The Gamification of Arts and Culture: 
The expanded narrative and the virtual space from digital media to COVID

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This paper considers how advances in technology towards the end of the twentieth century led both to new affordances in immersive experiences at the intersection of art, design, and technology (for example virtual reality), and came into their own during the COVID-19 pandemic through the creation of innovative, engaging works. The concept of an expanded narrative is presented as existing outside of the work itself, as the relationship between audience, artwork and the space in which it is presented – and by acknowledging how screen-based experiences become both accessible, affordable, and pervasive within society, this paper suggests a potential gamification of culture to bring art and entertainment to new audiences.

Immersion. Audience. Technology. Digital. Gamification.

1. INTRODUCTION

This research arose from a doctoral investigation into the historical precedents of contemporary immersive artistic experiences, considering the 1960s to the present day. In examining how changing technologies allowed for collaboration, multi-disciplinary artworks, and immersion, it is therefore relevant to consider the global need for (and uses of) digital technology during the COVID pandemic. This research is presented through the concept of the expanded narrative, which exists outside of the work itself, concerning the relationship between audience, work, and the environment in which it is presented. A distinction is also noted between the ‘immersive artistic experience’ (as being specifically related to the arts), and the broader ‘immersive experience’ (which has a wider connotation, of being related to social, commercial, educational purposes, for example)

Peter Bürger’s Theory of the Avant-Garde was written in the 1970s and deals with the historical avant-garde of the 1920s and 1930s, and its attempts to reconnect art and ‘life’. In the text, Bürger draws a link between the genre and political engagement through socially engaged practice. The audience (or the spectator) is placed in an active role of recipient and conduit of the message or meaning of the work, viewing it through the lens of their own subjective experience. Boris Groys observes that the internet allows for the realization of “the avant-garde impulse”, with art (as data) being placed in the context of reality (Groys 2016, p174). Although referring to its reproducibility, Groys’ posits that by its very nature (of, for example, a digital image being merely a visualisation of data) “digitalization turns visual arts into performing arts” in the same way that sheet music needs to be performed in order to be experienced (Ibid., p143). He also recognises that the experience of the digital work is dependent on the software and manner with which it is viewed, and requires what he terms as an ‘act of interpretation’ (of its form) from this viewer.

According to Groys’, “[these] digitalized images do not exist unless we as users give them a certain ‘here and now’”, indicating that works requiring the presence or action of an audience cease to fully exist without one (Ibid.). Groys’ further notes that our actions in the digital realm, whether on our own computers or behind our own doors, are fully visible
The increasing online world we inhabit has led to the gamification of arts and culture, with navigation and experience of virtual artworks and environments becoming commonplace. This concept is of relevance in the increasingly online world we inhabit because of COVID.

2. THE EXPANDED NARRATIVE

Artistic shifts during the 1960s led to a more active role of the audience, and the blurring of the boundaries between media and the artistic space, leading to the development of what I term an expanded narrative. This expanded narrative exists outside of the work itself, with regards to the relationship between audience, work and environment, and is here presented as arising from the incorporation of three elements:

(i) Active space – implying a purposefully constructed or controlled environment (or one which has been chosen specifically for its value or contribution to the finished work/performance). Such spaces include installation artworks or environments, for example Olafur Eliasson’s The Weather Project and Yayoi Kusama’s Infinity Mirror Rooms.

(ii) Collaboration – between disciplines, between creator and audience, or between individuals. Examples include the historic works of Experiments in Art and Technology (E.A.T.), and Terry Riley’s Time Lag Accumulator.

(iii) Active audience – undertaking an exploratory or participative role, for example audiences attending performances by Punchdrunk, or the happenings of the 1950s and 1960s.

The term ‘active space’ is used to imply a purposefully constructed or controlled environment (or one which has been chosen specifically for its value or contribution to the finished work/performance); while an ‘active audience’ has agency within (or contributes to) a work. A subjective relationship or expanded narrative between an active audience and artwork allows for the freedom to create individual understanding and interpretation through participation and engagement within the boundaries of the work or performance. These constructed `active spaces' then allow for other affordances such as movement or participation, resulting in an immersive experience for a deeper engagement with the performance/artwork.

This paper focuses in particular on the virtual as a contemporary form of active space, and the ways in which audiences engage with such spaces – further suggesting that our experiences with computer-based communication, information and games has led to a ‘gamification’ of arts and culture which allows both for a sense of ease and familiarity with navigation and experience of screen-based works, and for engaging new audiences. Further, the relevance and importance of online communication and experience within our mid-pandemic world is recognised – together with ways in which technology can be utilised as part of our ‘new normal’ to ensure the continued access to and engagement with arts and culture.

3. THE VIRTUAL AS ACTIVE SPACE

While the forms of participation with (and engagement of) an active audience traditionally resided within physical spaces, the advancement towards digital forms of practice brought new methods of enabling audience involvement. Frank Popper recognises this when he describes technologically driven art as being intrinsically about involving the audience in the process of creation and making a conscious move from participation to interaction (Popper 1993).

From the 1980s, artists were looking to the potential of computers and the internet to realise their ideas. Early pioneers of net.art included Vuk Ćosić, Alexei Shuglin and Olia Lialina, while others came from a computing background, for example John Klima. The movement was inexpensive and accessible to anyone with a computer, modem and internet connection (either at home or in a public space such as a library). As Mark Tribe (2006) noted,

New Media artists saw the internet much as their predecessors saw the portable video camera: as an accessible artistic tool that enabled them to explore the changing relationship between technology and culture.

New Media Art allowed artists to respond to the advance of information technology and digital culture, for example Christa Sommerer and Laurent Mignonneau’s A-Volve (1994), an interactive real-time environment in which visitors interacted with virtual creatures in a water-filled glass pool.

The emergence of interactive digital artworks brought with it new problems. Such works were medium specific and time-based, raising issues of how to display, curate and archive them. Unlike paintings and sculpture, these works required audience engagement to reveal their content, and flexible and responsive methods of presentation were often required. The movement from interactivity within physical spaces to those digitally created (and/or enhanced) and held within a computer marks a shift from the audience being present in the same location as a work to what Edwina Bartleem (2005) terms “spaces within spaces”, and towards virtual environments where through technology, the space of the spectator is
extended beyond a screen to a digitally constructed work. Additionally, intuitive interfaces encourage and welcome the exploration and action of the audience, where the experience is shaped by the collaboration between audience and artwork. While internet-based art works raise issues of uniqueness, ownership, and reproducibility, they also enabled new forms of production, not just reproduction. Similarly, virtual reality can both be used for creation and recreation (for example of a building, person or object – as with photography, painting, and other more traditional artistic forms).

Early forms of virtual spaces were presented within small cinema attractions between the 1970s and 1990s, such as the Omnimax (since renamed as IMAX dome) theatres, which showed films projected onto the curved ceiling of the venue. In 1988, Scott Fisher of the University of Southern California and Elisabeth Wenzel of the National Aeronautics and Space Administration (NASA), developed the Virtual Interface Environment Workstation (VIEW), “a multisensory, interactive display environment” which enabled the user to “virtually explore a 360-degree synthesized or remotely sensed environment and ... viscerally interact with its components” (Fisher et al. 1988). Developed at NASA, VIEW was a user-controlled head-mounted, stereoscopic display system, predating the virtual recreation of the real for research and commercial applications (such as flight simulators) in the 1990s, providing a liminal space bridging the real and the unreal. This in turn led to both the adoption of virtual reality by artists and audience, and the bespoke and artistic creation of new and online spaces allowing for creation and exploration. The 1990s and 2000s saw a move towards software and hardware which enabled new forms of immersion, including the CAVE Automatic Visual Environment, a room sized immersive display. To access and engage with virtual worlds, the audience was required to navigate the space using headsets or controllers – creating a distance between the audience and artwork.

While some composers and artists utilised existing commercial platforms (such as Pauline Oliveros’s work in Second Life, see next page), others pushed technology in new directions to inform their own practice, and develop innovative methods and scenarios to engage and immerse their audience – for example Char Davies, who uses virtual reality as a means to juxtapose the natural with the artificial experience, arguing the case of art as psychological experience. Of her own work, Osmose (1995), Davies notes that, “[i]n virtual reality, the interface is key to the media artwork and defines the character of interaction and perception” (Grau, 2003). This leads to the effect of “embodied presence” which, “in the course of the ‘immersion’, results in an emotional state of being that is heightened still further by the music” (Ibid.). Davies’ work suggests that by enabling an immersant to inhabit an alternative, computer-generated, unreal space, psychological effects can include experiencing changing sensations of time. The immersant is thus required to experience the virtual space as if it were an actual physical space, with engagement encouraged through familiar bodily functions to create a sense of embodiment within the constructed space, avoiding potential issues with detachment.

The “explosion of creativity and critical thought” of New Media art became a worldwide movement which “facilitated the formation of communities without regard for geography” from its inception, distributed through mailing lists and the internet, and reflecting the “increasingly global nature of the art world” marked by international biennials (Tribe and Reese, 2006). Collaboration increasingly involved networked collectives, for example Knowbiotic Research’s Dialogue with the Knowbiotic South (DWTKS) (1994-1997) which used data from research stations to “create [an interactive] changing abstract representation of Antartica”, which allowed the user “to ‘immerse’ himself into each knowbot” (Grau 2003, Archive of Digital Art, n.d. b).

Similarly virtual spaces provided experimental platforms for composers seeking to create new and innovative works, for example Oliveros – renowned for pioneering Deep Listening, her work utilised material properties of physical space and embraced the potential of the virtual for performance and collaboration and relates closely to the concept of the expanded narrative, through the listening experience (for both performer and audience) and the use of venue. Oliveros’s collaboration with the Avatar Orchestra Metaverse within Second Life began shortly after the group’s formation in 2007, using her avatar ‘Free Noyes’. For the premiere of The Heart of Tones (2008) (created by Oliveros as a recreation of the 1999 work of the same name) which took place simultaneously at the Open Space Voice+++ festival in Victoria, British Columbia, and ‘in-world’, Oliveros co-developed a ‘virtual instrument’ with Andreas Müller, for the avatars of the Orchestra to wear, which “include[d] individual controls for volume, duration, frequency and colour spectrum”, together with customised avatar animations “designed to provide subtle variations [sic] and evolutions in the perception of the received sound” (Avatar Orchestra Metaverse 2017). Oliveros was involved with two further works with the Avatar Orchestra Metaverse: a networked collaboration with Stelarc titled Rotating Brains / Beating Heart (2010) and Vancouver Calling (2012), composed for the 2012 Canadian New Music Forum.
3.1 The audience within the virtual space

The adoption of technology contributes to the creation of an expanded narrative where the audience is involved in creating their own experience of a work. The digitally constructed virtual space builds on this, allowing for new affordances for composers and artists who embrace these spaces to construct new experiences and performances for their audiences, enabling new forms of interactivity, where, according to Elizabeth K. Menon (2007), the action is shaped by the collaboration between the artwork and user, leading to the potential of different experiences with each encounter.

The audience is thus able to experience a hybrid space between the physical and the virtual by means of computer peripherals such as a mouse or keyboard, sensors, or in the case of the virtual environment Second Life, through an avatar, as represented by a Venn diagram where the physical and the digital exist independently (see Figure 1). Virtual works exist somewhere between both realms, allowing for experimentation and alternative forms of practice. The interface (for example a browser/keyboard/mouse used to access Second Life) therefore acts as a portal, allowing the audience to explore a constructed, digital space. These virtual spaces allow the creator to be in complete control of the location and staging of a work.

![Figure 1: Venn diagram representing the audience experience as linking the physical and digital](image)

Live theatre and art had incorporated audience involvement for some time, for example improvisation (responding to suggestions from the audience), happenings and the FOOD restaurant which opened in 1971, created by Gordon Matta-Clark, Carol Goodden and Tina Girouard). As Janet Murray (2017) notes, the attraction of this lay “in inviting the audience onto the stage, into the realm of illusion”, into what she describes as “holodeck experiences without the machinery”, which blur the boundary between artwork and audience. Towards the end of the century, advances in technology further enabled the creation of immersive experiences to be completed by the presence of the audience, for example Divina Commedia: Praxis for Death (1991) which was created by Masayuki Towata and Yasuaki Matsumoto, as a “completely bodily immersive installation”, inspired by float tanks and near-death experiences, in which visitors could float within a pool of edible gel, lit by a sequence of light patterns.

4. THE GAMIFICATION OF ARTS AND CULTURE

The means of communication and interaction as opened up by cyberspace and digital technology enable new forms of creation and participation. The growth in the development and adoption of online platforms – both for culture, and for work, can also be seen in the use of web-communication tools including Microsoft Teams and Zoom for meetings, collaboration, and events.

Replacing face to face communication with an embodied virtual (and remote) online presence requires the use and movement of an avatar within a 3D environment – such as that presented by Second Life and Gather. Town, the web-conferencing software launched in May 2020, which through it’s top-down view of a virtual room, navigated using the arrow keys, calls to mind action-adventure games such as The Legend of Zelda (1986-). Exploration and interaction within these virtual spaces draw parallels with open world games such as Ubisoft’s Assassin’s Creed series of games (2007-). The gameplay in early instalments (for example Unity (2014) and Syndicate (2015)) places the player at the centre of the narrative, as an ‘initiate’ in a fictional organisation accessing the memories of the protagonists they then control throughout the game. The camera angle shows a third person viewpoint, from an angle behind the character, however connection between the player and the character is ensured through free movement, making tactical decisions on gameplay and the ability to have exercise some control over the choice of clothing and weapons. The concept of world building through open world computer-based spaces and games is shown through the success of games such as Second Life and Minecraft, which continue to be active spaces for audiences and creatives. Both spaces have been embraced by artists – Blockworks is a global studio of creatives working within Minecraft, while Second Life is home to large numbers of galleries, exhibits and performances. Other online user created spaces include Roblox (2006-date), through which users can create their own games and experienced to be accessed by others.

The movement towards innovative online spaces (and the need for telematic, yet engaging experiences as a result of the pandemic) suggests a move towards ‘gamification’ within culture – drawing
parallels between the ways that computer games and screen-based experiences engage (and arguably immerse) the audience, and the manner of engaging with the former (though a keyboard/controller and screen) lead subconsciously to a learned manner of using such techniques to navigate and activate the latter. This play-based interaction calls to mind Roy Ascott’s concept of behaviourist art works which require game-like participation from an audience, and the navigation of Jeffrey Shaw’s Narrative Landscape (1985) and Legible City (1989) which utilise a joystick and bicycle respectively. Composers and musicians who have embraced technology in the creation of engaging and immersive digital experiences include apps featuring the work of Björk, Steve Reich and Radiohead. Both Björk’s Biophilia (2011) and Universal Everything’s Polyfauna (2014) – created with Radiohead) allow the audience to explore immersive, audio-visual, digital environments, while Steve Reich’s Clapping Music (2015) allows users to perform this work for themselves.

5. REACHING NEW AND DISTANT AUDIENCES IN TIMES OF CRISIS

Global pandemics, lock downs and social distancing saw a return to innovative and remote digital experiences. While it was no longer possible to have physically engaging experiences, digitally augmented technology experienced a resurgence, perhaps becoming even more essential than at the turn of the century. Workplace chats and social gatherings were replaced with telematic connections – hugs and visiting being reduced to pixels on a screen. Games were played over skype, Christmas parties took place through shared screens, and online workspaces like Zoom and Microsoft Teams replaced work-based collaboration. It should also be noted that the current generation of school children (both at primary and secondary levels) are growing up in the parallel spaces of the real and the virtual, in both their educational and social lives. While not necessarily the first generation to do this (the Alice Springs School of the Air in Australia, for example, has been operating via two-way radio since the 1950s), the presence of COVID led to the necessity to ensure the continuation of learning through lockdowns and self-isolation.

In November 2020, Innovate UK published a blog post reflecting on the BEYOND conference (on creative research and business innovation, November – December 2020) and on the cultural impact of COVID-19 (Smith 2020). In the same month, the International Council of Museums suggested that 6.1 percent of museums had closed globally as a result of the pandemic (Ings 2021). Innovate UK’s post noted that the timing of the pandemic occurred at a peak time for immersive, virtual technologies which allowed for hybrid experiences, and thus the potential for innovation in the creation of engaging, yet safe, performances. The BEYOND conference itself examined how audience experience has been affected by the pandemic and the creative responses that aim to address the widening gap between culture and audiences, recognising that screens have become our windows on the outside world. A poll of attendees considered the impact of lockdown on audience engagement and found that audiences were missing being part of a collective experience, and that a defining cultural outcome of the pandemic is the widening use of digital technology for live performance and distribution.

While prior to COVID-19, heritage attractions and educational institutions, such as Blarney Castle, the United States Holocaust Memorial Museum and North Carolina State University had extended their physical footprint into virtual space, providing online content: Art Basel created online exhibitions and opportunities for virtual visitors to explore their exhibits, including The Peale in Baltimore, whose digital representation replicates the original building and hosts exhibitions, tours and events and allowed virtual visitors to explore the museum and attend events from their own homes as avatars, using a viewer available for both Windows and Mac operating systems. In this way both equipment and techniques associated with PC gaming are shown to be adopted for wider cultural and artistic purposes, particularly as necessitated by social distancing and lockdowns.

Access issues created by the COVID-19 pandemic naturally led to further overlap between technology and heritage. In 2021, the Natural History Museum (NHM) in London has thirteen opportunities for visitors to engage with their exhibits from home – including a virtual tour of the Fantastic Beasts exhibition, an interactive exploration into the life of a blue whale, and interactive talks with scientists. Worldwide, galleries responded to the pandemic by providing online content: Art Basel created online viewing rooms, while the Frieze art fair was held virtually in 2020, and the Lisson Gallery collaborated with Augment to provide digital content that could be placed in the viewers own home using augmented technology. In August 2021, the Falko Alexander Gallery in Cologne both recreated its gallery, and created exclusively virtually accessible content, which enabled the venue to both extend the reach of its physical exhibitions and provide a temporary archive of the digital versions.

By bridging “analogue” physical and digital worlds, access issues created by the pandemic can
potentially be addressed, specifically through the use of Augmented Reality (AR) and VR (using mobile phone-based apps, which are relatively cheap, easy to access and use, or headsets which are equally becoming more affordable. AR was used to create innovative application (or app) based experiences, including those for The National Trust, firstly to reveal to visitors the potential damage of climate change to its properties (2019); and to encourage more families to visit sites (such as The Playful Garden (2020) in which a 3D version of Brodie Castle’s famous rabbit sculpture, Brodie, was brought to life). While both these examples require audiences to be physically present within the venues, a similar use of technology bridges analogue and digital worlds by allowing the user to view and interact with historic artefacts within their own home, for example the BBC Civilisations AR app (2018) which was developed as a pilot companion to the series of the same name.

By continuing to place the audience at the centre of the work, yet changing where and when that work takes place, consciousness and engagement replaces the physical, and keyboard and mouse interactions take the place of bodily engagement, leading to a new era of immersive possibilities.

As the obverse to this almost utopian viewpoint of an online digital society, and to provide balance, it is relevant to consider that while there are many positive aspects of digitally augmented online experiences (for example, travelling through time and space to other locations and historical periods, and reducing emissions related to travel for work and leisure), not all outcomes of our increasingly online society are positive. While access to mobile digital technologies has the potential to enrich and enhance everyday life, it also redefines concepts of privacy and personal identity by also subjecting users to control and surveillance – including cookies tracing movement across the internet, and the collection of personal details (for example the Cambridge Analytica scandal in the 2010s in which millions of Facebook customers had their data collected and used for advertising without their consent).

Such technology (and the companies behind them) operate on a system which places value on our interactions and activity, using this data to personalise advertisements, and to populate the material content of the services. Additionally, attention to (and obsession for) screen-based technologies – such as social media, email, games and streaming services – has the potential to overstrain and exploit our perceptive capacities, thus affecting well-being though issues as sleep disorders. In this way, while making communication and interaction possible, such technology arguably alienates us from human interaction – for example the ‘troll’ or ‘keyboard warrior’, hiding behind anonymity to share misinformation or hateful material. It is therefore necessary to educate and arm ourselves with the skills and technology necessary to both keep our information secure and to have the safest experiences online.

6. CONCLUSIONS

The three factors of active space, collaboration, and active audience together form an expanded narrative. Digital technology has both allowed for new forms of immersive practice, and new spaces in which to create, perform, collaborate and experience. The need to create ever more immersive (and thus productive) integration and engagement of remote participants is exemplified by the recreation of Facebook as Meta in 2021 – incorporating a range of VR and AR technologies to enable connection and exploration for immersive learning, innovation, connection and exploration within the metaverse.

The growth of online platforms has enabled global access to methods of engaging with or creating material. Examples of such include: films (from Youtube and Vimeo to Netflix and Amazon), art (from creating an artist portfolio using one of the many web creation tools available, to online content from the Tate and the Royal Academy), and music (from Soundcloud to Spotify and Amazon Music). Similarly, it has allowed for online and remote learning for pupils and students of all ages in response to the growing requirement for social distancing and lockdowns in response to the current global pandemic.

It is both testament to the continued relevance of immersive technologies, and a fitting conclusion, that in a twist of fate our once communal, social experiences are replaced by shared, yet disparate spaces – online gaming in place of arcades, social media in place of clubs and societies, and video conferencing technology used for conversation and collaboration. As the obverse to the ‘architectures of the post-anthropocene’ as described by Liam Young, where significant contemporary spaces (such as warehouses, ports and data centres) are now devoid of inhabitants, our digital selves now go where our physical bodies cannot. In this way, we have become part of the machine, our cells and atoms becoming bytes and pixels, allowing us to exist beyond our geographical and physical limitations to participate in the arts, culture and other experiences which have led on from these innovations.

Virtual Reality content such as games, software and social spaces are now readily accessible to domestic audiences using Valve Index, HTC Vive,
Oculus Rift, Windows Mixed Reality, and other headsets, through online marketplaces such as Steam. Similarly, Zwift is an online cycling and running program which allows users to pair their equipment with the software to train and race against others within a virtual world.

New forms of experiential art and performative spaces have developed as we learn to live within a ‘new normal’, leading to new interactions between humans and technology. While a virtual visit cannot replicate a physical one – there is much to be said for actually visiting a tangible space and immersing oneself in the sounds, scents and material properties of a castle, gallery or museum – a virtual, online visit has its own benefits: for one it is cheaper, and safer, and for another, it can take place at a convenient time, and from the comfort of our own homes.

Through the creation, and the enhancement of existing, digital provision, cultural and heritage venues would be able to remain open and viable throughout the pandemic and beyond – while also providing the public with access to methods of understanding and engaging with venues and sites which they may be unable to visit in person. Similarly, through the virtual experience of art works, museum collections and information on areas of historical interest, a potential lifeline could be extended to those organisations that have been forced to close or drastically alter their provision because of measures brought in to limit the effects of the pandemic.

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