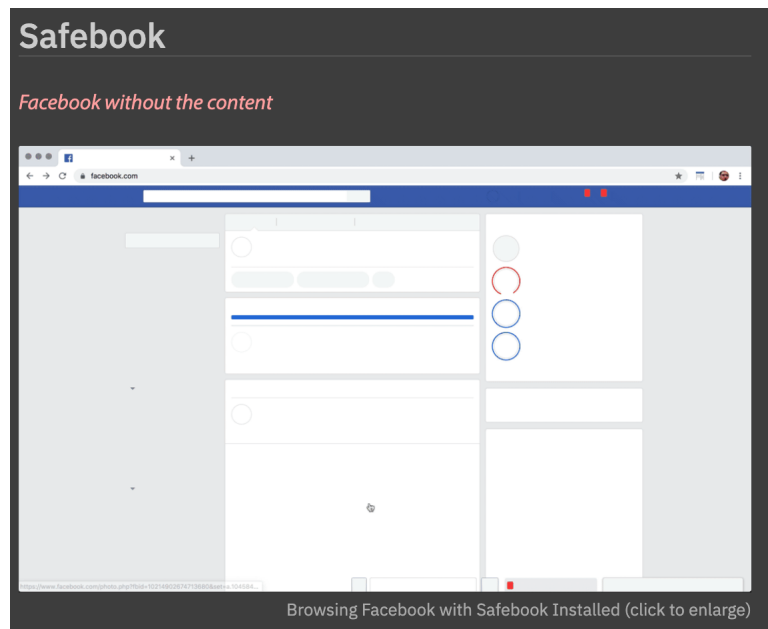
As if to prove that cohabitation, Grosser also created a social media platform called *Minus*. It looks much like other sites, though quieter. (fig. 12) There is no advertising, no sidebars, no links, etc., and members are allowed only 100 posts, ever.[327] It suggests scarcity, finiteness, posting only that which is vital, encouraging less, slowness; nothing is monetized, and you can neither "like" nor "follow" others. It discourages "infinite demand", while reminding us of very limited resources and time.[328] The countdown numbering that appears with each post: "[99], [98],[97]", etc. can also feel anxiety-provoking, increasing the sensation that the post must matter, it must be special, important, memorable, as there will only be a few. The usual social media sites, on the other hand, want posting to feel like breathing – steady, thoughtless, constant, and normal so that advertisers can find you.

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[326] Ben Grosser Projects, https://bengrosser.com/projects/safebook/ [Accessed November 28, 2022].
[327] Filippo Lorenzin, "An Exhibition That Helps Us Rethink Our Relationship to Facebook", *Hyperallergic*, October 10, 2021. https://hyperallergic.com/683141/an-exhibition-that-helps-us-rethink-our-relationship-to-facebook/ [Accessed November 28, 2022].
[328] Ben Grosser Projects, https://bengrosser.com/projects/minus/ [Accessed November 28, 2022].

8.   Artists use social media to market art

Of course, artists use social media to market their physical works. Instagram, again the most visual medium, is usually the platform of choice to sell, increase awareness, and find community, for artists. It also has more than two billion users and a sophisticated system of searching using hashtags,[329] so one can imagine this form of direct marketing would be a way to cut out the middle and provide immediate and easy access to their audience. However, platforms have policies that can block art they deem controversial. Though Instagram says they "allow" for artistic license around nudity, according to the *Art Newspaper* many artists face censorship every day. One artist, Samantha Spirit, says she has changed her art practice to get around the censorship.[330] She now plays with shadows and striping to disguise nudity and flummox the algorithms that struggle to identify a human when there are lines and patterns.[331]

Meta also writes very specific guidelines on what not to post, describing in detail various body parts, very specific acts, and what will be hidden under warnings.[332] And, what Facebook and Instagram remove for being sexually explicit is fairly innocent. A woman eating a banana or four feet protruding from under a quilt on a bed have been deemed "non-compliant". In essence, because of their policies, algorithms, and ability to take down posts, Instagram (et al.) choose what is art for their billions of users by forcing artists to figure out, under these conditions, whether they want to use the powerful platforms to create and market

[329] Alex Barinka, "Meta's Instagram Users Reach 2 Billion, Closing In on Facebook", *Bloomberg*, October 26, 2022.
https://www.bloomberg.com/news/articles/2022-10-26/meta-s-instagram-users-reach-2-billion-closing-in-on-facebook. [Accessed January 26, 2023].
[330] Emma Shapiro, "Is Instagram censorship changing art itself?", *The Art Newspaper*, January 19, 2022.
https://www.theartnewspaper.com/2022/01/19/is-instagram-censorship-changing-art-itself?utm_source=The+Art+Newspaper+Newsletters&utm_campaign=f91d1c95cc-EMAIL_CAMPAIGN_2022_01_18_07_34&utm_medium=email&utm_term=0_c459f924d0-f91d1c95cc-62222806 [Accessed January 26, 2023].
[331] Savannah Spirit, https://www.instagram.com/savannah.spirit_/ ;
Nicole Rodrigues, "Vibrant Knitwear Tricks Facial Recognition Cameras into Thinking You're A Zebra", *Design Taxi,* 24 Jan 2023,
https://designtaxi.com/news/421958/Vibrant-Knitwear-Tricks-Facial-Recognition-Cameras-Into-Thinking-You-re-A-Zebra/ Also, *Capable Design*, https://www.capable.design/mission. [Accessed January 26, 2023].
[332] These are *Meta* policies which apply to both Facebook and Instagram.
https://www.facebook.com/policies/ads/prohibited_content/adult_content_ [Accessed January 26, 2023].

their art. Again, these platforms exert power over artmaking and artists acquiesce or figure out work-arounds.

As a *New Yorker* article points out, it should be easier than ever for creatives to share their work on social media platforms and websites, and yet it is harder than ever to make money. Greig de Peuter writes that creative workers have been praised as role models for contemporary capitalism: self-reliant, high-risk, adaptable, and innovative. He notes capitalism's flexibility in absorbing all manner of labour including creative jobs that were originally sought as an escape from "Taylorized" factories.[333] Creators spend a lot of time "running a small business" that devolves responsibility onto the lone artist to be their own agent, marketer, promoter, and brander.[334] The characteristics of the internet along with reduced arts funding and the gig economy all contribute to the idea that artists are responsible for every aspect of their work. Furthermore, the internet has increased the belief that things should always be free (or incredibly low-priced), a concept that began with early file-sharing systems like Napster.[335] The internet was a "a platform, a device, a raft of free services."[336] The digital providers, though, needed revenue and if it was not directly from the user, advertising had to cover the difference.[337] As notions of free content circulated, consumers have come to expect to see things like art for free and by extension to screengrab the art for free. Artists should do it for "love" or for "exposure". As the New York Times article stated:

> There's still plenty of money to be made in art, or writing, or music. It's just not being made by the creators. Increasingly, their quest for personal artistic fulfillment is part of someone else's racket.[338]

9. Social media as hyperimagery

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[333] Greig de Peuter, "Beyond the Model Worker: Surveying a Creative Precariat", *Culture Unbound*, Volume 6, 2014: 264-265.

[334] William Deresiewicz argues that in the nineteenth-century artists were seen as craftspeople and in the twentieth century as professionals, but today artists must do it all for themselves. William Deresiewicz, *The Death of the Artist : How Creators Are Struggling to Survive in the Age of Billionaires and Big Tech.* (New York, New York: Henry Holt and Company, 2020).

[335] Hua Hsu, "How Can We Pay for Creativity in the Digital Age?" *The New Yorker*, September 7, 2020. https://www.newyorker.com/magazine/2020/09/14/how-can-we-pay-for-creativity-in-the-digital-age [Accessed January 26, 2023].

[336] William Deresiewicz, n.p.

[337] Vaidhyanathan, Siva, 'The Attention Machine', *Antisocial Media: How Facebook Disconnects Us and Undermines Democracy* (New York: Oxford Academic, 2022), https://doi-org.proxy1.lib.uwo.ca/10.1093/oso/9780190056544.003.0004, accessed 29 May 2023.

[338] Hsu, n.p.

A combination of images is not a new thing, obviously, and the traditional salon shows of the nineteenth century certainly hung art cheek-by-jowl to the ceilings, as O'Doherty noted when discussing frames. The intensity and multiplicity of images in the salon has parallels to the flow of images that the screen provides, be it rolling past on social media or arranged in a grid pattern on a website. Felix Thürlemann examines the collection of images across the last two centuries to make some interesting observations. He notes that any compilation of images — in books or art museums — forms a hyperimage. He views this new combination as a unit, even if they are temporarily juxtaposed, defining it this way: "a hyperimage consists of autonomous images that are assembled into a new image complex and thus generate a meaning that cannot be understood as mere addition."[339] The unified things are a new "signifying unit … and can be analyzed as structures of meaning."[340] Intriguingly, Thürlemann also theorizes that it is possible to see art history as a history of continuously rearranging images alongside new ones being painted, which suggests that what is important is constantly being redefined. The constant regrouping, within the rules of importance that were clear to the powers of the time, demonstrates what was valued. Moreover, each new configuration becomes a new art object in his estimation.[341]

Again, digital imagery is not the art itself, but the coming-together of online art images pulls them into a new configuration and perhaps even a new "art object", to stretch the Thürlemann definition. It also hearkens back to André Malraux and his *musée imaginaire.* Malraux laid out photos of sculptures in isolation that parallels both the purity of the white cube gallery and the clean and simple aesthetic of (early) Instagram.[342] Malraux put images together in new ways. Instead of academic or chronological, he did so according to symmetry, equivalence, and balance. It was personal. He was looking to educate, to introduce French society to new cultures, and to sell books. Even if it is not "new art", the lessons that are learned by observing the crowded salon walls or Malraux's art books can be applied to online digital art imagery, to some extent. There is the same amassing of images, the piling up and enforcing of a multitude of ideas and concepts, each with their own story. On social

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[339] Thürlemann, 1-2.
[340] Ibid., 2.
[341] Ibid..
[342] MacDowall & Budge, 2, 23.

media, however, they are moving past and building up too quickly for connection and retention. Like the *musée imaginaire*, posting to Instagram encourages personal design aesthetics through colour, form, length, multiples, though there is a limit to self-expression when it is at odds with digital and corporate supervision. And like Malraux, done to sell something.

Other things are also lost in the digital version of the salon. One is the hierarchy of images and the other is the size of the work. In the traditional salon, which room, where on the wall and size of the painting immediately informed the viewer of the importance, or not, of any image.[343] With the flow and layout of social media or a website, the size of an art image evades, as noted in the example of the High Museum app, "heartmatch.org". There may be a measurement buried in the details but truly understanding what the numbers mean for scale, emphasis, and impact, escapes. Specifically on social media, all images are reduced to the exact same square on the feed. This sense of similarity or equality makes determining the importance of the work difficult unless making it into the feed or website is considered the mark of significance. A flow of digital imagery reduces all images to a sameness, a standard, an alikeness. Images of celebrities, family, high fashion, fast food, wild animals, pets, professionals, and amateurs are all leveled. All sense of proportion, literally and figuratively, is removed, in acquiescence to the grid and the stream. One image appears and another replaces it instantaneously: resembling it, equalling it, and regularizing it.

Images from the museum are of actual, real objects and are often from actual mechanical photos. Most other images posted online are digital photos from their inception, designed, in large measure to be shared online. These digital photographs may be altered from their "originals" to post, but it is still a digital process within a digital process, a reproduction of a reproduction. And it is, according to Serafinelli again, the reason that a digital photo was taken in the first place – so that it could be posted.[344] Traditional art imagery digitized by the museum is remediated by posting it.[345] It is a reminder that it is being altered in and for a space for which it was never meant. The image of the traditional art object joins the onward

[343] Jennifer W. Olmsted, "The Sultan's Authority: Delacroix, Painting, and Politics at the Salon of 1845." *The Art Bulletin,* (New York, N.Y., 91 (1) (2009): 83–106; 83. https://doi.org/10.1080/00043079.2009.10786175.
[344] Serafinelli, *Digital Life on Instagram*, 43-44.
[345] More on remediation in Chapter 3, Section 19.

march of social media, of "the consumerism of experience, the transformation of memory into entertainment and spectacle".[346]

10. Archives

The museum holds another longstanding power and memory in its archive. Museums turned to photographs of their objects to post online during the pandemic and for many institutions those photos had been held in archives or databases solely for use by museum administrators and researchers. This connects the online photo to the long history of archives. Archives are often thought of as filing cabinets of old papers holding no political or cultural view or bias, but rather collected, collective stories. Over the last few decades, though, critical frameworks have developed to illuminate how seemingly harmless documents are not innocent of meaning, that prejudice, partiality, and politics are embedded in the archive. As noted earlier, Michel Foucault demonstrated that knowledge is connected to power. He uses the terms "archive" and "statements" almost as a general system of rules or possibilities for what we can and do say. These 'oversee' language, reflecting historical understanding and discipline societal interactions. They can be seen in how academic disciplines, for example, determine their own discursive formations or systematic conceptual frameworks. Foucault's concept of the "archive" is not about content, as is traditionally thought about archives, but rather about the rules or frameworks that oversee the space of discourse or "discursive function".[347] Discourse produces knowledge and knowledge is the power of the archive to act as an influence or guiding principle. These principles are often deeply held, covert, and little understood or expressed, but which are deeply held in the organization of authority.[348]

Jacques Derrida, too, gives much power to the archive, also in the form of control-over. He suggests that it is about direction over memory, a privileging of some things assigned to be set aside.[349] Who decides, who stores, whose story. Derrida notes that if there is not open

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[346] Lipovetsky, *Hypermodern Times*, 59.
[347] Michel Foucault, *The Archaeology of Knowledge* (London; New York: Abingdon Press, 2002; reprint of *l'archaéologie du savoir*, Éditions Gallimard, 1969), 129-130.
[348] Michel Foucault, *The Archaeology of Knowledge*, 128–30.
[349] Jacques Derrida, *Archive Fever: A Freudian Impression*, trans. Eric Prenowitz (Chicago and London: University of Chicago Press, 1995), 10.

access to the information stored in the institution, and more profoundly, widespread means to help to create and determine what the archive is, it is a society at risk of loss of freedom.

> …there is no political power without control of the archive, if not memory. Effective democratization can always be measured by this essential criterion: the participation in and access to the archive, its constitution, and its interpretation.[350]

Derrida warns us that there is a contingent nature to archiving, shaped as it is by social, political, and technological forces. It is a reminder that constant vigilance, transparency, and participation is required for effective historical memory.

Over the last decade journal publishers have turned from paper to digital dissemination. Marlene Manoff notes academic publishers have made the price of paper copies so exorbitant that it forces universities to shift to digital copies. Certainly, the pandemic made that seem like a very good idea, but it also gives publishers control over the historical record to delete, edit, or alter texts without warning or awareness, something nearly impossible to do when the archive is on paper.[351] This jeopardizes the public, historical record and damages future understanding of events, research, and data. Canadians may remember that between 2010 and 2015 then-Prime Minister Stephen Harper's Conservative government began to destroy archives, taking down research material, and removing websites in efforts at "austerity". Information on climate change, aboriginal issues, and census data disappeared from the public, digital record as well as from the sixteen libraries they closed.[352] Suddenly, average Canadians were made aware of the power of census-taking to determine social services or of research data to understand climate change. These moves highlight the work and power of the archive to give historical understanding, contributing to current meaning. It is a cautionary reminder of how publishers, governments and other powerbrokers can manipulate data and historical documents to exert power now and into the future.

These same principles apply to archiving, storage, and collecting in the museum. Museums are also part of institutional decision-making over community memory. Museums have clung to their objects with some ferocity – holding authority over them with restrictive

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[350] Derrida, *Archive Fever: A Freudian Impression*, 4, note 1.
[351] Marlene Manoff, "Theories of the Archive from across the disciplines", 12-13.
[352] Anne Kingston, "Vanishing Canada: Why we're all losers in Ottawa's war on data", September 18, 2015. https://www.macleans.ca/news/canada/vanishing-canada-why-were-all-losers-in-ottawas-war-on-data/ [Accessed July 8, 2022].

policies for reproductions, loans, visitor interactions, and restitution. Even as the focus for museums has shifted over the last two or three decades from places of instruction and pedagogy to community and viewer participation, little has changed at museums beyond allowing much more photography. There are still restrictions on opening hours, on volunteering (often aimed at the well-heeled retiree), on allowing visitors into the archive or storage, and in opening up what art is purchased or exhibited. [353] These issues are addressed elsewhere in this document, but it is useful to be reminded of how many things in and around the museum are still systemically exclusive and still exert power "over".

a. Collection or documentation

As museums turned to the photos of their collections to create online content, curiously, almost all museums' websites came to call the images of their online artwork, the "collection". In museum parlance, however, the collection is the actual, physical art whether it be on exhibition, sitting in storage, or on loan. Normally, when a museum takes a photograph of an artwork, it is an archival document that provides information about the artwork. The photo enters the archives as added value to what is known about an object. It serves as a witness to, and evidence and identification of, an artwork, but it is not an artwork-in-itself. So, the term "collection" has expanded from the physical collection of art to include what was once documentation in the archive. The act of taking a digital document and "turning it into an artwork", though, in its designation and standing within the museum's holdings, redistributes the authority between the original and the digital copy.[354]

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[353] A recent Instagram posting for the local museum advertised positions for "volunteer tour guides", able to commit to a two-hour "mandatory" meeting every Monday morning, as well as a half-day per week, from September to June. This totals to approximately 200 hours for the school year all during commonly designated "business hours". Few can accommodate that, I surmise.

[354] I am intrigued by whether this move is conscious or unconscious. On some websites, the tab, "Collection", merely takes you to a description of what you find in their physical collection, whether on exhibition or in storage. Presumably, as museums begin to add images, they simply get filed there because of the title. This may also hearken back to the earlier definition for the three sorts of digitization that museums engage with. This would be the second form – the "learning website" in which the museum uploads its database for educational purposes. See footnote 20. Fascinatingly, during a University Arts Association Canada presentation in October 2022, curators from the Musée des beaux arts de Montréal talked about the wrangling they do with the IT people who design the website. They indicated that it is quite a tussle between the arts side and the tech side to determine what gets posted to the front pages of the website. These particular curators expressed a wish for more control since they see it as an extension of the curatorial work of the museum. They believe that the website sometimes misrepresents their work because it is designed and uploaded by the technology and digital team rather than curators. It may be that this evolution in the descriptions of (digital) "collections" and (digital)

Felix Thürlemann suggests that original artworks have "prestige on account of their site specificity, their dependence on the owners, and their uniqueness."[355] But when the digital duplicate is treated as part of the collection and catalogued under "collections" on the museum's website, they are both potential art objects in the museum's collection, and now they are both singular. The digital image is no longer just a representative of the collection or a form of documentation of the original. It has a life of its own, performing as a unique thing, separate from the life of the original. There is, though, the real risk that the digital copy gains even more in this operation, because as Nicholas Carr noted "[b]y design, [devices] grab and hold our attention in ways natural objects never could."[356]

Boris Groys proposes that online information, including images posted from the museum collection is only information *about* art and literature, it cannot be the art and literature itself (it is not "the collection"). However, once digitized, an artist's artwork becomes integrated into information about the artist as a real person. It all becomes "documentation", Groys submits. When one searches for an artwork, inevitably, images of the artist, other works, and personal or informative items, like their place of residence, family life, or political views also result. Groys suggests the difference is that art is a fiction created to tell a narrative and to provoke emotions, whether in text (fiction) or in an image. Documentation, on the other hand, is not part of that created world. Documentation references that which has taken place, as fact such as locations, dates, etc. Documentation, unlike art, can be reformatted, rewritten, altered, all of which is traditionally forbidden with the art itself. Art cannot be used in a court of law; it has no "truth".[357] Therefore, placing traditional art online to be seen as art breaches the divide that has separately defined art and its documentation as the two begin to merge.

b.   Archival commons

The blurred lines of art as it merges with documentation in the digital age art are illustrated in a recent collaboration between the Museo Reina Sofía in Madrid and a Chilean art collective called CADA (*Colectivo Acciones de Arte*, 1979-1983). CADA offered the archive of their

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"archives" has been, by default, more a technical decision than a curatorial one. Regardless, it can lead to confusion.
[355] Thürlemann, 88.
[356] Carr, "How smartphones…"
[357] Boris Groys*, In the Flow* (London, UK; Brooklyn, NY: Verso, 2016), 174-176.

work: video and documentation of performances, actions, and interventions, to the Spanish museum because they did not trust any Chilean institutions to permanently safeguard the material. La Reina Sofia then collaborated with a Chilean museum to ensure protection of the physical material, as well as to be a part of documenting and cataloguing the entire archive. La Reina Sofia was also given an exhibition copy to keep of all the documentation/archive of the work. Given the original, ephemeral nature of the art, a "copy" makes the line between art and the documentation of the art almost insignificant.[358] What is documentation of the art is also all that remains of the art to exhibit because much of it was performance, actions, or interventions.

Moreover, La Reina Sofia is also working toward becoming an "archive of the commons", which means, for them, "multiple modernities"; a place that does not centralize European, canonical works of art while other works are around them to support and pay homage. It moves away from linear chronology toward a circular, overlapping, cross-cultural sharing, of privileging no history above another, and perhaps most importantly for la Reina Sofia, seeing the art professional and the audience as being of equal standing.[359] The museum desires "radical education: rather than being perceived as hoarded treasure, the work of art would be mobilized as a 'relational object'…with the aim of liberating its user psychologically, physically, socially, and politically."[360] Most interestingly, for la Reina Sofia, this also means legally recategorizing works of art as "art documentation". This redesignation allows for more public interaction with the artwork, to handle and read, in the archive and library.[361] It is this sort of public interaction that makes for fascinating new directions for museums. Rather than simply putting images of their artwork on their website and calling it "interactive", or their "digital collection", it catalyzes the art and its documentation as exhibition material and so much more. And it certainly redresses issues of accessibility and authoritarian oversight.

c.   Transparent archives

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[358] Claire Bishop, *Radical Museology* (London: Koenig Books, 2013), 43.
[359] Bishop, 43.
[360] Ibid.
[361] Ibid., 44.

A few museums are merging archives and exhibitions, at least spatially, again in an effort to be more transparent and to share more art with more people more routinely. The Winnipeg Art Gallery recently became WAG-Qaumajuq as it opened a large expansion they call a "cultural campus". Qaumajuq now holds the world's largest collection of contemporary Inuit art in trust for the Government of Nunavut which Nunavut calls "having a capital in Canada".[362] Much of it is now housed in a three storey "visible vault".[363] (fig. 13) Sandwiched between glass are shelves filled with Inuit sculpture. One can walk around both the outside and the inside of the structure as well as glimpse the conservation process at work. While there is no interaction with the material to touch or hold, it begins to move the traditional archives and vaults into public space. Far less is hidden from view awaiting its turn to be exhibited, thus also addressing discussion around the majority of museums' things that are stored away from view. It begins to dismantle the sense of control and power that museums have had over cultural material by having always been able to choose what to display and what to store away out of the public sight.

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[362] In response to the FAQ, "Why build Qaumajuq in Winnipeg on Treaty 1 when Inuit are not from here?" The website states, "Qaumajuq will bring the North to the South to deepen the world's understanding of Canada. The North covers over one third of Canada's landmass, yet fewer than two per cent of Canadians will ever set foot in the North. Qaumajuq will be a place to build and understand our relationships.
"Inuit stakeholders look forward to having a 'capital' in Canada in which their art, histories, and stories can be shared with each other and with the world. We are working closely with Northern partners, and our relationship with the Government of Nunavut is fundamental." https://www.wag.ca/about/qaumajuq/ [Accessed January 16, 2023].
[363] WAG-Qaumajuk. https://www.wag.ca/art/stories/moving-art-into-the-visible-vault/ [Accessed January 16, 2023].

Figure 13: The three-story visible vault at the WAG-Qaumajuq. Photo courtesy of WAG-Qaumajuq. https://www.rcinet.ca/eye-on-the-arctic/2021/08/05/winnipeg-art-gallery-wag-qaumajuq-launches-interactive-digital-platform-for-inuit-carvings/

In an even bolder move toward mixing exhibits and archival storage, the Depot Boijmans Van Beuningen, in Rotterdam, Netherlands, has placed its entire collection on display at all times. (fig. 14) Titled the "Depot" it is next to the actual museum in what they call an "accessible storage facility" holding more than 151 000 objects in different climate zones. The conservation and maintenance of objects are also open to public view.[364] In an unusual YouTube video on their website, a montage of shots shows the Depot with people of all ages moving through space (often floating), interacting with objects from a wide variety of time periods. A voiceover chants:

> Anything can happen.
> Everything is possible and probable.
> Time and space do not exist,
> only a framework of reality.
> The imagination spins weaving new patterns[365]

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[364] Depot Boijmans Van Beuningen. https://www.boijmans.nl/en/depot?gclid=Cj0KCQiAiJSeBhCCARIsAHnAzT_zRK_u31pNN9yxxGZjsf9q86N9 M1SExdzWr0xK8NtHLk7x1XYOYIcaArtUEALw_wcB [Accessed January 14, 2023].
[365] From a YouTube video on the Depot Boijmans Van Beuningen website. https://www.boijmans.nl/en/depot?gclid=Cj0KCQiAiJSeBhCCARIsAHnAzT_zRK_u31pNN9yxxGZjsf9q86N9 M1SExdzWr0xK8NtHLk7x1XYOYIcaArtUEALw_wcB [Accessed January 16, 2023].

What is also visible in the video are vast metal storage grids piled high with artwork. They proffer that once curatorial oversight, predetermined inspiration, and the creativity of the professionals are removed, the viewer is able to make meaning, see connections, and put together a whole new way of learning about the history of art. The director of the museum, Sjarel Ex, stated that, "So what happens here is that you do not follow the script that was written by a curator, which can be great and is great and one of the best things that we do, but you see things by coincidence, and you feel that you are discovering things and that you connect to things".[366] It is an oddly mixed message with Ex reminding us that it is curation that forms stories out of random art. The viewer brings serendipity, luck, and a curious eye. I speculate that many visitors will be overwhelmed at the endless racks of art and wish for curator's interpretation to make sense of the vast quantity of artwork.

Figure 14: Photos from Depot van Boiumans Beuningen. https://www.boijmans.nl/en/depot/about-depot

d.   From curation to filtration

The free-flow of open archives echoes the very open-ended way of moving around on the internet – it is a space of filtration not curation. Images on social media or on a museum's website are sorted (filtered) by algorithms and search terms based on viewing choices, not on understanding, expertise, or discernment (other than the gleaning of data from viewer choices in order to offer more of the same). In the same way, artwork at the Depot is also filtered, not curated. There is no curation by knowledgeable museum workers to give real direction.

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[366] Josephine Joly, "Rotterdam 'art storage' museum opens entire collection to public in 'world first'", *euronews.culture,* November 5, 2021. https://www.euronews.com/culture/2021/11/05/rotterdam-art-storage-museum-opens-entire-collection-to-public-in-world-first . [Accessed January 16, 2023].

Curators use elements of creativity, narrative, and often play with the unexpected: in layouts, combinations, and contextual information (like texts, labels, catalogues, and ephemera). There may still be indices, alphabetical searches, or breakdowns by categories online or at the Depot, but it can be exhausting when left on your own. It is not a helpful or supportive system for browsing art.[367] It is hypermodern in that it breaks down categorization, removes authorship (in this case, curatorship), emphasizes individualization, and privileges personalized experiences. In some ways it breaches the institution's long held desires for a closed system by giving the public access to parts previously deemed mysterious and unknowable.

Leaving the act of interpretation of art to the viewer is the subject in "The Poetics of the Open Work" by Umberto Eco. Eco writes that across time, understanding of art has been on the move. It began with a single interpretation, then a few prescribed methods, to a baroque belief in many sides with shifts according to perspective, to the current "field". "Field" suggests a scientific term and means a "complex interplay of motive forces is envisaged, a configuration of possible events, a complete dynamism of structure."[368] There is always possibility; static order is gone and intellectual authority gives way to personal decision, choice, and social context.[369] But, Eco adds, a work of art always contains something the artist provides, a "structural vitality" onto which can be grafted many possibilities provided by the viewer/reader.[370] The artist supplied an orientation *toward* something, the work is "not just as a conglomeration of random components ready to emerge from the chaos in which they previously stood and permitted to assume any form whatsoever." Artist and viewer are invited to "make the work together".[371] Indeed it now behooves the participant to participate, to make music, text, or artwork complete, to provide an interpretation equal to what the artist set it into the world to be.

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[367] Again, I stipulate that for researchers and students it can be a great benefit. But these are seekers who find their way through the information because they pursue a very particular thing.

[368] Umberto Eco, *The Open Work*, trans. Anna Cancogni (Cambridge, Mass.: Harvard University Press, 1989), 14.

[369] Eco, 15.

[370] Ibid., 14.

[371] Ibid., 15.

Eco's discussion of the interaction of art, artist, and viewer concludes that there needs to be "something" in the art that is organized, orderly, and capable of being offered to the viewer. There must be some sort of principles already in place such that someone encountering the work can begin to add to, to collaborate with what already exists. I would suggest that these principles are neither met by open storage nor an online "collection". Without curatorial oversight, guided tours, or additional, linking information there is the same "conglomeration of random components ready to emerge from the chaos" as noted above about the single artwork.[372] It is only a group of random artworks or indeed "all" the (museum's) artworks set out for public access.

In a related example, the Brooklyn Museum in 2008 invited artists to submit images that represented "The Changing Face of Brooklyn". After the call ended, visitors to an online forum could "jury" the selected works by evaluating them and answering some questions about their own expertise in and knowledge of art.[373] It turned into something else when a museum curator noticed the recursivity of this digital initiative:

> And what was the idea curated? The theme of the photographs submitted was "The Changing Faces of Brooklyn," but that is not the real theme of the installation that is presented in our galleries. Although the changing faces of Brooklyn is an idea that underlies each of the works of art in the exhibition, the exhibition itself is about the notion of selection, and specifically, selection by the crowd.[374]

The curators decided that what the crowd did was narrow the choices down but actually left curation to the expert staff of the museum. It demonstrates that curation is of ongoing importance in and through other methods of exhibition, including digital ones. Professionals were required to concentrate the vast agglomeration of photos and to make sense of it; to weave ideas so that the exhibition had coherence.

Similarly, these principles also apply to the online "collection" of art simply put on a website. These are often organized only by date, material, or alphabetically by creator. there is simply not enough of Eco's "structural vitality" to provide a way for the average viewer to

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[372] Ibid.
[373] Brooklyn Museum, *Click Exhibition*, June 27–August 10, 2008.
https://www.brooklynmuseum.org/exhibitions/click/ [Accessed June 15, 2023].
[374] Kevin Stayton, "Crowd-Curated or Crowd-Juried?", *BKM Tech*, July 23rd, 2008.
https://www.brooklynmuseum.org/community/blogosphere/2008/07/23/crowd-curated-or-crowd-juried/
[Accessed June 15, 2023].

derive meaning, to explore the field of possibilities, or "make a work together" with the artist. For a few highly informed individuals, probably researchers, this will feel like a treasure trove but for the average museum goer or internet browser, it will be too much information.

This need for orderliness, context, and narrative may also explain why blockbuster exhibitions do well when they offer shows about the Impressionists, Andy Warhol, or King Tut. The public arrives with, at the very least, name recognition. They have some way into the information, some context, something they already bring to the works. Some meaning is already present for them (dates, historical era, or pop cultural references in movies, books, or television) as they encounter the exhibition and so for them the bonus, the joy, the payoff lies in expanding their "field" of knowledge, of offering and receiving additional interpretations.

e. The archival turn goes meta

The work of La Reina Sofia reflects a shift over the last decades toward viewing the vast amount of information *about* art as increasingly an inspiration *for* art. Okwui Enwezor wrote that artists have "appropriated, interpreted, reconfigured, and interrogated archival structures and archival materials" to make art.[375] But that can be bewildering for museumgoers. Boris Groys describes increasing confusion in the gallery between what is seen that is art and what is seen that is documentation. He reminds us that there are two things documentation does, one is to provide a "recollection" of an event, project, or happening that is not a physical object. The other is to provide witness to a creative act, like unusual living circumstances, social justice events, or unusual human interactions.[376] This witness to a creative act might be via text, video, or photography, like the collaboration between La Reina Sofia and CADA does. Groys suggests this is the "only possible form of reference to an artistic activity that cannot be represented in any other way".[377] The archiving work of CADA and La Reina Sofia demonstrates that mixing the work and its witness is the same thing as mixing documentation and collection: they are the same thing, the same medium. It is this sort of

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[375] Okwui Enwezor, "Archive Fever: Photography between History and the Monument", *Archive Fever: Uses of the Document in Contemporary Art* exhibition catalogue (Göttingen, Germany; New York City: Steidl Publishers, 2007), 11.
[376] Boris Groys, *Art Power* (Cambridge, MA: The MIT Press), 53.
[377] Groys, *Art Power*, 54.

blurring that occurs when a museum posts their art images to the "collections" tab on their website.

Artists have turned to archives over the last four decades or so for inspiration and reflection in artmaking.[378] In what has been called an "archival turn", artists create art out of displays of objects and memorabilia in ways that mimic, highlight, and satirize institutional storage, archives, and documentation.[379] This leaves the possibility of confusion for visitors to the museum as they also blur what is archives and what is collection. The same sort of confusion can arise as museums also merge the functions of archives and collection on their website when uploading digital images. The digital image is a relationship between the document and the collection. The digital image reinforces the absence of the physical object, the removal of the curator, and the diminishment of the creator/artist.

This may explain in part why museums are feeling the need to become more about creating community – it expands their scope and reflects trends in broader society. As noted above, the new descriptors used by La Reina Sofia and the Winnipeg Art Gallery (WAG-Qaumajuq) point to a clear shift away from being solely "hangers and purveyors of art". La Reina Sofia describes themselves as "an archive of the commons…" involved in "radical education". The WAG-Qaumajuq calls itself a "cultural campus". Both institutions loosen ideas of what art is, what it can do, and demonstrate that there is less division and decision between "document" and "collection". It becomes about how the material you possess, physically and digitally, can be deployed to engage, educate, and communicate. It plays well in Eco's "field" of complexity, and with hypermodernist individuality and Kirby's multiple authorship. In other words, it appeals to the contemporary visitor's expectations.

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[378] These books also examine artistic practices based on archival inspiration, documentation, or presentation: Ernst Van Alpen, *Staging the Archive: Art and Photography in the Age of New Media* (Reaktion Books, 2014); Charles Merewether, *The Archive, Documents of Contemporary Art* (MIT Press, 2006).

[379] See, for example, the work of Christian Boltanski in a piece like "Archives" at the Museum of Modern Art in New York in which he displays dozens of blurry black and white photos of unknown people. The images are mounted on wire racks like in the archives. Boltanski addresses issues of memorialization and how museums segregate and isolate imagery and objects apart from their usual existence, away from the situations and places in which they made sense and gave meaning.
https://www.moma.org/interactives/exhibitions/1999/muse/artist_pages/boltanski_archives.html [Accessed June 9, 2023].

Chapter 3
      Branch C: What happens "online"
          1. The new 'isms

Compliance to the digital sphere might be a gentle way to describe the technological turn of the last three decades and the increasingly visual and image-laden atmosphere of the present time. The constant cascade of images and information was noticed by Guy Debord in the 1960s when he observed the effects of capitalism, advertising, propaganda, and entertainment on people. It is a process he termed "spectacle", defined as a mediation by images.[380] We are no longer social creatures, he believed, we are rather entirely visual receptors open to commodification; we have become wholly consumers and products of production.

More recently, the combination of an image-laden and monetized world that both bombards us and entertains us has been variously described as digimodernism, hypermodernism, and metamodernism. Thinkers attempt to corral the range of characteristics that capture the increasing speed of information production and ever-broadening choices presented, that is no longer quite post-modern but seems to enter new territories. Alan Kirby applies the term "digimodernism" to our current era, specifically focused on the change in "textuality". He connects the use of fingers to text/type and communicate as the "digits" in digimodernism but more importantly as a move from a single author delivering text to readers to the hypermodernist text which has multiple authors. The text is "made up to a varying degree by the reader or viewer or textual consumer".[381] His key terms are haphazardness, evanescence, onwardness, and anonymous, social, and multiple authorship. He saw that, with the rise of reality shows and specifically audience-voting TV shows like "America's Got Talent", that there was a shift from author-centric, top-down storytelling to immediate, mass authorship. He suggests that meaning now comes from the system of delivery not from the content. This system can feel futile, or it can feel liberating given the sense that it rolls on, regardless of character, story, content, or leadership. He also notes that it is irreproducible and transitory. A show like "The Bachelor" happens once and can never be repeated or even rerun. The ending is known, the conclusion determined by the audience

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[380] Debord, *Society of the Spectacle*, 6-8.
[381] Kirby, *Digimodernism*, 51.

who can never re-vote.[382] On the other hand, for those who become celebrities from being contestants on "The Bachelor", the story continues – on social media, in tabloid-style journalism, and perhaps in careers that develop out of the appearance. This resembles what happens when there is ongoing exposure for artists like Yayoi Kusama. Her works continuously appear and reappear online as hashtags, art inspiration, and copied illustration. Thus, the life of an exhibition or an artwork extends far beyond the life of the exhibition. In a digimodernist manner, the art iterates; it goes on to have multiple lives beyond its physical "objectness". Its story is also about ongoing additions beyond the museum's walls, especially as a post in the social media flow. The recent example of Maurizio Cattelan's *The Comedian* (2019) is another piece of art that has appeared and reappeared in galleries and in the news because its story continues to iterate. A banana, taped to a wall, is both an annoying and intriguing concept for audiences and maybe especially for media.

Digimodernism also nibbles away at the closed culture of the past few centuries wherein a book is a book is a book. The printed page is expected to endure, unchanging — the author set words to paper, an editor makes changes, and the printer encodes the text as-is. The same mindset has been brought to the museum. The museum, with its hold on vast collections, has generally functioned as a closed system. An artist creates a painting, the museum acquires it, a curator chooses to hang it as part of an exhibition, and the whole thing is viewed as something of a shrine to the power of art and the museum. It is not unchanging, but it has always been in the best interest of the museum to cleave to that concept of its unassailability, its permanence. Many forces, including economic and political chip away at that, but perhaps none more than the digital. The museum has been loathe, as noted elsewhere, to give over high resolution digital images to the dynamics of the internet. It also collects voraciously and only shows a very small percentage of what it holds, placing the rest into vaults. For public museums, indeed, the public can request to see items in storage, but who of us has ever done that or knows it is even possible? The institution's desire for the closed system undoubtedly

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[382] It is interesting to note that these are not available to syndicate, a usual source of income, but less of a concern as they are relatively cheap to produce. Further, they are examples of what used to be common – appointment television – shows that need to be watched live to give a communal experience. That increases the value of advertising placed in these slots and explains why it is mostly sports now that can command huge advertising dollars. There is only one Super Bowl slot, and everyone will be watching.

risks being breached by technology's disdain for chronology, classification, sequestration, and curation.

2. Hypermodernism and social media

Another description of what the avalanche of information and imagery in our lives may be doing to society is found in hypermodernism.[383] In his books, *Hypermodern Times* and *The Empire of Fashion*, Gilles Lipovetsky describes the current era as being marked by hyper-speed and hyper-individuality.[384] He sees this as a society of fashion in the sense of a trend or a fad, and of the current moment, using terms like ephemerality and novelty, like Kirby. However, Lipovetsky also adds the important characteristic of the permanent seduction of things destined for obsolescence. He suggests this instability leads to constant insecurity, anxiety, dread, fear, and paradoxically, superficiality and playfulness.[385] He also predicts the "hyper-consumer" who seeks "perpetual stimulation and emotions-per-second", nearly perfectly describing social media and its attendant effects on the user 10-15 years before widespread internet shopping and the rise of Facebook, Twitter, and the rest of the social media platforms.[386]

A culture of extreme individualism also means freedom of choice to partner with any gender, either gender, non-gendered, or gender-fluid. Lipovetsky argues that this destabilizes the traditional familial logic, giving women more say over reproduction over how, if, and when childbearing happens (as an extension of choice that the birth control pill gave).[387] Lipovetsky believes "hyper" traits also conversely lead to disengagement with broad social issues because, perhaps unsurprisingly, disengagement also incites more nationalistic,

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[383] Gilles Lipovetsky, *Hypermodern Times* (Cambridge, UK: Polity, 2005).

[384] Gilles Lipovetsky, *Empire of Fashion* (Princeton, NJ: Princeton University Press, 1994).

[385] Tied to this is also a cult of the body, of hedonism, of physical fitness, and of pushing physical limits, as found in the *X Games* or in the increasing numbers who want to climb Mt. Everest. From 1990 – 2005, 2 211 made their first attempt. From 2006-2019, 3 620 have tried. Raymond B. Huey et al., "Mountaineers on Mount Everest: Effects of age, sex, experience, and crowding on rates of success and death", *PLOS One*, August 26, 2020. https://doi.org/10.1371/journal.pone.0236919

[386] Lipovetsky, *Hypermodern Times*, 59.

[387] This is from a video of his presentation at a conference at Universidad Diego Portales, Santiago, Chile, 2018. "El individualismo en la época hipermoderna: Gilles Lipovetsky", from approx. 48 minutes on. https://culturadigital.udp.cl/index.php/video/el-individualismo-en-la-epoca-hipermoderna-gilles-lipovetsky/. Accessed June 9, 2023]. There are certainly constraints on this line of thinking but many, including Lipovetsky, thought that the trend toward liberal democracy in much of the developed world would continue to increase rights to all sorts of groups that had previously been marginalized.

populous sentiment. Social media and art found on social media become a part of this conversation that creates or enshrines ideologies. Museums put art on social media where it becomes a part of the mediating force of platforms. The museum and its art now contribute to conversations about all manner of issues beyond its immediate control and with unknown effects.[388] The museum may wade into ethical issues, moral debates, and political discussions in real time with minimal ability to intervene or retract once a post is out in the world.[389] And there are consequences to posts.[390]

In October 2022, in a nod to Halloween, the Art Canada Institute (ACI) posted an homage to artists who use costuming as a theme in their art. It went out on their social media feeds and their weekly email blast, writing, "[a]s Halloween approaches, we're looking at how artists in Canada have used the transformative power of costumes to trick the eye and treat the mind." A few hours later they issued an apology for a few reasons. They stated that they

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[388] A museum worker at the US Holocaust Museum writes of the potential perils of posting to Twitter from a museum that bears the weight of the Holocaust. The author notes that issues of transparency, privacy, and memorialization are vital questions to be considered before posting anything. Amelia S. Wong, "Ethical Issues of Social Media in Museums: a Case Study." *Museum Management and Curatorship* (2011) 26 (2): 97–112. https://doi.org/10.1080/09647775.2011.566710.

[389] The Canadian Museum for Human Rights in Winnipeg, for example, posted supportive comments for the Black Lives Matter campaign, in the wake of the George Floyd and Breonna Taylor murders, writing,

> About 15,000 people attended the #Justice4BlackLives rally at the Manitoba Legislature, listening to speakers and observing moments of silence. With chants of "No Justice, No Peace" filling downtown Winnipeg, the crowd marched to the Canadian Museum for Human Rights. Powerful protests and rallies like this are leading to more and more public dialogue about systemic racism and the role of the police in our communities. #BlackLivesMatter".

This set off a response, also on social media, from current and former employees who felt that the museum was "rife with systemic racism" citing incidents of discrimination and systemic anti-Black and anti-Indigenous racism, with the hashtag, "#CMHRStopLying". Later in 2020, as the events were investigated, accusations of sexual harassment also surfaced via social media. Laurelle A. Harris, "Phase One Report: Rebuilding The Foundation External Review Into Systemic Racism And Oppression At The Canadian Museum For Human Rights", 2020, 1. https://humanrights.ca/sites/prod/files/2020-08/A-FullReport_EN.pdf

[390] There are also consequences from posts that "transgress". If a post goes viral, there is a risk of serious outcomes. Loss of relationships, jobs, and the dreaded "cancellation" can ensue. The list of things and people who have been cancelled, re-cancelled, and so on, in an endless cycle of return and rebuff, is surprising. What it suggests is that even the state of "being cancelled" moves on, losing its power, and becomes lost in the transitory nature of social media.

There are also various states of "cancellation" – which could be a whole thesis in itself. But it does seem like degrees of perceived offense matter. Or doubling-down on apparent indiscretions. J.K. Rowling has faced ongoing criticism for not changing her stand on what defines a woman, thereby angering and alienating the trans community and all who support it. Kanye West, on the other hand, cycles through saying outrageous things and is cancelled, only to pop up again. This could be related to his apparent symptoms of bipolar disorder and a certain forgiveness for the actions that seem to stem from that diagnosis. Or it could be a Trump effect, in which so much is said, so often, that the deluge drowns out the message. Further, as of December 2022, Kanye's antisemitic comments may have finally gone too far.

misrepresented the artists' intentions and minimized the real work of artists who use different types of attire as part of a much larger message than simply "trick" and "treat" or "dressing up". They also noted that Halloween has both colonial and racist associations and that Halloween is both commercial and trivializing.[391] Though the ACI probably worked on the original piece thoughtfully — there is clearly research done to put together these weekly essays — one can only imagine the dawning apprehension, and even horror, with which they greeted emails or calls from concerned artists, viewers, and readers over the day, leading to a thorough apology a few hours later.

The hypermodernist speed of all things means publishing, producing, and disseminating is done rapidly and it is hard to know or guarantee how a message will be received, understood, or interpreted. This is all made much faster with social media's structure that allows "likes", "shares", and comments. Before there was the ability to interact with organizations on a platform in near-real time, in front of a world-wide audience, response by an audience to a perceived offense was much slower. An institution had time to act and react. These new forms of pseudo-dialogue may go on to be either just as speedily forgotten or the thing that topples an organization. But certainly, a heartfelt apology goes some distance to mending relationships and maintaining supportive communities.

Lipovetsky's hypermodern context is new for the museum as it engages with social media. It is important for the museum to be aware of all the possibilities of life online as a traditional institution. The images are not disseminated into a vacuum. They join the restless, "hyper" environment that is the internet. The images constantly rolling by evoke Orit Halpern's question, "how might one remember, recall, and distinguish moments of experiential meaning from an endless flow of stimuli"?[392]

3.   The closed system of the book vs. the open system of the web

With digimodernism, Alan Kirby noted that the line between creator and consumer of content becomes blurred. In books, films, and early television, the content was a closed system. The final product went out into the world and, while critics and consumers could write reviews

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[391] This is taken from their two emails sent out that day, October 28, 2022.

[392] Orit Halpern, *Beautiful Data* (Durham, N.C.; London: Duke University Press, 2014), 53.

and discuss the thing, there was no way to change the original; it was "sealed". Further, the book created a system of guidance built into its table of contents, introduction, indices, and appendices. Over centuries writers writing books and editors clarifying and arranging books created a clear and well-understood system for moving through book-bound knowledge. Direction and supervision were embedded within the parameters of the book. With the move to Web 2.0 in the early 2000s, the system became open to change, addition, subtraction, reduction, reusage, and interaction on a world-wide scale.[393] Web 2.0 is when platforms like Facebook became so important. For the first time ever, anyone could create content and put it out into the world for anyone to comment, add and subtract. It was going to be incredible. And it was in some ways. In the early 2000s anyone could join a conversation, old friends could be reunited, those with unusual hobbies could find each other. Eventually, though, again with the ability to use "like", "retweet", and "share", what was able to be amplified, rapidly reinforced human nature, increasing polarity and bullying. It also became yet another way for large corporations to make money. Web 2.0 is the present system and it is deeply embedded in corporatization and capitalism with the "big five" holding much of the ability to gatekeep information and earn vast amounts of money.

4. Information overload

A weekday edition of the New York Times contains more information than the average person was likely to come across in a lifetime in seventeenth century England.

Richard Saul Wurman[394]

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[393] Roughly, Web 1.0 was the simple posting of pages which were static, read-only; communication was in one direction. Web 2.0 has been about interaction- Wikipedia can be edited; news websites include comments; Facebook is entirely *about* the ability to cross-communicate. These spaces are known as "platforms" and act as intermediaries. Web3 hopes to take large, corporate platforms out of the interaction and return the internet to users, by the exchange of tokens (representing commodities or currency) on blockchains that do not require mediators like banks (or PayPal), retail outlets or the "big five": Amazon, Apple, Google, Meta, and Microsoft. Andrew Park, Matthew Wilson, et al, "Interoperability: Our Exciting and Terrifying Web3 Future", *Business Horizons,* (2023): 529-541. https://doi.org/10.1016/j.bushor.2022.10.005.
An up-and-coming singer, for example, could issues tokens on herself to fans. As her fame rises, so does the value of the tokens. Rewards could be issued to token holders along the way for free tickets or backstage passes. It is a system that would incentivize and monetize even more things but can include ongoing communication and mutual support. It promises the potential for interactions to be more egalitarian. We shall see.
[394] Wurman is creator of the TED conferences, which are, at 18 minutes long, determined to be the length of time that modern humans can listen without getting bored. Richard Saul Wurman, *Information Anxiety* (NY: Doubleday, 1989), 20.

Hypermodernism emphasizes hyper-speed and hyper-individualization; it addresses the avalanche of information and imagery humans view in a non-stop, endless barrage. It can be overwhelming. Information overload can lead to, as Byung-Chul Han describes, Information Fatigue Syndrome (IFS) first noted in 1996 by a British psychologist. The diagnosis of IFS was initially applied to tech workers who had to process vast quantities of data, but it could now, in the 2020s, be relevant to us all. Psychologists describe the symptoms of IFS as attention deficit, general unease, inability to bear responsibility, and weakening of analytical capacity. According to Han, thinking declines because there is no ability to discern or distill, nor to form conclusions, or determine essentials, all of which are processes of analysis. More information, he writes, does not shed more light; informative becomes "deformative", communication becomes only cumulation.[395]

The German photographer Thomas Ruff typified the flow of images on social media as an attempt to stay in the present.[396] He believes we take photos to avoid looking at the past; we store thousands of images on our devices and yet never look back at them. The way Ruff depicts photography in the social media stream, recording and uploading images becomes a very hypermodernistic gesture. It stakes a claim in the shifting mire of the immediately obsolescent, of the fleeting, of the narcissistic-and-yet-forgotten. It suggests both anxiety and playfulness. It is the dreaded "humble-brag" post, where the person posting attempts to convey both unpretentiousness and accomplishment at the same time, all within a system that moves on, in seconds, to the next thing.

Communication and cumulation can be seen on two levels. First is the deluge of information into which art imagery is inserted online. There is less and less ability to sort, edit, understand, place, consider what one is seeing because there is so/too much of it in any moment. This falls directly in opposition to the curated, slower-moving experience of visiting imagery in a museum.[397] One looks at physical objects and reads physical labels. While there are always distractions, there is a sense of direction, supervision, objective. Each work is in

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[395] Byung-Chul Han, *In the Swarm, Digital Prospects* (Cambridge, MA: The MIT Press, 2017), 60.
[396] Liz Jobey, "An interview with the artist Thomas Ruff", *FT.com*, Sept. 15, 2017. https://www.ft.com/content/6fbd0cfa-9746-11e7-a652-cde3f882dd7b
[397] Even museums, often with a lack of seating (it seems even less since COVID), crowds, timed tickets and hard-to-read labels can seem less like they want lingering and more like they want viewers to keep moving.

its place, masterminded by a system and people making a host of decisions along the way. There are echoes of Kirby's description of the closed book of tables of contents and indices and linearity versus the open and meandering internet. Once online a museum's imagery lacks that oversight, lacks the coherence of that the image you as part of a larger curatorial story. It becomes one more thing to scroll past, perhaps pausing to tap or "like" or comment for the personal or political gain of doing so. It is immediately replaced by the next image. While a museum's exhibition can also overwhelm or exhaust, the effort exerted to go out to a museum indicates that more information will be retained and a stronger memory formed.[398]

Secondly, a cascade of information leads to problems of storage. Anyone with a device knows the problems of digital space, the costs incurred to deal with it, and the general sense of needing ever more. It is overwhelming to decide how to manage, label, and sort through digital ephemera. Apple recently reported that iPhone users took three trillion photos last year.[399] What does any one of us do with them? They are saved, but to what end? We become digital hoarders until we realize that even the storage runs out. Then we pay for more storage because dealing with them seems like too much effort.

Google recently announced that there will be no more "unlimited" storage of photos. Indeed, they will total up all things you have stored in docs, drives, etc., in that capped total. They have, like other platforms, devised a user-pay system with levels of cost linked to quantities of storage available. But this announcement provides, as *Wired* writer Drew Austin notes, a moment to reconsider what is stored, in his case for more than a decade and realize that there had always been the assumption of infinite and eternal storage space in the cloud. The Google notification creates, at least for the writer, an existential question of what and why.[400] Austin writes that he faces some serious consequences if he does not take Google up on their offer of $1.99 USD per month for 100 gigabytes of storage. Emails may stop and access to important documents and to photos will be blocked. Google also added a graphic that shows how much storage you have left and when you will reach that marker. Austin

[398] Donna L. Korol, Paul E. Gold, & Claire J. Scavuzzo, "Use It and Boost It with Physical and Mental Activity." *Hippocampus*23, no. 11 (November 1, 2013): 1125–35. doi:10.1002/hipo.22197.
[399] MacRumours.com. https://www.macrumors.com/2022/09/08/apple-three-trillion-iphone-photos/ [Accessed December 6, 2022].
[400] Drew Austin, "The End of Infinite Data Storage Can Set You Free", *Wired.com*, March 16, 2022. https://www.wired.com/story/cloud-computing-space-data-storage-habits/ [Accessed December 8, 2022].

points out that this adds another level of anxiety to a medium that is already laden with disquiet and unease. In 2004, when Google offered a gigabyte of data the amount seemed unusable, unassailable, boundless. Austin believes that everything is kept because no one thought the day would arrive when decisions and choices would have to be made. There is also the fear of deleting something important and irreplaceable. Meanwhile rampant storing goes on - with corporations – companies that are inherently unstable, profit-driven, and, at some level, untrustworthy.[401] Drew Austin, like so many, finds himself bound up with Google. His emails, his photos, his documents are all stored with a company that seeks profit, market control, and data acquisition. Further, Twitter and Meta were, until recently, quite stable companies, with millions of users and predictable trajectories. Now both are struggling to discern a future and appear to have owners uncertain how to design for stability, users, *and* profits.[402]

Museums also plug into these systems in exactly the same ways as private users. Beyond using social media and creating websites, they look for data management services that will handle their images, texts, filing systems, and possibly even integrate with human resources, marketing, and fundraising databases. Often these choices are made by professional museum workers for whom this is not an expertise, so they hire expert consultants to help guide the choice of what data asset management (DAM) system to use.[403] The marketplace is crowded,

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[401] In the sense that they may disappear, alter or change services provided. *MySpace,* a popular mini-blogging site in the early to mid 2000s, lost all items stored previous to 2016 when a server migration ended in accidental deletion. More than 50 million songs, some representing the early starts of some famous people, including Lily Allen and Arctic Monkeys, are gone. Many had viewed this as an informal archive and had hoped that the whole thing, despite becoming much less popular over the last decade, would be saved, like other early social media sites, to the Internet Archive for posterity. Alex Hern, "MySpace loses all content uploaded before 2016", TheGuardian.com, March 18, 2019. [Accessed December 8, 2022].
https://www.theguardian.com/technology/2019/mar/18/myspace-loses-all-content-uploaded-before-2016.
[402] Shira Ovide, "An Unsteady Moment for Tech", *NYTimes.com*, Published April 28, 2022, updated April 29, 2022. https://www.nytimes.com/2022/04/28/technology/tech-uncertainty.html. [Accessed June 9, 2023]; Jim Waterson, et al., "'The most effective press watchdog': how Twitter changed journalism; Guardian writers look back at the platform's triumphs and pitfalls as the service faces an uncertain future", *Guardian* [London], November 30, 2022. https://link-galcom.proxy1.lib.uwo.ca/apps/doc/A728394053/AONE?u=lond95336&sid=bookmark-AONE&xid=0ef6a580. [Accessed June 9, 2023]; Scott Reid, "Analysis: Changing landscape sees Big Tech take axe to thousands of jobs", *Scotsman,* January 23, 2023. https://advance-lexis-com.proxy1.lib.uwo.ca/api/document?collection=news&id=urn:contentItem:67CS-4V11-JDPF-B3D1-00000-00&context=1516831. [Accessed June 9, 2023].
[403] This precise conversation arose in the fall of 2022 at a meeting of a local museum board. Government funding has been granted to update the DAM system of the museum and much time, effort, and cost is going into selection, including paying for an intermediary to help make a DAM choice. The museum staff spoke of

competitive, confusing, and expensive and just as likely to merge, fail, make errors, and change their terms, as Google is doing. Museums are throwing their information at this without understanding the consequences but also in the belief that they must do so to keep up, control, and manage their data and images.

> 5.   We prefer the digital image

Art and its digital duplicate also confound what Walter Benjamin believed copies do and what probably made sense for most of the twentieth century. He suggested that the aura of the original increases when there are reproductions "out in the world" representing it, enhancing it, increasing its popularity. But Benjamin could not have predicted the power of digitization and the lure of the device, and so it is quite possible that the digital representative comes to be seen as more interesting, accessible, and authoritative than the original. Even in 1960, Edgar Wind was noting that photography and reproduction had changed the way we view the original and that disappointment sometimes ensued when seeing the original.[404]

That can be seen with Johannes Vermeer's painting, *Milkmaid*, at the Rijksmuseum in Amsterdam. Around 2010 the staff noted that people were complaining about the postcards for sale in the giftshop. Purchasers said they liked the colour of the online milkmaid, "the yellow one", better, not the bluer one hanging on the wall or being sold on the postcards. The digital version had come to be seen as the "correct" one.[405] The Rijksmuseum used this experience to become one of the first and still one of the few, major museums, to provide extremely high-resolution imagery to anyone.[406] They make sure such that the expectations of visitors to the museum match with what they see when they arrive.[407]

Werner Schweibenz urges us to think through how online art information may change perception and lead to a re-education of the public.[408] Studies have shown that museum

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other museums in the region also going through the same activity. A Google search of "digital asset management" reveals a huge range of options, unsurprisingly.

[404] Wind, *Art and Anarchy*.

[405] Werner Schweibenz, "The Work of Art in the Age of Digital Reproduction", 15.

[406] Wim Pijbes, "The Battle for Beauty in a Virtual World: How Museums Can Profit from the Digital Revolution", *Uncommon Culture* 6(2) (2015):138-45.
https://uncommonculture.org/ojs/index.php/UC/article/view/6212.

[407] See Chapter 3, section 13 for more on the Rijksmuseum's digital policy.

[408] Schweibenz, "The Work of Art in the Age of Digital Reproduction".

attendees with some prior education and exposure to art view it differently from the neophyte. But what then is the effect if the viewer has interacted with art in an online medium before viewing the original? It seems that either a reproduction can usurp and replace the original in our memory, or as Simon Knell suggests, the onlooker brings with them the intangible, the memory of the online images, to the physical viewing and that the two merge.[409] At that point the beholder might come to see the digital artefact as having its own genuine value, rather than being an imperfect surrogate.[410] Museum staff and scholars need to contend with either of these possibilities. As more people see more images online, any digital images provided by museums need to be optimized for search engines and the images be of reasonable quality. The colour must also be accurate, though the variety of devices on which things are seen makes that more complicated. Museums must do their part to disseminate information that is accurate so that visitors arrive with the best chance to see artwork they can appreciate. Whether it is seeing the artwork as its own object with additional online information provided as support, or whether it is seen as a separate thing from its digital image.

Recent advances in AI technologies mean that search engines now turn up AI generated versions of artwork that viewers may or may not understand. Confusion over who is the original artist and what is the original material can make discernment between a digital reproduction of the original and artwork *inspired by* the original complicated. This is, or should be, an ongoing consideration for museum staff as they digitize objects for public consumption. As noted earlier, museums' own imagery is being used to train these data sets on what to create "in the style of" so museums contribute to the confusion of internet viewers. And again, visitors to the museum may now arrive with a completely different sets of expectations depending on how they have "prepared" to view art.

6.   Plugging in

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[409] S. J Knell, 'The Intangibility of Things,' in *Museum Objects. Experiencing the Properties of Things*, ed. by S. H. Dudley (London: Routledge, 2012), 324-335.
[410] H. Besser, "The Changing Museum", *Information: The Transformation of Society. Proceedings of the 50th Annual Meeting of the American Society for Information Science,* ed. C. Chen (Boston; Medford, N.J.: Learned Information, 1987), 14-19.
Frost, Olivia C. 'When the Object is Digital: Properties of Digital Surrogate Objects and Implications for Learning', *Perspectives on Object-Centered Learning in Museums*, ed. by S. G. Paris (Mahwah, N. J. and London: Lawrence Erlbaum Associates, 2002): 79-94.

As a digital image leaves the authority of the museum to journey as a putative representative of the museum on its website or on social media platforms it becomes part of effects for those on the other side of the screen. There is increasing exploration into the consequences of not just of being "online" for viewers but of being consistently glued to a screen. Sherry Turkle, an MIT psychology professor, has been at the vanguard of research into human-technology interactions. She speaks broadly to our constant interactions with screens, warning that devices, and phones, specifically, have created a division, a duality between the real world and the world carried within. We can sit in a room with family and friends and also have conversations with others via messaging. We become divided, existing in more than one place at a time and as Turkle writes, "a… phone brings us into the world of continual partial attention."[411] This incessant splitting, as well as devices' demands on time, feed feelings of anxiety, narcissism, and loneliness, resulting in, among other things, instability of relationships, communities, and intimacy, she concludes. There are overlap and similarities with the Informational Fatigue Syndrome mentioned earlier by Byung-Chul Han and generalized anxiety that hypermodernism produces.

More particularly, there is the question of being immersed in social media platforms for long periods. It is a difficult thing to measure. Researchers tends to prefer longitudinal studies for accuracy, however, given how quickly the digital landscape changes and intensifies, quicker snapshots may be more informative. Faster returns on research mean that they can reflect present states. Regardless, investigations do suggest that there are changes in mental health after about 2010. In an Ontario Student Drug Use and Health Survey (2019), self-reporting of mental health ranked "fair/poor" began to rise around 2009-2011 among grades 7-12 and for both males and females.[412] Rightly, one cannot claim that, given all the

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[411] Turkle, *Alone Together*, 161.

[412] Jonathan Haidt & Jean Twenge, *Adolescent mood disorders since 2010: A collaborative review* (ongoing), unpublished manuscript, New York University, 47-48. Additional research, showing similar trends, is also provided from Statistics Canada and from the Canadian Community Health Survey, which actually has asked the question in the reverse, ""In general, would you say your self-perceived general mental health is excellent or very good?" They began to ask the question in 2003 and there is a marked downward trend around 2010. This Google document collates data from Haidt and colleagues on all sorts of mental health and social effects of the internet, and specifically on social media. They find almost nothing salutary about its use on the scale it exists, and the manner in which it changes social interactions. They recommend some key changes to the regulations around social media platforms and the strengthening, by laws, of the democratic institutions of judiciary and legislature.

potential variables, social media is "the cause", but, as pointed out in an earlier section, Jonathan Haidt and colleagues believe there is enough evidence to point to the changes in social media architecture as an effect on this increasingly poor mental health. The ability to "like", then "retweet", and then "share", in that order, appeared on social media between 2009 and 2011, making the exchanges between social media users increasingly negative. The last ten years also includes a cohort of young adults who are among the first to be exposed to the internet and social media from a very young age or indeed have no recollection of a "before" device time.[413]

For Ronald J. Deibert, head of *Citizen Lab* at the University of Toronto, being online has three main concerns, or what he calls "painful truths". Firstly, social media platforms relentlessly survey users to capture data for targeted advertisements. Secondly, usage and data collection and surveillance are accepted willingly if not really consciously by users, and thirdly, that social media platforms are excellent media for authoritarianism, contrary to what was once thought about the freedom of the internet. While each of these things has already been noted and endlessly commented on in the broad public sphere, Deibert's concern is that they are more insidious, widespread, and profound than has been understood. He believes these concerns "present a very bleak picture of our social and political reality and presage a still bleaker future."[414] Again, though, the question we are concerned with is, how do these things relate to the issue of posting art online? And how does it affect museums?

One thing to consider is that museums are often, like here in London, Ontario, part of the local cultural landscape unlike more international institutions like the Metropolitan Museum in New York. Local museums are often a part of communities, reflective of and embedded in local issues, ideas, and culture. Some consideration should be given to what moving online means for fragmentation, isolation, and dilution of messaging. A recent study of social media interaction by a small museum in Italy suggested that the returns on investment of time and

[413] Jonathan Haidt, "Why the past 10 years of American life have been uniquely stupid", *The Atlantic*, May 2022. https://www.theatlantic.com/magazine/archive/2022/05/social-media-democracy-trust-babel/629369/
[414] Ronald J. Deibert, "The Road to Digital Unfreedom: Three Painful Truths About Social Media", *Journal of Democracy*, Vol. 30, No. 1, January 2019, pp. 25-39; 26.

energy were small in relation to skills and personnel required.[415] Another study noted that there might be advantages in doing social media as a form of communication with shareholders but that museums had to invest in several platforms to figure out how to reach various groups. And regardless, that museums have too many variables as to make any generalizations complex.[416] Perhaps it is best for smaller institutions to put their limited resources of money, time, and skilled professionals toward offline initiatives. This will be difficult and countercultural to do so when the funding, granting, and societal pressure is toward websites, social media blitzes, and digitizing images for the online "collection"/archive.

7.   Information within

Museums may blur the lines between their physical and digital holdings but merging the physical and digital can have more insidious implications. Sherry Turkle writes that with all of us glued to screens there is an "emergence of a new state of the self, itself, split between the screen and the physical real, wired into existence through technology."[417] Many other researchers also look at the merging of technologies with the body and brain greeting the possibility with anxiety or with pleasure. Technology, in this case, personal devices, are just the latest iteration of tools for doing something, rooted in the Greek word "techne", meaning doing something like an art or craft.[418] Over the centuries it slowly accrued a "mechanical arts" definition to come to designate the now-ubiquitous electronic and digital equipment that surround us.

Ernst Kapp, writing in 1877, demonstrated that tools are an unconscious reflection of our humanness, complete with flaws, through which humans come to insight, "[s]elf-consciousness," he wrote, "proves to be the result of a process in which knowledge of an

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[415] Luciana Lazzeretti, Andrea Sartori, & Niccolò Innocenti, "Museums and Social Media: The Case of the Museum of Natural History of Florence", *International Review on Public and Nonprofit Marketing*, (2015) 12 (3): 267–83. https://doi.org/10.1007/s12208-015-0136-5.
[416] Jiwon Suh, "Revenue Sources Matter to Nonprofit Communication? An Examination of Museum Communication and Social Media Engagement", *Journal of Nonprofit & Public Sector Marketing* (2022) 34 (3): 271–90. https://doi.org/10.1080/10495142.2020.1865231.
[417] Sherry Turkle, *Alone Together* (New York: Basic Books, 2011), 16.
[418] Oxford Dictionary of English, Second Edition (Oxford, UK: Oxford University Press, 2002).

exterior is transformed into knowledge of an interior."[419] Kapp is considered by his current editors to have been the first post-humanist in his search for the dialogue or connection between "tools" and "organs". Computers, as both tool and technology, must be considered as devices and concepts that both extend our humanness into another realm but also invade our humanness, altering and reshaping what human means. And according to Kapp, an awareness of the entire machine – warts and all - gives an awareness of self, something often ignored.

Derrida became aware of the merging of human and tool when he noted that archiving moved from physical to digital.[420] He believes that if people are products of what is stored in archives – formerly paper, text, chemical images, but now ones and zeroes immediately and universally accessible – then humans become new products: "transforming the entire public and private space of humanity, and first of all the limit between the private, the secret (private or public), and the public or the phenomenal".[421] This is also a human- tool merging; it is an enmeshment of information about us that becomes ever more invasive, from an external record-keeping to an internal monitoring. Who does not have a Fitbit or Apple watch that knows heartrate, step count, sleep time, etc. These supervise and manage at the biological level. As a society we have not considered the full extent of that public/private entanglement and exposure. We happily trade personal information to corporations for more information about ourselves and for access, savings, deals, etc. And companies lure but also eventually enforce compliance at some level in exchange for that good or service.

For Donna Haraway, information systems make up who we are and what we know in a complex and incomplete integration. This is an opportunity to form new categories that are inclusive. Haraway sees it as an opening to rethink and incorporate women in a holistic and liberating fashion. "The cyborg is a kind of disassembled and reassembled, postmodern and personal self. This is the self [that] feminists must code." [422] Meanwhile, this sort of porosity

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[419] Ernst Kapp, *Elements of a Philosophy of Technology*, eds. Jeffrey West Kirkwood & Leif Weatherby; trans. Lauren K. Wolfe (Minneapolis, London: University of Minnesota Press, 2018), 22.
[420] Derrida, *Archive Fever*.
[421] Ibid., 17.
[422] Donna Haraway, "The Cyborg Manifesto", in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), 163.

to machines helps to understand that humans are part of a network that influences us at a profound level. As Haraway said: "Technology is not neutral. We're inside of what we make, and it's inside of us. We're living in a world of connections — and it matters which ones get made and unmade."[423]

Katherine Hayles theorizes that if information is central to human experience, and if computers are becoming the central source of information, then the mind and the computer become melded. This means that information then becomes detached from the material objects – the computers in which it had been stored – and becomes free to move in/with humans.[424] But that indicates that we carry the profound dissonance of machine and human within as well. Computers operate under particular protocols, with a certain design for data organization and a binary system for sorting information. The way computers handle large quantities of information does not have a parallel in the human brain, and yet there is more and more insertion into computer environments so that we become more like the machine. Or perhaps become anxious, angry, or frustrated by the disconnect because we are *not* machinery. While this is an idea easily dismissed as science fiction or hyperbole or even fearmongering, many thinkers have wondered, written, and theorized about this possibility and the repercussions of this transition.

The new city of Songdo, in South Korea is described by Orit Halpern as a place of non-architecture, of disposable spaces, a designed community where the buildings and physical structures are of little importance and serve only to host layers of technology that use the data of the inhabitants. Every action, move, and choice of the residents are harvested, often without the companies that are gathering it knowing exactly what it will be used for but intuitively understanding that there will be great value in the complete data set of millions of users.[425] Halpern calls this form of biopolitics "managing life itself by bandwidth". She

[423] Donna Haraway quoted in Hari Kunzru, "You are Cyborg", *Wired.com*, February 1, 1997. https://www.wired.com/1997/02/ffharaway/?utm_source=nl&utm_brand=wired&utm_mailing=WIR_Classics_ 020323&utm_campaign=auddev&utm_medium=email&utm_content=WIR_Classics_020323&bxid=5bea0d25 2ddf9c72dc8dad12&cndid=23806699&hasha=c33918a7cec52653e8285c2084d34d03&hashb=bc114d8a6e6159 fbfd218df34c6ce7e9b42e17d1&esrc=&source=EDT_WIR_NEWSLETTER_0_ENGAGEMENT_ZZ&utm_ter m=WIR_Classics [Accessed February 3, 2023].
[424] Katherine N. Hayles, *How We Became Posthuman* (London; Chicago: The University of Chicago Press, 1999).
[425] Halpern, *Beautiful Data*, 2-7.

further underscores that this data is not simply numbers but requires "crafting" it to make it worthwhile. Value comes not only from the quantity of information but also from aestheticizing the numbers (infographics, data visualization[426]) to create a narrative, a way of seeing the world, a perceptual grooming of the human user.[427] Data visualization at its most basic aims to inform in a pleasing fashion, balancing aesthetics and utility.[428] Moreover, as everything ends up online, museum images come to be seen with the same sort of logic as other data visualization. It is information and line, shape, form, and colour packaged, like corporate statistics, to provide something digestible. Complexity and artistry are smoothed into an easily understandable bundle of entertainment designed to capture your attention.

   Halpern's investigation suggests that it quickly becomes insidious in its messaging. "Pretty" graphics distract so that information harvesting may not be so readily seen as altering or harmful. She writes that it goes unnoticed that cities like Songdo, about to be duplicated and rolled out elsewhere in the world, embed computational infrastructure in the fabric of daily lilfe. Inhabitants move from being "an observing subject to a 'user'".[429] There are no longer singular humans but rather "units of attention, and bandwidth, consisting of roving populations of action in the network."[430]

8.   Digital logic

Seb Franklin also considers that units "measure" humans now and argues that the ways that knowledge/information are structured in the digital age profoundly affect contemporary society. He analyzes the years, post-WW II, as underpinned by a growing "information economy" which has effects on almost everything from the markets to social spaces to dispossession in the developing world.[431] Franklin sees this development as becoming normative, beginning in the nineteenth century as it conjoins information, labour, and social management and then adds increasingly complex technology and governmentality. These

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[426] Data visualization is defined as "empirical research which incorporates two-and-three dimensional techniques in order to give insights into data patterns". Qi Li, "Data Visualization as Creative Art Practice," *Visual Communication* 17 (3) (2018): 299–312; n.p. https://doi.org/10.1177/1470357218768202.
[427] Halpern, 2-7.
[428] Qi Li, n.p.
[429] Halpern, 240.
[430] Ibid.
[431] Seb Franklin, *Control: Digitality as Cultural Logic*, (Cambridge, MA: The MIT Press, 2015), xv.

principles become entrenched in human-computer metaphors in the twentieth century, to fully penetrate, at present, as "informatic principles". He uses the term, "control" to describe this evolution of social worlds "reconceptualized as information-processing systems…"[432] He views the transformation of humanity across the last century-and-a-half through technological principles like statistical forecasting, distribution, and self-regulation. It both describes late-stage capitalism and is "fundamentally digital".[433]

Relentlessly and always, Franklin suggests, the digital goes beyond the systems that execute daily tasks like communication, banking, and personal data management, moving more deeply into the ways that digital "thought" becomes human thought and human management.

> Control…should be understood as the logical basis of a worldview that imbricates literal practices of computation, the new organizational and infrastructural concepts these practices facilitate, and metaphors derived from the electronic digital computer and its processes with a system of value production that can produce profit only by exploiting and dispossessing human life.[434]

Franklin notes that in the pursuit to "digitize" the world, everything must become "legible, recordable, and knowable via particular numeric and linguistic constructs".[435] This, however, requires processes of capture, definition, optimization, and filtering. This can also lead to those who are digitally filtered out and/or excluded from measure, process, and do not, literally "count". And always he expands this to the human experience more broadly, to say:

> persistent reformulation of the computer from finite, concrete technology to universal metaphor (for the brain, for the subject, for the economy, for society) lies behind the emergent logic of control…[436]

Byung-Chul Han calls this a move from thinking, which is a human action, to calculation. He emphasizes that thinking is about spirit, action, and truth, while calculation describes the systems, and steps that predictably arrive at a solution. Han sees those calculations as

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[432] Franklin, xv.
[433] Ibid.
[434] Seb Franklin, xviii.
[435] Franklin, xix.
[436] Ibid., xxi.

"operations" and operations preclude decisions. Operations do not have the temporality or existential attributes of human thinking. They simply move inexorably to a result.[437]

Franklin, too, like others, leans into Gilles Deleuze's descriptions of what emerges after the Foucauldian institutions (school, factory, hospital, the family) break down. Deleuze called them "free floating" modes of organization. Deleuze saw these new organizations - anything which is self-regulating, from the human to the social group to the group of groups to the complexities of the market or even the battlefield – as intelligible and analyzable, like a computer. But, as Franklin notes, Deleuze did not see these as creating social conditions, but rather as the systems that arise when there are social conditions capable of creating and using them. It is a bit of a chicken and egg. Ultimately, though, Franklin understands Deleuze as pushing farther than others have credited him for, who saw Deleuze as limiting the digital to that which ensues from the physical and digital capacities of computers. Franklin sees in Deleuze's language of "control" a gradually increasing emphasis on instrumentalizing and valorizing all of life for capitalistic endeavour.[438]

Valorizing life, which is to say applying money-making capacities to the human body, began roughly with the marking of hours in early industrialization in the move to measure work-for-pay. A lineage can be traced through Charles Babbage's writings in the 1830s. Babbage worked on an early computing machine, but also wrote a book in which he desired to break down labour into units that could then be specifically categorized as low-skilled – for those of 'modest aptitude' to whom less money could be paid. Additionally, he is renowned for the "Analytical Engine", now acknowledged as the first stored-program computer… constitut[ing a] projection of a more perfect factory." Clearly, Babbage connects early ideas of computing and of labour stratification, labour reward, and diminishment of personhood.[439]

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[437] Byung-Chul Han, *In the Swarm: Digital Prospects*, trans. Erik Butler (Cambridge, MA: The MIT Press, 2017), 52.
[438] Franklin, 4-5.
[439] Dominic Oldman, "Digital research, the legacy of form and structure and the ResearchSpace system", *Information And Knowledge Organisation In Digital Humanities; Global Perspectives*, eds. Koraljka Golub and Ying-Hsang Liu (London, U.K.; New York: Routledge, 2022), 142.
Michelle Henning, "New Media" in *A Companion to Museum Studies*, ed. Sharon Macdonald (Malden, MA; Oxford, U.K: Blackwell Publishing, 2006), 303.

As noted earlier, Ernst Kapp believed that tools are a reflection or extension of the human body, but he was suggesting something even more profound about technology.[440] For Kapp, technology is a relationship between humans and the world in a primary sense. Work, production, and technology are directly generative of humans and vice-versa, developing together. The human body and the tools of capitalism, computation, and digitization march onward, from Kapp through Taylorism and post-Fordism, toward atomizing and valorizing the human body and human labour as discrete units of measurement.

At present, getting fit, pursuing education, developing social skills and activities, choosing partners, and raising children have all become value-producing activities. They are perceived as acts of entrepreneurship to gain maximum capital in exchange for activity, as well as indicators of the hypermodernist era. As Foucault suggested, this is less a description of labour power than it is "a conception of capital-ability which, according to diverse variables, receives a certain income that is a wage, an income-wage, so that the worker himself appears as a sort of enterprise for himself.[441] Labour practices, optimization, and discretization are made universal and applied to all human activity. It can be seen in the current gig economy, where people monetize themselves, their vehicles, homes, skills, but where most of the actual money is returned to the large corporations who supervise and organize the worker. Artists and museums also find themselves as functionaries in this system, scrambling to find or provide ongoing employment, funding a living. Museums and artists both work within and attempt to defy a system determined to remake everything as optimizable and discretely measurable.

All human capacities are exploited in the capitalistic system but perhaps none more so than the sense of vision, of sight, where eyes look, because where eyes go money follows. In this moment, social media is considered the best way to find eyeballs. Behind the social media platforms, corporations work hard to gain the valuable commodity that is your sight and represents your attention. Their hope is to open your wallet to whatever it is their algorithms have decided captures your consideration. And if you pause on an advertisement

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[440] Ernst Kapp, *Elements of a Philosophy of Technology*, Kapp is considered one of the earliest thinkers on technology, where technology is a study of production, from the German, *Technik*. (xvi).
[441] Michel Foucault, *The Birth of Biopolitics: Lectures at the Collège de France, 1978-79*, trans. Graham Burchell (London; Palgrave Macmillan, 2008), 219.

for shoes, more advertisements for shoes will follow. It is mathematical, algorithmic, digitally logical, and entirely grounded in capitalism.

9.   Museums influenced by digital logic

Digital logic is also tied to structuralism of the mid-twentieth century, of the desire by philosophers and thinkers to understand the production of knowledge, the configuration of the social world in a systemic way. Society, according to general systems theory, could be categorized and from this mapped and linked.[442] It is a very "digital" way of seeing the world, looking for logic in the naming and cataloguing, the breaking down into units in order to look for ways to measure and capture.[443] Susan Pearce calls it "setting certain problems to do with structure, to do with pattern, to do with, essentially, the rules of being human".[444] In the same ways, museums come to think about their collections in systemic and systematic ways, especially through automation and computation. Ross Parry suggests that this is just the latest iteration in five hundred years of museums guarding control over their collections:

> whether through curatorial memory, the drawers of a cabinet, or the physical proximity of objects to one another… [the late twentieth iteration is in] the act of reducing collections to hierarchies, imposing data control, standardizing data entry, of containing documentation to specific codes and terms…[445]

As part of the Enlightenment project, museums have always been in the business of bringing meaning to things, to bits and pieces of the past and the present to create a narrative but the dream of total understanding, of complete comprehension haunts the endeavours of the curator, librarian, or archivist. Writer Jorge Luis Borges explores this idea in his story of "The Library of Babel" about a librarian who has spent his entire life in the library of seemingly all books looking, alongside others for the "catalogue of catalogues". Borges' narrator tells us that the library was supposed to "reveal the fundamental mysteries of mankind", that the library would not only have this book, but, if necessary, also generate the language and grammar required to understand this new knowledge. The narrator describes people who worship and weep at the feet of books, overwhelmed by knowledge they cannot

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[442] Ross Parry, *Museum Meanings* (London; New York: Routledge Publishing, 2007), 29.
[443] Harvard professor Daniel Schacter warns that we must not get caught up in seeing the human brain like a computer retrieving and storing memory, processing as if it were a deterministic biological computer. Daniel l. Schacter, *How the Mind Forgets and Remembers: The Seven Sins of Memory* (Boston: Houghton Mifflin), 134.
[444] Ross Parry, *Recoding the Museum…*, 29.
[445] Parry, 30.

understand; of those who fall into madness at the overwhelming task of trying to know everything.[446] It is part of the human condition to dream of knowing more, of knowing all. Perhaps some of the frustration of the twenty-first century is that, while it was never possible for humans to know everything, with the avalanche of information production at present even the possibility slips away. Our anxiety grows as the deluge increases.

What do museums do as gatherers and purveyors of information currently? Museums attempt to control information as Ross Parry noted above, but they function under the very real avalanche of physical art, art information, and archiving and now augmented by a perceived deluge of digitized art, information, and archives. There is not so much a decrease in the workload for museums as doubling of it. And certainly funding has not matched the needs of both physical and digital storage of art and art information.[447] It may be that museums should focus on the real: the physical objects that they have and let go of some of the digital demands. As Elizabeth Merritt recently wrote for the American Association of Museums, "the overall economic and social impacts of digitally powered sharing are problematic, at best." She goes on to caution museums of many of the things outlined in this dissertation, like data scraping by AI models, exploitation of labour, and the tendency of every new technology to "bend toward money." She advises that museums move forward by weighing the costs and benefits of technologies.[448]

10.   The digital image

Digital images are a form of reproduction, as already noted, but they have a set of unique characteristics that require examination. Standing in front of an artwork in a gallery also comes with a complex of interactions and systems behind it, as has been described previously. Here, too, there is an influencing source: a physical system of art delivery at work behind the scenes; perceptions of the art when viewing it; and an economy at work around

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[446] Jorge Luis Borges, "The Library of Babel", *Collected Fictions,* trans. Andrew Hurley (NY: Penguin Books, 1998), 112-118.

[447] For more on the state of museum finances see Chapter 4.

[448] Elizabeth Merritt, "Techno-skepticism: Rethinking the Costs and Benefits of Digital Technology", *American Alliance of Museums; Centre for the Future of Museums Blog*, May 31, 2023. https://www.aam-us.org/2023/05/31/techno-skepticism-rethinking-the-costs-and-benefits-of-digital-technology/?utm_source=American+Alliance+of+Museums&utm_campaign=eb837736f5-Dispatches_June1_2023&utm_medium=email&utm_term=0_-eb837736f5-%5BLIST_EMAIL_ID%5D

the physical art image. But little has been done to grasp the multipartite effects of a museum creating digital images of the works in their collection. The digital image of the traditional work of art becomes part of interactions that are complex, complicated, and expanding. There must be a comparison between the museum system – the real-life experience of standing in front of an art object – with the technologies, perceptions, and economies of an image on a device. It is a new context for an old form and suggests the hackneyed phrase one hears about running twenty-first century software on primeval bodies. In many ways, as a species, there is no change in response to input, stimuli, visuals since our Neolithic ancestors. Computers and the digital age, however, change the speed and quantity of input, as well as the sophistication of those systems to assess us and use the information. We, as humans, are little aware and seem poorly prepared to address these profound alterations.

a. Manipulation of the digital image

The digital image is a set of binary code, bits, series of ones and zeroes, that turn light-emitting devices off and on, on a screen. It is a scientific, technological process which parallels the chemistry that produces photographs. Like the darkroom where the photographer manipulates paper, chemicals, light, and time to produce an image that is pleasing and/or accurate, the digital image, too can be manipulated at various stages to produce something that the creator wants. The huge difference is that, where once developing a photograph and then altering it required special equipment, skill, space, and time, the digital image can be reconfigured by almost anyone. The devices, too, on which it can be done are nearly ubiquitous society-wide and while programs like the Adobe Suite are expensive and require computers with large processors and memory, simple screen-grabs, filters, and editing are available to all who have a device.

More interestingly, the changes to the original image can be done without leaving a trace.[449] Manipulation of actual photographs was a much more complicated and expert task. Recreating a whole new digital image or subtly altering one to convey a whole new meaning is relatively available to anyone with a smart phone or a computer. It opens up the possibility to view all images with scepticism and disbelief after a century-and-a-half of accepting that

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[449] Elizabeth A. Kessler, *Picturing the Cosmos; Hubble Space Telescope Images and the Astronomic Sublime* (Minneapolis: The University of Minneapolis Press, 2012), 127.

photographic reproduction catalogues, historicizes, and documents. If the Victorians were enchanted by the cohesive, trustworthy, and evidentiary nature of the photographic image, now, with the digital image, much of that must be set aside to see the digital image as an image, complete-in-itself, indicating nothing of what, if anything it is representing. Indeed, it may or may not correspond to anything but itself.

b. Veracity of the digital image

The digital image's ability to "duplicate" or "replicate" or play with what is real seems like an entirely new concept. Veracity is replaced by ambiguousness. No image can be trusted to be what it appears to be. This, too, coincides with the "'isms" mentioned earlier. Digimodernism sees the digital as the disintegration of authorship and cohesion and the addition of "multiple authorship".[450] Indeed, if any image can be taken from the internet and reconstituted, all possibilities of reliability are gone. In hypermodernistic fashion, it happens with incredible speed and with an ongoing endlessness. That image is edited and then re-posted, only to be re-redone in a moment by the next person, relegating "the original" to a slippery place in the past, to a point that no one can define or remember. And which might not matter. As Walter Benjamin predicted, the original is lost to the seeming advantages of the "reproduction" to go out into the world. But this cannot be seen as a reproduction in the Benjaminian sense. It is a new thing.

Perhaps, though, it is not entirely novel. Once, painters were not able to "capture the moment" because of the slowness of the medium. They were hired to convey a form of reality for the patron. The clothes portrayed might be richer in shade and texture, the sitter fatter or thinner, older or younger, surrounded by a real family and a real home or an imaginary setting that befitted the image the purchaser wanted to express. When the portrait was finished, assistants might alter, retouch, or make wholesale changes. The final product was not necessarily "real"; it was a combination of the artist's/artists' conceptions and the patron's desires. Again though, what is innovative is the speed, access, and invisible manipulation that is now possible with the digital. It requires little skill to be able to digitally alter images. The software is free, or inexpensive, and the time required to learn to use it is

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[450] AI will only make matters like this more complex. Multiple authors become no authors at all, other than a chatbot working as a generative pre-trained transformer (GPT).

relatively short. In hours, one can produce extremely good images that are changed in subtle or extreme ways.

Intriguingly, and more basically, where once changes or "artistic license" exercised on the original were done with the artists' and patrons' permissions, digital alterations are so easily done that it is rare to ask the artist or the owner of the image. Again, the digital image may be considered a copy of the original artwork, but questions of ownership and manipulation of the digital copy are a constant consideration by museums and galleries. It is also a concern to image-hoarding agencies like Getty Images who now own the rights to nearly half-a-billion images.[451] Meta/Facebook too has had to change course several times as it struggled with public perceptions of its use of posted images. It has shown alleged indifference to misuse of users' photos by others, including marketers, AI scraping, and data analytics companies.[452] Beyond museums lie a lot of image providers who also mediate access, change images, and insert themselves between producer and viewer. Major rightsholders, like Getty Images or Facebook/Meta, regulate and alter the flow of private and public (or previously public) imagery.

c.   Hubble Space Telescope and Image "Interpretation"

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[451] To quote Mark Getty, chairman and co-founder of Getty Images, "For 25 years, Getty Images has embraced disruption and change; riding the digital wave to evolve from an analogue stock photo business into a multi-billion-dollar, global e-commerce industry leader and trusted brand, that is home to over 400 million pieces of content and represents more than 320,000 of the world's best content creators. As a global team, we serve more than one million customers in almost every country around the world…"
https://wherewestand.gettyimages.com/ [Accessed Dec. 7, 2021].
   Getty Images has purchased large quantities of stock photographers' and agencies' historical work, as well as archives of images from many trusted news organizations around the world (including the BBC and Agence France Presse) which they have digitized and placed behind a paywall. Getty Images notes that, "As the world's largest privately held visual archive, we own and represent material from thousands of unique sources, and from different cultures and time periods, that are accessible as part of the historic record." Indeed, how accessible they are will be is for the future record. (https://www.gettyimages.ca/about-us/values/archive-cultural-sensitivity.) [Accessed Dec. 7, 2021].

[452] Katherine Tangalakis-Lippert, "Clearview AI scraped 30 billion images from Facebook and other social media sites", *BusinessInsider.com*, Apr 2, 2023. https://www.businessinsider.com/clearview-scraped-30-billion-images-facebook-police-facial-recogntion-database-2023-4. [Accessed June 19, 2023].
Meta/Facebook is also a well-known mediator of millions, perhaps billions of private images. Their data policy clearly states that the user/page owner is the holder of the image and that the image will be deleted if the account is deleted. However, they offer no protection if the content is shared, screen-captured, or tagged elsewhere. Moreover, the list of people with whom they share metadata, if not the image itself, is almost everyone, including advertisers, partners, other Meta products (like Instagram and Messenger), researchers, vendors, and law enforcement. They suggest that you monitor your own privacy settings and post carefully. This is a much more user-centred policy than some years ago, when Facebook often used personal images without permission. https://www.facebook.com/policy.php [Accessed Dec. 7, 2021].

A more thoughtful and perhaps artistic or creative example of digital manipulation is found in how data from the Hubble Space Telescope is represented to the public. Elizabeth Kessler notes that scientists create images from the data sent back from the Hubble using a combination of perceived objectivity of instruments – what they call, "mechanical objectivity" – and growing reliance on expert opinion.[453] This produces an image contingent on the maker "to synthesize, highlight, and grasp relationship in ways that were not reducible to mechanical procedure."[454] Simply put, it means that scientists behind the data take numbers and assign meaning to them to create a visual portrait of outer space for the public. While one hopes for impartiality in the assessment of the information, ultimately, they admit to using their skills and understanding to interpret a stream of data points to make images for the public to see. The public goes on to "understand" the cosmos as presented in these digital productions. In fact, as Kessler notes, the scientists present "saturated colors, high contrast, and rich detail, as well as majestic compositions and dramatic lighting" which have become the normative picture.[455] These are, since 2005, the default visuals we have in our heads for how the universe "looks". "The decisions astronomers and image scientists make encourage a particular way of seeing the cosmos."[456] Though this comes from a reputable, single source, there are similarities to the way that an online version of the *Golden Milkmaid* by Vermeer became the public idea of what an image is. Whole generations are being given a particular way to see the universe which will be very hard to change should there be need or reason.

d. Creating a system of belief through digitally manipulated images

Manipulating digital imagery involves decision-making. These decisions direct how the digital images are received. For example, the astronomers and the image-processing specialists working with the Hubble Space Telescope sensed that they were interacting with something enormous, awe-inspiring, and wonder-making as they decided how to communicate the data that the telescope beamed back to earth. According to Elizabeth Kessler, they were also aware of making images that will outlast themselves and go on to create a system of "belief" for all future scientists and the public. These images will continue

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[453] Kessler, 128.
[454] Ibid.
[455] Ibid., 5.
[456] Ibid.

to influence how scientists and the public "see" space, therefore how they determined the colours, the clarity, and the contrast matters. Moreover, the digital manipulation was done, in large measure, to engender support or even devotion. The Hubble Heritage Project, which oversaw this, released an image almost monthly from 1997 to 2016, with aims to educate, inspire, and, importantly, to ensure funding. Kessler notes that administrators at NASA used the images to gain and maintain financial support for the eye-wateringly expensive project.[457]

In the same way Instagram has also formed the ways that photos are seen and with a billion users there is no escaping its influence. In its early days, Instagram captured the zeitgeist with its retro filters that added faded, greyed, or sepia-toned effects to uploaded photos. It soon offered other filters which gave a hyper-saturated effect reminiscent of an old super-8 movie.[458] The app also forced the image into a square which resembled Polaroids or early instamatic cameras (from which it draws its name).[459] Patricia Gill calls this "technonostalgia" – a desire to return to old-fashioned values with willful blindness to whatever good or bad may come:

> the reestablishment of homey virtues in a blighted world, sanguinely celebrating the force of the human spirit in increasingly mechanistic surroundings; a nostalgic disavowal of potential future (or present) catastrophe.[460]

It promises a return to the past in the face of future uncertainty. It may provide comfort on a discomforting platform like a social medium.

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[457] Kessler, 6. The project maintains a website with links to all the photos, and these words, "The Hubble Heritage project was run by a group of astronomers and image processing specialists at the Space Telescope Science Institute from 1998 to 2016. The stated goal of the project was to use the Hubble Space Telescope's archive of imagery, augmented with new observation data, to produce aesthetically impactful and scientifically accurate color images of our universe. Although the team has since disbanded, the legacy of the program remains in the collection of rich and vibrant windows into our universe, which have inspired countless people across the world, fostering a deep and lasting appreciation of astronomy within the public." https://hubblesite.org/resource-gallery/learning-resources/hubble-heritage. [Accessed December 13, 2022]. The whole process has begun again with the James Webb Telescope. https://esawebb.org/images/potm2301a/ [Accessed January 31, 2023].
[458] Leaver, et al., 49.
[459] Alicia Chester, "The Outmoded Instant: From Instagram to Polaroid", *Afterimage* 45 (5) (2018): 10. https://www.lib.uwo.ca/cgi-bin/ezpauthn.cgi?url=http://search.proquest.com/scholarly-journals/outmoded-instant-instagram-polaroid/docview/2159926434/se-2.
[460] Patricia Gill, "Technostalgia: making the future past perfect", *Camera Obscura* 14 (1997), 171. Lachlan John MacDowall & Poppy de Souza, "I'd Double Tap That!!': street art, graffiti, and Instagram research", *Media, Culture & Society*, 40:1(2017): 3-22.

There is popular belief that high contrast, intense colours are now what are most often used on Instagram, and though a literature search could not back this up, Reddit does. Some of the answers to the question, "Why are all the photos in digital spaces so oversaturated?" were quite rational. Suggestions include that bright colours and intense contrast grab viewers' attention and slow scrolling. They stand out from the rest (until everyone is doing it). They also make up for screen differences in phones or if the brightness is turned down. And so, it is quite reasonable that, if the images catch the eye, advertisers and influencers' saturated photos sell.[461] Would scrollers slow down for posts of images of grey seas and dreary clouds or for the turquoise waters and azure skies of the Caribbean?

Marques Brownlee, a tech blogger, and influencer with 17 million subscribers on YouTube ran a competition with 16 different phones, comparing photos two at a time on his social media channels. After five million votes were tallied, the results showed that people scrolling past the images overwhelmingly chose the brightest, warmest image from each pair.[462] Social media does not require the best camera for viewing nor do sharpness and contrast matter as much as saturation and glow.

[461] Reddit, https://www.reddit.com/r/photography/comments/cyn336/why_are_all_the_photos_in_digital_spaces_so/ [Accessed June 6, 2023].

[462] Marques Brownlee, MKBHD, https://www.youtube.com/watch?v=_5-bo8a4zU0&ab_channel=MarquesBrownlee [Accessed June 6, 2023].

Figure 15: Samples of recent book covers. (Penguin Random House, Catapult; Knopf Doubleday Publishing Group; Macmillan.) From *On the Media* , PBS.org https://www.wnycstudios.org/podcasts/otm/segments/story-behind-book-cover-blobs-on-the-media

This has repercussions for museums' images on these platforms. Do they increase the filtration on images of their artwork to catch scrollers' eyes? Do they change the contrast or colouring for the image to "make sense" on Instagram? A scholar on the National Public Radio show, "On the Media", recently noted that book covers have become much brighter in recent years to increase visibility as people sweep past on social media and websites. (fig. 15) The thumbnail image on a small screen or the grid must host a book cover that is seen and sells.[463] So where is the line between cleaning up a photo – attempting to maintain its integrity but making it clear, sharp, and legible for another medium – and altering it for publication? Would a social media team member in a museum ever change an image going out to Twitter or Instagram so that people take note of it in the constant deluge? Where standing out is the whole purpose? It does seem tempting or even routine, unheeded. I can imagine that editing photos – even photos of major works of art – for the feed is an instinct especially for a generation who ordinarily reworks and filters for effect. Museums need policies and oversight for how images are communicated.

e.   Image credibility and trustworthiness

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[463] The website says, "… a lot of covers share a certain aesthetic. With some observers across the Internet have dubbed the book Blob. Actually, they're blobs of various bright hues and contours, beckoning abstractly behind the title… Cute, splashy, asymmetrical shapes on things. Bright colors all kind of smushed together." From the transcript of the conversation between Brooke Gladstone, host and guest Margot Boyer-Dry, "The Fine Print", *On the Media*, September 16, 2022. https://www.wnycstudios.org/podcasts/otm/segments/story-behind-book-cover-blobs-on-the-media.

Alongside the normal trends and explainable changes in how images are altered and viewed, there are more insidious changes. Of late there is growing awareness of "deep fakes", doctored imagery, and all manner of manipulations of images online. This leads to a wide variation in trust of things seen on the internet. In the early days, it seemed, there was a fair amount of confidence in online information and imagery, but increasingly there is awareness of exposure to misrepresentation. Due to the breadth and rapidity of information dissemination there is a lot of potential for viewer manipulation. And, while there has traditionally been trust in large institutions and governmental agencies, that no longer holds true, especially for American audiences where viewers tend to have confidence in something only if it reinforces their pre-existing belief system or opinions.[464] A recent study suggested that images from highly trustworthy sources, like the New York Times, did not affect how trustworthy an image is thought to be, nor are images less trusted when reposted to an intermediary source like a personal website, from a trustworthy source. The only factors that influenced how well someone could identify fakes, i.e.: navigate the internet with some ability to trust what they were seeing, was in a study where respondents self-declared attributes of internet familiarity, digital imaging experience, and social media aptitude.[465] So, intriguingly, teaching digital imaging manipulation encourages users to learn to question other images. Learning to be sceptical about images is a good beginning for encouraging online caution. From the internet provider to the digital photo uploader to the machine upon which the images are viewed, there are many possibilities for exploitation, alteration, and misuse.

The best way to combat misinformation (defective information or mistakes), disinformation (like hoaxes) or malinformation (stories that aim to damage) is to begin to teach media and technology literacy early in life.[466] Finland is a world leader in providing

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[464] Silvia Knobloch-Westerwick, et al., "Confirmation Bias in Online Searches: Impacts of Selective Exposure Before an Election on Political Attitude Strength and Shifts", *Journal of Computer-Mediated Communication,* 20 (2015), 1710187. doi:10.1111/jcc4.12105.

[465] Cuihua Shen et al., "Fake Images: The Effects of Source, Intermediary, and Digital Media Literacy on Contextual Assessment of Image Credibility Online", *New Media & Society 21*, no. 2 (February 2019): 438–63. https://doi.org/10.1177/1461444818799526.

[466] Government of Canada, "How to identify misinformation, disinformation, and malinformation (ITSAP.00.300)" https://www.cyber.gc.ca/en/guidance/how-identify-misinformation-disinformation-and-malinformation-itsap00300 . [Accessed August 14, 2022].

high quality classroom instruction on digital literacy and information manipulation. This requires resources and teachers who are competent in digital matters which Canadian school systems seem reluctant to invest in. But some European countries who do spend money on teaching children to use the internet wisely find it pays off:

> We must tackle this issue through improved news literacy, and it is the task of our educators and society at large to teach children how to use doubt intelligently and to understand that uncertainty can be quantified and measured. Studies show a positive relationship between the level of education and resilience to fake news, the OSI report said, with more knowledge and better critical-thinking skills guarding against fabricated information.[467]

Educators and policy makers are finding that early immersion in digital understanding creates youth who are resilient to internet deception and that education beats regulation.

While some countries, including Germany and France, are legislating to try to combat fake news, others say that could jeopardize free speech, and argue that education and awareness are better solutions:

> … High-quality education and having more and more educated people is a prerequisite for tackling the negative effects of fake news and post-truth…While some regulation is necessary, education seems to be the best all-round solution.[468]

Though perhaps trust in images does not matter anymore. Increased immersion in a social media ethic means confidence in the authenticity of the mediated visual becomes immaterial or even irrelevant. The aesthetic and market demand of social media environments set aside confidence in the system of images in exchange for usage, interactions, and sales. There are no penalties for doctored images, no consequences to adjusting or modifying except aesthetic concerns. It does not matter if what is seen online is "real" and wholly and completely represents an "original".[469] Viewers only care if it is interesting and appealing; creators only

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[467] Emma Charlton, "How Finland is fighting fake news - in the classroom", *The World Economic Forum*, May 21, 2019. https://www.weforum.org/agenda/2019/05/how-finland-is-fighting-fake-news-in-the-classroom/ [Accessed February 3, 2023].

[468] Charlton, "How Finland is fighting fake news - in the classroom".

[469] Again, AI is really pushing how humans categorize reality, fiction, make-believe, and truth as the technology becomes more accessible, more powerful, and more relevant to daily life. Laura Sartori & Giulia Bocca, "Minding the Gap(s): Public Perceptions of AI and Socio-Technical Imaginaries", *AI & Society* (2023) 38 (2): 443–58. https://doi.org/10.1007/s00146-022-01422-1;
Sarah R. Kreps, Miles McCain, & Miles Brundage, "All the News That's Fit to Fabricate: AI-Generated Text as a Tool of Media Misinformation", *Journal of Experimental Political Science* 9 (1) (2022): 104–17. https://doi.org/10.1017/XPS.2020.37.

want an image to capture attention for measurement by corporations. And so this could be an opening for museums – with their high levels of public trust and their physical objects – to bring people and items together to reassure visitors that there are places in which their eyes witness tangible, substantial *things*. In examining what is "real" art and the contemporary state of online art, objects, marketing, and trust, a detour must be made to discuss non-fungible tokens (NFTs).

11.   NFTs: an introduction

NFTs came to public attention during COVID when so many were glued to screens. It is a platform that takes a digital image and registers it on the blockchain ledger, which makes it singular. Blockchain technology "breaks up" the object, stores the file in small pieces of data on millions of computers, and only the holder of the lengthy password can "reconstitute" the information in a single place to create the artwork. This makes the item or image "non-fungible" or unique. One can still view the digital object, even screen-grab it, etc., but only the owner can sell it on; this is the "non-fungible" part of digital art. A famous example is an image of the first tweet by Twitter owner, Jack Dorsey, which sold for $2.9m (USD) in March 2021. A few months later the purchaser tried to resell it, but top bids had dropped to about $10 000. That first person had purchased in the middle of the NFT bubble of spring 2021.[470]

The movement to create non-fungible tokens has been financially tumultuous, in part because there are a lot of questions about the credibility of an art token – how they are made, sold, and legally tendered. Can there be value in making digital art to sell online when the product seems fleeting and digitally accessible to all? Why "own" it, and to what end? The market grows and shrinks around NFTs because there is an inherent mistrust in the way they function. To seemingly address that, some of the largest NFT platforms have held extended (physical) pop-ups or launched actual galleries in 2022.

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[470] Jeff Kauflin, "Why Jack Dorsey's First-Tweet NFT Plummeted 99% In Value In A Year", *Forbes,* April 14, 2022. https://www.forbes.com/sites/jeffkauflin/2022/04/14/why-jack-dorseys-first-tweet-nft-plummeted-99-in-value-in-a-year/?sh=20aa611565cb. [Accessed August 14, 2022].

There is no end to the irony in learning that these advanced ether-based technologies are opening bricks-and-mortar spaces to attract real buyers. One of the co-founders of SuperRare Labs, Jonathan Perkins, noted that "When you have a big, beautiful, digital frame in a gallery setting and someone's got a glass of champagne in their hand you say, 'Oh, that's it,' so there's this educational aspect that helps people understand for the first time".[471] How fascinating that even those whose career is selling NFTs seem to require that the digital works be displayed on television screens on a gallery wall in a setting that gives formal recognition to the artwork in order to be considered "real". What does Perkins hope people will "understand"? That you can hang your digital art on the wall, like traditional art? That there are real people behind the platforms to give validity? That this is not just a trick of some tech bros to make yet more money? That NFTs can or must be more three-dimensional than just a string of code in a device? (That might be more of a lesson for those who work with NFT platforms.)

Yet more surprising is that Perkins continues by saying, "[w]hen you see photos on Instagram of a party happening in the gallery with the works on the wall, it legitimises the whole space". So, in addition to having to hang digital works in a device physically on a wall, it is also the photos of the exhibition happening on Instagram that make the whole exhibition noteworthy or even "real"- that makes it exist, true, and authentic for potential buyers and the public. That which was created solely in the ether to be bought and sold becomes a digital image hanging on a real wall, in a real gallery, and then paradoxically it is all more authentic when it is beamed out to the world via a social media platform.

This process indicates that there is comfort in things happening as they have in the past – that there an exhibition in a physical space legitimizes; that the bits and bytes of digital art must be returned to something physical to be considered art. Weirdly though, this includes the people of whom it could be assumed already comprehend NFTs and appreciate the digital art token. And more irony — that the physical happening, that very traditional "art opening",

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[471] Daniel Cassady, "Why are NFT platforms opening up physical gallery spaces?", *The Art Newspaper*, July 15, 2022, https://www.theartnewspaper.com/2022/07/15/why-are-nft-platforms-opening-up-physical-gallery-spaces?utm_source=The+Art+Newspaper+Newsletters&utm_campaign=0802a3ac61-EMAIL_CAMPAIGN_2022_07_12_02_36_COPY_01&utm_medium=email&utm_term=0_c459f924d0-0802a3ac61-62222806 [Accessed August 14, 2022].

is only made genuine then by reciprocally existing on the internet. It is in the act of posting it to Instagram that the actual exhibition and the NFT are validated. The Instagram post seems to give the final stamp of recognition to NFTs as art worth paying for. And all of this despite a broad, general understanding that anything on the internet is potentially manipulated or manipulative.

Though NFTs deals with art that was never physical, unlike what this thesis focuses on, there are some interesting lessons for legitimacy and for what art viewers might need. Museums, in the form of professional curators, need to continue to hang art in coherent exhibitions to give validity, endorsement, and authenticity to art and artists and for visitors. Museums need to tend, and be tended, so that there are spaces for exhibition, places where art exists and where curators create intriguing narratives with art. A recent survey by the Canadian Museums Association (CMA) noted that 86% of respondents "trust" museums"; 89% see it as a "safe" space; and 80% feel welcome. In musing on why this is the case, the writers stated that:

> …trust in museums is akin to faith. It is both earned and bestowed on museums. Bestowed because there is a belief that artifacts speak for themselves. Earned because there is a belief that the system has dedicated researchers and there are checks and balances on what researchers say about the artifacts." There appears to be a base level of trust in museums, founded partially on the presence of objects and the assumption of expert knowledge…[472]

The more time spent in the digital sphere and the more that goods and services migrate online, the more the opposite is also needed – the physical, the real, the actual. The museum, from a position of trust and expertise, can balance and question its digital opposite, perhaps strengthening both.

12. Neo baroque concepts of the slippery original

Determining the cosmos' colour, filtering for social media, and buying and selling NFTs might also be seen as neo-baroque events. It can be helpful to see these things in an historical context, hearkening back to other times of enormous change in the past. In her book, *Neo-*

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[472] Caroline Loewen, "Sources of Trust in Uncertain Times", *Muse Magazine Online*, Winter 2022. https://museums.ca/site/reportsandpublications/museonline/winter2022_sourcestrust#:~:text=Most%20importan tly%2C%20the%20public%20continues,%25)%20and%20television%20(33%25). [Accessed June 7, 2023].

Baroque Aesthetics and Contemporary Entertainment, Angela Ndalianis argues that this the present is a new "poetics" of the baroque.[473] She identifies the neo-baroque in the current instability and untrustworthiness of "truth" and "reality"; in the exploding definitions of objectivity, subjectivity, categorization, and boundaries. She views the neo-baroque as going off into multiple places and spaces and depths, rather than a singular onward motion. Everything becomes multi-sensorial, which makes sense of the current mania for digitally immersive experiences and artwork. The classical themes of linearity, continuity, beginnings, and endings are abandoned.[474] Everything is enigmatic and potentially infinite. All these attributes, she argues, echo the sorts of rising technologies and shifting populations of the earlier baroque period.

The neo-baroque is "polycentrist", a core concept for Ndalianis, who contends that expansion beyond the frame is vital. "Stories refuse to be contained within a single structure, expanding their narrative universes into further sequels and serials. Distinct media cross over into other media, merging with, influencing, or being influenced by other media forms."[475] Hypertexts and hyperimages, connected to a digital image of a traditional art object on a museum website, extend beyond just the "picture" to give information about related topics, artworks, and historical contexts. Links can take you anywhere; multimedia can connect to video and music; virtual tours put you in the gallery. It is a feast of visuality, knowledge, and re-creation/recreation.

The neo-baroque also deploys decontextualization, pulling images out of their usual space and redeploying them in a completely different place. The danger of loss, though, is arguably replaced by the capacity for re-contextualization, re-invention, and then re-deployment. And it is under these conditions that the neo-baroque and capitalism become perfect partners. The Marvel universe is an example of the ability of the neo-baroque to embrace change and non-linearity to continuously expand the storyline. It accepts swapping and adding heroes, tolerates the same character be played by any number of actors. There is money to be made and worlds to unfurl, ad infinitum in a neo-baroque era. But for the museum this can be

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[473] Angela Ndalianis, *Neo-Baroque Aesthetics and Contemporary Entertainment*.
[474] Ndalianis, 25
[475] Ibid.

disconcerting. As an historical institution of power and influence, of solid objects and trained staff, the neo-baroque can provide opportunity, but it can also be daunting. The institution and its original artwork face changes as they work with digital reproductions. Online images create ambiguity related to their unreliability of source, quality, and accuracy. They also generate a split within viewers as to how they understand what they see – as noted earlier they both trust and at the same time know they are being manipulated. Digital imagery is part of a neo-baroque system that changes power structures and hierarchies by breaking through frames and boundaries to disseminate "ownership" of imagery. Putting digital images of their traditional art online could undermine the museum if done hastily or be supportive of its work if done thoughtfully, critically, and with an awareness of the systems into which they are entering.

13.   Museums upload high resolution imagery

Very few museums have the resources to put a large majority of their images online and in high resolution. However, if there are money and staff available and a long-term commitment to analytics, doing so gives an unexpected measure of control over those images. The Rijksmuseum in Amsterdam was closed for renovations for 10 years and in that time also worked out a digital mission which includes uploading extremely high-resolution imagery onto their website for use in any way that the viewer saw fit.[476] Indeed, the Rijksmuseum has been at the centre of thinking about the public's perception of digital art and the problems that arise when the image that is "out there" on the internet is so different from the original that visitors to the gallery are disappointed in the original.[477] So the museum made it part of their mission to reproduce extremely high resolution images of their art on their website. It decreases merchandising by the museum, to some extent, because users can do it for themselves, but it also circumvents theft by other companies who steal imagery to make and sell their own goods. At present, there are more than 650 000 personal portfolios or "Rijkstudios".[478] Each person who uses the Rijkstudio is required to sign up with an email

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[476] The "Rijkstudio" is a tab on the Rijksmuseum website that encourages users to "discover the possibilities of the masterpieces". There are more than 760 000 works from the museum's wares available to download. https://www.rijksmuseum.nl/en/rijksstudio
[477] The story of Vermeer's *Milkmaid* at the Rijksmuseum was recounted in Chapter 3, section 5.
[478] As of November 2022, "Now in Rijkstudio: Browse 766,042 works of art and 663,979 Rijkstudios". https://www.rijksmuseum.nl/en/rijksstudio

address, meaning a lot of addresses are gathered and used for marketing.[479] The museum is trading interactions/loyalties/ exposure for some lost revenue in the gift shop, and it seems like a fair exchange. There is no advertising on the page, but there are major sponsors named, like Phillips ING, and the national Dutch lottery.

14. Digital snacking

This digital sampling by the user may contribute to increased art exposure and art knowledge, as well as create priceless loyalty and a sense of belonging to the Rijksmuseum. And frankly, this form of openness also behooves a nationally funded, public museum. But creating a Rijkstudio may also be what some call "digital snacking", another form of digimodernism, of grazing anything and everything but rarely going deeply.[480] One critic, Viola Rühse, noted that the Rijkstudio fragments art as the images become too big for most screens and are disrupted by navigation tools. She also calls it a "spectacle space" devoted more to a "trendy online environment" with pretty pictures and minimal text, context, or real curatorial input – than art appreciation and education.[481] Further, she points out that the saved imagery to a Rijkstudio suggests creativity but there are few actual things that can be done to the image other than cropping and sending it off via a corporate link to be produced as a thing, be it a tote bag, t-shirt, or mug. Indeed, the head of digital at the museum claimed that the Rijkstudio made the average person a "museum director".[482] Rühse considers that there is no evidence that the Rijkstudios put any authority in the hands of users. There is no exchange between participants nor has an actual exhibition ever come from these user-curators. "… the boundaries between the professional and the public are retained. Authority, decision making, and power are not really shared."[483] If the museum is trying to appear more accessible, Rühse

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[479] Viola Rühse, "The Digital Collection of the Rijksmuseum: Open Content and the Commercialization of a National Museum", in *Museum and Archive on the Move: Changing Cultural Institutions in the Digital Era,* ed. Oliver Grau (Berlin, Boston: De Gruyter, 2017), 51. https://doi-org.proxy1.lib.uwo.ca/10.1515/9783110529630-003

[480] The Canadian Government also calls those who looks at and shares images widely a "cultural snacker". The images may be shared directly from a website through linking to social media or it might be from screen-grabs and copy/paste functions. "Unacknowledged Sharing", *Technology News for Museums*, February 2014, https://app.pch.gc.ca/sgc-cms/nouvelles-news/anglais-english/?p=7671 [Accessed June 7, 2023].

[481] Rühse, "The Digital Collection of the Rijksmuseum...", 44-45.

[482] Peter Gorgels, "Redesigned Rijkstudio: everyone is a museum director!" *linkedin.com*, June 29, 2016. https://www.linkedin.com/pulse/redesigned-rijksstudio-ready-mobile-era-peter-gorgels/ [Accessed June 7, 2023].

[483] Rühse, 45.

proposes that its ticket price (€22.50 in June 2023) and its one-star Michelin restaurant detract from the "openness" that the museum asserts.[484]

Lastly, digital snacking also feeds into and/or is a product of the claim that people have shorter and shorter attention spans. The average American, for instance, checks their phone 52 times per day and it could be argued that seems low.[485] A well-known study suggested that humans' attention span had dropped to eight seconds, based (only) on how long the average person remains on a webpage.[486] These are things for museums to bear in mind as they attempt to educate and increase appreciation of their online collections. Perhaps the "spectacle space" of the Rijksmuseum is not the shallow and pretty space that Rühse bemoans but rather a clear attempt to meet viewers where they are in the twenty-first century. It is hard to know if a museum puts heavy content on a website or social media whether it will be appreciated and by whom. Again, it must be said that for educators and researchers more content is better but for the average user who is only grazing, online media do not encourage any sort of lingering.

15. Code, with issues

Clearly, there are humans behind the decisions of how to represent the images from NASA's Hubble telescope, but there are also humans behind the editing software that the amateur uses to play with digital images on their own devices. As computing evolved over the decades, programming and design of computational machines has seemed relatively impartial. However, Boaz Miller argues, values are embedded in technologies; they are not neutral things. Tech creators and constructors cannot avoid responsibility for the consequences of their products because of their longevity and durability, the values embedded in them have real world and long-term effects. He cites the example of the Apple iPhone that recognizes a selfie is being taken and blurs wrinkles or skin irregularities. It is possible to say that the function on the graphics card in the iPhone has "values" since it is processing the image to "beautify" and enhance. As the algorithms and hardware are not transparent it is impossible

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[484] Ibid.

[485] Chris Ategeka, *The Unintended Consequences of Technology : Solutions, Breakthroughs, and the Restart We Need* (John Wiley & Sons, 2021), 106.

[486] Neil A. Bradbury, "Attention span during lectures: 8 seconds, 10 minutes, or more?", *Advances in Physiology Education* 40:4, (2016):509-513.

to know exactly what is going on, but "the artifact may be said to embody…values".[487] These predeterminations live on within our devices, the result, then of judgements and decisions made by those who are in tech programs and jobs and tend to be young, male, and based in the "West". [488] Additionally, with the move to machine learning and artificial intelligence (AI) the complexities of programmer-bias continue. Facial recognition software has problems identifying BIPOC users; voice recognition software "prefers" male voices. There are real-world consequences to system infrastructure and data sets that contain our human prejudices and therefore cannot reflect all users.[489]

When the data sets used to train AI and algorithms are gathered by young, male, Western programmers, the resulting computational understanding of the world will be young, male, and Western.[490] There is a long list of glitches, complications, and hurdles for anyone not in these categories when using digital devices and the software and hardware that runs them. Nestled right into the language of a computer code and the algorithms are the tools which make preferences, reject users, and assume a worldview that reflects the original programmer and data sets.[491] Consequently, the devices on which the art image is viewed contain errors and shortcomings that can affect how "the image" is seen, accessed, found, and available.

A few years ago, Google released its image matching "game" in which the user uploaded a photo to the Google Arts and Culture app, entitled, "Art Selfie". Google then used its millions of saved images of artwork to match the uploaded face to a famous piece of art.

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[487] Boaz Miller, "Is Technology Value-Neutral?" *Science, Technology, & Human Values* 46 (1) (2021): 53–80. https://doi.org/10.1177/0162243919900965.

[488] LinkedIn reports that their workforce in "tech" is split: 27.8% women and 70.8% male; while the "non-tech" workforce is 57.75 women and 41.7% men. (https://news.linkedin.com/2022/october/2022-workforce-diversity-report). According to Statista, a corporate provider of marketing and consumer data, Dell's female tech staff is at 20%, while Intel's total female workforce, worldwide, is at 28%.
https://www.statista.com/statistics/1241029/dell-technologies-global-gender-diversity/;
https://www.statista.com/statistics/1200964/intel-share-women-workforce-worldwide/

[489] James Bridle, *New Dark Age: Technology, Knowledge and the End of the Future* (London: Verso, 2018), 144.
Also: Catherine Stinson, "Algorithms are not Neutral", *AI and Ethics* 2 (2022):763–770**.**

[490] Caroline Criado Perez, *Invisible Women* (NY: Abrams, 2019), 104-109.

[491] In 2020, a black man was arrested in Detroit, coming out of his own home, in front of his family. It was later determined that this may be the first case of wrongful arrest based on facial recognition software algorithms. It took a long time to sort it out and eventually the prosecutor apologized. Mark Coeckelbergh, *The Political Philosophy of AI* (Cambridge, UK; Meford, MA: Polity Press, 2022), 2. Also, Kashmir Hill, "Wrongfully Accused by an Algorithm", *NY Times*, June 24, 2020. https://www.nytimes.com/2020/06/24/technology/facial-recognition-arrest.html.

Almost immediately, there were concerns that the app was very poor at matching BIPOC individuals with suitable art faces. This reflects the artwork posted to the internet, which has been, and remains, overwhelmingly from the museum collections of the Global North and therefore heavily reflective of European subjects. Google harvests images from many sources but especially from what museums have put online and others have reposted, so the data set is not particularly representational. It contains and proliferates the same biases that museums do. In 2018, a *Mashable* writer noted that he could not get his face, self-described as Latin American, to match to another Latin American portrait. In five attempts he was matched to three Europeans and two Asians.[492] Far worse, in 2015, Google's Photos app tagged two Black men as gorillas.[493] Or consider that Amazon's same-day delivery service was unavailable in zip codes in predominantly black neighbourhoods in six major cities even when the service was widely available elsewhere.[494] And in 2016, analysis of a publicly available dataset taken from Google News demonstrated that the top occupation associated with men was 'maestro', while for women it was 'homemaker'. "We show that even word embeddings trained on Google News articles exhibit female/male gender stereotypes to a disturbing extent. This raises concerns because their widespread use…often tends to amplify these biases."[495]

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[492] Michael Nuñez, "The Google Arts and Culture app has a race problem", *mashable.com*, January 16, 2018. https://mashable.com/article/google-arts-culture-app-race-problem-racist; Accessed July 4, 2022. Another example of racism embedded in data is found in the use of software by the Los Angeles police for "predictive policing". It uses data from the past to monitor "high-risk" neighbourhoods. Unsurprisingly, since we now well understand that policing has contained racist impulses, when the data from past crime and past arrests is fed into a prediction model, the model foresees Black and Latino neighbourhoods will be where the crime is and where the policing should be focused. Catherine D'Ignazio and Lauren F. Klein, *Data Feminism*, 13.

[493] Alistair Barr, "Google Mistakenly Tags Black People as 'Gorillas,' Showing Limits of Algorithms", *The Wall Street Journal*, July 1, 2015. https://www.wsj.com/articles/BL-DGB-42522; Accessed July 10, 2022. Just as interesting and surprising is that in May 2023, the NY Times reported that now, eight years after that first issue, in a test of the various apps that host one's own photos (Google, Apple, Amazon, and Microsoft), none of them could search out and bring up any image that was a primate. It would not find photos representing orangutans, baboons, apes, or monkeys. At present it seems all of those companies are either unable to give results that are 100% accurate and fear that one failure becomes the issue, or the problem is embedded in the program's ability to discern colour, shading, and features and is proving difficult to solve. Nico Grant & Kashmir Hill, "Google's Photo App Still Can't Find Gorillas. And Neither Can Apple's." NYTimes, May 23, 2023. https://www.nytimes.com/2023/05/22/technology/ai-photo-labels-google-apple.html. [Accessed June 7, 2023].

[494] Elizabeth Weise, "Amazon same-day delivery less likely in black areas", April 22, 2016. *USA TODAY*, https://www.usatoday.com/story/tech/news/2016/04/22/amazon-same-day-delivery-less-likely-black-areas-report-says/83345684/ [Accessed June 12, 2023].

[495] Tolga Bolukbasi, Kai-Wei Chang, James Zou, Venkatesh Saligrama & Adam Kalai, "Man is to Computer Programmer as Woman is to Homemaker? Debiasing Word Embeddings", *30th Conference on Neural Information Processing Systems (NIPS 2016)*, Barcelona, Spain.

16.   Machines in the museum

All these examples, and hundreds more, should provoke larger questions and concerns.
Perhaps the biggest fear may be not that machines will become smarter than us but that, as
social scientist Kate Crawford notes, they will hard-code sexism, racism, and other forms of
discrimination into the digital infrastructure of our societies.[496] And yet there is so little
discussion of this issue, even as neural networks and machine learning continue to entrench
their results ever more profoundly into our daily lives. Their collation of data and formulae
underly shopping patterns, medical technologies, traffic control, job searches, and image
analysis. AI and machine learning programs underpin software like "Dall-E", which
"creates" art-on-demand in the style of known artists. And "ChatGPT", which can construct
logical text that mimics human reasoning, logic, and writing patterns is causing great unease
especially among educators but will also have consequences for museum literature,
education, and outreach.[497]

Galleries are even using surveillance technology to measure "visitor satisfaction". In
2021, the *Istituzione Bologna Musei* began a project to monitor visitors to their galleries
using multiple cameras around the rooms of the museum. As a person entered the gallery, the
system assigned a numeric code to them. Using a software tracking system called "Shareart",
the cameras collected billions of data points about facial features, eye movement, movement
through the gallery, time spent at each artwork, gender, age group, and emotional responses
to works of art.[498] Researchers suggested that they would be able to use the data to curate

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https://papers.nips.cc/paper/2016/file/a486cd07e4ac3d270571622f4f316ec5-Paper.pdf. [Accessed December
19, 2022].
[496] Kate Crawford, "Artificial Intelligence's White Guy Problem", *The New York Times*, June 25, 2016,
https://www.nytimes.com/2016/06/26/opinion/sunday/artificial-intelligences-white-guy-problem.html.
[Accessed July 10, 2022].
[497] I asked Chat GPT from OpenAI to define what Chat GPT is in simple terms. This was its response:
    "Chat GPT is a computer program that uses artificial intelligence to have conversations with people.
    It's designed to understand and generate human-like responses by analyzing the text input it receives.
    Chat GPT can provide information, answer questions, engage in discussions, and simulate conversation
    with users in a way that feels natural. It's trained on a large amount of text data to learn patterns and
    context, enabling it to generate relevant and coherent responses. Its purpose is to assist and interact
    with users through written communication, like a virtual chat companion."
https://chat.openai.com [Accessed June 7, 2023]. Further, "GPT 4" has even greater capacity to create
sophisticated, creative responses and scored in the 90th percentile of the bar exam, compared to the tenth
percentile for earlier versions. https://openai.com/gpt-4. [Accessed June 7, 2023].
[498] Stefano Ferriani et al., "The Shareart system, IOT and neural networks to evaluate the appreciation of works
of art during museum visits. Experimentation at the municipal art collections of Bologna", ENEA-IRIS Open

shows that genuinely hold people's interests. A bonus, they noted was that in the pandemic era they would be able warn people who were not using masks appropriately to do so. Data protection agencies have many concerns: the system has no opt-out; the warnings that this is occurring are limited to a small sign at the entrance; and the cameras are small and very unobtrusive. Further, organizations who track privacy and confidentiality issues note that Emotion Recognition Technologies (ERT) do not work very well, often misinterpreting what a face registers, especially if the person is not white or male or adult.[499] Looking at art is a complex emotional response not reducible to the narrow range that these systems recognize. The European Digital Rights Agency wrote that:

> … 'use of AI to infer emotions of a natural person is highly undesirable and should be prohibited.'… ERT are based on two fundamentally flawed assumptions: a person's inner emotions can be inferred from their facial expressions, and such emotions are discrete and uniformly expressed throughout the world. ERT lacks a solid scientific basis and risks consolidating arbitrary assumptions about people.[500]

The report expresses concern about the intimate and personal experience of viewing art in which emotions may be normally expressed relative to life events. If a visitor knew there were cameras it might "distort the freedom of expression…people might avoid exhibitions or change the way they experience works of art.[501] Apparently, the director of the museum was unfazed by the morally questionable amount of data being collected, only noting that it would give them so much more information than they were used to having about a visitor.[502]

There is the suggestion that this could lead to AI curation: choosing art based on what neural networks collate and proffer as the artworks that engender a response from the crowd at a museum. This seems to be a deeply flawed argument. Given that ERT can only at present detect six different emotions (sadness, happiness, fear, anger, disgust, or surprise), creating a complex exhibition of artwork based on a limited and potentially flawed measure of

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Archive, Institutional Research Information System, January 1, 2021, https://iris.enea.it/handle/20.500.12079/56301?mode=full [Accessed February 14, 2023].
[499] "No place for emotion recognition technologies in Italian museums", European Digital Rights (EDRi), July 14, 2021. https://edri.org/our-work/no-place-for-emotion-recognition-technologies-in-italian-museums/ [Accessed February 14, 2023].
[500] Ibid.
[501] Ibid.
[502] Manuel Charr, "Museum Uses Artificial Intelligence to Curate Better Exhibitions", *Museum Next*, June 23, 2021. https://www.museumnext.com/article/museum-uses-artificial-intelligence-to-curate-better-exhibitions/ [Accessed February 14, 2023].

emotional response seems irresponsible.[503] It once again leads away from knowledgeable expert curation by highly trained museum personnel toward a machinic algorithm for superficial entertainment based on "likes". It seeks simple amusement over complex and challenging exhibitions.

17.   The internet's systems

Both the art image on the museum website and on social media come to us via the internet. Society spends its days increasingly in a netscape that fashions us as it forms around us, and this is no less true for the art viewed virtually. Alexander Galloway uses the term "protocol" to describe the creation in the 1970s of a standard for cheap, ubiquitous connectivity, which would become the internet known today. It is a set of practices called "Transmission Control Protocol/Internet Protocol" (TCP/IP) that governs possible behaviours and achieves voluntary regulation within a contingent space. The protocol body oversees regulations that function at the level of coding to make certain that all devices can communicate with other devices, that hardware and software can exchange packets of information on a computer network. This organization was created by the US Department of Defense (DARPA) in the 1980s, who turned it over to the National Science Foundation, who then gave it over to a consortium of commercial telecommunications interests in 1995.[504]

The TCP/IP organization has remained, despite the odds, the internet's structure for accepting traffic, language, and information that is completely interoperable amongst all machines. It needs totality, flexibility, and aims for "university" over diversity.[505] This, Galloway argues, makes the internet the most controlled mass media in history.[506] It is an interesting dichotomy of actions in which users are both fully controlled by the end-use corporations and the data collected on them, and yet the language of the computer code works to remain wide open for use by all devices and hardware. There is no real sense of this but the entire internet's protocol rests on the agreement of corporations to oversee the system, and their agreement works with their mutual interest in keeping the whole thing

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[503] Cambridge Cognition, https://www.cambridgecognition.com/cantab/cognitive-tests/emotion-and-social/emotion-recognition-task-ert/ [Accessed February 16, 2023].
[504] Alexander Galloway, *Protocol,* 6.
[505] Ibid., 82.
[506] Ibid., 243.

useable. It seems fragile, though, and it certainly has openings for future misuse.[507] Indeed the original promise was that the transmitted packets of information would be treated equally in their travel around the internet as it is computers that access, retransmit and process information in the network, not some deeper infrastructure.[508] But ongoing regulation has undermined that equality, allowing internet service providers (ISP) to slow or speed traffic and threatening net neutrality.[509]

a. Internet's society of control

Protocol survives though because it is both a solution to the problem of how to have all the machines in the world interact, as well as provides the most pragmatic way to do so. It perpetuates itself and thus becomes a blueprint and a reflection of how humans live. Many insert themselves into it constantly becoming ever more like it, actions swayed by "control", coming to interact as machines do. Galloway, like Seb Franklin earlier, suggests that this is the "societies of control" that Gilles Deleuze said follows Michel Foucault's "sovereign control" and the bureaucratic "disciplinary society".

Control happens in working daily with digital machines, liking, agreeing, signing up, giving over information to technologies and companies that oversee habits, behaviours, desires, and who use this vast knowledge to sell to users, to gain access to what they want, to what corporations think is wanted, and to what users think is impossible to live without. TSP/IP protocols work largely because no one has decided to misuse it to any extent, but that means it can be thwarted, twisted, or overtaken. A group of corporate interests oversee it and to the present, the balance of capitalistic interests and universal demand keep malicious forces in check, though one could argue the balance is precarious.

Michel Foucault theorized that with daily participation in a milieu, a discourse forms society as much as society forms it. He recognized that power was at work in that space and,

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[507] Ibid., 244.
[508] Sky Croeser, *Global Justice and the Politics of Information: the struggle over knowledge* (London, U.K.; New York: Routledge, Taylor & Francis Books, 2015), 103.
[509] Net neutrality remains an ongoing battle as it undermines democratic access, coding, server space, and content creation. Joel Taylor & Laura Kate Gibson, "Digitisation, Digital Interaction and Social Media: Embedded Barriers to Democratic Heritage", *International Journal of Heritage Studies: IJHS 23* (5) (2017), 410-411. https://doi.org/10.1080/13527258.2016.1171245.

as noted earlier, the power was moving away from brute force toward the acquisition of knowledge. In the twenty-first century, digital information is the space of power and the holder of information is the powerbroker.

The digital image of the traditional artwork is plugged into this context. It thrives and replicates in the technological sphere, it moves and shifts where and what it is in space. The physical object is broken down into digital bits and reconstituted as a digital object with those attendant characteristics. It is communicable, mutable, potentially obsolete, or forgettable in the information deluge, but also enduring in the way that digital things are dredged up and are always stored somewhere. Some of these attributes mirror an art object's "real' life. Art can be politicized, as can digital objects; it can be propagandized, as can digital objects. Perhaps it is the scope, reach, and insidious ways that technologies have come to rest in the centre of our lives that makes this iteration feel different, potentially more sinister, or at least more prevalent, prevailing, and predominant.

Early digital thinkers like Friedrich Kittler agree there is an intensification in that the computer is part of the logic of escalation of machines, from scrawl of chalk on a cave wall to the keyboard in front of me. Writing literature becomes writing software becomes "structures burnt into silicon chips". Kittler believes the digital drives the human out of humanities. "As we know and simply do not say, no human being writes anymore."[510] The last "writing" (by hand), he posits, may have occurred just before the 1970s when the Intel engineers invented the silicon chip. He did not consider that humans and machines are extensions of each other, as other theorists like Ernst Kapp do, but rather that technology works with a logic of escalation that leaves humans behind.[511] Indeed, in his interpretation of the story of Dracula it is technology that comes to be at the core of all things, affecting both writer and writing. Central to the storyline of Dracula is the character of "Mina" the journalist who faithfully keeps track of events with her typewriter in order to defeat the

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[510] Friedrich Kittler, *Discourse Networks, 1800/1900* (Stanford, CA: Stanford University Press. 1990)
[511] Friedrich Kittler, *Literature, Information, Media Systems* (Amsterdam: Overseas Publishers Assoc., 1997), 121.

vampire. Kittler sees this new world as aggressively technologized: machines altering behaviour and social formation.[512]

Logically, this suggests an alienation of the human from the digital technology and therefore, it can be argued, once art is on a device there is the removal of the artist from the art. The process of inserting art "into the machine" means, if one extends Kittler, that the digitized version of an art piece is no longer from the hand of an artist. The link is severed: the digitized version is a new, no-longer-artist-derived, object. It has lost its three-dimensionality, along with the senses of touch, smell, and texture. All of it is now fed solely through the eyes.[513] And, indeed, according to Byung-Chul Han, this is the preference. There is no longer space or time for objects, we are too busy in the machine.

> Our obsession is no longer for objects, but for information and data. Today we produce and consume more information than objects. We actually get high on communication. Libidinal energies have been redirected from objects to nonobjects. The consequence is infomania… We are becoming information- and data-fetishists. Now there is even talk of datasexuals. Tapping and swiping a smartphone is almost a liturgical gesture, and it has a massive effect on our relationship to the world. Information that doesn't interest us gets swiped away. Content we like, on the other hand, gets zoomed in, using the pincer movement of our fingers. We literally have a grip on the world.[514]

b.   A cog in the wheel and a measurable unit

Not only do devices separate us from material objects but machines gradually enfold humans so that gradually humans come to be like them with measurable, networked, filtered, responses. In earlier discussion of the ideas of Seb Franklin, it was noted that the worker gradually became a measurable "unit" of production over the last three or four centuries. Frederick Taylor's (1856-1915) "scientific method" reduced the worker to a cog in a series of

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[512] Gill Partington, "Friedrich Kittler's 'Aufschreibsystem'", *Science Fiction Studies 33*, no. 1 (March 2006): 53–67. https://search-ebscohost-com.proxy1.lib.uwo.ca/login.aspx?direct=true&db=hlh&AN=19907608&site=ehost-live..

[513] But any online offerings are only available to those who have the means of access. According to the United Nations specialized agency for information and communication technologies — the International Telecommunication Union (ITU) — even now only about 66% or 5.3 billion of the nearly 8 billion people on earth have access to the internet; 2.7 billion people are still offline. "Online" is defined as visiting the internet at least once in three months. International Telecommunications Union, "Facts and Figures 2022", *International Telecommunication Union, Telecommunication Development Sector*. https://www.itu.int/itu-d/reports/statistics/facts-figures-2022/#footnote1 [Accessed February 6, 2023].

[514] Gesine Borcherdt, "Byung-Chul Han: "I Practise Philosophy as Art", *ArtReview*, December 02, 2021. https://artreview.com/byung-chul-han-i-practise-philosophy-as-art/ [Accessed June 12, 2023].

steps that define production but also sped up production. It made it simple to create discrete tasks and to pay for them. His ideas inspired Henry Ford to apply them to his factories turning out cars in Detroit. Rather than a person creating a car, each job was broken down into the smallest of accomplishable tasks so that each worker could master it and made each task and worker interchangeable. The increased output meant workers could be paid more from increased production and profits. Ford understood that paying a worker well for their time gave them money to then buy Ford's product. This separated his workers from workers in general, forming a group of well-paid factory workers different from the unskilled and the unemployed.[515]

Antonio Gramsci wrote that these new production methods also separated the worker from fashioning a whole product, removing the sense of accomplishment in creating. He traced a long line of gradual degradation of humanness and of the human spirit in work beginning with industrialism and probably reaching its apotheosis in the U.S. and with neo-liberal capitalism at present. He foresaw that this "brutal" phase of industrialization would be superseded by even more insidious forms of labour, selecting, and disposing of workers in a "pitiless" elimination.[516] It makes the Victorian spirit of paternalistic factory towns and companies that built whole communities to control the behaviour of their employees seem almost generous and holistic. Indeed, in their efforts to create institutions like libraries, athletic facilities, classes, lectures, and entire schools to prevent alcoholism and familial disruption, they accidentally looked after the whole person and the family. It may have been entirely self-serving for the factory owners, but it benefitted the community by building vitally important infrastructure, like education and housing. The system was authoritarian, but it advantaged the employee, as well.[517]

There are parallels across other systems, like in the categorization of heritage materials in the UK across the last two centuries. In the nineteenth century, archaeological heritage and by extension museum objects, were seen as important to social welfare and education. In the

[515] Stuart Jeffries, *Everything, All the Time, Everywhere* (London; Brooklyn, NY: Verso Books, 2021), 20-23.
[516] Antonio Gramsci, *The Antonio Gramsci Reader Selected Writings, 1916-1935*, ed. David Forgacs (New York: New York University Press, 2000), 290-291.
[517] Paul Balchin & Maureen Rhoden, eds. *Housing: the Essential Foundations : The Essential Foundations* (London: Taylor & Francis Group, 1998); 123.

mid-twentieth century the meaning of these objects instead was that they created "good nations and a stable international order".[518] At present cultural objects are often presented as a resource – something to be managed – to provide a functional good or a value for investment.[519] Everything becomes transactional. When museums like the La Reina Sofia see their space as a community space and a place for "radical education", they are working to counter the value of the object as a reduction to the unit, the measurable, the producible, the monetizable. And when art is uploaded to the internet by the museum, as has been noted over and over, it joins the business of the world-wide web. It participates in a space that reduces to units of exchange, assesses units of labour, thus reducing the act of producing a work of art. Organizations must be transparent, candid, and reliable in their messaging if they want to be community and cultural hubs.

c.   Network theory

Very early on, words like "links", "addresses", "mail", "trash", "network", and "web" were used to analogize things done on the computer screen and keyboard. It helped make the operations feel more familiar and usable. Much like "protocol" allows all machines to interact in a system, Manuel Castells initiated the term "network theory" to describe the increasingly interconnected society he saw in the late twentieth century. It fitted his view that we are in a "series of networks strung around the globe" underpinned and enabled by communication networks.[520] Alexander Galloway similarly uses words like rhizomes, hierarchies, and networks as ways to describe how systems work on us and through us, highlighting and extending the theories of Foucault and Deleuze in controlling and disciplining humans.[521] Castells saw the shift to networks and believed this was a comprehensive change in everything. He thought that the complete technologization of our lives must drive changes that are broad and deep, encompassing psychological, cultural, and economic effects including the fragmentation of physical space.[522] Using a term like "network" helps to visualize the extreme possibilities of technological and psychic alterations

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[518] John Carman, "Good citizens and sound economics", in *Heritage of Value, Archaeology of Renown*, eds. Clay Mathers, et al. (Tallahassee, Florida: University Press of Florida, 2005), 43-57.
[519] Carman, "Good citizens".
[520] Felix Stalder, *Manuel Castells* (Cambridge, UK; Malden, MA: Polity Press, 2006), 1.
[521] Galloway, *Protocol*, 33.
[522] Stalder, *Manuel Castells,* 167.

as they spin an interlinking web in and through to capture society. COVID showed that there is capacity to exist almost entirely online. It was possible to migrate community, learning, family, work, and milestone events to the screen, subtracting the notion of "physically being together" from the idea of "gathering". Though most experts expect to be counting the cost of the fragmentation of physical space for years to come.[523]

Lev Manovich also suggests that these networks are all-encompassing and change how information is received as a society within a system of interconnected nodes. He recognizes that the pervasiveness of these networks brings us directly to this moment of digital saturation. Social media and digital communication spaces have become the platforms around which many interact and come to understand society. Writing more than twenty years ago, Manovich saw it as uniting us in sameness. He wrote about how early conditions jointly shaped humans and technology and exerts power in the same, ongoing fashion as archiving did a century earlier:

> The development of modern media and the development of computers begin around the same time and both were necessary for the functioning of mass modern societies. The ability to disseminate the SAME texts, images, and sounds to millions – thus assuring the same ideological beliefs- was as essential as the ability to keep track of their birth records, employment records, medical records, and police records.[524]

As Wendy Hui Kyong Chun points out, though, networks are not producing a "we" as Manovich foresaw.[525] Not understood at the time was the fragmentary effect of individualized devices, churning out news, information, and entertainment entirely customized to each viewer. What were once mass or communal activities, like reading a morning newspaper or watching a nightly news show or going to the movies on the weekend, have become potentially isolating events. Two people sitting on a public bus seat now only have in common the act of momentarily sharing transit. Everything else in their worlds might be received from completely different sources, forming them outside of any physical

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[523] For example, papers are already being written about the mental health effects on those under 20 years old which suggest that overall, they are experiencing higher than usual incidents of fear, anxiety, and depression, compared to pre-pandemic levels. H. Samji, et al., "Review: Mental health impacts of the COVID-19 pandemic on children and youth – a systematic review". *Child & Adolescent Mental Health*, 27(2022) : 173-189. https://doi.org/10.1111/camh.12501

[524] Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 22-23.

[525] Wendy Hui Kyung Chun, *Updating to Remain the Same* (Cambridge, MA: MIT Press, 2016).

community and deconstructing any feelings of collectivity. Indeed, in my own home four people can be in the same room but listening to different music, watching different streaming services, and reading entirely different things. It can isolate and reinforce effects of loneliness. It certainly increases individualization and potentially disconnects relationships. Humans may be "networked" but they are not connected.

What the Manovich quote above does get right is the capacity of developing technologies to gather information and to keep records, and that the act of information-gathering is inherently a performance of power. Record-keeping is in direct lineage with the Enlightenment and Victorian mania for cataloguing and categorizing. It underpins the digital, networked era's desire to know more, gather more, save more, and classify more. Holding information, as always, signifies authority.[526]

While protocol underpins the foundations of the internet and web services used every day to virtually circumnavigate and communicate, there is another, increasingly powerful system overlaying this. Information gathered about users' activities and interests grows exponentially with each passing year. The efforts to gain the information about our habits, our purchases, our movements, our weaknesses, our behaviours, in order to sell things, comes together in the ever-expanding algorithms that govern our digital lives.[527] The imbrication of the economic with the digital is profoundly contained in the algorithms that want to monetize all of life from birth to death (and beyond) by predicting what users want, what users might want, and what users should want. Jonathon Cohn believes that technology determine what

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[526] Robert A. Cropf & Timothy C. Bagwell, eds. *Ethical Issues and Citizen Rights in the Era of Digital Government Surveillance* (Hershey, PA: IGI Global, 2016). https://doi-org.proxy1.lib.uwo.ca/10.4018/978-1-4666-9905-2;
Heidi Boghosian, *Spying on Democracy: Government Surveillance, Corporate Power, and Public Resistance* (San Francisco, CA: City Lights Books, 2013);
Glenn Greenwald, *No Place to Hide: Edward Snowden, the NSA and the Surveillance State* (London: Hamish Hamilton, 2014).
[527] Yongrui Duan, Yao Ge, & Yixuan Feng, "Pricing and personal data collection strategies of online platforms in the face of privacy concerns", *Electronic Commerce Research*, vol. 22, no. 2, (June 2022), 539+. link.gale.com/apps/doc/A706508831/AONE?u=lond95336&sid=bookmark-AONE&xid=baa6e739;
A. Acquisti, C. Taylor, & L. Wagman, "The economics of privacy", *Journal of Economic Literature* vol. 54, issue 2, (2016), 442-492. doi: 10.1257/jel.54.2.442; T. Valletti, & J. Wu, "User profiling with data requirements: Structure and policy implications", *Production and Operations Management,* vol. 29, issue 2 (2020), 309-329. doi: 10.1111/poms.13108.

we "want as individuals rather than what we need as a collective". It is an idea that expands forms of corruption, authority, control, and oppression.[528]

A transactional, neoliberal system puts constant pressure on museums to be present on websites and social media. These platforms by conception generate both exponential demand and a fear of missing out, fostering the belief that if museums want a share of the public attention, they must be ever-increasingly online. This means constantly figuring out which is the latest and most effective technologies, as well as pursuing specific social media platforms. Each one requires expertise to understand how it works and the demographic each platform reaches.[529]

d.   Algorithms

As Raymond Williams noted, "Old power struggles [are] inevitably remapped onto newly emergent forms".[530] With capitalism markets are constantly determining what purchasers might want. With the advent of digital technologies sellers have at their fingertips access to vast data and analytics about human psychology and conduct.[531] Human behaviours are mapped and studied and collated until companies can target with great precision ever more specific groups.[532] One sees that in any simple online search because exploration begins and ends with commercial advertising and marketing. Google exists solely as a platform for advertising as its main source of revenue and so if Google is not able to figure out exactly what it is that you want to buy and from whom, they do not make money. Understanding the specific impetus of each consumer is a powerful motivator in the development of

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[528] Jonathan Cohn, *The Burden of Choice: Recommendations, Subversion, and Algorithmic Culture* (New Brunswick, NJ: Rutgers University Press, 2019), 6. https://doi.org/10.36019/9780813597850.

[529] Consequently, museums are obliged to find the means to staff and pay for these initiatives. I think institutions, especially mid-size or smaller, should give sober thought to whether this is the best use of the very finite resources of most museums. Perhaps it is better to focus on analogue activities as keeping up with technologies, equipment, software, and social media platforms could be a losing financial and personnel battle. Sarah Gambo & Bahire Ofe Özad, "The Demographics of Computer-Mediated Communication: A Review of Social Media Demographic Trends Among Social Networking Site Giants", *Computers in Human Behavior Reports 2* (2020): 100016–. https://doi.org/10.1016/j.chbr.2020.100016.

[530] Raymond William's 'technological determinism', via Marsha Kinder, "Medium Specificity and Productive Precursors, an introduction", in *Transmedia Frictions; the Digital, the Arts and the Humanities*, eds. Marsha Kinder & Tara McPherson (Los Angeles: University of California Press, 2014), 2.

[531] Isabel Wagner, *Auditing Corporate Surveillance Systems: Research Methods for Greater Transparency*. Cambridge: Cambridge University Press, 2022. doi:10.1017/9781108946940.

[532] Leighton Andrews, *Facebook, the Media and Democracy: Big Tech, Small State?* (London, U.K.; New York: Routledge, 2019). https://doi-org.proxy1.lib.uwo.ca/10.4324/9780429466410

technologies. Used properly and ethically it could help museums find their target crowd but also risks being a part of the echo chamber of viewers only seeing that which they predetermined to appreciate.

e.   "In the Swarm"

In his book, *In the Swarm*, Byung-Chul Hun pessimistically foresees nothing but the worst of times going down the digitized path. He notes that humanity becomes "flattened" in the ways that the stock market, Facebook, or the Secret Service all use the same sorts of algorithms to collect information on us about our habits, our movements, and our choices. "Our devices are collaborators in logging our lives down to the very last detail," Han notes.[533] The characteristics of this flattening are constant exhibition and attention-seeking perhaps in order to differentiate ourselves. But for Han what this comes to look like is a soulless, voiceless, featureless "swarm"[534] in which all shout into the constant flow of the internet and social media. The "flattening" also smooths emotions so that there is nothing stronger than outrage, a consistent, endless sensation of one-way frustration and anger. Consequently, most online interactions are not dialogue, do not form community, nor a "stable we" because each participant cares only for the self. And much of the commenting descends into rants — outrage is not articulated through protest and action but through a performance like tweeting, described as selfish, singular, unidirectional expression that quickly dissipates.[535] It does not lead to transformation nor revolution.

   What Han describes is very similar to the breakdowns in society that Lipovetsky's hyper individualism summarizes. Han notes too that when a device mediates and filters communication, the real is gone, the imaginary becomes the "total". Devices provide a constant mirror, never creating a space for development of the complete spectrum of human interconnectivity. The device diminishes facial expressions, gestures, body language, and

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[533] Byung-Chul Han, *In the Swarm; Digital Prospects*, trans. Eric Butler (Cambridge, MA: The MIT Press, 2017), 74.
[534] Han, *In the Swarm,* 10-11.
[535] Ibid., 7-8.

tactility.[536] "As a digital reflector, the smartphone serves to renew … infancy. It opens up a narcissistic space- a sphere of the imaginary- in which one encloses oneself." [537]

Han comments that the offset of screen/camera means that "we are constantly staring past one another" and it feels especially poignant after two years of COVID videoconferencing.[538] Doubtless, we have all had the experience of talking with someone via devices and realizing that their camera and your own face on their screen are in radically different positions. Their eyes look to the image of you on their screen even if your image is not close to the camera they use. It is mildly disturbing – asymmetric – suggests Han, and means we constantly miss the other.[539] The screen, therefore, is a constant filter and barrier to the real. We remain, according to Han, isolated and separate from each other and from any sort of healthy public sphere.[540]

Contrarily, the social media companies tell us that we are developing broader relationships- that polarization is not "a thing".[541] Mark Zuckerberg seems to overstate results of a recent study in which 12 countries' trends were measured and in some polarization was, he says, "on the increase before Facebook existed and in others it was decreasing while internet and Facebook use increased."[542] But the study he quotes also stretches back to the 1970s to examine data, which is greater than the scope of the social media era. It does not focus on what has happened with the rising use of social media over the last ten years. As noted earlier, Jonathan Haidt argued that there was a pivot around 2010 when Facebook and Twitter changed their systems' architecture in order to increase virality

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[536] Ibid., 22.
[537] Jacques Lacan saw human development as containing three parts intertwined and non-sequential: the imaginary, the symbolic, the real. For Han, the focus is on Lacan's "imaginary", which contains the field of imagination and images. As an infant, we begin to construct ourselves through the image we see reflected back to us. We see "I" in the mirror and begin to define that as separate from the environment. Eventually, according to Lacan, we integrate this image of ourselves into our holistic self-image. The mirror stage, though, continues to be linked to the **imaginary** "I" we construct in early childhood, as a permanent structure of subjectivity. This summary based on class notes from: Joy James, VAH 9682B Contemporary Art and the Process of Witnessing, UWO, Feb. 2019.
[538] Han, 24.
[539] Ibid., 24.
[540] Ibid., 48.
[541] Polarization is defined as, "…the extent to which citizens feel more negatively toward other political parties than toward their own", Shanto Iyengar, et al., "The Origins and Consequences of Affective Polarization in the United States", *Annual Review of Political Science*, 22 (2019): 129–146.
[542] Levi Boxell, Matthew Gentzkow, & Jesse M. Shapiro, "Cross-Country Trends in Affective Polarization", *Review of Economics and Statistics*, (January 2022): 1-60.

of posts, allowing people to spread rumours and half-truths and increasing the likelihood of finding communities of like-minded folk.[543] Before that many of us will remember finding old friends, connecting with others who shared interests – often arcane ones and literally feeling the planet shrinking. It seemed hard to imagine, as Haidt points out, that dictators or walls could stop a global citizen. But as the algorithms became shrewder and more targeted, they brought the possibility to shout louder with minimal consequences. And according to some research, polarization – the sensation of finding your people and having your beliefs reinforced – has increased.[544]

18. Digital policy for museums

At present, our American neighbours are reckoning with an attack on their capitol building by a mob built by Twitter and its incredibly adept user, Donald Trump. Even the average American believes that social media has a negative effect on their country, though a higher percentage of young people continue to believe social media is a mostly positive thing for the U.S.[545] So paradoxically, society doesn't trust social media in large numbers, but uses social media in large numbers. How do museums use this information? Do they enter the fray and hope to make a difference with educational and aesthetic posts? Do they reach more communities? How does it affect the perception of art seen online and the information about art? More people might be "seeing" it but are more people truly taking it in? Or are they just scrolling by? Or, like so many other echo chambers, are cultural workers, artists, and curators "preaching to the choir" because they are only seen by those within their own group?

Maybe it is better to step back from which medium to wade into and examine digitization at a policy level so that the rest more naturally falls into place. In a case study of the Museum of London (U.K.), an author analyzed their digital strategy using the "Digital Heritage

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[543] Jonathan Haidt, "Why the past 10 years of American life have been uniquely stupid".

[544] Anecdotally, the sensation is that we are growing apart as a society. And none of us can know the required percentage for a culture to fracture but at times it seems imminent. Brooke Auxier, "64% of Americans say social media have a mostly negative effect on the way things are going in the U.S. today", *Pew Research Center*, October 15, 2020. https://www.pewresearch.org/fact-tank/2020/10/15/64-of-americans-say-social-media-have-a-mostly-negative-effect-on-the-way-things-are-going-in-the-u-s-today/ [Accessed August 2, 2022].

[545] Ibid. "For instance, 15% of those ages 18 to 29 say social media have a mostly positive effect on the way things are going in the country today, while just 8% of those over age 30 say the same. Americans 18 to 29 are also less likely than those 30 and older to say social media have a mostly negative impact (54% vs. 67%)."

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Sustainability" (DHS) framework which breaks down into three stages. The first is "Understanding Context" which includes knowing the broader funding and governmental initiatives. Second, "Identifying Stakeholders" looks around to ask to whom the institution is accountable and with whom are there commonalities and differences. Finally, there is "Monitoring Digital Strategies" to analyze what digital instruments are working, what will be the ongoing needs, and what practices and responsibilities go with those technologies.[546] These three steps highlighted for this museum that it was important to understand that a new government meant a new emphasis on education and so a digital strategy should include that for potential funding. The framework also drove a survey of their audience – in person and online – to broaden a new policy on equity, diversity, and inclusion. Finally, the museum put in place a digital strategy that included understanding oversight of a digital heritage resource, including who contributes to its development and enhancement and who safeguards it. This policy work grew, it should be noted, to include issues of copyright, social media use, and digitization of artwork.[547] And so this deeper level work begins to answer questions and organize who will do it, why, and for whom. Even with a limited budget, this sort of preparatory methodology and initial regulation facilitates decisions about where to begin with social media platforms and digitization of artwork.

Another study of museums in Berlin and Prague noted the obvious — that a social media strategy must be integrated across "all the platforms" not just Facebook (the medium of choice as of 2016).[548] The study suggested that posts must done very regularly to maintain engagement as well as be "interesting" in order to stimulate re-sharing. All of which to say that there is a fair amount of common sense involved in social media marketing but also an enormous variation between each museum according to its needs, its audience, and its budget. Also noteworthy is that there were regional differences between Berlin and Prague in

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[546] Ana Sánchez Laws, *Museum Websites and Social Media: Issues of Participation, Sustainability, Trust and Diversity* (New York, Oxford: Berghahn Books, 2015), 59. https://doiorg.proxy1.lib.uwo.ca/10.1515/9781782388692.
[547] Ibid., 119-120.
[548] This study mentions using the museum website, Facebook, YouTube, and Twitter but no mention of Instagram. This probably reflects the rise of Instagram since 2016. Bojana Suzić, Miroslav Karlíček, & Václav Stříteský, "Adoption of Social Media for Public Relations by Museums", *Central European Business Review 5* (2016) (2): 5–16. https://doi.org/10.18267/j.cebr.148.

how people use social media, thus geographical considerations play an important part in knowing who the audience is.

19. Effects of the screen: perception and remediation

In the year 2000, Jay Bolter wrote that the new digital experiences were a combination of "hypermediacy" and a "transparent immediacy".[549] Hypermedia aims to highlight the medium in which you are viewing. It looks like, say, the ways in which television news now has banner text, graphical indicators, temperatures/weather, time, scrolling news briefs, etc. (fig. 16) One is aware of the extent of the medium, and therefore deeply aware of the screen, its limits, and its abilities. Transparent immediacy, in opposition, Bolter proposes, wants to erase the media so that you are unaware of the limits of its possibilities. Perspectival painting, for example, is a media that attempts to expand the view beyond the edges of the canvas to make the viewer forget that there are edges at all.

Bolter states that new media both convey a sense of immediacy and erasure of media, and at the same time awareness that the media is there to assist, filter, and provide. This contradiction persists remarkably undiminished since his writing. There is continual insertion into systems of media that both help us to learn, communicate, and view, but also filter, intercede, and alter how those things happen. During COVID, for example, there was gratitude for the abilities of videoconferencing platforms like Zoom and FaceTime to bring people together in a useful and communal fashion. But as COVID fears wane most of us prefer to gather in person. In the shift between the immediacy of technologies and the hypermedia experience of screens, there is awareness of losses in communication. The user becomes, as Bolter stated, aware of the hypermediated experience. The "screen" inserts itself into conversation; it filters and falters. The technology elides human response to facial cues, body cues, contextual clues as Han noted earlier.

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[549] This section is indebted to: Jay David Bolter, "Remediation and the Desire for Immediacy", *Configurations*, Vol. 4, No. 3, (Fall 1996), Johns Hopkins University Press.
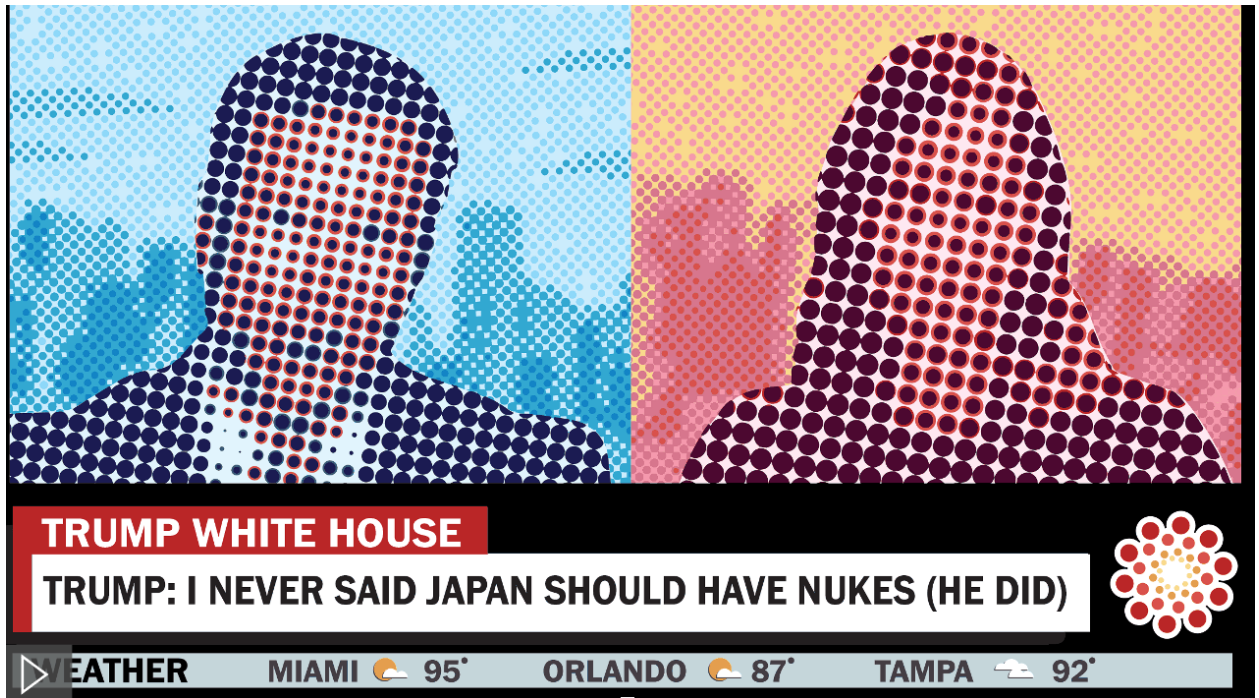
Figure 16: An example of a screen that displays "hypermediacy".
"How Cable News Chyrons Have Adapted to the Trump Era", *The Washington Post*. Illustration by Daniel Hartzberg, July 31, 2018. https://www.washingtonpost.com/graphics/2018/lifestyle/style/how-cable-news-chyrons-have-adapted-to-the-trump-era/

Two decades ago, Bolter noted the obsession that television had with placing people in the moment, using body cams, location cams, and car cams to give a real-world experience of a situation. Television producers sought and still seek immediacy: the sensation that everything else falls away and the viewer is "there" alongside the action, the news, the reporters, the musicians, the bachelors, or the top models, present to whatever the screen is feeding. It gives the sensation of omniscience – that all information is available. At the same time, there are the edges to the screen, added graphics, chyrons, and a flow of factoids that inevitably accompany the primary action, all of which intrude on that immediacy. There is a push-pull experience of entering into the screen but also interrupted and restricted by the things of the screen. This also occurs with the digital experience of artwork.

Viewing art on a screen comes with all these technological concerns and disruptions, compared to the experience of seeing art in person. While it is true that live contexts have issues, like access, crowds, space, lighting, costs, etc., digital experiences of traditional art contain difficulties, too, which are often ignored and misunderstood. Though for many, a visit to an art museum is also difficult or impossible. The capacity to go to a museum can be

limited by the cost, the distance, or the perceived gatekeeping by the cultural elite.[550] Access to the museum can be difficult for those with ability challenges, cultural, language, or socioeconomic barriers. Museums continue to work on those physical shortcomings in an effort to be open to providing everyone the experience of seeing art. Online art too faces comparable difficulties. There are problems of accessibility, as well as disruptions of the screen and its content. For Bolter, being online constantly highlights the screen itself while also attempting to shield an awareness of that screen.

Art viewed online gives the impression of both complete immersion and constant awareness of more/other. The screen gives knowledge and/or entertainment but at the same time proffers the floating arrow, the hyperlink, the flashing ad, the next tab, the dropdown menu, and the notorious clickbait. You are on the page but also constantly moving on to the next thing. There is too much. The screen expands and the screen shrinks. It demands presence and then it demands progression. It promises something and then immediately withdraws it, moves it, or alters it. There is obsolescence, commodification, mutability, and opacity. Museum websites help to mitigate the flow of what a search engine offers as "art", but it can still be complicated. The Art Institute of Chicago's "collections" tab offers the ability to "[e]xplore thousands of artworks…" There are filters, alphabetical indices, and a search bar but page one, of unknown numbers of pages, unhelpfully has images ranging from an Aztec coronation stone to a Juan Gris cubist painting to a Gerhard Richter photograph. It could be a sample of their "greatest hits", but no indication is given as to categorization; it seems only to summarize "all results".

As noted earlier, wide open websites with all the offerings do not seem to work in the way that the rest of a museum works. Entering a gallery is a controlled, organized narrative created by experts. Entering the website "collection" is a grid of unfolding images with minimal order or none at all. It is left to the viewer to determine a path in a very

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[550] Museums work hard to battle this, and in the summer of 2022, as we entered the Art Gallery of Ontario, my son was offered an annual membership for $0 by a friendly employee at the front door. This perk, financed by the CIBC, is for those 14-25 years old. I imagine they hope to nurture loyalty in the young now and keep them returning as they grow older so that they become regular visitors as well as potential donors. Though it does target young people already entering the building, so it is an excellent idea, but I can still imagine the great numbers of Torontonians who will never see the AGO as a place to which they can comfortably go, or desire to go.

hypermodern, multi-authored, polycentric fashion, all of which changes the way art is perceived and received. It gains the element of surprise and the thrill of making new connections for the hunter but for most website visitors it will be disconcerting. There is the promise of hypermediacy in that there are large numbers of images, filters, and pages proffering all manner of information, but also transparent immediacy in that they promise an experience of instant art anywhere, all the time.

Back in 2000, Jay Bolter even addressed the one of main theses of this document by suggesting that "old media", like paintings, are "poured into" new media like websites, but also indicates that they have not become "transparent" or any more "real":

> Ideally, there should be no difference between the experience of seeing a painting in person and on the computer screen, but this is never so. The computer always intervenes and makes its presence felt in some way, maybe because the image is too large and so the viewer must click on a button or slide a bar to view a whole thing. Or perhaps because the digital image appears grainy, pixelated, or with untrue colours.[551]

The machinery and interface of the computer/device infringe, Bolter boldly stated more than twenty years ago, and amazingly this still holds.

20.   Looking for Monet

Issues of obsolescence, commodification, mutability, and opacity matter more as curation in the museum becomes filtration online. Expertise is lost to quantity. For example, imagine a student needs to find an image of Monet's *Water Lilies* for a class presentation. If it is a first-year student and unaware of how many Monet did, or what dimensions, year, or current place of residence their search requires, and only looks for "Monet water lilies", the search easily yields something else entirely. (fig. 17) The internet lacks the curation of the art gallery, wherein an expert has labelled and organized, provided provenance and legitimacy. There is discussion of the democratization of information but with infinite choice also comes infinite possibilities of looking at the wrong thing (colour, size, location, artist), or being unable to find the right thing (too many choices, blocked access, low-res images) or finding whatever is for sale with water lilies emblazoned on it. Even in switching to the "images" search on Google, the first things that appear are copies of what look like "water lilies" for sale from

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[551] Jay David Bolter, "Remediation and the Desire for Immediacy", 66.

Etsy, Wayfair, and Amazon.[552] In this case, though, the first choices for non-commercial information come from the Met Museum and the Art Institute of Chicago. It might be very helpful if you know to trust these institutions.[553] You are, however, no further ahead with which images you need.
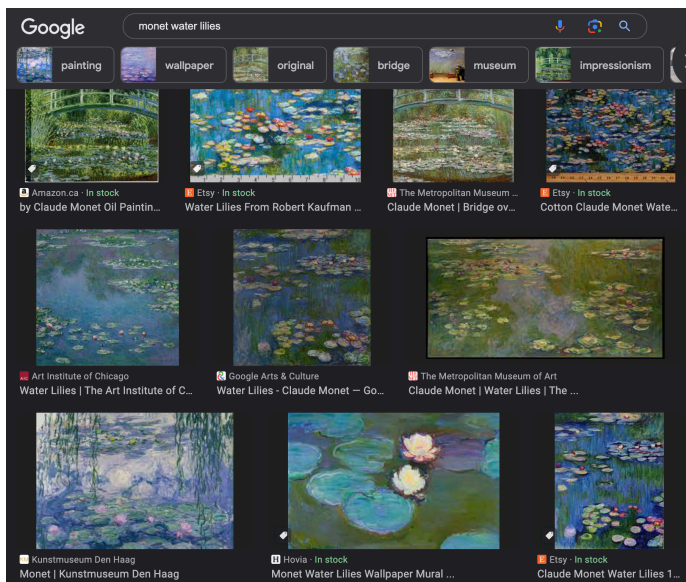

Figure 17: Screen grab of query:
 "Monet Water Lilies".
Image by S. Kopp

Another risk looms – the third option for image websites is for *claude-monet.com*,[554] which might sound like a foundation or not-for-profit set up to oversee the work of Monet. In this case, as often happens, it is a for-profit project of an undeclared person or organization. No information about the sources, citations, or images is provided. To a new student or casual passerby this may seem fine. It gives dates, history, and imagery by Monet but none of it authentic enough for an essay or for teaching as no sources are given. Additionally, the page layout itself is distracting. It contains a sizeable list of the various platforms to connect

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[552] Of late, even the almighty Google is failing to provide the satisfying search results it once did. In a recent Atlantic article (https://www.theatlantic.com/ideas/archive/2022/06/google-search-algorithm-internet/661325/), the author Charlie Warzel, quoted an engineer whose blog post was so damning about Google's increasingly awful search returns that it prompted Google's Search liaison to craft a PR response refuting the claims. A quote from the blog that, incidentally, shot to the top of Hacker News all-time upvoted articles reads, "If you've tried to search for a recipe or product review recently, I don't need to tell you that Google search results have gone to shit. You would have already noticed that the first few non-ad results are SEO optimized sites filled with affiliate links and ads." Dmitri Brereton, "Google Search is Dying", *DKB Blog,* February 15, 2022, https://dkb.io/post/google-search-is-dying

[553] See Chapter 3, section 10e, *Image credibility and trustworthiness* for more on measuring trust in online images.

[554] Claudemonet.com. https://www.claude-monet.com/

images to on the viewer's own social media feeds. Its tabs do not link, which feels dodgy. The copyright at the bottom states, "2010", (at least it has a date) and the feel of the page is vaguely retro. The font, too, is "Georgia", and gives the sensation of another decade.

The fifth image on the search page for "Monet Waterlilies" is linked to *monetpaintings.org*. A ".org" site originally and still should designate a not-for-profit organization, but now anyone can purchase almost any top-level domain. This site, *monetpaintings.org,* is not an authorized body representing Claude Monet's estate but has the good grace to post a large disclaimer at the bottom of the home page indicating both its lack of legal connection to the Monet estate and its connection to websites which pay this website if images are purchased. The website is elegant and subtle and feels contemporary which immediately makes it all feel more "trustworthy".[555] Humans are easily influenced. But it is still impossible to know if the images are the ones needed, if they are from "the hand" of Monet, or if they are high resolution enough to be projected, and most importantly, are they clear of copyright. Ultimately, most first-year students consider themselves digital natives and probably trust or simply take from whatever the first few results of the search yield.

21.   Good information, if you know where to look

For educational purposes, there are sites that make a profound contribution to the mass distribution of good, digital images of art and of rigorous scholarly information. When one cannot go to the museum, as many of us cannot, there are websites for the Art Institute of Chicago, the Smithsonian, the Art Canada Institute, or, as noted earlier, the Rijksmuseum. These all provide high resolution imagery and some level of academic writing on art and artists with the aim of education and access. It is an uphill battle, though, to continue to educate the public, and specifically our youth, about what resources can be trusted.

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[555]This is the footer from: MonetPaintings.org:
© MonetPaintings.org 2020. All Rights Reserved
*Disclaimer: **MonetPaintings.org** is a personal website covering the career of famous French painter Claude Monet but is in no way an official website for Claude Monet and MonetPaintings.org does not claim to be that in any way. The Estate of Claude Monet and their presence hold all necessary copyrights and licences for all of his paintings and other works. All prints, paintings and photos included in MonetPaintings.org are provided as an affiliate to Art.com and Amazon who hold necessary permissions. Art.com and Amazon pay us small commissions based on any prints or paintings that you buy as a result of using this website.* Monetpaintings.org.

It can be hard to teach students about what is an academic source for information and how to use it. Reliable websites like the ACI and many museums' websites sit in the same pool of resources as everything else that comes up in a Google search. And it is guaranteed to be a Google search. Or perhaps Google Scholar as students learn how to find it. But researchers have pointed out that students are more likely to go to Google and Wikipedia than a library or a library's website.[556] Students are also unlikely to know how to use the Wikipedia footnotes to follow up on what might be a very trustworthy connection.[557] Simply put, finding responsible, academic information is complicated. The information is splintered across a million websites, databases, and search engines, and explaining to students what a reputable source is proves incredibly difficult. Further, convincing undergraduates to read journal papers is also challenging as they seem to prefer the straightforward summary and simple language of less academic sources like Wikipedia.[558]

There is some evidence that youth, despite being fully immersed in digital technologies almost from birth, still struggle to attain the levels of inquiry-based and self-directed learning expected of them. In part, those skills require understanding where to find and how to comprehend and judge available resources to determine which are most significant and dependable. Simply knowing how to navigate the internet does not give critical thinking and appraisal skills when it comes to understanding what one finds on the worldwide web.[559]

So "the internet" has difficulties providing reputable educational sources unless you are confident with searching and evaluating the kind of materials on offer. All of it must be viewed with a cynical and cautious eye, assuming inaccuracies, scams, and schemes.

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[556] Terry Judd & Gregor Kennedy, "Expediency-based practice? Medical students' reliance on Google and Wikipedia for biomedical inquiries", *British Journal of Educational Technology*, Vol. 42, No. 2, (2011): 351-360.

[557] Lily Todorinova, "Wikipedia and undergraduate research trajectories", *New Library World,* Vol. 116 No. ¾ (2015): 201-212. Students find "Wikipedia's reference sections are …too overwhelming and numerous.", 201.

[558] A recent MIT study showed that Irish judges were using Wikipedia to look up past case law for decisions in their own legal decisions. "Using a randomized field experiment, researchers found that Wikipedia articles on decided cases, written by law students, guide both the decisions that judges cite as precedents and the textual content of their written opinions." Rachel Gordon, "Study finds Wikipedia influences judicial behavior", MIT News, July 27, 2022, https://news.mit.edu/2022/study-finds-wikipedia-influences-judicial-behavior-0727 [Accessed August 4, 2022].

[559] Judd & Kennedy, "Expediency-based practice? Medical students' reliance on Google and Wikipedia for biomedical inquiries," 352.

22.   The interface

That sense of infringement, of entering a domain that lies between your eyes and the screen of the computer is also broached by Alexander Galloway in his book, *The Interface Effect*.[560] He describes the space of crossing, of a threshold, of the act of using a digital device, as an effect. He emphasizes, over and over, that this is not a "thing" but a space which enacts. There are several levels at work here. One is the simplest to understand- that of the screen that one sees, holds, adjusts, etc. It is a physical thing, an object made of metal, plastic, glass, emitting light at which users look. It is, more-or-less, two-dimensional. However, there is also immediately something more esoteric. It is also a window, a space into which to peer, a lens, a shadowy mirror. Certainly, anyone old enough to remember the "before-times" can marvel at its magical qualities to inform, entertain, and communicate. This space, of the metal and glass, as well as the window and door, are often considered simply as that interface, the space "between" the human and media. Marshall McLuhan and all those after him, including Lev Manovich, saw the new device, the computer, as a container for all the old media. It was, as had happened before, a medium that held previous media. As photography led to film, and then to VHS/DVD/CDs, so did all of it – text, images, video, etc., end up on a computer.[561] However, Galloway argues that, unlike media before, the computer is not a medium that holds media, but rather a form of mediation itself. It is an interface, a "fertile nexus", where "complex things…take place at the threshold".[562]

This leads, Galloway suggests, to a constant search for what and where the edges lie; when does an image end and the frame begin? What is the space of the interface? As noted earlier, the frame has a long and complex history in its interplay with the art object. Where once it could be argued that the frame was heavy, bulky, ornate, and defined what was "inside" of it, over the centuries the frame has grown to include the entire gallery. In modernism "frame" and "context" come to be interchangeable' what surrounds the art and what holds the art become interactive, merging, if not synonymous.

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[560] Galloway, *The Interface Effect*.
[561] Ibid., 31.
[562] Ibid, 32. The French philosopher, François Dagognet (1924-2015), quoted in Galloway.

It suggests that what is inside/outside becomes even more undefinable when using a computer as the very language of code lacks any sort of borders or definitions of interior and exterior. The code for functions or commands or programs that causes things to appear on the screen is simply a list of numbers, letters, symbols, governed only by "syntactic techniques".[563] Differences between what is an image and what is text, description, or function on a computer screen exist only artificially — both are "code" consisting of a language.

The interface becomes a process, a "translation, a boundary".[564] The effect happens on both "sides" of the interface and can only be named when there is the sense of one space or material becoming separate from another space or material. The interface mediates or stimulates both what is interior and what is exterior. It acts in both directions to create and engage. Haidy Geismar writes that:

> …the digital is a continual process of translation and apprehension in which data is converted into binary information that is converted back into multiple representations that are both codifications as well as instantiations of sociality.[565]

One way to make sense of Galloway is to consider a digital piece of art, created for a screen. There is an assumption that the artist makes allowances for, or indeed works with the interface that mediates between viewer, screen, and art. One hopes that, like artists who create physical work to sit in galleries or museums, digital artists create work for screens that are best served by the digital process where "the edges of art make reference to the medium itself".[566] In a clear interrogation of this point, Keiicho Matsuda (b. 1984), is a British-Japanese artist who filmed a short movie, *Hyper-Reality* (2016), in Medellin, Colombia. This fictional account follows a protagonist wearing an augmented reality device (AR) in a journey around the city. AR is the only way we see the day unfolding for her, no other perspective is shown. All her actions feel gamified; technology is layered on all her movement in the way we are shown the city until her implant is hacked and her social status, social life, and other important data linked to the interface are suddenly corrupted. For just a second the audience is given a glimpse of what machine vision systems see: visual cues,

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[563] Galloway, *Interface*, 33.
[564] Ibid.
[565] Haidy Geismar, "Museum + Digital =?", 269.
[566] Galloway, *Interface*, 33.

called fiducial markers, that allow machines to align themselves in space. Following the attack, all her systems reset, leaving her with no memories of her past life. Matsuda sees this as an impetus for further discussion on where technology is taking us.[567] This artist uses the medium of the screen and all the hardware and software associated with it to create a story that wonders what becomes of us when the interface between screen and code, between screen and human, between camera and digital data, are co-mingling, shifting, inseparable, and in this case ultimately corrupted and damaged. In a few short minutes of video, Matsuda reflexively demonstrates that the delivery medium is both the problem and the best way to reveal the problem: a space where "…the edges of art make reference to the medium itself".[568]

Matsuda's art highlights many of the apprehensions that this thesis has touched on with rampant digitization: concern about the medium itself and its capacity for data collection; concern about computer "vision" and how we are imaged by technology; concern for the memories we upload to clouds, platforms, and which then flow past in ceaseless surging; concern for the erosion of collectivity and community for the convenience and entertainment of a device. Indeed, perhaps Matsuda does not have "edges of art make reference to the medium itself" but rather subsumes the edges so that only the medium remains. Narratively, Matsuda give a glimpse of Galloway's interior/exterior as the fiducial markers flicker, but as the protagonist's edges are erased all that remains is the girl trapped inside the machine.

Chapter 4
        Museums look ahead
                1.   Public funding for museums on the wane

As gallery spaces gradually emptied of ornamentation in the early twentieth century, the "white cube" gallery's strength lay in its ability to hang any sort of art. This also made it supremely useful for selling art as well. While art historians, including Brian O'Doherty, hesitate to discuss the economics of selling art, there is a profound interplay between art and money. As suggested by the history of the church and state and their attendant powers to

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[567]Victoria & Albert Museum Collection. https://collections.vam.ac.uk/item/O1612463/hyper-reality-keiichi-matsuda/. [Accessed January 12, 2023].
[568] Galloway, *Interface*, 33.

determine what art is and where it will hang, where there is power there is money (and vice-versa).

When cabinets of curiosities gave over to institutions of collecting and display, endowments, bequests, and patronage quickly grew alongside the expansion of art museums.[569] Museum and patron shared a mutual cultural and social standing beneficial to both and the relationship quickly became about capitalization, benefaction, and influence.[570] Into the present museums continue to rely on wealthy patrons. Less and less funding is given to cultural institutions in Canada and consequently museums are forced to turn to private citizens to bridge the gap.[571] According to the Canadian Encyclopedia government funding to institutions fell throughout the 1990s and so arts and heritage organizations had to look elsewhere for money. During that period revenue provided by private sectors and citizens to arts organizations grew by 44%.[572] In 2016 a report from the Canadian Museums Association blasted the federal government for pouring money into its own museums while ignoring all the others.[573] Museums simply must rely on support from the community, from corporations, and from wealthy donors. It is illuminating to note that in a hypermodernist era, to reach donors any campaign must make them feel special, individual, important, and "valued".[574] Fortunately one study suggests that the wealthy, post-pandemic, are more likely to give.[575]

  2. Museums seek private donations

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[569] Manfred J. Holler, & Barbara Klose-Ullmann, "Art Goes America", *Journal of Economic Issues* 44, (2010) (1): 89–112. https://doi.org/10.2753/JEI0021-3624440105.

[570] Donna Yates, "Museums, Collectors, and Value Manipulation: Tax Fraud through Donation of Antiquities", *Journal of Financial Crime* 23, no. 1 (2016): 173-186. doi: https://doi.org/10.1108/JFC-11-2014-0051. https://www.lib.uwo.ca/cgi-bin/ezpauthn.cgi?url=http://search.proquest.com/scholarly-journals/museums-collectors-value-manipulation-tax-fraud/docview/2126565766/se-2.

[571] Jocelyn Harvey, "Arts, Heritage and Cultural Industries Funding", *The Canadian Encyclopedia*. Historica Canada. Published February 06, 2006; last edited December 16, 2013. https://www.thecanadianencyclopedia.ca/en/article/arts-heritage-and-cultural-industries-funding. [Accessed January 6, 2023].

[572] Ibid.

[573] Canadian Museums Association, "The State of Museums in Canada Brief to the Standing Committee On Canadian Heritage", *Canadian Museums Association,* (June 2016), 2. https://museums.in1touch.org/uploaded/web/docs/Advocacy/CMA_Recommendations_CHPC_2016_EN.pdf. [Accessed January 6, 2023].

[574] Vitreo Group, "Current Issues In Canadian Museums And The Non-Profit Sector", *vitreogroup.ca*, https://www.vitreogroup.ca/vitreo-research/2023/1/26/current-issues-in-canadian-museums [Accessed June 19, 2023].

[575] Ibid.

The loss of public funding places tremendous pressure on museums to replace government monies with local community support. One of the ways the museum does this is to establish a sense of ownership in the art and in the building as a part of the community. As any individual artwork has often already been stripped of its own particular historical and cultural story, placing works in the museum can reinstitute a new form of structural loyalty and sense of place for an artwork. The museum imbues pieces with position and place, a feeling that "this art belongs here". Creating an online "collection" or database of art that is accessible from anywhere may be antithetical to creating a sense of ownership in art and the museum for the local community, even if the relationship is only symbolic. Ross Parry calls a visit to the museum a "microcosm (a singular space), against the fragmentary and distributed characteristics of museums' new on-line channel."[576] Art on a website or social media site may alienate the very community which museum staff work so industriously to attract and hold. At the very least, it probably does not grow a community around it. Because a website can originate anywhere the online artwork's place of origin is gone or unknown. It may be difficult for a community to feel like digital images on a museum website "belong" to them and if that proprietorial sense is tampered with, interest and money may also scatter.

That may also be why there has been such widespread emphasis on the importance of the museum building and property as special or distinctive. Art might be transient or touring or in storage or forgotten, but the place and space of the museum are unique and enduring. Again, though it is possible that going online runs counter to creating the identity of the museum. Money, resources, and concepts expended online may detract from the physicality and allure of the actual museum. It loosens attachment. People may perceive less need to go to the building to "see" the art, and over time this may lead to less loyalty, less attendance, less volunteering, or less giving.

Major museums in the US, for example, report a significant decrease in attendance compared to 2019. The National Portrait Gallery in Washington, DC was still down 81% on its pre-pandemic visitor figures; The Broad in Los Angeles down 79%, while the Metropolitan Museum of Art in New York has lost more than four million visitors

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[576] Ross Parry, *Recoding the Museum,* 14.

annually.[577] The UK museums reported that, between July and September 2022, visitors were down 31.4% from summer of 2019.[578] Presumably, these numbers will rise over the next years as things return to 'normal', but it is possible that they may never return to pre-COVID levels. As with other things, loyalties have shifted, habits have changed, routes have altered, and certain things once considered immovable, like the journey into work at a central location have become negotiable.[579] At the same time that attendance has dropped, many of these museums have sharply increased online accessibility. There is no way to determine yet if these two things are correlated or causal, but something changed for museum goers.

Future research in this area should include determining the factors that will contribute to museums' success as COVID grows distant. There should be investigations into whether the move to an online art delivery system helped museums during COVID; whether an online collection of art assists in recovery of physical attendees, donations, and volunteers; or whether an online system loosens ties to museums and effects contributions from their constituencies. All these possibilities will have institutions scrambling to "catch up" – to find previous attendees and supporters – as well as to encourage new ones which include a new generation with very different interests and experiences.[580]

3. Marketing: creating a strong online presence

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[577] Lee Cheshire, "Bouncing back: the US museums that have regained the visitors lost to Covid closures", *The Art Newspaper*, March 28, 2022. https://www.theartnewspaper.com/2022/03/28/bouncing-back-the-us-museums-who-have-nearly-regained-the-visitors-lost-to-covid. [Accessed January 6, 2023].
[578] Department for Culture, Media, and Sport, "Statistical data set: Museums and galleries monthly visits", *UK Government*, 17 November 2022. https://www.gov.uk/government/statistical-data-sets/museums-and-galleries-monthly-visits#summary. [Accessed January 10, 2023].
[579] Church attendance, which could be likened to cultural institutional fealty, is also down, post-COVID, with about 2 in 3 returning, according to the American surveys and statistics firm, Lifeway Research. Lifeway notes that it is not so much that people have decided not to return, they have simply "gotten out of practice". Aaron Earls, "Some Previous Churchgoers Are Still Missing Post-COVID", *Lifeway Research*, June 3, 2022. https://research.lifeway.com/2022/06/03/some-previous-churchgoers-are-still-missing-post-covid/ [Accessed January 7, 2023].
[580] A recent article suggests that Gen Z (defined here as born between 1997-2012) want to be consulted, to be seen as co-collaborators, are sceptical of information until proven, and enjoy an afternoon in a museum having an offline, social experience. Sadiya Akasha, "Want to Appeal to Gen Z? Lose the 'Cult of Curator' Mindset", *Museum* magazine, January 6, 2022. https://museum-id.com/want-to-appeal-to-the-gen-z-demographic-lose-the-cult-of-curator-mindset/. [Accessed January 10, 2023]. Another article, written by a university student who worked in a museum, suggested Gen Z can be attracted by hosting free nights; cultivating quirky social media accounts; providing interactivity for adults, not just kids; inviting guest speakers and providing audience interaction; and inviting young adults to contribute to the collection, be it data, objects, stories, etc. Niko Kluver, "5 Ways Museums Can Engage Generation Z", *American Alliance of Museums*, Sep 2, 2022. https://www.aam-us.org/2022/09/02/5-ways-museums-can-engage-generation-z/ [Accessed January 10, 2023].

If museums decide to pursue an online experience, there may be pertinent links to brand marketing in the retail sector. Perhaps it is not precisely comparative, but online retailers have found that while loyalty to their brand was initially strong, as internet consumers have become increasingly savvy, they are ever more likely to shop around, becoming measurably less steadfast. Researchers have also noted that retailers need an extremely strong correlation between their bricks-and-mortar space and their online offering. The connection, the experiences, both online and offline must be "seamless".[581] So museums who do offer online experiences, including art browsing, online exhibitions, etc., must be careful to somehow impart strong experience that encourages feelings of attachment, similarity, strong brand connections, exactly as attending a museum does.

A recent study of fan clubs of European football evidenced that creating a social connection for fans was equally important for both online and offline experiences. In other words, fans would be loyal, related, attached both in person and online, as long as social experiences were provided in both contexts:

> …interpersonal influences in online contexts resemble offline interpersonal influences… consumers develop their loyalty to service brands in the same way in both offline and online settings… the study shows that these relationships are important and influence service brand loyalty in the same manner in both online and offline services.[582]

For museums, therefore, it is very important if they increasingly turn to online offerings that they are nurturing some kind of online social interrelations with and between art fans and the particular museum. To be successful, methods must encourage bonds of interaction and loyalty for both the physical place of the museum and the internet space of the museum. More research is needed to demonstrate whether strong enough bonds are formed when institutions specifically use social media, as the field is relatively young. Retail marketing research though suggests that persuasive storytelling combined with the strong visual imagery provides a response that, on a platform like Instagram, can create a powerful message for brands. "A story and a picture" immerse consumers in an experience, creating a

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[581] Maria Eugenia Ruiz-Molina, Miguel-Ángel Gómez-Borja, & Alejandro Mollá-Descals, "Can Offline–Online Congruence Explain Online Loyalty in Electronic Commerce?", *International Journal of Retail & Distribution Management* 49, no. 9 (March 11, 2021): 1271–94. doi:10.1108/IJRDM-02-2020-0060.
[582] Rodoula H. Tsiotsou, "The social aspects of consumption as predictors of consumer loyalty: Online vs offline services," *Journal of Service Management*, (27 (2) (2016): 91-116.

cognitive relationship between them and the brand.[583] Museums certainly contain pictures and stories, since that is the very definition of curation, so a creative, digital campaign is undoubtedly possible, but again, it requires significant ongoing financial investment in expertise and technologies.

4. NFTs as a fundraiser for the museum

Something a few museums have tried, to raise money, is to monetize their holdings by selling NFTs of their own art. As noted earlier though, NFTs have had a rocky start, demonstrating volatility in price and demand, so this has proven to be an unpredictable choice for providing revenue stream. In the fall of 2021, in conjunction with their Hokusai exhibition, the British Museum launched a series of NFTs of Hokusai works. The works on offer ranged from "unique" (release of one) to "ultra-rare" (two), "limited" (1,000) and "common" (10,000). At the launch in October 2021 the first one in the edition sold for nearly €40 000 but the price quickly dropped to under €20 000 in November. At present a few are still available at an unlisted price but presumably far, far less than its initial offering. This reflects the drop in NFT prices in general, as well as in cryptocurrencies, the medium of exchange with which NFTs are linked. The amount that the British Museum received for selling these digital rights remains unknown, but the *Doni Tondo* by Michelangelo netted the Ufizzi in Florence €70 000 on a sale yielding €240 000 in total in 2021. The museum said that the money would go to restoration.[584] There was some public outcry at the potential misuse of digital rights given that the painting is in a public museum and is public heritage. The Italian government halted further sales in July 2022 as debate continues over ownership and copyright issues for major masterpieces in national institutions.[585]

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[583] Ran Huang & Sejin Ha, "The Role of Need for Cognition in Consumers' Mental Imagery: A Study of Retail Brand's Instagram", *International Journal of Retail & Distribution Management* 49, no. 2 (November 4, 2020): 242–62. doi:10.1108/IJRDM-04-2020-0146.

[584] Gareth Harris, "Uffizi gallery makes only €70,000 from Michelangelo NFT that sold for €240,000", *The Art Newspaper*, 13 June 2022 https://www.theartnewspaper.com/2022/06/13/uffizi-gallery-makes-only-euro70000-from-michelangelo-nft-that-sold-for-euro240000. [Accessed January 11, 2023].

[585] Gareth Harris & Ben Munster, "Italian government plans to halt digital sales of masterpieces from its major museums", *The Art Newspaper*, 8 July 2022. https://www.theartnewspaper.com/2022/07/08/italian-government-weighs-in-on-digital-copies-fracas. [Accessed January 11, 2023]. Presumably there is also concern around the fact that the private company who produced the NFT made money in the transaction, too.

Interestingly, Cinello, the Italian company producing some of the digital versions of Italian artwork, says that they make DAWs, ("digitally-encrypted artworks": a registered trademark) not "just" NFTs. According to their website, the DAWs are "Detailed, authenticated and limited digital extension of original artwork produced in original size." They create limited edition LED reproductions placed in period-style wooden frames, each accompanied by a unique NFT.[586] They use enigmatic language to describe this new form:

> Cinello has created a new digital universe for masterworks of art in partnership with museums and contemporary artists who have granted us the rights to convert their collections to flawless Digital Artwork. We call this DAW®.[587]

Moreover, they title these, "The New Original Digitals", suggesting that:

> Cinello takes things to the next level by introducing a new category of masterpieces by the Great Masters of all time in an authenticated digital version, thus opening a new market. The extraordinarily high technological content makes the DAW® absolutely impossible to copy and guarantees its uniqueness. For each DAW®, the ownership of the work is certified on a Blockchain public ledger.[588]

Given the losses museums faced during the pandemic – the Victoria & Albert (London, U.K.) alone lost £73m in the first year of the closures – it is no surprise that museums are turning to other ways to monetize their works.[589] In early 2022, the Belvedere Museum in Vienna produced a one-off drop of 10,000 NFTs of Gustav Klimt's *The Kiss*, releasing them for Valentine's Day. They were valued at 0.65 Ethereum, or €1,850, each. In March 2022, a media relations officer at the Austrian museum said around 2,400 of these Klimt NFTs had been sold, generating about €4.3 million.[590]

The DAW is an NFT of a museum's artwork and so it is more comparable to the digitally immersive experience than the usual NFTs. NFTs are usually *born digital* objects which means they have never been physical objects — similar to digital art or internet-based objects (like Jack Dorsey's first tweet). Differently, the DAW is a digital image of a *physical* artwork. It is a reproduction, done in limited numbers, of an original, tangible object

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[586] Scott Reyburn, "Museums Are Cashing In on NFTs", *New York Times*, March 25, 2022. https://www.nytimes.com/2022/03/25/arts/design/museums-nfts.html [Accessed January 11, 2023].
[587] Cinello.com. https://www.cinello.com/page/daw [Accessed June 18, 2023].
[588] Ibid. [Accessed January 11, 2023].
[589] Alex Marshall, "British Museums Face Covid's Long-Term Effects", *New York Times*, Oct. 14, 2021. Updated Oct. 20, 2021. https://www.nytimes.com/2021/10/14/arts/design/british-museums-recovery.html [Accessed January 11, 2023].
[590] Scott Reyburn, "Museums Are Cashing in…"

downloaded onto a dedicated device (tablet) set in a frame, to hang on the wall. In this sense, it is more akin to a digitally immersive experience, mining past artworks by well-known artists and updated with new technologies. It is aimed at a new audience who cannot afford an actual masterpiece or who may be intrigued by the idea of owning something "unique".

> DAW® artworks will naturally increase in value, attracting collectors looking for scarcity in collecting digital assets… patented digital management system… provides an encrypted and easy to display certified edition of original digital artworks in a very high image resolution while preserving the original size of the artwork.[591]

It is curious that somehow museums have managed to retain control of this use of their content and to make money from it,[592] unlike the digitally immersive companies who produce the "art" and make money in an entirely separate process from the museums. I believe it may have something to do with how the digitally immersive experience historically developed – in the south of France by a photographer, in the open air entirely separately from museums. Some of those who work with one of the current production companies were connected to *Cathédrale d'Images,* an exhibition created by Albert Plécy (1914-1977). Plécy was a photographer, curator, author, and organizer of photographic festivals, events, and organizations. In 1975, he projected images onto giant screens along with a soundtrack in the quarries and gorges of Les Baux de Provence, near Avignon. In 1977, Plécy created the company, *Cathédrale d'Images* with his wife, Anne, who continued it through to the early 2000s. after Albert's death. Now known as *Carriéres de Lumiéres*, projections continue in Les Baux de Provence, run by *Culturespaces,* a private museum management company. [593] It seems impossible to uncover what images Plécy originally projected onto the quarry walls in the 1970s but at present the shows seem to follow the same formula as the touring digitally

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[591] Cinello.com. https://www.cinello.com/themes/cinello/assets/images/Cinello-Technology-v2.pdf [Accessed June 18, 2023].

[592] Ibid. Cinello gives 50% of the sale price back to the museum. In a personal email, the Senior Manager, Primo Maronati wrote, "The number of copies and the prices are defined from the Museums, at the moment are 9 copies for each masterpiece, you can visit our website cinello.com (there is also an App) and you can find the complete Catalog that includes over 250 DAW®. The price is on request based on the chosen work they start from €40.000 up to € 300.000." [Received June 22, 2023].

[593] Albert Plécy, *l'homme d'images*, *Arles: Actes Sud* (ISBN 978-2-7427-1212-0; 1997). https://web.archive.org/web/20170910125819/http://www.actes-sud.fr/catalogue/actes-sud-beaux-arts/albert-plecy-lhomme-dimages; *Carriéres de Lumiéres*, https://www.carrieres-lumieres.com/en/bit-of-history#13/1] [All accessed March 15, 2023].

immersive experience with shows entitled, "de Vermeer à Van Gogh" and "Mondrian" running this summer, 2023.[594]

5. Case study of an online 'museum'

The Art Canada Institute (ACI) provides an interesting look of an institution as an (almost) entirely online experience. Self-described as an "online museum, a digital library, and an interactive Canadian art encyclopedia", it began in 2013 as the mission of Sara Angel, then a Ph.D. student with a Trudeau Scholarship, a strong journalism background, and a network of colleagues to tap into for support.[595] Her idea was and is to bring Canadian art to everyone, regardless of geography, age, education, only requiring internet access. In less than a decade, the ACI has become a robust and respectable forum to view Canadian art and learn about Canadian artists. It also acts as an encouragement to Canadian researchers to write about Canadian subjects. All of it is in both official languages. Her vision has launched more than 50 online books with several new titles added each year, as well as curriculum support, events, and fellowships for graduate students. It is a lively, thorough, aesthetically pleasing, and rigorously academic website and information source. And it is almost all online, except for an intermittent lecture series currently on hiatus from COVID. They have highlighted male to female artists at a rate of about two-to-one, better than most institutions attain with exhibitions, and about twenty percent of the online books feature diverse artists.[596]

ACI has proven to be a treasure for increasing knowledge and access to Canadian art and art information, but it does not do this as a bricks-and-mortar institution. Ultimately, the ACI does not face most of the concerns that digitization creates for physical museums that are outlined in this document. It does not have to wrestle with the weight of an historical collection, of bequeaths and directions determined in an earlier time. It bears no responsibility for any objects. It does not have the enormous costs of maintaining a building which places limits and constraints on what can be accomplished. It does not sit in a particular community whose needs it must continuously strive to serve. It works well in its

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[594] Carrière des lumières, https://www.carrieres-lumieres.com [Accessed June 21, 2023].
[595] "Our History", *Art Canada Institute – Institut de l'art canadien*, https://www.aci-iac.ca/about/ [Accessed March 1, 2023].
[596]"The Canadian Online Art Book Project", https://www.aci-iac.ca/art-books/ As of fall, 2022.

sphere as a nimble and useful online Canadian art destination. Where digitization might drain funding from other initiatives and alter perceptions of what the museum and its collections do, the ACI does not need to worry. Their concerns centre on developing donors and supporters, as well as the ongoing need to get permissions to upload images from artists and their estates.[597]

Other issues for the ACI as they exist entirely in the ether, will be ongoing nurture and maintenance of consistency, as well as community and loyalty to the work and "product" of the ACI. Digital projects lack the physical connections to geographical location, buildings, and local relationships and may stretch loyalties. As noted earlier with online shopping, online users can be fickle, going to the website that appears first in a search or perhaps pops up on Instagram. Funding for digital projects can also be fickle, with technological obsolescence, costs of upgrading equipment, and creating and sustaining a strong digital brand. There is a deep need for the educational excellence of the work of the ACI and other first-rate museum websites, as scholars and students seek their information and images. But the aesthetic and community values are diminished or nonexistent. It suggests the assertion made by a museum curator that, "A virtual museum is taking us further from the imperative of real things towards the acceptance of the equivalency of online experience and direct experience."[598] And so how can museums differentiate the work that they do as physical places with physical art?

6. The future work of [physical] museums

…museums should not be reactionary; they should be visionary.
Hank Willis Thomas (in a round table discussion with *SFMOMA* staff (2017))

The museum has often been on the wrong side of history, enacting paternalistic, colonizing policies to enforce a particular worldview. There is no doubt that a lot of restoration and correction is required to redress old habits and old systems. In many quarters museums are

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[597] These conclusions are based on private conversations with authors and staff at the ACI over the last 5+ years.
[598] Kelvin Browne, "A museum without visitors is just an attractive warehouse", *The Globe and Mail,* June 4, 2020. https://www.theglobeandmail.com/arts/art-and-architecture/article-a-museum-without-visitors-is-just-an-attractive-warehouse/ [Accessed June 5, 2020].

looking to be a new and different thing: to be a good citizen in their communities. So many museums are re-centring mission and vision statements on empowering marginalized voices, being a porous presence for learning, creativity, partnership, and as a witness to events and histories previously ignored.

Recently, the Speed Museum of Louisville, Kentucky, stepped bravely into the middle of the heartbreaking story of Breonna Taylor, a young health care worker who was killed in her own apartment by police. The museum felt compelled to act and so they centred their work on, *Promise, Witness, Remember*, by artist Amy Sherrald. They created a national advisory board, a steering committee made up of local BIPOC members, and, most vitally, enfolded the Taylor family in all the consultation. In a matter of months, the exhibition came together, and included workshops, conversations, and a real sense that they had been able to help the community. The work goes on, writes the current director, in transforming the programming and focus of the museum to be centred on the people and issues of the city and state. She states:

> The goal of the Speed's approach is to make the museum a better neighbour to its community—an institution that measures success not by how many people it brings in through its doors but by how well it brings its resources outward; an institution that engages directly with timely issues, uplifts local voices and uses art as a catalyst for personal and collective transformation. Becoming a truly responsive museum means meeting community needs and priorities as they evolve. This is only possible when museums are willing to embrace the rich, rewarding messiness of an iterative, collaborative process: sharing power, seeking and internalising feedback, and measuring impact on the community's own terms.[599]

There is a welcome space for the museum that engages with its region, that is a part of the problem-solving, community-building, eye-opening conversations that are required in modern cities. These initiatives are not based in digital or technological concepts but rather focus on people, community, and relationships. All are encouraged to come to the museum to find some space:

> …the museum does give free time—freedom to loiter and tarry, to indulge the long double-take, the retracing of steps, the dreamy pause, the regress and ingress of reverie, the wending progress that is engagement. It is a tempo of consciousness

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[599] Raphaela Platow, "How the Speed Art Museum learned to listen in the midst of a community tragedy", *The Art Newspaper*, September 2, 2022. https://www.theartnewspaper.com/2022/09/02/speed-art-museum-louisville-listen-community-breonna-taylor [Accessed January 31, 2023].

disarming to modern audience conditioned to fear open-ended silence as a forerunner to boredom.[600]

As the Speed Museum example above suggests, museums seem are less about their objects and more about the dialogue that art opens up between the institution and its constituents. The emphasis is not so much on the material culture of the place but on being a space for the neighbourhood to gather. In an age of polarization, the museum is a forum for debate and nuanced conversation. It is the place to be led by varied expertise from idea to idea, unfolding possibilities.

Curator and academic Ken Arnold thinks the focus should be on the strengths of the museum rather than any question of its existence after he found himself part of a Twitter storm questioning the survival of the museum. He was part of a curatorial team that eventually closed a gallery entitled, *Medicine Man*, at the Wellcome Gallery in London, UK. The Wellcome Gallery is a "free museum and library exploring health and human experience",[601] which had struggled with what to do with this particular collection of colonial medical tools. Eventually, the curatorial team decided that the collection "perpetuates a version of medical history that is based on racist, sexist and ableist theories and language" and closure was the best response.[602] Afterward, Arnold wrote that:

> Something I have been wondering about is what could be gained from concerning ourselves a bit more with what museums are good *at*, and worrying a little less about what they might be good *for*? The unedifying hour I spent ploughing through this online culture-skirmish brought to mind, by dint of its absence in these posts, one exceptional aspect of museums. Namely, their provision of open, unpredictable fora where visitors can move beyond the simplicities of either being for or against something."

Arnold believes that the physical museum moves us beyond the binary and polarizing online arguments and particularly on social media, to deeper deliberation, slow contemplation, and sober second thought. This may involve open curation, where difficult

[600] Didier Maleuvre, "A Plea for Silence: Putting Art Back in to the Art Museum," in *Museum Philosophy for the 21st Century*, ed. Hugh H. Genoways (Lanham, MD: AltaMira Press, 2006), 167.
[601] Wellcome Collection. https://wellcomecollection.org [Accessed February 5, 2023].
[602] Ken Arnold, "What can we learn from the Wellcome Collection's gallery closure backlash? What museums are really capable of", *The Art Newspaper*, December 19, 2022. https://www.theartnewspaper.com/2022/12/19/what-can-we-learn-from-the-wellcome-collections-gallery-closure-backlash-what-museums-are-really-capable-of [Accessed February 5, 2023].

projects are courageously created in the public domain, "curating opportunities to think aloud with things".[603] He realizes that mistakes will be made, but those should be part of the process. Again, the internet does not allow for a lot of missteps when furor, cancellation, condemnation, and polarity run rampant, but perhaps that is what Arnold is inviting. He wonders if the museum could be the public arena for the audacity and resolution of rigorous discussion, for daring action, and careful dispute. These things stand in direct opposition to what is currently dominant online. They also provide a response to Byung-Chul Han's fear of flattening and of one-way outrage that leads to inaction. The museum is a place to take on difficult topics and to do it in a generous, gentle, meticulous, and bold fashion. The museum enhances public dialogue and offers alternative patterns of thinking to what governs online debate.

Additionally, as the museum serves the public good, it also serves the personal good. A concept like the "slow museum" in which visitors are encouraged to pick an image and spend some time with it seem to unlock new experiences, new ways of thinking, and engage viewers afresh. One University of Pennsylvania professor took groups of students to the museum and asked them to choose a painting to look at for 20 minutes. Students found themselves making new connections with their own lives and finding the ability to focus.[604] Other studies have shown that visits to arts and cultural centres have a positive effect on wellbeing, restoring health, and increasing self-reported happiness.[605]

Conclusions: Wrapping Up

Accordingly, museums must consider how they contribute to the public good as they join the digital fray. A few years ago, I was involved in parent council at our local high school as my child entered grade nine into a "Google" classroom, complete with desktop computers, "free" Chromebooks, a Google email account, and all work submitted through the Google

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[603] Ibid., np.
[604] Stephanie Rosenbloom, The Art of Slowing Down in a Museum*", NYTimes*, October 9, 2014. https://www.nytimes.com/2014/10/12/travel/the-art-of-slowing-down-in-a-museum.html
[605] Daniel Wheatley, Craig Bickerton, "Subjective well-being and engagement in arts, culture and sport", *Journal of Cultural Economics* 41 (2017):23–45. DOI 10.1007/s10824-016-9270-0. See also: "The Happy Museum". This is a consortium of UK museums researching best practices for museums. They also work with academics and publish through the Oxford Internet Institute at the University of Oxford. https://happymuseumproject.org/about/who/museums/ [Accessed February 5, 2023].

classroom platform. I asked the teacher, the principal, and a school board trustee about the evidence that this was the best way to be taught. I looked for scholarly articles that supported online learning over regular, classroom interactions. I asked about the legal implications of Google storing Canadian students' information on American servers, meaning that there was no legal access to the information if there was a problem. No one would respond to my questions, nor confirm that it had been discussed, determined, or evaluated. It seemed to occur in a vacuum. Google provided Chromebooks for free in the beginning but that was followed by a program requiring significant payment to Google.[606] Teachers were also offered Google professional development days.[607] All of this may be fine – it may be a philanthropic gesture from a company with only the best intentions at heart, but it also inserts

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[606] "…1,600 Grade 9 students … the Google Chromebook compact laptop to use for the rest of their high school years. If it works, the program will be extended to the board's 27 high schools permanently…The pilot will cost $732,400 next year — money that will be drawn from board reserves because no provincial funding is available... The full program…would cost about $2.5 million a year…" Hank Daniszewski, "Thames Valley school board to test free Chromebooks for Grade 9 students at eight schools", *London Free Press*, April 3, 2017. https://lfpress.com/2017/04/03/thames-valley-school-board-to-test-free-chromebooks-for-grade-9-students-at-eight-schools [Accessed June 18, 2023].

[607] From the Thames Valley District School Board (TVDSB) website in 2017:
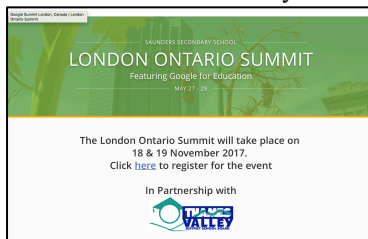
 It included this description:

"Enjoy two days of inspiring keynote speakers, empowering hands-on breakout sessions, and fun activities… Choose from compelling sessions about all the Apps in the G Suite for Education (Drive, Docs, Slides, Sheets, Drawings, YouTube, Classroom, Maps and more)… Manage your Summit experience on the NEW EdTechTeam Events App. Create a personalized schedule, access useful event information, see what people are saying on Twitter, and provide feedback via emoji for the sessions you attend. We have you covered! Stay fueled throughout the day with breakfast, lunch and cookies. Get one-on-one support at the Wonder Bar (Mission Control) and don't forget your exclusive EdTechTeam SWAG."

https://boardapps.tvdsb.ca/annual/growth-of-gotvdsb-across-the-valley.html [Accessed June 19, 2023].

a generation of students into the Google ecosystem, making them comfortable with and tied to Google's platform, Google accounts, and Google devices.[608] All the while, Google also collects a vast amount of information about a vulnerable population.

I think the most important question for all acts of digitization, whether it is in schools, museums, places of worship, or for meetings, conferences, and universities, is "why"? With computerization it seems analysis recedes and devices, apps, and the perception of utopian possibilities of technology are welcomed with little critical thinking through the positives and negatives. Eventually there may be review and analysis, a discussion of concerns and mounting issues but "why" never leads the discussion. Additionally, because there is a transactional nature to almost all daily activities now, the corporations who lead this make it very hard to step back to examine the value of digitization.

Life "online" reflects the usual human mix of the trustworthy, the devious, the crazy, and the less crazy. What is new is the rapidity of onset, the complete obeisance to this medium, and its imbrication with our lives. Societies of the past echoed the same sorts of warnings and cries for sober consideration of the printing press, the telegraph, the telephone, and the television. However, the way that this has become the container for ALL forms of old media, the so many carry the device, attend to the device, and rely on the device, has not been seen before. The world wide web lives in each mind and molds behaviours in the Deleuzian sense of "control through". It is welcomed it in an uncritical and unconditional way to become the medium for all activities. It has many, many advantages for communication and education, but it must all be used with an incredibly critical and thoughtful eye.

Conclusions: Final discussion

It is possible that, as with other parts of society, there will be a growing split between sizes of museums — large museums grow larger, while small museums shrink, perhaps with a loss of

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[608] Similarly, various soft drink companies and even fast-food outlets were allowed into schools, with proceeds going back to school's coffers (much needed as cutbacks continue to public education) up until the early 2000s. Eventually parents, educators and some policymakers realized that there was a looming epidemic of obesity and moved to disallow most "junk food" vendors. The whole yes/no process took about 30 years to cycle. I was part of a school that had to refuse a "Coca-Cola" scoreboard because it was considered a bad influence. Catherine Gidney, "Nutritional Wastelands": Vending Machines, Fast Food Outlets, and the Fight over Junk Food in Canadian Schools", *CBMH/BCHM,* Volume 32:2 2015, p. 391-409.
https://www.utpjournals.press/doi/pdf/10.3138/cbmh.32.2.391 [Accessed February 5, 2023].

mid-sized museums. This will affect digitization too. Wealthy museums will continue to grow in power and influence, creating elaborate digital versions of their museum that reflect their physical galleries, provide expansive educational materials, and deliver high-quality digital art images. Large-scale, destination museums will be able to invest in a digital team, software, designers, and data analytics people who can create and maintain a sophisticated, versatile, digital presence. The team, though, should also include digital curators who can envision online exhibitions that challenge, awe, and instruct, as their terrestrial counterparts do, rather than trying to recreate gallery visits online or simply dumping the information online like a giant filing cabinet. Whether there is a social media team, what its role is, and how it enacts a digital presence must also form part of the decision-making structure. As noted throughout, social media platforms are voracious consumers of imagery, sorting, classifying, and monetizing digital photos for their advertisers and platform owners. Museum leadership teams should use caution and common sense to examine how or if social media and websites work for their own particular institution. This includes knowing how they perform, for whom, and in which broad capacities, along with the financial and employee investment required. From this information they can create policies and structures for the best chance for success if they choose broad digitization and social media presence.

Those museums with little money should focus on becoming community hubs for meeting, building collective identity, and delivering educational physical visits. These venues should consider only offering the "brochure website" as defined earlier – websites that highlight opening hours, exhibits, address, contacts, etc., without feeling pushed to upload lots of digital images of their art. Their money is likely best spent on physical curation, education, outreach, and purchasing art that is local, provocative, and reflective. Their websites might only have the basics to support the physical work and art in the building. Their social media presence may only highlight broad information about what is going on and when.

Digital images of art are, of course only going to increase. They will continue to be uploaded by visitors to the museum, by visitors to digitally immersive experiences, by artists, and by museums. The best possibility to deal with the onslaught is to create and pass on tools that will help citizens to be informed about what they are seeing. Museums must be a part of teaching users to be sceptical, to question sources, and by their own example demonstrate

how and where to find trustworthy resources. Museums hold considerable public trust in their ability to educate and disseminate *accurate* information and through judicious use of their own websites and social media feeds, can nurture integrity and wisdom.[609]

Opportunities for further research

As I work through this thesis the information evolves in front of me. Many of the research papers and books on social media effects were not even available when I first began more than three years ago and so there must be and inevitably will be ongoing exploration of the effects, benefits, and detriments for museums and their collections online. Evaluation and knowledge are central to deciding whether there is value to posting digital images of traditional art on websites and media platforms.

   Important insights will be gained by specifically surveying social media users as to their interest in what museums upload and post and why. Targeted questions about what it is that followers want from the museum on their social media feeds or on their website would be helpful. It is also vital to know if people who follow museums on social media already go to museums or does what appear on the feed actually draw followers into the building.[610] Or is it only people who already frequent museums who see an artwork online and seek it out? What sort of content is most linked to museum visits, and in direct line with this thesis, is it images of traditional art that compels an Instagram follower to go see the original artwork? Digital images of traditional art online wend their way into our sights each day via Google, commercials, and all online spaces we inhabit. In all the circumstances in which art is encountered go on to induce museum visits? Does attending digitally immersive experiences, visiting a casino with great art, or seeing NFTs encourage visiting physical, original art in a museum? Is there any correlation between the two places and what they offer for visitors or are they different groups of people with different interests in arts and entertainment.

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[609] In 2016 96% of Canadians said they believe museums are trustworthy sources of historical information. Caroline Loewen, "Sources of Trust in Uncertain Times", *Canadian Museums Association*, Winter 2022, https://museums.ca/site/reportsandpublications/museonline/winter2022_sourcestrust

[610] A recent Facebook experiment by a museum in Oslo involved posting daily images from their photography collection with the question, "where is this?" found an increase in museum followers and likes. More of these sorts of simple trials would provide so much usable information for museums as they plan and deploy resources. Emily Oswald, "Remembering in public: A case study of museum-user communication on Facebook", *A History of Participation in Museums and Archives: Traversing Citizen Science and Citizen Humanities,* eds. P. Hetland, et al. (London, U.K.; New York: Routledge, 2020). https://doi.org/10.4324/9780429197536

As with many fields, the rapid rise of AI will offer many possibilities for change within the museum and provide areas for future research. As AI inevitably becomes a method of curation it will be important to understand and measure the effects of AI curatorial choice for exhibitions. How will the selections be programmed, by whom, and with what sort of success for the visitor looking to be engaged and enlightened. Will a large-language model's "idea" of what is best exhibited together match or surpass the creativity of human curation?[611] Experimentation into visitor interest as determined by camera surveillance of facial

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[611] We are sometime away from that as I asked ChatGPT to "design an exhibition of Art Gallery of Ontario images about women". It did not understand that question, so I rephrased it more simply, "Which artists at the Art Gallery of Ontario paint or draw women?" to which it responded:
*"As an AI language model, I don't have real-time access to current exhibitions or specific information about the Art Gallery of Ontario (AGO) beyond my knowledge cut-off in September 2021. Therefore, I cannot provide you with an accurate list of artists at AGO who paint or draw women as of June 2023.*
However, the Art Gallery of Ontario has a vast collection that spans different periods and genres, so it's likely to feature works by various artists who depict women in their artwork. Some notable artists known for portraying women in their paintings or drawings include:
1. Pablo Picasso
2. Edgar Degas
3. Frida Kahlo
4. Pierre-Auguste Renoir
5. Mary Cassatt
6. Gustav Klimt
7. Georgia O'Keeffe
8. John Singer Sargent
9. Édouard Manet
10. Tamara de Lempicka
It's always a good idea to visit the official website of the Art Gallery of Ontario or check their current exhibitions to get the most accurate and up-to-date information on featured artists and their works*."
https://chat.openai.com/?model=text-davinci-002-render-sha [Accessed June 12, 2023].
Since ChatGPT is text-based I then tried Bing Dall-E image generation. It returned this image to the query, "design an exhibition of Art Gallery of Ontario images about women":
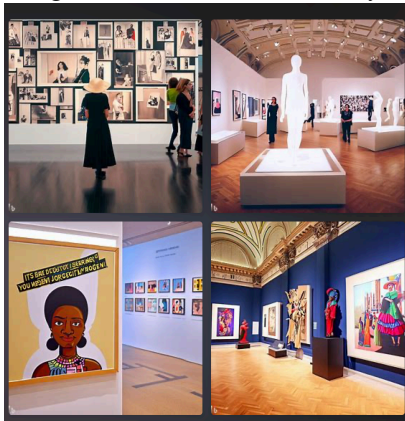
This is clearly not rigorous curation but at the pace of technological breakthroughs, it is not difficult imagine that human curation will be declared replaceable (and much cheaper) in the near future. https://www.bing.com/images/create/design-an-exhibition-of-art-gallery-of-ontario-ima/64887d28b1094bd88b17a3573d692358?FORM=GENCRE [Accessed June 12, 2023].

expressions, eye movements, and emotional responses to images exists and will surely expand. That sort of data is seductive to museum administration but these incursions into personal information need ethical consideration. AI may offer sophisticated and creative solutions as witnessed by its chess-playing abilities, but it might also be another threat to the creative class.[612]

Images from engines like Dall-E are pouring onto the internet and complicate image searches. Research into how visitors "see" a museum's art needs further exploration. Do visitors preview images so they arrive with expectations of what they will see and are those expectations accurate. Further, as there are more and more, will they see the online object as separate from or an extension of the original art object — what exactly are the next steps for the digital image of a traditional artwork on the internet. Is it a new and singular piece of digital art, is it a part of the documentation adding information to the original piece. This also leads to ongoing studies into how internet viewers determine source, accuracy, relevance, and location of proper materials.

Equally, AI could provide sound educational materials based on museum collections, disseminating information to online classrooms for distant students, but investigation into quality and rigour will need to be constant as AI "drifts", "hallucinates", obfuscates, and lies at present.[613] AI may eventually handle social media and website development for museums which will have implications in budgeting for technologies and for personnel but examination of these choices and decisions that AI learns to make will be required. Questions of necessity, ethics, finances, and social costs of turning decisions over to the algorithms lie at the heart of this thesis and remain open, in some senses, as the technology moves ever faster.

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[612] In 2019, Google's AI chess-playing engine, AlphaZero, astounded watchers: "AlphaZero's strength and originality truly surprised us. Chess is full of superhuman expert systems, yet AlphaZero discovered an uncharted space in which its self-taught insights were both startling and valuable." Matthew Sadler & Natasha Regan, "DeepMind's superhuman AI is rewriting how we play chess", *Wired.com*, February 2019. https://www.wired.co.uk/article/deepmind-ai-chess [Accessed June 19, 2023].

[613] Ji Ziwei et al. "Survey of Hallucination in Natural Language Generation", *ACM Computer Survey* 55, 12, Article 248 (December 2023), https://doi.org/10.1145/3571730;
Terry Yue Zhuo et al., "Exploring AI Ethics of ChatGPT: A Diagnostic Analysis", *Cornell University, arxiv Computer Science*, May 29, 2023. arXiv:2301.12867.

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