6.1 The digital transformation of cultural practice

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Introduction

Cultural organizations and those that work in them are involved in an emerging praxis that is both an externally focussed critique of society and technology, and an inwardly focussed critique of institutions through technology, artists and commissions. This chapter draws on the work of cultural professionals and artists who have engaged with emerging technologies to create provocations that engage patrons, audiences and visitors in the wider debates that exist around these technologies, and their use in society. The primary focus of this chapter is on museums, galleries and wider visual arts organizations, however much of the thinking on leadership is applicable to wider cultural leadership.

In many ways this chapter is rooted in the academic traditions of theatre, dance, art, musicology and museum studies, and examines the social impact, the political challenge and economic reality of cultural practice today. This chapter argues that while social and technological changes are not a new concept for arts organizations, what is new is the depth and reach of these technologies in terms of art form development, data creation, manipulation and interpretation. It is a rallying cry for value-led leadership from cultural professionals, and platform more critically engaged practice within the arena of digital technologies and digital culture from the cultural sector in Europe.

Digital context

When it comes to discussing digital technologies the conversation often turns to contradictory narratives, utopian dreams where work is carried out by machines as we enjoy a constant life of leisure. Or, a more science fiction-led narrative of dystopian disasters where freedom, and creativity have vanished, and a robot state has taken over. The reality is and will likely continue to be more nuanced and exist somewhere between the utopian and dystopian fiction that prevail in popular culture. Indeed today, neither utopian nor dystopian narratives fully depict the use of digital technologies in our everyday lives. If we think about how we engage with technology at a mundane and everyday level, we can create a foundation from which to begin to think about the space for digital leadership. Machine learning helps to filter spam in our inbox, and attempts to help us structure emails by suggesting ways to complete sentences (Dada, Bassi and Chiroma, 2019). City mapper and Google maps help us to travel in the most efficient way possible,

responding to live conditions and recalibrating our journeys as we move (Tavmen, 2020). On the web our search results are 'improved' – meaning that we find what we are looking for quickly – but limiting any serendipitous opportunities for discovery whether that's to find an article about an unknown female scientist (Wade and Zaringhalam, 2018), or a local hairdresser who doesn't pay to advertise online (Noble, 2018). The thousands of photos we take on our phones on a monthly basis are neatly tagged and categorized using machine vision technologies so we can search for pictures of our birthday, or family BBQ (Lee, 2020). Alexa is always listening but she/it/Alexa can't understand regional accents, and our arguments with 'her' often seem to outway any useful 'assistance' it provides. Digital technologies filter our lives and our experience is more efficient for it, but the trade-off for an efficient life is less opportunity for discovery, and a life viewed through the prism of those that programmed the machine. It's fair to say the landscape is complicated.

Cultural context

When it comes to understanding a cultural organization's relationship with technology, motivation is key. If we look across existing research, policy and practice we find three core motivations for engaging with digital technology platforms and wider digital culture. These can be defined as

1. To improve visitor experience
2. To increase sales
3. To develop art and art form

While motivation has provided a helpful prism from which to view the adoption of technology in cultural organizations to date, this chapter advances this discussion by moving beyond operational intent to examining the potential for arts organizations to become agents of change. This chapter argues that for cultural organizations to be agents of change within this arena they must look beyond operational intent, and take a wider social, political and economic view. In doing so it introduces a fourth motivation for engaging with emerging technologies, and wider digital culture, namely:

4. To facilitate critical technology discourse

This motivation can be described as engaging with digital technologies to develop the digital literacies of visitors and to shape technology discourse. In other words, rather than simply using digital platforms, collecting or showing these technologies, cultural leaders can engage with their wider impact on art and society through critical conversations, commissions and programming. I first developed the concept of critical digital literacy when developing the Museums + AI toolkit, the toolkit provides a framework for the strategic development of Artificial Intelligence projects in museums. The term critical technology discourse provides a theoretical concept from which to frame how cultural organizations critically engage with technology, the impact these organizations can have by being open and accountable about the technologies they are using, and through public programmes and contemporary collecting to develop the digital literacy of visitors (Murphy and Villaespesa, 2020).

Early foundations (digital) enlightenment

Museums as data-centric institutions that focus on collection, cataloguing, search and retrieval, serve as a helpful foundation for thinking about the wider challenge of digital leadership across the cultural sector. If we look at museums as we know them today we can see that in many ways they are defined by the enlightenment ideals of the late 1800s and early 1900s. This period saw a shift from private ownership towards national collections, and public access. This shift was motivated by a changing purpose, gone were the days that large internationally significant collections were presented solely to demonstrate wealth and status, and instead we began to see collections presented to the public in the widest sense. This new more accessible model of exhibition was however not altruistic in motive, instead it was premised on the instrumental vision that education would create a more productive workforce, and a more cohesive society. Iwona Blazwick, director of The Whitechapel Gallery, goes a step further in describing the motivations of the founder of The Whitechapel Gallery, London as 'Evangelical' (Blazwick, 2006: 119). Admittedly the founder of The Whitechapel gallery was a priest, although this was not the case for most museums and public galleries founded around this time, it does give us some indication of the wider discourse of the revolutionary potential that museums could have. As Blazwick frames it, the gallery 'embraced a belief in the democratising and civilising power of contact with culture' (Blazwick, 2006: 121). Around the same period in America, John Cotton-Dana, founding director of Newark Museum, was advocating for a new model of a public museum that was both useful and beneficial to the city and its people (John Cotton Dana, 1920; Murphy, 2019). His instrumentalist vision centred on the ideals of enlightenment, and positioned the museum as a space where culture and society is not only collected and observed, but that the museum also serves as an important place of world building, of social, educational and personal development. The opening of public museums, particularly in the UK and United States at this time, went hand in hand with a drive towards education for the working classes, the idea of the museum as an active rather than passive institution, that shapes rather than simply collects culture became prevalent. The arts as a catalyst for developing how society functions, rather than simply providing a stage to showcase society as it stands, is a helpful analogy for thinking about how arts organizations and cultural professionals can support digital literacy, shape digital culture and facilitate digital enlightenment.

Agents of change

Today it is not uncommon for museums, and museum professionals to be engaged in conversations around activism, social justice, homelessnes, gentrification, politics, decolonization, racism, sexism, homophobia and poverty. These conversations take many forms, such as articles in professional publications, namely Museums Journal published by the Museums Association (UK), Museum (magazine published by the American Alliance of Museums) and Museum International published by the International Council of Museums (ICOM), For examples of current debates see Williams (2017), Chantraine and Soares (2020), Stahlmann (2020) Kendall Adams (n.d.) Janeen Bryant, Cohen-Stratyner, Mann and Williams (2021). Museums studies as an academic discipline has also engaged in this new

model of instrumental ideals, under the contemporary moniker of activism, with seminal books on the topic written by Maura Reilly, *Curatorial Activism towards and ethics of curating* (2018); and *Museum Activism* an edited volume by Robert R. Janes and Richard Sandell (2019) which both clearly define the museum as a space where ideas are made (rather than simply displayed). What all of this tells us, is that as Autry and Murwaski termed it 'museums are not neutral', and they are becoming more comfortable having difficult conversations in public ('Museums Are Not Neutral' n.d.). However, whilst museums might be more comfortable having difficult conversations (in relation to social justice issues) in public, we are yet to truly see a similarly confident, and 'activist' approach to debates around the use of technology.

Digital activism

Technology is not simply a mechanism for processing data, or assisting with operational tasks in a museum, the use of emerging search-based technologies in particular intersects with and at times rallies against wider social justice conversations that are being led by museums. However it is this very gap that offers a possible, progressive way forward for museums and museum professionals to respond to the increasing use of technologies both within the museum, and within wider society. By accepting that museums are not neutral, and neither is technology, we can create a unique and valuable platform for critical technology discourse. We as cultural leaders can support our visitors towards a path to what the museologists of the Victorian era may have defined as (digital) enlightenment. However, perhaps today a less colonial model may be digital citizenship, digital literacy or even digital activism. Museums are in a unique position to provide a platform for this dialogue, to showcase, to engage, but also to educate visitors on how technologies are not only shaping their visitor experience, but also their wider experience beyond the museum, from healthcare to education, to criminal justice, politics and spending behaviours.

Amaro argues that categorization models which are commonly used across different facets of society demonstrate that the boundary between scientific ordering, and socially constructed pseudoscience is often malleable. 'From astrological data and amateur interests to public administration, eugenics, and colonial schematics, data has been thought to provide the most objective measures of complex social phenomenon and relations' (Amaro 2019: 125). History has shown us that categorization and ordering can create a range of biases, and discriminations which can have a negative impact on those that have been categorized, Amaro frames the negative impact of categorization around lived experiences and 'reduction[s] of life chances' which are created as a result of problematic schematics (Amaro 2019: 126). Amaro's essay reflects upon how these known flaws in categorization models or schematics are further heightened by algorithmic decision-making. Livingstone also notes that technology not only mirrors existing biases but can also 'hideously amplify it' (Livingston, 2019: 14)**.** Amaro and Livingston are not writing about the use of digital technologies in a museum context, but their observations are clearly applicable.

As the web, and associated technologies, have been colonized by commercial providers, profit rather than purpose has been a key driver in the design of these new technology spaces, places and processes. Zuboff argues that technology companies often conflate 'commercial imperatives and technology necessity' (2019: 15). This is an important point

for museums, and the artists that they work with. We must first acknowledge that it is near impossible for either humans or machines to make objective decisions. In machine terms we see this subjective constraint being defined as 'coded bias' in humans we increasingly see these subjective constraints and the systems that host these decisions as 'structural inequality' or 'unconscious bias'. Whilst it may be near impossible to create bias free systems, we can go someway in developing these systems by engaging with more diverse training data, more diverse design perspectives and a greater acknowledgement of bias. As such we can shape what is technologically possible, and the application of those technologies by broadening the conversation and those involved in the development of these technologies, to include new voices and perspectives not only in the design of the systems but also in the contextualization of data at all stages of the system, what Jo and Gebru term the 'sociocultural data' (Jo and Gebru, 2020).

In practice

Serpentine Galleries

In a guest lecture to students at Goldsmiths, University of London (which was later posted on YouTube), Ben Vickers, Chief Technology Officer at Serpentine Galleries, spoke about the positive impact that galleries, art and artists can have on the wider technology sector, and indeed on the development of technology itself. Vickers argued there is a value to artists and arts organizations being in the room when technology is being developed. This is a model of collaboration that Vickers has advocated at The Serpentine Galleries, and moves the galleries' relationship with big tech from that of user, to collaborator. 'What we have been trying to develop is not to … acquiesce to that agenda but to attempt to build a bridge where you know your position could be taken seriously without you kind of neutering it on the way' (*Victoria Ivanova + Ben Vickers (Serpentine) – All Tomorrows Parties. Goldsmiths MFA Lecture* 2020). What Vickers describes is the co-creative model of working that many museums now aspire to when it comes to their relationship with visitors. However, it is not as evident when it comes to technology projects, but it does serve as a helpful model of partnership, which moves away from technology companies seeking to launch their latest tools through a partnership with a museum, and towards developing these technologies with artists, in galleries and with visitors. This model of partnership values the museum as a platform of digital activism, rather than a showroom for new technology. Could this model also support the development of more equitable modes of digital innovation? Or is this a utopian aspiration?

Cooper-Hewitt, Smithsonian Design Museum

The exhibition *Face Values: Exploring Artificial Intelligence,* which was initially shown at the 2018 Design Biennale in London, and later at Cooper Hewitt, New York, examined facial recognition technology through the work of artists and designers, the exhibition's description does not present a position on these technologies; however, it clearly situates their use as being covert, and prolific, thereby creating a point of resonance for visitors.

This high-tech, provocative response investigates the human face as a living data source used by governments and businesses to track, measure and monetize emotions. Using their own faces to control cameras and software, viewers experience the power and limitations of emotion recognition technologies through playful interactions that encourage awareness of these often hidden tools. *Face Values* speaks to the growing fascination around facial detection technology, particularly in the United States, where major companies continue to experiment and push boundaries with this controversial software ('Face Values: Exploring Artificial Intelligence | Cooper Hewitt, Smithsonian Design Museum' 2016).

In discussing this exhibition, Curator of Contemporary Design, Andrea Lipps explains 'What we are able to do is really poke and probe the technology to raise questions with our visitors' (*Design Talk | Curator, Computer, Creator: A Discussion on Museums and A.I. in the Twenty first Century* 2019). Then director of Cooper Hewitt, Caroline Baumann related the exhibition to the museum's mission in saying that the exhibition served as a site for experimentation, and a mechanism for the museum to seek answers to a wide range of questions, that include

- How might we engage with technology to empower people through design?
- What are our opportunities to make meaning with AI?
- How might we design equitable and ethical applications with AI in our sector and well beyond the museum sector?

These questions are important ones given the broad social impact that AI technologies have, and indeed can or will have on society. Lipps frames this emerging challenge of how we use, but also critique technologies within the context of how museums collect, and asks: 'Just as museums employ a level of criticality in acquiring works for our collections, for developing exhibitions, for our galleries, how can we maintain that same level of criticality in the development of digital technologies for the museum experience?'

For Lipps the way in which museums use technologies echoes her understanding of design itself, 'Design is the externalisation of our values. It is the manifestation. It is the tangible form of our priorities'. The idea that the technologies we use in our museums, regardless of intent, are a tangible manifestation of our priorities is perhaps a helpful provocation, but crucially, Lipps recognizes that the role of museums in the operational use of AI technologies, and in their collection and exhibition through the work of artists and designers, is not about providing the 'answer' but instead is about providing space for the discussion.

Whitney Museum of American Art

The curators of the 2019 Whitney Biennale reflected upon the political, social and environmental conflict they witnessed in the work of artists when they were developing this particular edition of this long-standing biennale of contemporary art, of and about the Americas. In the introduction to the exhibition catalogue they cite controversy as a central and indeed important component to the biennale, 'On occasion, the Museum itself has become the site and subject of protest. We strive to be a space for open dialogue, a role that is fundamental to our institutional identity' (Panetta et al. 2019: 96).

For the Whitney Biennial 2019, Forensic Architecture (FA) and Praxis Films presented an investigation into Warren B. Kanders, vice chair of the board of trustees of the Whitney Museum of American Art and CEO of the Safariland Group–one of the world's major manufacturers of so-called 'less-lethal' munitions ('Forensic Architecture, Tripple Chaser', n.d.). Whitney commissioned Forensic Architecture to produce work that examined how 'less lethal munitions' such as tear gas were discharged in protests on the Mexican/US border. This work linked Kanders (Vice Chair) to the sale of weapons that were used by US Border Agents. As a result of their findings a number of artists withdrew their work from the 2019 Biennale. This case study raises a number of prescient questions: How do we respond to artists who are using technologies to ask big and challenging questions of governments and stakeholders? How can we as cultural leaders support critical engagement with and through digital technologies?

The Photographers Gallery

In 2019 The Photographers Gallery commissioned 'Operation Earnest Voice' a performance piece by artist Jonas Lund. The work sought to shine a light on how political lobbies had engaged algorithms, bots and misinformation in the run-up to the 2016 Brexit referendum (when UK Citizens were asked whether they wanted to remain a member of the European Union or Not). 'The campaign involves deploying false identities, or "sockpuppet" accounts, to comment on and derail online conversations in an effort to sway public attitude (Rea, 2019).' The performance took the form of an active influencing agency, with temporary staff recruited to make content, generate conversations and influence online communities. The work sought to shine a light on the mechanisms behind online misinformation, manipulation and fake news. The projects website which is still live today would easily pass as a political campaign agency rather than that of a piece of performance art https://operationearnestvoice.co.uk/. Such was the shock at this commission, a political lobbying group lodged a complaint with the Charity Commission (UK) and argued that the gallery should lose its charitable status because this was not an art commission but a political campaign. When technology is politically divisive how can arts organizations provide a platform to debate the power and influence of technology on our democracies? How can arts organizations develop their own critical digital literacy so they can commission challenging art works, but also defend those art works from political pressure? Should arts organizations question the power of technology platforms and companies?

Conclusion

As cultural managers we should think about the impact that our work with digital technologies and digital culture can have beyond our immediate motivation.

1. To improve visitor experience
2. To increase sales
3. To develop art and art form
4. To facilitate critical technology discourse

The link between what happens in the digital team, public programmes and collecting could become more reflective and engaged through organization wide transparency, dialogue and development. The role of cultural leaders is to be critical and curious, to think of technology as an art form. Technology and its application must change and respond to society in the way the culture we manage does, but for technology to be responsive we as cultural leaders need to be critical and creative adopters rather than passive enablers. What is the motivation for using this technology? What impact will it have? How can we refine our adoption of this technology? These are the questions that cultural leaders need to ask themselves and their colleagues as a matter of routine. By asking these questions we create a culture of critical technology discourse that benefits visitor experience, sales, artists and art forms.

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