

Art and Technology: In the Face of a WorldWide Pandemic

Emily Swain

SUNY Purchase Arts Management Department

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Art and Technology: In the Face of a WorldWide Pandemic: Literature Review

Saying the year 2020 had its challenges is an understatement. Considering the societal split brought on by the United States presidential election and its results, numerous natural disasters, and the Global COVID-19 Pandemic, the world as we knew it changed forever as society and life around us changed and fractured. With the unknown-nature of the virus, at first the world stood still. People across the world were faced with hardships and the Arts suffered along with the rest of the world. With shelter in place acts preventing non essential travel all connection to the outside world, loved ones, and fellow collaborators was through technology. Due to social distancing regulations traditional theaters, movie theaters, museums, and concert halls began to shut down day by day as a result of the pandemic. Across the entire world, small businesses began to close due to lack of income. In an attempt to gain revenue, artists and arts organizations alike had to turn to technology to fill the gaps in income and the creative process itself. It is no secret that technology has been a staple in the development of art for centuries; Digital film, Virtual Reality Technology, and Video/text communication are all essential tools in the integration of social distancing regulations. Without technology like this, it would be impossible for most artists to connect and share their work. It has also been essential in non arts careers pushing the workforce to develop and protect the worker. Whether it be professional zoom meetings, auditions, or interviews the world was forced to adapt to the new norm in both art and non art related fields.

These developments have been extremely beneficial to the arts. Whether it be the use of platforms such as zoom and spacial chat to create collaborative art miles away from your fellow collaborators; Social media to actually promote an artists brand or connect to fellow artists; and in some cases, complex technology like virtual reality technology to bring performance art right

to your home. Technology was especially crucial during the year 2020 where technology was all we had as we remained isolated due to the COVID-19 pandemic. With the world at a standstill, the human population turned to the new virtual world of communication and programming. As Broadway lights go out, art museums doors close, and concert halls and theaters remain vacant, an already fragile and underfunded field of study and profession is faced with a complete shut down. With the collaborative process of art and the community itself being based so heavily in communication and collaboration, the government's decision to begin shelter in place under the guidance of the Center of Disease Control and Prevention, made artists and people alike turn to what was accessible from the safety of their own homes. While some companies and arts organizations managed to stay afloat throughout the pandemic with the use of technology and reaching out to a wider audience through the internet, others could not withstand the year 2020 financially, shutting their doors before the virus outbreak began its decline in the curve in the number of new and fatal cases.

While the COVID-Pandemic brought a necessity for the relationship between technology and art, historically, this relationship has existed since arguably, the beginning of art itself in its many focuses. Through years passing, technology and the arts have gone hand in hand. In 1875, Eadward Muybridge was employed by the governor of California to prove that in a horse's gallop, all four of its hooves lifted off the ground. In completing this seemingly mundane task, Muybridge created the Zoopraxiscope, the beginning of film as we know it today began. Soon movies became an essential part of the arts, capturing the attention of people across generations and making the arts even further accessible.¹ With more adaptations and advancements of film technology, film cameras became digital, and soon VCR technology brought popular films to the

¹ Thompson, Kristin, and David Bordwell. *Film History: an Introduction*. McGraw, 2003.

home theater. Soon VHS was followed by DVDs then complete digital downloads and streaming services such as Netflix and Hulu brought about a new accessible technology to view films at the click of a mouse. This proved to be a much needed remedy during the COVID-19 pandemic in 2020, not only for the consumers, but for the actors and artists starved for work and desperate for sources of income with a paralyzed art scene. While these streaming services maintained their income from their memberships and existing content throughout the pandemic, they were also negatively affected as their own private studio productions were put on hold much like all other production companies alike. This meant that projects budgeted and planned years in advance came to a halt resulting in huge production budget losses and box office income.

Due to the exceedingly fast progression of infection on the US population, in March 2020, states all over the country started going into lockdown. Large meeting places began to empty out as businesses began to close their doors due to new regulations. Movie theaters and the film industry itself began to feel the inadvertent consequences of this mandatory lockdown. With no patrons to fill their seats, major film companies were faced with a decision. Either shelve the films set to premiere during quarantine until after the COVID-19 outbreak has been more contained or; find an alternative way of realising through various streaming services such as HBO Max, Disney+, and Amazon Prime Video. Some of these services later realised during quarantine a '*watch party*' mode on their software letting you live chat and connect with loved ones watching the exact same program at the exact same time. Unfortunately, deciding whether to release or shelf the film is only one of the problems the film industry was faced with. Projects that were in the works or set to film in the year 2020 came to a halt. Without understanding the virus and how it is transmitted and its lasting effects, any sort of face to face work in the industry, both film and television, was virtually impossible. Certain large companies began supplementing

this pause in production to reach out to their fans by live streaming script reading on social media via video communication programs such as Zoom and Google Teams. An example of this being Sony Pictures sponsoring a Zoom Table Reading with the cast of NBC's *Community* in which the actors gathered over zoom to read a fan favorite episode from Season 5 to raise money for COVID-19 relief.² Seeing actors in their homes still reaching out to put out content for their fans on platforms such as this is a perfect example of how technology was extensively crucial during the COVID-19 Pandemic.

The hardest hit medium in the COVID-19 pandemic was the Theater industry. The stepping stone for the invention and production of film's prerequisite of an intimate venue close to the art imitating life was decimated by the integration of social distancing guidelines. For centuries the Theater has been a source of public access to the arts. The birth of theater dates all the way back to the 6th century B.C. When a priest of Dionysus by the name of Thespis created a theater in which the characters act out greek dramas and tragedy through movement, song and dance.³ As time progressed, theater became more complex. Storylines became more heartfelt and relatable, from heroic epics to what we now know as William Shakespeare classics, theater has been an ever evolving form of art since its conceptualization. By the mid 1670's footlights were introduced to theater with the use of candles and lamps bringing another layer of what we now know as theatricality. Similarly to the advancements in film gas powered, followed by the electric carbon arc-lamp, spot lights, all leading up to the high tech projections, lighting and sound we have in today's theater experience. Until recent, the public opinion on theater is that the

² Keveney, B. (2020, May 08). 'Community' is back in session for Cast script reading to support Covid-19 relief efforts.

³ Cartwright, Mark. "Ancient Greek Theatre." *Ancient History Encyclopedia*, Ancient History Encyclopedia, 29 Mar. 2021, .

audience is essential. One of the largest appeals for a theater's target audience is seeing live performance art that is genuine and can never be replicated.

In 2010 Adolfo Adamo and his peers connected the art of theater and science to learn theater through advanced technology using 'talking heads'. Presenting the experience as an "innovative virtual theater in which the language of performance joins advanced technologies for educational goals. On the stage of this pioneering theatrical environment human actors interact with 3D faces ("talking heads") on a wide screen. These synthetic characters are endowed with emotional expressions and voices and resemble famous personalities such as Pythagoras and Einstein."⁴ This performance pushed the idea of audience interactivity and the intimacy of personal performance. Once again this niche and seemingly fringe technology has become something that could allow for further connectivity and interactivity when having an audience is not possible. Thanks to technology advancements like live video communication, and virtual reality technology used in this study, theater was able to continue to exist during the year 2020 when restrictions due to public safety kept the world apart. The thought of theater not having an audience is a scary one, but technology would help to keep the community alive if necessary.

Live theater is one of the fields of art that suffered the most during this pandemic, with lasting side effects that may last years following. In the US theater culture, one specific destination and career making phenomenon that almost immediately comes to mind is New York City's Broadway. Using the Broadway scene in New York City as a prime example of the effects of the COVID-19 pandemic, we can analyze and understand the impact of the tragic world wide crisis. On top of wealthy patron donations, organizational donations, and grants, one of the largest sources of income for a Broadway theater piece or any theater piece for that matter is

⁴ Adamo, Adolfo, et al. "Connecting Art and Science for Education: Learning through an Advanced Virtual Theater with 'Talking Heads.'" *Leonardo*, vol. 43, no. 5, 2010, pp. 442–424. JSTOR

ticket sales and concessions. In order to pay for the electricity for the thousands to million dollar lights and sound equipment, highly reputable production team staff and cast, there must be a performance to begin with. Even as the year went on and businesses started opening at half capacity, enclosed spaces such as theaters remained closed. Theaters were eventually sanctioned to open their performances at one quarter capacity. The only issue with that is large theaters such as Broadway theaters depend on the outcome of filling their hundreds of seats every night. While traditional theater remains in what could only be described as limbo until further progression in the fight against the COVID-19 outbreak, new independent innovative theater companies used technological advancements and programs to bring theater right to your home. The Royal Shakespeare Academy has since been leading a group of 15 different UK companies who will use their knowledge and expertise in theater and performance, the music industry, video production, gaming and the research sector to shape how audiences will experience live performance in the future. Sarah Ellis, director of digital development at RSC states, “Digital innovation in arts and culture is at a pivotal moment, with an increasing number of new ways in which audiences can experience live performance using new and emerging technologies. Culture develops as technology advances, and there are more and more opportunities that can be developed and experimented with to bring this technology to global audiences.”⁵

RSC exemplifies just this in their Audiences of the Future project. Using adapting technologies, applying user friendly mechanics to the software, and evaluating the current needs and faculties of their audience, Audiences of the Future sets out to create a new way to enjoy and appreciate live performances.

⁵ Rogers, Sol. “How Technology Is Augmenting Traditional Theater.” *Forbes*, Forbes Magazine, 9 Dec. 2019,

One of Audiences of the Futures projects that opened during the pandemic was called *Dream*, written by playwright Pippa Hill. A dreamlike journey into a forest: a story of transformation. Inspired by Shakespeare's iconic play, *A Midsummer Night's Dream*. Puck invites you on a magical journey between dusk and dawn. With a cloud of fireflies lighting the way, you explore the forest and encounter four sprites, Moth, Peaseblossom, Cobweb and Mustardseed. But storm clouds gather on the horizon, threatening destruction. Inviting you to be a part of this interactive experience shared between actors and audience members, advanced technology in both theater and gaming pioneer collaboration in this piece. Technologies such as these have the possibility to be on the forefront of all forms of performance art when it comes to times such as these where we must turn to technology to keep art alive during over 365 days and counting of quarantine due to the COVID-19 pandemic.

Both film and theater as we know it today would be far less extraordinary without music. Transitions and ambiance within these fields would be lost without music. For hundreds of years developments in music have brought new instruments, music genres, and performance art from across the world and many cultures. With developed technology such as radios, record players, CD Players, MP3 players, and Ipods made having inspiring music in your home became more accessible as technology developed. You can now create an entire song with any instrument you could imagine at the touch of your finger tips with new programs such as GarageBand and Logic Pro. Since the developments of software such as these, new genres of fully electric music, DJing and self produced work began to rise giving more artists opportunities to create their work with a minimal budget. While the authenticity of music and a live performance is still appreciated by its audience, creating music could be done from ways away because of this forever developing technology which was extremely pertinent during the COVID-19 lock down in 2020. The

accessibility of music software has not only allowed a wide range of artists to express themselves but also to monetize their work. Artists like Lil Nas X have used these technologies to pave a way to create music and pursue their dreams by banking on virality and the use of internet ‘clout’, or internet interactivity on your content, to generate exposure and expand their brands and fanbase. Lil Naz X's musical catalog perfectly encapsulates Bourdieu's idea of Culture capitalism by delicately interweaving pop culture references with catchy upbeat tunes as well as popular clothing and streetwear brands in order to create a strong connection to his audience in both style and content. By using the pillars of Bourdieu's Cultural Capital, artists can generate a “cult following” of super fans hanging on to every last word or expression as their idols make it available for purchase on the free market. These artists epitomize the infinite potential of internet marketing and brand identity to establish a long lived connection with their desired target audience. ⁶Despite steady advancements that aid in the application of Bourdieu's theory the accessibility of these tools makes viral competition all the more steep. Allowing anyone with access to the internet to market themselves.

One of the most classic and refined forms of art is the visual arts. Collectors and curators have brought great artists visual arts for centuries. From Greek sculptures and art, to renaissance greats such as Leonardo DiVinci, Michael Angelo, and Donatello, art that is hundreds of years old has been able to be expertly curated and displayed for the public to see and appreciate so classic pieces that hold much cultural significance are protected and properly celebrated. Over time multi media art and art exhibits were created to highlight and properly house these spectacular works of art. Merging different forms of media such as projection, audio, sculpture or painting artists used technology to add texture, and body to their work through transmedia

⁶ Holt, Douglas B. “Does Cultural Capital Structure American Consumption?” *Journal of Consumer Research*, vol. 25, no. 1, 1998, pp. 1–25. *JSTOR*,

storytelling. Visual art soon became something to experience through all walks of life. Classic curated art museums began using virtual walkthroughs using virtual reality 3D technology such as The Mets 360 Project-- an award-winning series of six short videos inviting viewers around the world to virtually visit The Met's art and architecture in a fresh, immersive way. Created using spherical 360° technology, it allows viewers to explore some of the Museum's iconic spaces as never before.⁷

By removing the covering that would typically be protecting the art, hanging 360 cameras from the ceiling to get a birds eye view of exhibits people would not be able to see otherwise by creating a whole new experience all together. Using this technology The Met's art exhibit brought the audience interaction to a new level. Users experience the work like a fly on the wall, alone and uninterrupted to enjoy these remarkable works of human achievement down to the very aura they radiate. These technologies helped keep the arts alive and an arms reach away when culturally famous museums and visual arts exhibits could not be reached during the COVID-19 pandemic.

One of the most debatable forms of art that did not necessarily change during the 2020 pandemic but was flourishing due to the appeal and escapism quality is video games. While many studies have shown negative impact video games have on the youth, there is most definitely something to learn about modern technology and animation art. Alexandra Overby and Brian L. Jones discuss in their journal article *'Virtual LEGOs: Incorporating Minecraft Into the Art Education Curriculum'* the benefits of world building and story building video games such as Minecraft stating, "While Survival and Adventure Modes are engaging arenas to play in, the Creative Mode is the most adaptable to educational settings. In Creative Mode, players move

⁷ Metropolitan Museum of Art. "Met 360 Project." *Metmuseum.org*, The Metropolitan Museum of Art, www.metmuseum.org/art/online-features/met-360-project.

around the landscape by flying or walking and can gather unlimited materials to build their creations. Players can log in independently and work alone or log into a server for multiplayer play. Educators can set limits and tasks for their students to keep them focused or allow more open-ended learning. From a simple shelter to the Taj Mahal, not only are the structural possibilities endless, but the ways educators can engage students in this virtual space is also unlimited.”⁸ A game with similar world building and game mechanics called *Animal Crossing:New Horizons* was released at the very beginning of quarantine in 2020. After its release it quickly became one of the top selling games because of the escapist quality of this virtual world building experience as you gather supplies and allies to build a fully functioning island. Using supplies gathered throughout the game, the player has a chance to use their artistic ability to build and refurbish the town of their dreams. Selling off the shelf during the peak of the COVID-19 pandemic, this video game game gives young artists at home a creative outlet. Shortly after its release the game became a popular online meeting place and topic of conversation on social media. Graduation between friends, gender reveals, and birthdays are all examples of viral videos of *Animal Crossing:New Horizons* gameplay that hit social media during the pandemic.

Social Media and the Arts

Through it all, one specific aspect of technology that since its conception has changed society outside of what cyberpsychologist would refer to as the “cyber world” forever, is social media. Myspace, Facebook,Instagram, Youtube, and now TikTok social media have all been an excellent medium for people to connect and create despite being miles apart. Social media has also been an essential part of exposure for up and coming artists as well as cemented artists to

⁸ OVERBY, ALEXANDRA, and BRIAN L. JONES. “Virtual LEGOs: Incorporating Minecraft Into the Art Education Curriculum.” *Art Education*, vol. 68, no. 1, 2015, pp. 21–27.,

promote upcoming work and performances. In today's social media culture fame exposure and overnight stardom has become less of a rarity and continues to be more and more possible with the accessibility of online outreach. Social media is now monetizable for any user with a larger following. A very popular example of this is young pop music artist Justin Bieber. Now a two time Grammy award winner at 26, Justin Beiber started his career at just 13 years old when discovered after going viral on Youtube for a video of a cover of 'With You' by Chris Brown, posted for only his family to see. Overnight this 13 year old child's fame grew to reach record labels, big names in the music industry such as Justin Timberlake, and various talk show hosts and news channels. Of course most fame like this fizzles out over time as we have seen since, but Bieber's fame seemed to only grow. Due to the wide reach of social media and modern algorithms that coders that create these social media platforms fellow artists with similar interests are more likely to come across similar content during their journey into what Cyber Psychologist describe as 'cyber space' which is a completely different world separate from the one your physical body is occupying.

Social media has also led to a new renaissance in the field of interactive art. What was intended to be a solo project could turn into a collaboration with five complete strangers from all over the country who have interpreted your work to add on what they thought could add to the art. Whether it be harmonies on a social media user's cover of a popular song or using new social media trends like 'dueting' where your video and audio syncs and plays simultaneously with another person. Leaving opportunity for endless duets with people all over the world. *Ratatouille the Musical* is a perfect example of a community written concept that gained legitimate footing for musical theater in the time of COVID. This original musical theater social media phenomenon is based on the 2003 Original Disney Pixar film *Ratatouille*. The animated film

portrays the story of a rat named Remy who dreams of becoming a great chef, despite being a rat in a definitely rodent-phobic profession. He moves to Paris to follow his dream, with the help of a talentless garbage boy Linguini who works in the kitchen of his uncle, a famous chef and Remy's idol. He puts his culinary skills to the test in the kitchen but he has to stay in hiding at the same time by concealing himself under his chef's hat. During the pandemic people all over the world were faced with a lot more free time than they are used to. Starting with one person who used that excess free time to create what seemed at first glance to be a parody musical number about the first time Remy and Linguini agreed to help each other achieve their goals. This social media user posted that small 35 second clip that began what we now know as *Ratatouille the Tik Tok Musical*. Soon this social media sensation grew to have a full ensemble, dance routines, fully composed score, and that perfect indepth musical theater dramatic spin as more people follow the thread and add their own creations to the hashtag and trend.

The outreach of the trend and growing collaborative performative art piece alone is something extraordinary within itself for it to grow into a fully functional theater piece. However, once this trend grew over almost all social media platforms it started getting attention in the professional theater community. Playbill, an extremely popular theater magazine for theater goers founded in 1884 in New York City, caught wind of the social media theater piece and hosted an open, fully remote, and online, panel using streaming technology live from their official website. In this panel, directors, writers and choreographers alike spoke on the democratization of making art, finding an audience during the pandemic, and looking to the journey of *Ratatouille: The TikTok Musical* as inspiration for the future of creating digital content and accessibility. This live stream was also available to be viewed on progressive non for profit

arts organization Broadway for All's, official YouTube channel.⁹ Broadway for All's mission is to continue aspiring artists and leaders in arts entertainment with the programming, community, and vision to build a more inclusive and powerful arts industry. Technological advancements open the arts and entertainment industries horizons to beyond what the eye can see as new possibilities are being created and utilized everyday.¹⁰

New Media Art and its Use

New Media Art is defined by Chris Wahl in his book titled 'Preserving and Exhibiting Media Art: Challenges and Perspectives: Chapter One- A brief Introduction to Media Art,' "the precise nature of these concepts as well as the differences between them are hardly clear cut. It is nevertheless possible to define "new media art" as a general term for every kind of art that is created with the help of a computer."¹¹

In this chapter Wahl describes the birth of the internet and the moment that you knew for sure that the net was no longer just a hub for communication. Describing the creation of the graphical user interface as the last straw in convincing even the most stubborn of people that computers were not just an extension of familiar entertainment businesses such as newspapers, radios, and film.

Realizations such as these are what began the use of terms such as "media art" and "new media art". While this sparked conversation about new forms of art never seen before, it also prompted the idea that every kind of art can be considered media art. While every form of art can be considered media art as "media" can also be referred to as any tool or artificial extension of

⁹ Meyer, Dan. "Ratatouille: The TikTok Musical Viral Sensation Continues With #AnyoneCanCreate Streaming Panel." *Playbill*, PLAYBILL INC., 13 Jan. 2021,

¹⁰ *Broadway For All*

¹¹ Wahl, Chris. "Between Art History and Media History: A Brief Introduction to Media Art." *Preserving and Exhibiting Media Art: Challenges and Perspectives*, edited by JULIA NOORDEGRAAF et al., Amsterdam University Press, Amsterdam, 2013, pp. 25–58. JSTOR,

the human body, new media art as Wahl describes is art created with the help or use of a computer. By this definition, nearly all forms of art that were created during the COVID-19 pandemic were considered New Media Art. This is due to the fact that with quarantine keeping people indoors, the use of computers for communication, distribution, collaboration and the creation of new media art itself.

Online Education and the Arts

In Peter DePietro's journal article titled, "Social Media and Collaborative Learning" he states, " More and more, instructors are integrating social media into the curriculum in order to engage students and prompt collaborative learning. The popularity of social media platforms such as Facebook, Twitter, and Google plus in class sessions is gaining, as is the use of new technologies such as tablet computers and smartphones, on which social media can easily be assessed."¹²

This statement can also be applied to the specific field of arts education. As aspects of art utilize more technology that can be used to either create new art or perfect your existing art, education surrounding the arts must adapt to support these advancements.

Using technology to actually create art is not the only beneficial aspect of these advancements. A large part of art and growth within an artists career and or education is the connection and critiques of others. While art is first for the artists, programs such as social media and open forums give artists the opportunity to share their creations and receive feedback from their peers and followers. In "Learning and Teaching Art Through Social Media" by Juan Carlos Castro, he discusses the experience of his student participant Gaelan Knoll to show how the

¹² DePietro, Peter. "SOCIAL MEDIA AND COLLABORATIVE LEARNING." *Counterpoints*, vol. 435, 2013, pp. 47–62. *JSTOR*

online use of social media in his arts education affects his view on the arts and his own works. Castro states , “Through his participation in this online social media study, he was able to produce a portfolio of photographic works that articulated complex ideas through image and text. The difference between classroom-based learning and online learning, for Knoll, was that he attributed his learning and artmaking by being able to build confidence and positive affect in his learning and art making by being able to engage with his classmates’ work differently.”¹³ Knoll's experience in arts education through social media is a perfect example of how technological advancements call for educational, artistic, and collaborative advancements in turn.

The year 2020 has brought it’s challenges to the world around us. Small businesses going bankrupt due to insufficient Pandemic Relief Checks, millions of virus related deaths, job loss, and most importantly, a shared fear for what comes next. A period of time so impactful that its effects will last years to come in different ways. Masks will become a norm for some who want to be extra precautions. Restaurants will remain at partial capacity until further notice. Health and safety regulations on school grounds will change. People's general views when it comes to contact and cleanliness will be forever changed as we push through this life changing tragedy together. The community of the arts will too feel these changes within their fields as time goes on and our world opens back up. Theaters filled to capacity, concerts sold out, museums filled with patrons, and maybe with the use of developing technology, the world of art will take a step forward and pioneer new possibilities everyday as it has since the beginning.

¹³ CASTRO, JUAN CARLOS. “Learning and Teaching Art Through Social Media.” *Studies in Art Education*, vol. 53, no. 2, 2012, pp. 152–169. *JSTOR*

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