

CITY, UNIVERSITY OF LONDON

The web is alive with the sound of music:
An analysis of the history and future of virtual ensemble performances
as performance documents

Arianna Dahlia

January 2021

Submitted in partial fulfillment of the requirements for the degree of
MSc in Library Science
Supervisor Dr. Lyn Robinson

Abstract

This dissertation aims to examine virtual ensemble performances as performance documents and their potential effects on performance documentation. It will be looking at these topics from a library science and documentation perspective. This dissertation's objectives include defining what a virtual ensemble is and other relevant terminology related to the virtual ensembles phenomena and community. Another objective is to explain the history of virtual ensembles by addressing where they come from and how they got started. The final objection is to examine the place of virtual ensembles as performance documents and speculating how they may impact the future of performance and music documentation. The primary methodology used in this project is desk research and analysis. The analyses used will be focused on literary analysis. However, some philosophical and historical analysis was used as well as limited performance analysis when necessary. While this research is meant to look at a general overview of virtual performance in multiple disciplines, such as orchestra and theatre, this research will emphasize choir performances due to the prevalence of accessible material for choirs using that medium.

The findings indicate that while they have many similarities and could be classified as performance documents, subtle differences make them distinct and better suited to be categorized as their own discipline. Nonetheless, virtual ensembles are still worth preserving as documentation of the story of now and the evolution of art and its digitization. Additionally, it must be remembered that posting something online or digitizing it is not the same as preserving something. Despite being published online, these documents will need special efforts to be preserved and available for future generations.

This study adds value to the field of library science by joining the discussion on documentation and its definition. It also participates in the documentation discourse by examining an emerging form of documentation and performance and how it fits into current and changing definitions within the field. It also adds value by discussing the ways virtual ensemble projects fit within and can help accomplish the mission of libraries and the goals of library science by fostering learning and the creation of knowledge.

Table of Contents

Abstract	2
Table of Contents	3
Acknowledgements	4
Introduction	5
Chapter 1: Golden bricks: laying a vocabulary foundation by defining key words and phrases ...	8
1.1 the document debate	8
1.2 the language of music	9
1.3 Liveness online and in documentation	11
Chapter 2: And then there was lux: a history of the virtual ensemble movement	14
Chapter 3: They gather: current analysis and why virtual ensemble documents matter	17
3.1 New medium, new message	17
3.2 Where are they now? The pandemic's effects	20
3.3 Limitations	24
Chapter 4: May we always sing along: the future of virtual ensemble documents and their potential impact on the future of performances and performance documentation	29
4.1 The next verse	29
4.2 Why libraries should care	33
Conclusion	38
Works Cited	40
Appendix 1: Dissertation Proposal	49
Appendix 2: Bibliography	59
Appendix 3: Reflection	63

Acknowledgements

Thank you to Dr. Lyn Robinson for her supervision and support throughout both this dissertation and the entire Master's degree process.

Thank you to Joe Dunne-Howrie for his initial supervision during the start of this dissertation and for his role as an advisor and source of literature recommended during the early stages of research.

Thank you to Debbie Lee for advisement and discussion on topics of this dissertation and to both Debbie Lee and Ludie Price for allowing me to sit in on lectures and access to relevant lecture notes as part of the research for this dissertation.

Special thanks to Jonathan Keijser for allowing access to the documentary *What Would Beethoven Do?* as part of the research for this dissertation.

I would also like to thank my friends and fellow CityLIS cohort members for their support and encouragement over the year and zoom during our virtual study sessions. These helped me stay productive and connected to the world during the isolation of lock down while living through a pandemic as an international student. Thank you.

Introduction

In today's society, more and more of the world is going digital. This focus on the digital has been emphasized by a global pandemic that shuts down the world. The result is that to survive; society has had to distance itself from the physical and rely more on the digital. Life as we know it has closed and moved online from school to work, shopping to entertainment, even networking and connecting with others seems to be confined to the digital realm. While the technological advances of the twenty-first century have made this possible, they have also opened a discussion on the merits of activities, and a life lived online versus in-person. One of the focal points of these discussions has been the performing arts. While the recent technological advantages have allowed for new possibilities, they have also brought up questions of authenticity in performance and the distinction between performance and documentation of performance. In a world that seems to be headed towards what could be an at least temporary digitize or die dichotomy, it is vital to examine and understand the merits and limitations of digital performances and their potential effects on the performing arts sector.

The purpose of this research aims to shed light on this emerging format of performance and performance documentation and to examine the potential effects of this movement. The purpose of this research is additionally to question the potential role librarians and libraries, particularly those associated with a school or dedicated to the performing arts, may take on in facilitating the creation and preservation of such works. In order to accomplish this, this project will be using a document and documentation perspective to evaluate and discuss virtual ensembles. This project aims to participate in the digital performance documentation conversation from a library science perspective by exploring virtual ensembles as a performance document. Additionally, this dissertation aims to lead to a deeper understanding of the connection and developments of the connection between performance and the documentation of a performance in a world where the two seem to be blending together as they are integrated into the digital world.

To accomplish these aims there will be three guiding objectives that will lead the research for this dissertation. The first objective will be defining what virtual ensembles are and other

relevant terminology related to the virtual ensemble phenomena and community. The next guiding objective will be to examine and share the history of virtual ensembles by discussing where they come from, how they got started, and how they have developed over time. The last objective will be to discuss and evaluate the place of virtual ensembles as performance documents and speculating on the impact they may have on the future of performance, music documentation, and theatre. This dissertation will focus on the virtual ensembles that are the most accessible and seem to have the most significant impact. This methodology will also be focusing on digital resources due to safety restrictions related to the ongoing pandemic at the time of research, with many libraries being closed or highly restricted in available physical services offered at the time.

The methods undertaken to accomplish these aims and objectives will be desk research using conceptual, philosophical, and literary analysis of appropriate and relevant sources in a literature review. This literature review aims to gain as comprehensive an overview as possible while still keeping the ideas and research broad enough to be more widely applicable to performance documentation in general, not just limited to choirs or orchestras. Another goal will be to focus on its relationship to documentation and librarianship, limiting the ability of a genuinely comprehensive literary review of the subject. Due to the limitations of scholarly materials directly related to the topics of virtual ensembles and their effect on performance and performance documentation, these searches were lead by broader topics and terms that could be applied and analyzed in the context of this topic. Examples of the terms used were virtual, virtual ensemble, virtual choir, virtual orchestra, virtual performance, performance, performance documentation, music, music documentation, and other similar terms to attempt to get as inclusive a phrasing as possible while still being close enough to bring results. The boolean search method was used when searching through online databases. The primary sources of information searched through to find sources were the City University Library catalog and Google scholar. Due to the focus and nature of this topic, Youtube and Facebook groups pertaining to virtual ensemble projects, where information and resources are shared among those who wish to participate in or create virtual ensembles, were also used on a limited basis with the goal of creating a more comprehensive review and analysis. While Youtube and Facebook are

not considered academic or scholarly sites, they are currently the primary method of information and performance dissemination related to the majority of public virtual ensembles and therefore necessary and appropriate to use as a part of this research. When examining the virtual ensemble performances, there will be some performance analysis of the document, as that is the focus of this dissertation.

The literature review was mostly confined to digital resources due to most physical libraries' closure during the pandemic. However, a handful of physical sources were able to be accessed and used. However, access was limited to the last few months of research and to the books stockpiled before the proposal had been approved, and research could officially start in preparation for an expected shutdown. Since this was before official research could start or more specific texts could be identified, this was limited to the broader topics of performance and performance documentation found by perusing the physical shelves in the City University of London Library's music and performance documentation section. Further physical resources were able to be accessed later on in the research. However, due to the timing of the access and quarantining of materials, access was still extremely limited related to non-electronic sources.

The reading list used for this literature review was further expended through recommended texts from an academic advisor, focusing on the performance and theatre side. Citation mining was also used for resources that touched upon relevant topics but did not go in a direction directly relevant to the context of this dissertation. Google Scholar was used primarily to locate articles and other keywords and phrasings to find relevant articles. The use of Google scholar usually consisted of finding the title of an article using Google scholars search algorithm and then using the title to find it on City University's library catalog. Some articles and other academic works related to the topic were offered on other university websites connected to the researcher who created them.

Youtube was used as a source of more virtual ensemble performance documents to analyze how they have changed over time as a performance regarding the complexity of both the performance and document and the role of virtual ensembles as a performance document in general. However, Youtube was also used as a source to access director and composer lectures and interviews related to virtual ensembles. While these sources are not typically considered

scholarly sources, they were appropriate and necessary for the topic. They were especially relevant considering the limited scholarly research on virtual ensembles and the lack of in-person scholarly talk available during a pandemic. Some online resources used were educational talks and lectures, whether hosted on zoom, shared on Youtube later, or posted directly to Youtube. These lectures being available digitally allowed access to conferences and lecturers from around the world that would not have otherwise been possible to attend either due to timing, cost, or travel limitations, particularly during a pandemic when in-person gatherings are being canceled. Facebook groups were also used to find additional examples of virtual ensemble performances and recorded lectures from directors and academics. The Facebook group part of the literature review was relatively brief and focused on finding more virtual ensemble documents. However, a few other research articles were shared, such as the Fancourt & Steptoe 2019 article, and other students and researchers sharing their work. The use of Facebook groups also allowed for access to the primary sources of posted content created by directors disseminating information to their choirs on different projects and aspects of the behind-the-scenes of what goes into making these documents. This is an appropriate methodology considering the nature of virtual ensemble documents, how they are produced and shared, and the context of when this dissertation was undertaken.

1. Golden bricks: laying a vocabulary foundation by defining key words and phrases

1.1 The document debate

Before beginning this conversation, it is essential to define a few essential terms to ensure mutual understanding. For example, when it comes to the term “performance documents,” there has been some disagreement about what this term means. Performances are a type of art, and Gorichanaz has defined art documentation as “the creation and organization of documents representing and related to artworks and artists” (2017). When it comes to performing arts, this distinction takes on slightly greater significance and can be divided into two main understandings. The first one is a more theatrical understanding as something has been

documented through live performance, an example being an interpretive dance or music (Buckland 2014). The second understanding comes from a document perspective, which is a document that contains information about the performance itself, such as a recording of the performance, a playbill, sheet music from a performance, or a setlist (Auslander 2006).

This definition, however, is more complicated than it seems as there is still much debate over what constitutes a document in the first place. This discussion of defining documents and documentation would not be complete without mentioning Paul Otlet and his document theory published in his *Traité de documentation*, which translates to: “Treatise on documentation.” In his treatise, Otlet states that anything can be considered a document as long as it expresses information that can be understood through examination (Otlet 1943, Buckland 2018). Otlet’s definition was later challenged and developed by Briet, a French librarian. Briet’s definition is quoted by Lund and Buckland as being:

Any concrete or symbolic indexical sign [...] preserved for the purposes of representing, reconstituting, or proving a physical or intellectual phenomenon. She continues, ‘Is a star a document? Is a pebble rolled by a torrent a document? Is a living animal a document? No. But the photographs and catalogues of stars, the stones in the museum of mineralogy, and the animals that are catalogued and shown in a zoo are documents’ (Briet 2006, p. 10). (2008)

While this distinction between these two definitions may seem subtle, it is pertinent. It can have real consequences when discussing non-textual documents, such as virtual ensemble recordings, as will be further discussed later in this dissertation (Gorichanaz 2017).

In the context of this dissertation, the term “performance document” will primarily rely on Otlet’s conceptualization and refer to, while not limiting itself to, documents that records a performance, particularly in how the document attempts to capture the performance through recording it for posterity and with the aim of allowing for the performance to be relived. Examples of this would be a pro-shot recording of a theatre performance or a sound recording of a concert. “Performance documentation,” in the context of this dissertation, will refer to the act of documenting a performance in a way in which it can be re-experienced later on in the future.

1.2 The language of music

Another important term for this dissertation is a “virtual ensemble.” The term in the context of this dissertation refers to a group of musicians using the internet to connect with each other and make music together over the internet regardless of physical distance. More direct terms may be applied throughout this dissertation, such as “virtual choir,” also known as and referred to in other research as an “Internet-based choral ensemble” (Armstrong 2012). Other terms, including “virtual orchestra” or “virtual handbell ensemble,” may also be used and fall under the umbrella term of “virtual ensemble.” The use of the word “virtual” in the term connotes the idea that the experience is one of virtual reality, which is usually associated with immersion. Immersion is defined as “the physical sensation of being inside a virtual space” (Bellini, et al. 2018, pp.53). However, while the term used to describe the type of ensembles discussed here is virtual, as coined by Eric Whitacre (About the virtual choir 2020), perhaps a more accurate term is to describe them is “mixed reality”. The term “mixed reality” is used by Chatzichristodoulou, who quotes Giannachi’s work to describe mixed reality as a form of virtual reality that, rather than block out the real, “offers the possibility of creating [...] hybrid performance and participatory environments in which real and physical data appear [...] juxtaposed’ (p. 5)” (2011, pp. 447). While this term is more accurate for the purposes of this dissertation, the term used to refer to these performance recordings in this dissertation will remain the more commonly known and used virtual ensemble, rather than calling them “mixed-reality ensembles.”

Virtual ensembles are most commonly done by “multi-tracking,” however, there are other methods of creating a virtual ensemble, and not all multitrack performances will be considered virtual ensembles. The term ensemble will be reserved for larger groups of musicians rather than groups of one or two musicians who use multi-tracking to cover more parts when creating performances. A “multitrack performance document” is a performance document created by layering more than one pre-recorded track of a performance to create a new or more complete performance. The use of multi-tracking allows viewers and musicians to differentiate and consider both the Micro-performance and macro-performance. The “Micro-performance” is a smaller performance that can be combined with other micro-performances to create a more

extensive work or could be viewed alone as a solo performance. In the context of virtual ensembles and this essay, micro-performances would be considered the individual recording of people performing their line or part of a song solo. These micro-performances are sometimes posted on Youtube, Facebook, or other social media platforms where participants may share their work (Armstrong 2012, Katelyn Verkoeyen 2017, Lisa Wilson 2013, The Nerd Lord 2017, Philip Eqoute 2013, KMHSCChamberChorus 2009). In contrast, a “Macro-performance” is the bigger performance created through the combination of these micro-performances to create a more extensive performance, including all the different parts put together to create an ensemble. In the macro-performance, performers are transformed from soloists into ensemble members. They are joined by others who have also recorded either the same part or different parts (Armstrong 2012, Eric Whitacre's Virtual Choir 2014, Sing Out Strong 2020, Julie Gaulke 2016).

1.3 Liveness online and in documentation

In this essay, a recording will be referred to as a performance, at least in the context of virtual ensembles. However, there is still much debate in the performing arts as to whether recordings can be considered performances. Critics, such as Peggy Phelan, quoted by Sharon Phelan, have argued that the “[performance’s] only life is in the present. Performance cannot be saved, recorded, documented, or otherwise participate in the circulation of representations of representations: once it does so, it becomes something other than performance [...] (1993, [pp.] 146)” (2015, pp. 55). Using this argument, virtual ensembles cannot be performances because through the act of recording they have been made into something other than performance. The performance exists only in the live performance, and the recording is not the performance but merely a representation of the performance. During a time of digitize or die, this view of performances comes across as restrictive and limiting to the arts sector. It does not allow for full experimentation to explore new opportunities created by advances in technology. As discussed by Auslander, some problems are created when distinctions are created between the art or performance and its documentation. Particularly for works that are created specifically for the purpose of being documented, as is the case for virtual ensembles. Auslander argues that

“performance art and its documentation co-constitute each other” and that “whereas documents of performance art are traditionally or naively understood as proof of the performance that transpired, these theatrical documents firmly assert themselves as works of art in themselves” (Gorichanaz 2017, Auslander 2006).

This debate about liveness and performance can be seen as an extension of the distinction between Otlet and Briet’s conceptualization of documentation. “For Otlet, an artwork and its photograph were equivalent, as they were both assumed to present the same facts. Not so for Briet, who would see them only as related.” (Gorichanaz 2017). Based on Otlet’s understanding, a performance and its recording can be considered equivalent documents. Whereas with Briet, the recording would be a secondary document derived from the performance and related to it, but not equivalent to the performance as a document. As technology develops and the world relies more and more on the digital, the lines between the two will continue to blur.

One example of this blurring of lines is in an expansion of the ways that liveness is conceptualized. By modern standards, there is more than one way to conceptualize liveness. As Phelan referred to, there is liveness in an ontological sense, but there is also an ideological liveness that has become more common in this era of the quasi-live. This ideological liveness relies on an idea expressed in a quote by Rick Altman that Auslander uses, which states that: “whether the events transmitted are live or not, the television experience itself is... sensed as live by the home viewing audience” (1999, pp.12-13). This new conceptualization of liveness is particularly pertinent in the digital age and to documentation. It is experienced in a virtual ensemble context when rehearsals or premiers are hosted by the project director or organizer. The audiences’ experience with the recorded performance can be sensed or thought of as live by the audience, even if the performance is not. This idea of ideological liveness is emphasized by the term “going live” used to describe when a recording is made available and accessible to the public. Youtube has a little red dot next to the word “live” for specific videos just published, even if the video itself is pre-recorded. The event is often recorded, with the primary production pre-recorded, and will be able to be rewatched at any time and as many times as the audience desires. None the less, there is still a sense of liveness created by the idea of community and that even if it is rewatched, it will never be that same experience of trusting that others are watching and

rehearsing with the viewer. Though the video may be pre-recorded, there is still a sense of liveness that will fade like the last name on the credits as the screen goes black. It can be watched again, but never with the same sense of liveness.

Be that as it may, there are some who would argue that there is more to being live than timing and geography. There is a bond that unites those present during a performance that creates a community and atmosphere lacking with digitally live events. That is missing in this new conceptualization of liveness. Auslander writes that: “the appeal of live performance proposes that live performance brings performers and spectators together in a community. This view misunderstands the dynamic of performance, which is predicated on the distinction between performers and spectators” (1999, pp.56). While there is a sense of community between those involved in in-person theatre there is also a distinction between performer and artist that divides the community. It could be argued that there is a greater sense of community in the virtual performance community because there is less distinction between artist and audience. While not everyone in the audience may have participated as an artist, everyone who sees it, artist or not, participates as an audience member and shares the experience of experiencing it for the first time when it premieres.

When dealing with recorded performances, after the performance has been created and recorded or documented, the performer experiences a sort of mimesis (Auerbach 2010). It is no longer the performer performing but rather a representation of the performer. The recording simultaneously is and is not them. This mimesis creates an experience described by Giannachi where it is “no longer possible to base any claim on one’s own existence, there is nothing for it but to perform an appearing act without concerning oneself with being- or even with being seen. So it is not: I exist, I am here! But rather: I am an image - look! look” (2004, pp.12). While this is true of all recordings, it is particularly true for larger virtual ensemble projects where singers are one in a sea of over seventeen thousand faces and may not even be able to identify their own image. It becomes less about a physical image or individual existence, but rather the community's existence, no longer an I, but a we. Look. Listen. We are here. We are not alone, but together, even when apart. The faces and names lost in the crowd, but the participants' hearts and spirits shining through as their voices blend. Another way of conceptualizing it is the death of the

author, as described by Barthes (1967). Their role as a performer is over, and they fade back into the role of audience member. The performance no longer belongs to them, but to the audience and to the ensemble as a whole.

Returning to the community aspects of liveness in performance, Auslander provides further analysis and finds this bond created in live performances to be weak. Later, he writes that:

Another conventional argument is that the experience of live performance builds community. It is surely the case that a sense of community may emanate from being part of an audience that clearly values something you value, though the reality of our cultural economy is that the communal bond unifying such an audience is most likely to be little more than the common consumption of a particular performance commodity. Leaving that issue aside, I would argue against the idea that live performance itself somehow generates whatever sense of community one may experience. For one thing, mediated performance makes just as effective a focal point for the gathering of social group as live performance. (Auslander 1999, pp.55)

Based on Auslander's argument, an audience's bond over a live performance is weak and could equally effectively be created over a recorded performance. Alternatively, there is research by Fancourt and Steptoe which provides scientific evidence and qualitative data in support of the idea that, at least among participants, the community bonding aspects that occur between those involved in virtual ensembles can be equivalent to those of performing in an in-person choir (2019). Although, it is worth mentioning that Fancourt and Steptoe's research focused on community bonds among participants, rather than solely among audience members, which may yield different results from that of the study. Thus it can be argued that liveness has no effect on the community bond created among an audience and should therefore not be used as an argument for a benefit or result of live performances.

2. And then there was lux: a history of the virtual ensemble movement

Virtual ensembles are not truly a new form of documentation, but rather a new way of using an older technology. Based on Otlet and Briet's definitions, it is clear that video recording and sound recording can be classified as documents. Additionally, video and sound recording

have been created and used to record and share music for centuries beginning with the invention of the phonograph in 1877 (Cook 2009) and have continued to develop with the advances in technology. Ways to connect artist and performance spaces to create networked performances through the internet has been being explored and researched since the early 1970s. Dixon states that “real-time linking of performers working in remote locations has been one of the most popular uses of the internet for live performances” (2007, pp.17). Experiments in how best to accomplish this even continue today as composers explore the ways technological advances can be used in the performing arts. Most recent experiments have focused less on the live aspect of virtual collaboration and more on the ideas of multi-tracking due to technical issues that persist today, including issues with syncing, video and audio delays, video quality, and internet connection issues (Dixon 2007). Some of the more recent and popular pre-pandemic examples being Whitacre's attempt to combine a zoom choir and in-person choir for a shared performance, which he did at a TED talk he gave (TED 2013), and the combining of virtual and live was similarly used for the Glasgow Commonwealth Games opening ceremony where he combined a multi-track choir recording with a live choir (Eric Whitacre 2014). While the concepts and technology may not be new, what is being done with it is still relatively new and has received new interest in the recent global pandemic. Watkins expressed it nicely when she cited Bolter & Grusin (1999), stating: “What is new about new media comes from the particular ways in which they refashion older media and the ways in which older media refashion themselves to answer the challenges of new media” (2020). This means that what is considered new technology is not necessarily new, but the evolution of older technology and concepts as they update themselves to remain relevant to society.

One example of this is multi-tracking. Multi-tracking has been developing since at least 2008 by single performers such as Julien Neel (A Cappella Trudbol 2008) and a Youtuber known as Robin van Youtube (2008, 2009) as well as many others. However, due to a lack of preservation, many have become lost in cyberspace. However, it was not until 2009 that it started to develop beyond single artists or small collaborations into full ensembles. Grammy award-winning director and composer Eric Whitacre was inspired by a fan video sent by Britlin Losee, now Britlin Furst, of herself singing the soprano line of one of his compositions, “Sleep.” On

May 15th, 2009, Whitacre sent out a call for singers from around the world to send him videos of themselves singing their parts of his song “Sleep” (Whitacre 2009, TED 2011), which were used in the original 2009 virtual choir experiment (Virtual Musicians Group 2012).

Since then, Eric Whitacre’s virtual choirs have grown from 185 singers over 12 countries in his first official virtual choir, “Lux Aurumque” (Eric Whitacre's Virtual Choir 2010), to 17,572 singers over 129 countries in his latest project, Virtual choir 6: “Sing Gently,” which was created during the pandemic lockdown (Eric Whitacre's Virtual Choir 6: Sing Gently 2020). Whitacre’s virtual choirs have inspired many other musicians to create and participate in virtual ensembles. Some more prominent name stars and creators have even utilized virtual choirs as a way to interact and connect with their fans and get them involved in projects (Canadian Opera Company 2020; Dear Evan Hansen 2017; DisneyExaminer 2013; Hollens 2017; Stay at Home Choir 2020). However, the biggest increase in creation has happened in these past few months during the pandemic. As classes moved online and in some places singing in person became banned, many music ensembles, both school and community ensembles, looked to the virtual choirs Whitacre had popularized as a way to continue to make music without meeting in person. Director, composer, and virtual choir creator David Wesley stated in an interview that not many virtual choir projects existed on youtube before March 2020 (Dr. Cayari 2020). Wesley has been creating and working on virtual choir projects since 2016. In addition to an increase in virtual choirs, the pandemic has expanded this movement toward virtual performances through multi-tracking to include other musical ensembles and performing arts, such as theatre. Orchestras and other instrumentalists have joined together to create their own virtual ensembles and make music together again. While virtual choirs were rare, it was even rarer to find a virtual ensemble that was not a choir, the author’s research only yielding one virtual non-choir performance, a handbell ensemble from 2013 (HandbellMusicians).

There has been a boom of new virtual ensemble performances during the pandemic as in-person ensembles move online. This increase in virtual ensemble performances has especially been the case for school ensembles and music classes that have had to move online with the rest of the school’s classes. Unlike a physics or literature class or any other non-performance subject, these classes have limited online opportunities. However, they are still an important and,

depending on the degree, potentially mandatory part of the education provided by a school. Many schools have moved online until it is safe to meet in-person again during the COVID-19 pandemic. However, choirs and orchestra classes are considered exceptionally high risk and may have longer to wait to return to in-person classes safely. This is complicated, considering that these classes are the hardest to move online. Performances and classes were canceled and, as a temporary replacement and way to continue classes, some schools chose to create virtual ensemble performances of the music they had prepared and learned as part of their classes for their canceled concerts (Concordia Lutheran High School A Cappella Choir 2020; Concordia University Irvine 2020; Rguillenmusic 2020; The San Diego Union-Tribune 2020). As virtual ensembles gained popularity, virtual ensembles have also begun to be used as a form of advertising or a way to get a community involved in events, which will later be discussed further.

3. They gather: current analysis and why virtual ensemble documents matter

3.1 New medium, new message

According to Marshall McLuhan, the medium used to communicate a message will impact the message received and its interpretation (1964). Based on McLuhan's research, the medium with which information is disseminated is vital because it can affect the social relationships within society. The choice of mediums can also produce new inter-personal relationships that will shift with changes in the medium chosen and create a new culture around how society receives and exchanges information. It can even alter society's perspective of reality. An example of this is how printed materials were once seen as being more reliable than digital sources. However, as technology has evolved, so has society around it. Now print sources are not always considered reliable as digital as many have become outdated without being replaced as a greater reliance on digital resources has grown out of increased reliance on technology. The medium used affects society's perception of its information and how they will interact with it. Berryman points out that "to date, insights from art history and aesthetics have been noticeably absent from the documentation literature" (2018). A way to avoid this absence is by examining

and addressing how the changing mediums and the aesthetics of those mediums have changed through out the history of art, in this context, performance art.

Berryman described art as “embodied information and sought to establish connections between ideas and things” (2018). However, with the performing arts and through the development of virtual ensembles, art is being expanded to enable connections between people. One way it does this is by dissolving hierarchies that would be inherent in the physical and in-person ensembles. In support of this, Berryman states that “the document was a way of dissolving aesthetic and material hierarchies, which under modernism had prevented art from performing an informational role in the society” (2018). Virtual ensembles allow art to reclaim its informal role in society and return to the masses, rather than being limited to an elite group with the resources to enjoy it. Armstrong writes that:

On the surface, it might appear that Virtual Choir participants are simply recording themselves singing, in isolation, and then sending those recordings out into the immaterial ether of bits and bytes to be aggregated into a larger ‘performance’ by a team of digital technology experts. However, on a deeper level, what they are ‘doing’ in this process is, in actuality, something far more complex and meaningful, despite the seemingly impersonal nature of this collaboration. It is through this unique act of ‘doing’ that we understand the particular value of this project. (2012, pp.88-89)

Virtual ensembles as a medium have a special meaning that differs from an in-person ensemble. Classical music, and the forms that go with it, such as choirs and orchestras, have been stigmatized as being for people who are old and boring or only being for the wealthy upper-class, but virtual ensembles are helping to make classical music more accessible and revitalize the genre for younger generations to enjoy. There is a distance between the audience and the performer, both physically and physiologically, that separates the two. The audience is invited to listen and admire, but not to join in. This separation of audience and performer has contributed to limiting the accessibility of the art to the general public. Unlike in-person performances or recordings, virtual ensembles invite others to join and sing with them rather than being separated from them.

The use of virtual ensembles creates a mimesis effect, as previously discussed, where the performer is both performer and audience member as they watch their own performance. This

mimesis effect helps connect the audience and performers, allowing them to each be both, should they choose to. Giannachi quotes and expands on some of Nauman's research, stating that:

the viewers were confronted with their own images recorded from an earlier moment in time, so prompting a realization of having been “caught” by the medium and affecting the displacement of time/space at the heart of the work of art. The video helps viewers “to see” through “the jungle of the real” ([Nauman 1968-9]: 23) by acting as a establishing factor and thereby relocating the viewer in a universe in which they are simultaneously viewer and viewed. (Giannachi 2004, pp.26)

This is another expression of the mimesis previously mentioned. Additionally, while the medium is a recording, the medium in this context can also be considered the people being recorded.

These are not usually famous people but could be the audiences' friends, family, and neighbors.

The use of ordinary people helps bridge the divide between audience and performer, making participation more conceptually achievable than many in-person or big-name ensembles where the ensemble's reputation for excellence may intimidate others out of attempting to join. These are not vocal stars or the top musicians in their field, although they are welcome to join. These are local high school students, the man down the street, and the lady next door. These are people who are not professional musicians but who join because they love the music. The use of ordinary people brings the audience and the performers together in a way that will further be discussed later in this dissertation. Virtual ensembles bring the message that: “music is for everyone. Beauty is for everyone” (What Would Beethoven Do? 2016). They speak to the individuals within society and tell them that they are not alone. These virtual ensembles create new opportunities to create, to experience beauty, and be a part of something bigger than ourselves, even while apart, and invite each of us to do the same. As Eric Whitacre says: it is about “all coming together for a single, focused purpose and that purpose is only to make something beautiful and to be a part of something larger than ourselves” (What Would Beethoven Do? 2016). This is what the medium of virtual ensembles invites us to do and the message created by using virtual ensembles as a medium for performance.

Watkins uses a quote by Catherine Hobbs (2001) that describes digital curation as: “more of an archive of character than of achievement, more of documenting our complex inner humanity than our surface activities” (2020). While Watkins applies this quote to discuss a

library or archive collection, it can also be applied to virtual ensembles. While most performance documents are a way to document and record the music and its performance by the performer, virtual ensembles have become more than that. Another scholar writes that “more deeply, one can see that artistic works perform documentary reference in interesting ways: they may reference not observable facts of the world, but deeply felt meanings, states of mind and the like” (Gorichanaz 2017). Virtual ensembles are not just documenting the music and faces shared in the production of these recordings, but the hearts and spirits of those involved. This heart and spirit is harder to capture in performance documentation and can be easily lost or less evident in official or traditional forms of recording and documentation. Many performers see being a part of a virtual choir not as an achievement of their own doing or vocal merits but as a way to participate in something bigger than ourselves and be a part of a community. While being technologically advanced, virtual ensembles are a return to something primitive that society seems to have lost, the joys of singing together and being part of a community (Halvorson 2020, McMahan 2020, St Clair 2020).

3.2 Where are they now? The pandemic’s effects

As technology has advanced, so have the ability and opportunities to use it for art. Eric Whitacre’s virtual choirs have been becoming more advanced visually while simplifying musically to allow them to be more widely accessible to potential participants. However, there has been a return to greater complexity in music being performed in a virtual ensemble format during the pandemic. This increase in musical complexity is due to the fact that many of the projects have been created to perform music that choirs may have already been working on with in-person rehearsals before moving online after government restrictions. This increase in complexity is in opposition to the simplification of music that has been observed as Whitacre’s virtual choirs have developed into a focus on more simplistic music, with Whitacre stating in an interview that: “something about a thousand voices singing together comes with its own fireworks. The music doesn’t need adornment. The music needs to be clear” (NAMM Foundation 2020). This has been reflected in the music he has chosen for his projects as the

music he chose started out simple with “Lux Aurumque” (2010) and “Sleep” (Virtual Musicians Group 2012), then got more complex as he further explored the limitations of this new form with “Water Night” (2012), before returning to simpler music with “Deep Fields” (2018, Eric Whitacre's Virtual Choir 2018) and the only piece that was specifically written for a virtual choir performance, “Sing Gently” (2020). However, most virtual ensemble groups that are not Whitacre’s do not reach as high a number of participants and may therefore not qualify for the “fireworks” created by such a large number of singers. Having a smaller number of singers allows for more space for added adornment in the music. However, how much space or need there is for adornment will vary depending on the number of performers and quality of performers and equipment used in recording as to whether the adornment even comes through in the recording.

In addition to the music, the visual complexity of virtual ensemble projects has often increased with the technology's further developments. The visual complexity will have a greater sense of variance to it as it will depend on the technical skills and resources of the leading creator or organizer of the project. Some of the video visuals remain as simple as a wall of faces created by lining up the videos in a way that emulates a formation that might be used if they were all singing together, albeit a 2D version of it or a large zoom call (Wesley 2016, 2018, 2019). Others are more complex and will use technology to create different visuals that complement the musical imagery of the piece being performed. Examples include creating a virtual city and putting singers in virtual skyscrapers' windows (Eric Whitacre's Virtual Choir 2013) or having different shaped videos. One example of this is a performance of Whitacre’s October, which used videos shaped like leaves and had them gently fall across the screen as one might see outside on an autumn day (Laura Campbell 2020). The technology being utilized to create visual images that helped capture and express a representation of the story or feeling expressed by the music. The visual complexity and effects will depend on the creator's resources and vary significantly from performance to performance. Depending on how advanced the visuals are, some virtual choirs have moved away from a mixed-reality look and closer to virtual reality as they strive to block out more of the real world by using backdrops to create a cleaner look and adding fancier visuals. However, this will vary depending on the team's sophistication working on the visuals

and the aim or vision of the organizer. Some creators like the mixed reality look created by being able to peek into the musicians' background and see the diversity of backgrounds and the intimacy of seeing the singers' physical spaces, as described by Eric Whitacre (TED 2011). Other creators consider the mixed reality look to be messy and aim for a more immersive look that blocks out reality and allows for a cleaner and more unified choir look for the final product.

Another change to virtual ensembles is the level of inclusion they are able to achieve. With the restrictions of the pandemic, there has been a rise in knowledge about virtual ensembles, and more people have had the chance to participate or view them as schools and theatres transition to find ways to produce art while following health and safety guidelines. One scholar wrote that “scale can enable inclusion by attracting a more diverse audience that is no longer limited by zip code or income level. Second, scale creates new business models” (Kao 2020). While in-person ensembles are limited by geography and availability and, depending on the ensemble, skill, virtual ensembles are usually open to everyone. This may vary depending on the producer's resources as to how many videos they can handle based on what technology they have access to. However, in theory, virtual performances are a space where all performers and all levels are welcomed. Using a virtual format for performance and performance documentation also allows for the participation of isolated groups or high-risk groups who would not otherwise be able to participate in music ensembles. One example is people who suffer from cystic fibrosis. Due to this disease, those who suffer from cystic fibrosis might never get to sing with a choir, but using the virtual ensemble, they are able to be included and participate as a part of a virtual ensemble (Cystic Fibrosis Trust 2017; *ibid.* 2019; Handler 2020).

Whitacre's choirs have always been open to everyone and have grown into a more inclusive group as more people have learned about them and joined over the years. However, during the pandemic, among the rise in virtual ensembles not all have been as inclusive as Whitacre's projects. There have been some less inclusive ensembles projects that have come into existence among schools or community groups. This is not because they are purposefully trying to exclude people, but is usually due to limitations related to copyright and technology. Not all creators have access to the resources to sync over 17,000 video and audio recordings and must therefore limit the recordings they can accept for a project. Virtual choir 5 took two and a half

days to render using high-tech computers and software (NAMM Foundation 2020). Not all creators have access to the high-quality equipment used by Whitacre and his team to be able to achieve the level of inclusiveness that most projects strive for.

Sometimes, there are technology issues where a submitted video cannot be uploaded into the final project. Another challenge when working with a large number of submissions is that a submission may accidentally not make it to the final work and not be noticed that one is missing. Creators may charge to participate in a project in order to be able to afford better equipment or staff to help with the rendering of the project, but this can limit the inclusivity of a project to those who can afford to participate, excluding those with low incomes who may not have money to spare.

With increased creation and use of virtual ensembles come increased copyright issues. As mentioned, copyright issues will also be a potential limitation with virtual ensemble works. Copyright can also limit an ensemble's ability to be inclusive by limiting the amount and way that participants can access sheet music. Participants may be required to buy a specific arrangement, which can limit participation from a financial aspect. Alternatively, if they are allowed to share the sheet music for free online, there may be requirements to be password-protected and only accessible to participants. These barriers, along with the use of technology as a means of distribution in the first place, may limit its accessibility to those on the other side of the digital divide who may not be tech-savvy enough to access the music without help.

While some virtual ensemble projects are done through schools or directly through the piece's composer, who should understand copyright issues, that is not always the case. Some projects are done as fandom works by people who may not understand the copyright issues associated with putting on and publishing a performance. As mentioned, depending on how complicated the piece, sheet music may need to be shared among the musicians so they can learn their part. Performance and or publication licenses may need to be acquired for the work as a whole. Licensing and copyright are essential since, theoretically, the performance cannot exist outside of a published video by the nature of virtual ensembles. This is not the case for an in-person concert, which can be performed without being recorded or published in a way that anyone other than the physically present audience can see or experience. Some projects have had

to be canceled or taken off the internet due to copyright violations by creators who did not get the necessary permissions or thought they could get around it by creating their own arrangement without making sufficient changes to be considered an original work and avoid copyright infringement.

Copyright can be confusing and may cause issues based on confusion over rights and licensing. A composer may think they can use a piece or give someone else permission to use one of their pieces when they do not realize they no longer have the rights. The rights may be held by the publisher, who may be less willing to allow others to use or share a piece without a licensing fee than the composer might. Furthermore, to complicate things further, there may be multiple different rights holders who need to be contacted in order to get the relevant permissions to create and share a project.

3.3 Limitations

While there is evidence, as mentioned earlier, for the community building aspects of virtual ensembles, there are limitations to them as well. Further research on the subject has implied that these virtual ensembles may not indeed be as inclusive as had been thought initially. This is due to the fact that, while it allows for more people to join, it leaves out those on the other side of the digital divide who may not have either any or adequate access to technology or the internet. It also threatens to leave out those who are not technologically savvy enough to fulfill the requested formatting that some projects require. Additionally, there are other factors that may prevent participation, such as not having a physical space that allows for recording without being disturbing to others. When performing in an in-person choir, there is an understanding that the location will be used for performance or rehearsal. This mutual understanding may not be the case when performers are expected to record in their own homes. They may live in an apartment or student accommodations where thin walls are shared with other people who may not be as understanding about the situation.

Besides, there are other more technical limitations aside from physical access that is encountered when comparing virtual ensemble performances to in-person performances. While discussing the limitations of virtual ensembles, one scholar writes:

What do they miss? First up, the kind of inspiring interaction that happens among musicians when they are live on stage. You may have seen musicians performing together – for example on *The Late Show* with Stephen Colbert - but these are likely not live at all, but rather individual, sheltered-in-place performances, synchronized by a click track, and then stitched together. The absence of a live audience is an even bigger deficiency, described by one musician friend as “soul-crushing.” Audiences energize performers through their show of appreciation and by the “vibe” they create in a live venue. And that energy is fueled by the rituals and responsibilities of concert attendance. You commit to the performance by showing up, finding your seat and staying in it for the duration. Walking out in the middle of a performance would be awkward, to say the least. You read your program, settle into the buzz of being part of the audience. You express appreciation by applauding and sometimes rising to your feet in a standing ovation. You may try to find the artist afterwards in the hope of an autograph or a quick word. (Kao 2020)

There are many musical nuances that can happen in live performances that are absent in virtual ensembles and, therefore, not able to be captured using this form of documentation. Some examples are the ability to synchronize to the point of breathing together and enjoying the acoustics of a proper concert hall. Both are things that can energize a performance for the ensemble and the audience and improve a performance. Virtual ensemble performances lack the togetherness, both physically and more importantly musically, of in-person performances that can sometimes be captured when documenting a truly live performance. This musical togetherness is communicated in a document through the cut-offs' crispness and in the moments where audiences can hear the ensemble, usually a choir, breathe together before a section of music. Virtual ensembles also miss out on the immediate interactions with the audience and the energy that can be brought into a performance from those interactions. These nuances are absent in virtual ensemble documentation due to the number and quality of the recordings, many of which are filmed on smartphones or using the camera and microphone already in computers, which are not usually considered high quality by professional music recording standards.

Additionally, unlike an in-person session, the director has less control or ability to fix the choir's sound. Granted, it could be argued they have more control and ability to fix things in editing and lowering sound, but there are still limitations. The fixing that is missing is the one

created as a back and forth conversation with the director. They coax the sound and energy to create the performance they want through correction and encouragement given over the long rehearsals that go into a live performance. This conversation can try to be achieved over notes exchanged on social media or the project page or virtual rehearsals, where the director can try to express what they want from the choir. However, there are limits to this when the director cannot hear the choir to be able to fix things. The only other option is to go recording by recording and send back for re-recording any that did not meet the standards, but that is not usually a method employed by directors due to the time it would take.

Even Whitacre, credited with popularizing the idea of and creating virtual choirs, has suggested that virtual ensembles should not be thought of as the same discipline as music but rather should be considered “another discipline completely” (NAMM Foundation 2020). Whitacre describes it as, “Not the same as an ensemble... beautiful and important... but not the same” (ibid.). Faircourt and Steptoe even cite Chayko, stating that: “from a sociology perspective, VR activities in cyberspace are not poor substitutes for activities in physical space, but are simply different, leading to the suggestion that they are referred to not as ‘virtual’ spaces (implying ‘unreal’) but rather as ‘socio-mental’ spaces” (Chayko 2008; Faircourt & Steptoe 2019). Another scholar writes that, “[this] is not a matter of copying but conveying. It is more a matter of 'catching a likeness' than duplicating” (Goodman). Virtual ensembles are not meant to replicate or replace in-person performances. They are meant to convey the ideas of ensemble and community into a digital context.

These distinctions in the classification of disciplines are appropriate, considering the shift in roles that takes place when creating a virtual ensemble. As a different discipline, it can require and utilize different roles. As a discipline with different roles, it is only fair to consider it a different discipline as it requires different standards and tasks from its participants. When discussing digital and interactive performances, it has been argued that:

shifts in traditional performance roles turn spectators into performers, so that performers are mostly “members of the ‘public’ who are the primary users of the technology” (p. 176). Spectators are redefined as those who watch the action, either temporarily before they take their turn to perform (i.e. use the technology) themselves, or because they happen upon it (bystanders). Interestingly, this shift of performance roles entails that “traditional actors step away from center stage to adopt a [...] role that increasingly blurs

acting with technical operation” (p. 226). As a result, professional performers are repositioned as the orchestrators of mixed reality events alongside technical staff. (Chatzichristodoulou 2013, pp. 448)

This shift has been seen in the creation of virtual ensembles as the general public takes on the role of performer, and those previously in the role of performer or director are pushed to take on more technical roles. These more technical roles include creating rehearsal tracks to help the new performers learn their parts and the directors having to learn new technologies to create these new virtual performances. This shift is often viewed as a downfall of digitization, but this shifting of roles may have some benefits to it as well. While this does require more and different skills from performers and creators, it also challenges and allows them to learn new skills that they can use to boost their careers. Rather than seeing this switch in roles as something destructive, it can be seen as a way for artists to connect with their fans and create advertising for themselves by utilizing and creating a community of support. Fans and fandoms are known for being some of the first to explore new ways to utilize and harness technology to share and express their passions and obsessions (Price 2020). Some theatres have already begun to utilize virtual ensemble created in partnership with their fandom members to advertise and add a scene of authenticity to their show by connecting it to the public and the world off the stage. This has been seen in the way *Once the Musical* utilized social media through collecting and sharing fan videos of couples singing the main song from their show (Lonergan 2016). It can also be seen in the way other shows such as *Hamilton* and *Dear Evan Hansen* have used or attempted to use virtual choirs to promote their shows and lend themselves a sense of authenticity to attract more fans (Becca Eggleton 2017; BroadwayBOI !!! 2017; Canadian Opera Company 2020; *Dear Evan Hansen* 2017; Katelyn Verkoeyen 2017).

This utilization of relevant fandoms can create a more supportive and connected community of support where fans feel more connected and invested in the production, show, or cause. This may manifest in a greater willingness to buy tickets for future shows, purchase relevant merchandise, donate to the organization or cause being promoted, or just liking and sharing information on social media to spread the word to friends and family, thereby providing free advertising. Lonergan quotes a passage from ‘Fandoms as Free Labor,’ stating that: “‘Instead

of being dismissed as insignificant and a waste of time at best and pathological at worst, [fandom] should be valued as a new form of publicity and advertising, authored by volunteers, that corporations badly need in an era of market fragmentation' ('Fandoms as Free Labor', 2013, pp.99)" (2016 pp.77). Utilizing fandom involvement in advertising encourages word of mouth advertising, which can help reach new audiences. On the other hand, depending on the intended use, reliance on fandom works as free labor could also bring up moral and ethical issues surrounding the use of free labor. Examples of this include loss of work for qualified candidates trying to earn a living and be paid for their work, as well as the disadvantage towards artists trying to make a career out of their work who are now being asked and expected to provide it for free.

With all these shortcomings and differences, virtual ensemble performances should still be thought of as worth preserving, creating, and being thought of as a performance, "not because it's better but because it fulfills a piece of the human odyssey that nothing else can" (What Would Beethoven Do? 2016). The commercialization of the arts has brought with it an elitism where people think they can only do something if they are good at it, but virtual ensembles allow for the potential to break that stereotype. It encourages creation not from a place of inherent talent but out of an expression of our collective humanity. It provides a sense of community in a time where there is so much division and distrust. While they may be worthy of preserving, they will also be hard to preserve. Many people incorrectly assume that it will be preserved if something has been digitized, although this is not the case. Digitization does not equate to preservation. It just means a digital version has been created that needs preservation. Using free storage sites on the open web does not adequately preserve documents either, as the site holding the information can sometimes delete items without warning (Ovenden 2020). Technology is always updating, and it can be easy for a file that was thought to be preserved to become unreadable by newer equipment and updated software. Files may become corrupted, which can also make them unreadable and therefore lost to future generations. Digital documents require monitoring and updating to avoid the file becoming damaged, out of date for current software, or lost in the digital deep in a sea of other documents and files. As a result of the constantly changing

technologies, digital documents can be considered even more challenging to preserve than physical documents due to technology's ever-changing nature.

4. May we always sing along: the future of virtual ensemble documents and their potential impact on the future of performances and performance documentation

4.1 The next verse

While it is still too early to see the full effects the increase in reliance on virtual performances will undoubtedly have in the coming years, there are some effects that are beginning to be seen. These effects include a resurgence of art for art's sake and music made out of love of music rather than to sell, creating a decommercialization of music and the performing arts. This is seen in the variety of people who participate in these projects. It has become less focused on performing out of a sense of talent and more focused on the aspects of the performing arts pertaining to humanity, with an emphasis on the idea that beauty is for everyone. Virtual ensembles have created a fandom works opportunity for those who love music to come together, create, and to invite others to do the same. Durant writes that:

changes in musical production gradually alter how people (including people not actively involved in making music) think about music's aims, styles, and properties, setting up different standards of excellence and musical ideals to be aspired to, and challenging many existing practical ideologies of music theory, technique and education. (1990, pp. 175)

These changes are already being seen in the creation of a global community of people who chose to come together to encourage each other and to perform in virtual ensembles. It is not just a community of people who make music together, but a community that encourages and supports each other in all aspects of life. The music is not about performance excellence; it is about coming together. This was exemplified in a recently published opinion piece by Christian Sagers. After seeing virtual choir 6, Sagers wrote, "Whitacre has achieved what every naive child prays for on their knees each night; he literally brought the world together in harmony [...] Watching his video is what gratitude looks like, what comity sounds like, what beauty feels like" (2020).

Virtual ensembles are not about the music or the technical aspects of musicianship, although they are still essential and participants strive for excellence in both areas. What virtual ensembles are really about is coming together and being in harmony and community with others.

That being said, the future of virtual ensembles can be summed down to two potential outcomes. Durant writes that “technological developments take on their particular character only in specific instantiations within prevailing, but also changing social relations and contexts” (Durant 1990, pp.180). This means that in the context of virtual ensembles, the technologies and ideas of virtual ensembles are becoming popular and more advanced because there is a pandemic creating an environment where people feel unsafe and fearful about meeting together or are outright not allowed to. However, even in this time of uncertainty and fear, people still desire to come together and connect, which is why virtual choirs have taken off recently. Whitacre’s virtual choirs were already fairly popular, with Virtual choir 5 including over 8,000 singers (2018). However, with the pandemic forcing many aspects of life to go digital, Whitacre’s next virtual choir received more than double the number of submissions, with over 17,500 submissions included in the final recording (Eric Whitacre's Virtual Choir 2020). One potential outcome for virtual ensembles after the pandemic is that they will continue to flourish and become more complex as technology develops. With technological advancements, perhaps virtual ensembles will advance to the point of being in full virtual reality. No longer will virtual ensembles be a screen full of faces in boxes, but they may involve having full avatars staged in a virtual concert hall as if they were all standing together on a stage mimicking a performance in real life. However, this is one option; it will depend on how technology advances and how widespread access to the relevant technology is as to whether it will take off.

While multi-track performances have primarily been focused on ensembles, some theatres and creators have recently started to explore multi-tracking as a potential form of virtual performance in light of the pandemic. Virtual performance options have been increasingly researched as a way to continue to create during a time of social distancing and self-isolation. Britlin Furst, originally Britlin Losee and the person who submitted the first video that inspired Whitacre to explore the creation of a virtual choir, is one of those currently exploring and working towards the creation of a new multi-tracked virtual musical (Furst 2020). Furst recently

announced on the Facebook group of her virtual choir that she would be collaborating with Victor Wisehart on creating a full Broadway-level virtual musical. This would involve using the same process as creating a virtual choir. However, instead of only performing one song, it would involve multiple songs with performers filming their individual parts in isolation and digitally combining the micro-performances to create a macro-performance of the full show. This show will be created specifically with virtual performance in mind and could lead to future musicals being written and created in a similar style; however, at this point, it is still in the experimental stage.

Another example of this is The Other Palace Theatre's recent production of *The Last 5 Years* (2020). This production had their cast of two actors, Lauren Samuels and Danny Becker, record their parts separately in their own homes. Samuels and Becker even pretending to pass props back and forth and then put their micro-performances they created of their character's part together to create a macro-performance that is the full musical. The theatre added a sense of quasi-liveness and ephemerality. However, it limited the production's accessibility to a set time frame that started at a set time and only lasted long enough to see the production once through. While this form worked well for this musical with its simplicity and limited cast and limited cast interaction based on how the story is written, it may not work as well for larger works with bigger casts or that require more elaborate staging. Whether this form is a viable potential future for theatre to remain operational while following government safety guidelines remains to be seen and will require more research.

However, the appeal of virtual ensembles and other virtual performances will likely change over time once the pandemic is over, and people are permitted to sing together in-person safely. Virtual ensembles will likely remain in the future as further virtual performance experiments occur. However, they will not remain as popular as they are in this moment as the context changes. When people are allowed to perform in-person again when the pandemic is over, the virtual choir will likely fade from popularity in favor of live performances. If this is the case, technology may not focus as heavily on virtual reality concerts, at least for large ensembles and regular musicians. However, it may still be explored for the highest levels of performers. After the pandemic, virtual ensembles will most likely fade back into relative obscurity in favor

of in-person ensembles. They may become a phenomenon of the past, something particular to this point and context in time. Perhaps there will be an increase in participation in in-person ensembles as people who tried participating in a virtual group join a local ensemble with support and encouragement from their new virtual group. Alternatively, maybe the arts fade into the background to the point they were at before the pandemic once life stabilizes and more things and opportunities are competing for the world's attention. In-person performances slowly rebuild from the state they emerge from the pandemic in and slowly rebuild with a decreased number of potential performers as many current performers had to leave the performing arts sector during the pandemic, and the students who would have graduated into the field are held back as a result of being unable to proceed with and meet specific performance requirements due to pandemic restrictions.

Alternatively, as more experiments are attempted and learned from, one potential result of the pandemic and these experiments may be that:

[t]he habits of virtual creation and consumption have become more deeply ingrained and will not likely return to being a simple curiosity [...] technological innovation will make virtual performance better over time...and potentially different. It is in the nature of the internet to expand choice dramatically and thus create new patterns of demand. (Kao 2020)

Perhaps one of the new patterns of demand to come from this recent pandemic, at least until it is safe to perform in-person again, will be for virtual theatre productions, as previously mentioned. Not only the chance to watch them, but to participate in and be a part of them, with shows being created from a love of acting, writing, performing, and creating, rather than to sell tickets and make money. In discussing the advancements of technology, it has been said that one thing coming out of these changes is a “culture of things produced because people care about it, not necessarily because they hope other people will buy it” (Steal This Film II 2007). These are works created by the people for themselves, works created out of love of art, and the joy of creating and playing rather than solely based on money and connections. As Eric Whitacre said in an interview: “How much money do you really need? It’s music, you’re suppose to give this shit away so that other people can do something more interesting” (What Would Beethoven Do? 2016). There is an increasing demand to be a part of something and to be able to contribute to something bigger than ourselves. In a world where people cannot meet in person, virtual

ensemble and virtual theatre performances could fill that need until it is safe to perform in-person again.

Due to the various limitations, as discussed in the previous section, it seems clear that virtual performances will never replace live in-person performances. However, with in-person gatherings not allowed or severely limited and no clear answer as to when people will be allowed to safely gather to enjoy in-person performances again (Handler 2020), and as a result of all the attention that virtual performance has gotten recently, it seems they will be here to stay for the foreseeable future at least in a limited capacity. This will particularly be the case for professional and student groups, at least as an alternative to closing down the performing arts departments until it is safe to perform in-person. For students studying performing arts, who may be required to participate in a certain number of performances per term according to their degree requirements, virtual performances may be their only option for now. Many schools have turned to virtual performances as a safe alternative to live performances during the switch to online learning as part of the spring 2020 term. Many are continuing to look into it for the upcoming term due to the increased health and safety concerns connected with live in-person performances during a pandemic. This switch to virtual performances would allow students to continue getting experience performing and meet course requirements that might not otherwise be met under pandemic conditions (LeedsConservatoire 2020).

4.2 Why libraries should care

One of the roles of libraries and librarians is to help encourage learning and the use and creation of knowledge. One way to accomplish this, especially in academic libraries, is by helping support teachers through the provision of resources and online support. However, there are some classes where this will be harder than others. One example is classes where it is harder to switch to online learning, such as those related to the performing arts where the pandemic restrictions and switch to online have hit extra hard and may not allow for live rehearsals or performances. These restrictions and switching to online-only make things more complicated as rehearsals and performances are often a large part of the course requirements (Pensaert 2020).

Librarians, especially those in academic libraries, can help support these classes by helping to look into examples of online alternatives, such as virtual ensemble performances for their schools' music or drama department, by helping students and professors find examples of these types of performances. They can also help research copyright issues related to creating their own virtual performances and providing access to sheet music and scripts to facilitate in the creation of other virtual performances without breaking copyright.

Libraries and archives, particularly those that focus on music or the performing arts and school libraries whose music or theatre departments created virtual performances during the COVID-19 shutdown, may want to preserve these documents as part of the record. Lankes, a library science scholar, writes that:

Today, in addition to preserving cultural artifacts of the past, librarians are working with neighborhoods to capture the culture of the now. [...] However, we should now expect our libraries to not simply act as a storehouse of the works of great men of the past, but to also capture our story as it is unfolding today. (2012, pp. 20)

Virtual ensembles are part of the story of now. They are a part of how society and communities are trying to cope with the isolation and stresses of an increasingly digital world, exacerbated by pandemic life. Virtual choirs are a part of our current cultural heritage, not just for the part they have played during the pandemic but also for their role before the pandemic, having been featured in documentaries and at cultural events. Eric Whitacre's virtual choirs have been featured in two documentaries discussing how technology can facilitate connection and its potential impact on society. The first is *Internet Rising* (2011), which uses part of the virtual choir rendition of "Sleep 2.0" (Eric Whitacre VEO 2011), and the second is *What Would Beethoven Do?* (2016), which focuses on how virtual choir is reshaping the images of choir and classical music. Additionally, virtual choirs have been featured and premiered, and installed as part of historical celebrations and sporting events. Examples include the Glasgow 2014 Commonwealth Games, which featured Whitacre's virtual youth choir (2014), the Millennium Bridge, London as part of the 2012 Olympics, and the opening of the Titanic Belfast 100th anniversary exhibition, which featured Virtual Choir 3's performance of "Water Night" (2012, *About the virtual choir 2020*, *Curatorial Curiosities* 2012). Additionally, they are a

part of the performing arts sector's fight for the ability to continue to create in new ways, using new technologies, and while not being allowed to meet in person.

Virtual ensembles may provide a way to safely produce and record new music for large scale ensembles without requiring performers to quarantine either alone or with each other for the duration of the performance's run. It is also a way to allow composers to record and produce new music for large ensembles when these types of ensembles cannot meet in person. Composers such as Eric Whitacre, Britlin Losee, and David Wesley have been using virtual choirs as a way to record and release new music. However, as previously discussed, there are limitations to using this method. By utilizing this publication method, it can provide new opportunities for self-publication and lesser-known composers to share new works and get their music out to ensembles who may never have heard of them.

Thus far, the only known archival attempts to preserve virtual ensemble projects have been self archival by participants and possibly some unknown archival efforts by specific creators. Whitacre recently announced the creation of a booklet archiving details of the history so far of his virtual projects to commemorate the 10th anniversary of his first virtual choir. However, this booklet will not necessarily archive and preserve the performance itself. It contains participants' names, facts about the performance, photos of the performance, and a variety of quotes and testimonies about peoples' experiences with Whitacre's virtual choirs. It even comes with a CD of audio recordings of the performances (Sing as one 2020). However, while these are all relevant and important for learning about or researching Whitacre's virtual choirs, they do not archive the performance as a whole in such a way that will preserve them for future generations to be experienced. There is more to documenting and preserving a performance than recording facts and the names of those involved. However, not archiving the full performance itself still allows for the disappearance of the video's primary performance document with the audio recording.

Another role of the library is to facilitate the creation of knowledge and to foster a sense of community. Libraries could use virtual ensembles as a way to engage with the community and bring people together during a time when we are not allowed to be together. Libraries could work together with their local community to create virtual ensemble performances as a way of

outreach to their community members and rekindling a sense of community while still maintaining social distancing and governmental guidelines about meeting and socializing. Some public libraries have already started hosting musical meet-ups for their community through the use of music-centered events such as drum circles or ukulele events (Orange Public Library and History Center 2020). As established by Fancourt and Steptoe (2019), virtual ensembles have an ability to encourage a sense of community comparable to the sense of community created by participation in an in-person ensemble. Libraries could also use virtual ensemble events to promote their music collections or other library services.

As previously noted, Berryman noticed absences in documentation literature of perspectives from art history and aesthetics point of view (2018). These absences can be considered detrimental to the development of creativity within society. In studying the work of Régimbeau, it has been said that: “a univocal analysis of art-making is necessarily insufficient; scholars cannot simply consider particular masterpieces or mediums in isolation, but rather they must consider the complex network of interrelations that underpin the creation of any work of art” (Gorichanaz 2017, Tidline 2003). This means that to better understand a work of art, the art must be studied in the context within which it was created. This study, however, requires the preservation of the work and the influential works that came before. A work of art cannot be studied in its context if the context and the works that influenced it are not preserved. This argument was later built upon further by citing the work of information scientist Tonyia Tidline. Gorichanaz and Tidline state that she “conducted a narrative analysis of the information behavior of artists, finding that engaging with other artwork is an important part of the creative process and artists' development. That is, art only works when it is woven into the fabric of human life” (Gorichanaz 2017, Tidline 2003). This is one of the things that virtual ensembles strive to accomplish, to reweave art into “the fabric of human life” when it feels like it has been ripped out by the pandemic and pandemic related safety restrictions. Virtual ensembles allow for the performing arts to be woven into the digital age and return to being something that is for everyone and not just the elite. Virtual ensembles also allow for artistic collaboration among the general public as well as for composers and directors. Virtual ensembles provide an opportunity for global artist collaboration to aid with society's development as a whole.

Filling this void created by a lack of documentation on art history and aesthetics can be achieved by creating better preservation methods for performances and performance documentation. This would allow other artists and creators to interact and engage with a work beyond the initial performance, allowing for an increase in creativity and development of the creative process. This task is one that will fall to libraries and museums since one of the purposes of library science and libraries is to enable education and foster the creation of new knowledge. Education is not limited to the maths and sciences, but should also include the arts and music. Additionally, these should not be limited to the classics but should include art and music in general and the context to achieve a well-rounded perspective instead of the univocal view previously deemed insufficient. In order to truly appreciate and understand art, it must be understood in its context and be able to see the effects, directly or indirectly, that the art has on what has come after.

Virtual ensembles are a part of art, its history, and the context that will inspire future artistic works and deserve a place in music and documentation discourse. Berryman writes of the process of art documentation that:

These practices were designed to transgress the ontological boundaries that had separated art and information in the modern era. This was not achieved by making documents look more like works of art through stylization or aesthetics. Rather, it was achieved by making artworks look more like documents, as emblems of information. It did not matter if these documents were dull, cheaply produced, or indeed incomprehensible. The document format was prized for its transparency and factual neutrality, for its potential to reconcile art and information. (Berryman 2018)

One way this is achieved is through virtual ensembles, which allow for the blending of art and documentation to enable its dissemination in an era of digitization and shorter attention spans. Virtual ensembles are not just about documenting the notes or melody, but the spirit of ensemble music and allowing that sense of community to be translated into document form. Some virtual ensembles are less technologically and aesthetically advanced, but virtual ensembles are about more than the aesthetics. Virtual ensembles are about coming together to create something beautiful and be a part of a community. Having the art of music broken down into a document form allows it to be more accessible to a busy audience. It can be a struggle to get people interested and willing to spend hours away from their phone to experience an art form they are

not familiar with or have preconceived notions about. By making the art in to more manageable bites, for example, one song instead of a multi-hour concert, and bringing it to them by posting on social media platforms, where the audience is, older art forms can be reintroduced in a new way and attract new audiences.

Conclusion

Performance and performance documentation is an evolving field, and in much the same way that there is still debate over the definition of a document today, these debates will continue. Artists and creators will continue to explore new technologies and how they can be used to create art. This continued exploration will bring up new questions and preservation requirements as they lead society to the next thing. This dissertation has discussed some of the debates around the definitions of document, performance, and documentation and some of the challenges that come up in their classifications. It also touched upon how language and terminology evolve based on the changing technology and mediums used by a discipline. Based on the literature review, it can be seen that, while they have their limitations, virtual ensembles are a valid form of performance and performance documentation. However, while they are similar to music, they can and should also be thought of as their own unique discipline within the umbrella term of performance.

In much the same way e-books and the internet have not replaced physical books, virtual ensemble performances will not replace the in-person ensembles or recordings. Virtual ensembles are not a replacement or adequate substitute for live in-person performances but are still an essential piece of cultural and musical heritage that are important and worthy of being preserved in their own right. Additionally, while not ideal, it may be a way to preserve the performing arts sectors and a sense of community until it becomes safe to return to in-person performances, especially for disciplines at a higher risk level, such as choir and wind instruments. Virtual ensembles could also provide an opportunity for libraries to foster community involvement and build bonds within the communities they serve during a time of social distancing.

There is still plenty of further research to be done on this topic. While Fancourt and Steptoe's research found similarities in the benefits of virtual choir and in-person choirs, this research was done from a performance perspective. Further research will be needed to see if their findings are similar when studied from non-choir performances such as orchestra and theatre. Also absent from Fancourt and Steptoe's research is an audience's perspective on the community building aspects and engagement of virtual ensembles. The results of further research still to be done in this area could impact the ability virtual ensembles have on audience members who did not participate as a performer, providing further insights into virtual ensembles as a performance and performance document. Further research into preservation methods for this style of document as well as the personal documentation habits and information seeking behavior within these communities could also yield interesting insights for the information documentation and library science communities. While there are still questions to be answered, perhaps this dissertation can serve as a jumping-off point for further research. Further discourse is still needed on the documentation of the performing arts, how they have evolved with access and the advancement of technology, and the importance of preservation and the need for it to evolve along with the documents being preserved.

Works Cited

- About the virtual choir* (2020). Available at: <https://ericwhitacre.com/the-virtual-choir/about> (Accessed: 11/2/20).
- A Cappella Trudbol (2008). *Lida Rose (Music Man) - Barbershop - Trudbol A Cappella*. 18/10/2008. Available at: <https://www.youtube.com/watch?v=MXpJfI4cv2k> (Accessed: 29/6/2020).
- Armstrong, M. (2012). *Musicking in Cyberspace: Creating Music and Fostering Global Community through a Virtual Choir*. Masters dissertation. Tufts University. Available at: <https://dl.tufts.edu/catalog/tufts:20724> (accessed 22/6/2020).
- Auerbach, E. (2010) "Odysseus' Scar." in Leitch, V.B. & Cain, W.E. (compiler & editors) *The Norton Anthology of Theory and Criticism* (second edition). W. W. Norton & Company. pp. 1030-1046.
- Auslander, P. (1999). *Liveness: Performances in mediatized culture*. London: Routledge.
- Auslander, P. (2006). The performativity of performance documentation. *PAJ: A Journal of Performance and Art*, 28(3), 1-10. doi:10.1162/pajj.2006.28.3.1.
- Barthes, R. (1967). "Death of the Author." Available at: https://moodle.city.ac.uk/pluginfile.php/1762140/mod_resource/content/1/Death%20of%20the%20Author%20by%20Roland%20Barthes.pdf (Accessed: 30/1/2020).
- Becca Eggleton (2017). Hamilton virtual choir submission. 27/12/2017. Available at: <https://www.youtube.com/watch?v=Nat8jYf5SqU> (Accessed: 30/7/2020).
- Bellini, N., Bergamasco, M., Brehonnet, R., Carrozzino, M., and Lagier, J. (2018). Virtual cultural experiences: the drivers of satisfaction. *Symphonya. Emerg. Issues Manag.* 2, 52–65. doi: 10.4468/2018.2.5bellini.bergamasco.brehonnet. carozzino.lagier.
- Berryman, J. (2018). "Art as document: on conceptual art and documentation", *Journal of Documentation*, vol. 74, no. 6, pp. 1149-1161.
- Briet S. (2006). *What is Documentation?* English translation of classic French text. Translated by Day RD and Martinet L, with Anghelescu HGB. Lanham, MD: Scarecrow Press.
- BroadwayBOI !!! (2017). Hamilton virtual choir submission. 19/12/2017. Available at: https://www.youtube.com/watch?v=QWvI9amQ_nM (Accessed: 30/7/2020).

- Bolter, J. D., & Grusin, R. A. (1999). *Remediation: Understanding new media*. London; Cambridge, Mass.; MIT Press.
- Buckland, M. (2014). Document Theory: An Introduction. In: Summer School on Records, Archives and Memory Studies: Proceedings. Gilliland AJ, Tomić M and Willer M (Eds). Zadar: University of Zadar.
- Buckland, M. (2018). "Document Theory", *Knowledge organization*, vol. 45, no. 5, pp. 425-436.
- Canadian Opera Company (2020). *COC Virtual Choir | "Anvil Chorus" from Verdi's IL TROVATORE*. 15/7/2020. Available at: <https://www.youtube.com/watch?v=oypLDFKNd4I> (Accessed: 8/1/2020).
- Chatzichristodoulou, M. (2013). Performing mixed reality. *Contemporary Theatre Review*, 23(3), 447-449. doi:10.1080/10486801.2013.808007
- Chayko, M. (2008). *Portable Communities: The Social Dynamics of Online and Mobile Connectedness*. New York, NY: Suny Press.
- Concordia Lutheran High School A Cappella Choir (2020). [Facebook] 27 March. Available at: <https://www.facebook.com/CLHSACAPPELLA/videos/1535852366582894/UzpfSTE0MjUwMDEyOT03ODA1ODQwMjc2MTY/> (Accessed 27 March 2020).
- Concordia University Irvine (2020). *Concordia Choir – "Thou shalt know Him" | Virtual Choir of Students & Alumni*. 2/6/2020. Available at : <https://www.youtube.com/watch?v=KjYzm5soRGc&fbclid=IwAR2A51dYBnxkC7IJY2RTvls6wmgTd4am3Y9ECY3oGq9W5I14Zfp2hPru1M0> (Accessed: 2/6/2020).
- Cook, N. (2009). *The cambridge companion to recorded music*. Cambridge; New York: Cambridge University Press. doi:10.1017/CCOL9780521865821.
- Curatorial Curiosities. (2012). 'Olympic Sound - London 2012', *Curatorial Curiosities's Blog*, 30/7/2012. Available at: <https://curatorialcuriosities.wordpress.com/2012/07/30/olympic-sounds-london-2012/> (Accessed: 11/2/20).
- Cystic Fibrosis Trust (2019). *Take me to church by the Cystic Fibrosis Virtual Choir | The singers that can never meet*. 18/6/2019. Available at: <https://www.youtube.com/watch?v=B-Qt3Dm2GxU> (Accessed: 8/1/2020).

- Cystic Fibrosis Trust (2017). *With one voice: Cross infection and the Cystic Fibrosis Virtual Choir*. 15/12/2017. Available at: <https://www.youtube.com/watch?v=yQYjmZKpG8U> (Accessed: 8/1/2020).
- David Wesley (2019). *A Mighty Fortress Is Our God (Virtual Choir #4)*. 7/12/2019. Available at: https://www.youtube.com/watch?v=z4EoLm3_luM (Accessed: 8/1/2020).
- David Wesley (2018). *In Christ Alone (Virtual Choir #3 / A Cappella)*. 22/11/2018. Available at: <https://www.youtube.com/watch?v=RY4CW5pte98> (Accessed: 8/1/2020).
- David Wesley (2016). *Nothing But The Blood (Virtual Choir #1)*. 20/11/2016. Available at: <https://www.youtube.com/watch?v=-Cvv5uDOzvM> (Accessed: 8/1/2020).
- Dear Evan Hansen (2017). *"You Will Be Found" Virtual Choir | DEAR EVAN HANSEN*. 11/12/2017. Available at: <https://www.youtube.com/watch?v=WFZmT-LRMBM> (Accessed: 8/1/2020).
- De Kosnick, A. (2013). 'Fandom as free labor' in Scholz, T. (ed.) *Digital labor: the internet as playground and factory*. London: Routledge.
- DisneyExaminer (2013). *"World of Color - Winter Dreams" Honor Choir - Eric Whitacre's "Glow" [FULL HD VIDEO]*. 17/12/2013. Available at: https://www.youtube.com/watch?v=cy_yOiWHHHs (Accessed: 8/1/2020).
- Dixon, S. (2007). *Digital performance: a history of new media in theater, dance, performance art and installation*, MIT, London; Cambridge, Mass.
- Dr. Cayari (2020). *Creating Virtual Choirs (with Christopher Cayari, Melody Myers, David Wesley, and Matt Clauhs)*. 28/6/2020. Available at: <https://youtu.be/i1eyP5IVFD0?fbclid=IwAR35O-AgjU1c0FOu1YymEwOwrBwasM4F9yJRbxYr66t7WBs7uvc-3oA2DSw> (Accessed: 29/6/2020).
- Eric Whitacre (2014). *Virtual Youth Choir Premiere (The Commonwealth Games)*. 25/7/2014. Available at: <https://www.youtube.com/watch?v=0LwsGFEh79g> (Accessed: 8/1/2020).
- Eric Whitacre (2018). *Deep Field: The Impossible Magnitude of our Universe*. 12/11/2018. Available at: <https://www.youtube.com/watch?v=yDiD8F9ItX0&t=1226s> (Accessed: 20/1/2020).

- Eric Whitacre's Virtual Choir (2014). *Eric Whitacre's Virtual Youth Choir - What If*. 14/8/2014.
Available at: <https://www.youtube.com/watch?v=DmJBJV0i928> (Accessed: 8/1/2020).
- Eric Whitacre's Virtual Choir (2012). *Eric Whitacre's Virtual Choir 3, 'Water Night'*. 2/4/2012.
Available at: <https://www.youtube.com/watch?v=V3rRaL-Czxw> (Accessed: 8/1/2020).
- Eric Whitacre's Virtual Choir (2013). *Eric Whitacre's Virtual Choir 4: Fly to Paradise*.
11/7/2013. Available at: <https://www.youtube.com/watch?v=Y8oDnUga0JU> (Accessed:
8/1/2020).
- Eric Whitacre's Virtual Choir (2020). *Eric Whitacre's Virtual Choir 6: Sing Gently*.
19/7/2020. Available at: <https://www.youtube.com/watch?v=Y8oDnUga0JU> (Accessed:
19/7/2020).
- Eric Whitacre's Virtual Choir (2010). *Eric Whitacre's Virtual Choir - 'Lux Aurumque'*. 21/3/2010.
Available at: <https://www.youtube.com/watch?v=D7o7BrlbaDs> (Accessed: 8/1/2020).
- EricWhitacreVEVO (2011). *Eric Whitacre - Eric Whitacre's Virtual Choir 2.0, 'Sleep'*.
6/5/2011. Available at: <https://www.youtube.com/watch?v=6WhWDCw3Mng> (Accessed:
8/1/2020).
- Eric Whitacre's Virtual Choir (2018). *Virtual Choir 5: Deep Field - Level 1 - Intro*. 5/6/2018.
Available at: <https://www.youtube.com/watch?v=QYGYgUFxMU8> (Accessed:
8/1/2020).
- Fancourt, D., & Steptoe, A. (2019). Present in body or just in mind: Differences in social
presence and emotion regulation in live vs. virtual singing experiences. *Frontiers in
Psychology*, 10 doi:10.3389/fpsyg.2019.00778.
- Furst, B. (2020). *Inner Light Choir* [Facebook] 31 July. Available at: [https://www.facebook.com/
groups/610582789534850/permalink/662020061057789](https://www.facebook.com/groups/610582789534850/permalink/662020061057789) (Accessed: 31/7/2020).
- Giannachi, G. (2004). *Virtual theatres: An introduction*. London: Routledge.
- Gorichanaz, T. (2017). Understanding art-making as documentation. *Art Documentation*, 36(2),
191-203. doi:10.1086/694239
- Halvorson, A. (2020). *Virtual Choir 6 - Official* [Facebook] 21 July. Available at: [https://
www.facebook.com/groups/virtualchoir6/permalink/1557865364380154](https://www.facebook.com/groups/virtualchoir6/permalink/1557865364380154) (Accessed:
21/7/2020).

- HandbellMusicians (2013). *Virtual Handbell Ensemble - Misterium*. 16/9/2013. Available at: <https://www.youtube.com/watch?v=LGg99ar2ktk> (Accessed: 11/7/2020).
- Handler, M. (2020). How Eric Whitacre built a surprisingly real online community in the world's largest virtual choir. 19/7/2020. Available at: https://www.forbes.com/sites/micahhendler/2020/07/19/how-eric-whitacre-built-a-surprisingly-real-online-community-in-the-worlds-largest-virtual-choir/?fbclid=IwAR2G4noI-4xwvPVJvnIB62f92mxd35E_Km9Wqj6jaOTFEy9YgWrVFJaposo#2af6aff130ea (Accessed: 21/7/2020).
- Hobbs, C. (2001). The character of personal archives: Reflections on the value of records of individuals. *Archivaria*, 126-135.
- Internet Rising: Documentary Film* (2011). Directed by Martin, A. K. [Featured film] Available at : <https://www.oii.ox.ac.uk/videos/internet-rising-documentary-film/> (Accessed: 22/1/2020)
- Julie Gaulke (2016). *Stars by Ēriks Ešvalds - Virtual Choir Friends production by Julie Gaulke*. 8/9/2016. Available at: <https://www.youtube.com/watch?v=Z7c4BTh4TJw> (Accessed: 20/1/2020).
- Kao, J. (2020). 'The Coronavirus Is Making Artists Go Virtual - Here's How That's Changing Their Bond With Their Audience,' *Forbes*. Available at: https://www.forbes.com/sites/johnkao/2020/05/03/when-live-becomes-virtual-innovating-the-bond-between-performer-and-audience/?fbclid=IwAR2y6kc7tUXhJvCgMZR7X_DxrB5yXuI1DyWA61sEeMqR2TJqqY2MkJ84GBg#e9e384d2c0ea (Accessed: 2/6/2020).
- Katelyn Verkoeyen (2017). *Dear Evan Hansen Virtual Choir*. 3/11/2017. Available at: <https://www.youtube.com/watch?v=nFTEhh3iJFg> (Accessed: 8/1/2020).
- KMHSChamberChorus (2009). *Eric Whitacre's Virtual Choir: Lux - Tenor II*. 17/12/2009. Available at: <https://www.youtube.com/watch?v=Waye6Y2gnbU> (Accessed: 8/1/2020).
- Lankes, R.D. (2012). *Expect More: Demanding Better Libraries For Today's Complex World*. Available at: <https://davidlankes.org/new-librarianship/expect-more-demanding-better-libraries-for-todays-complex-world/> (Accessed: 31/12/19).

- Last 5 Years, The* by J. R. Brown (2020). Directed by L. Jackson. Performed by L. Samuels and D. Becker. [The Other Palace. 26 June]. Available at: https://ls.gininet.com/player/26b90d1220654007?utm_campaign=600945_Last%20%20Years%20%20pre%20show%20%2026.06.20&utm_medium=email&utm_source=LW%20Theatres&dm_i=504T,CVOX,3EW1YZ,1GH19,1 (Accessed: 26/6/ 2020).
- Laura Campbell (2020). Eric Whitacre's 'October' Performed by 368 Musicians. 29/7/2020. Available at: https://www.youtube.com/watch?v=t5uAyJXv_wI&t=4s (Accessed: 30/7/2020).
- Leeds Conservatoire (2020). '*Light*' from '*Next to Normal*' | LCoM Musical Theatre Students Virtual Ensemble. 19/7/2020. Available at: <https://www.youtube.com/watch?v=dQihQdrXQ2E> (Accessed: 20/8/2020).
- Lisa Wilson (2013). *Virtual Choir 4 [Bliss] Submission Alto 2*. 9/6/2013. Available at: <https://www.youtube.com/watch?v=33ecH1FXT2E> (Accessed: 8/1/2020).
- Lonergan, P. (2016). *Theatre & social media*. London: Palgrave.
- McCluhan, M. (1964). 'The Medium is the Message', in McCluhan, M. (ed.) *Understanding Media: The Extensions of Man*. London: Routledge, pp. 1-18.
- McMahan, R. W. (2020). *Virtual Choir 6 - Official* [Facebook] 21 July. Available at: <https://www.facebook.com/groups/virtualchoir6/permalink/1557865364380154> (Accessed: 21/7/2020).
- NAMM Foundation (2020). *Virtual Choir 6: Sing Gently, a Conversation with Eric Whitacre*. 5/5/2020. Available at: https://www.youtube.com/watch?time_continue=2&v=c2DTd4UsIOI&feature=emb_logo (Accessed: 5/5/2020).
- Orange Public Library and History Center (2020). *Ukulele Soup hosted by Orange Public Library*. Available at: <https://iheartoldtownorange.com/event/ukulele-soup-hosted-by-orange-public-library-5/> (Accessed: 16/11/2020).
- Otlet P. (1934). *Traité de Documentation. Le Livre sur le livre*. Brussels: Editions mundaneum.
- Ovenden, R. (2020). *Burning the books: a history of knowledge under attack*. Online Event Supported by Friends of the Bodleian, 29 September, Online.

- Pensaert, A. (2020). *The impact of Covid-19 on music libraries internationally*. International Association of Music Libraries, Archives and and Documentation Centers, 22 July, Available at: <https://us02web.zoom.us/j/82505585555?pwd=RFZTNGNkcmdYL0xvVmhGTTI1WDdEZz09>. (Accessed: 22/7/2020).
- Peter Hollens (2017). *Dragon Age Inquisition - The Dawn Will Come - Peter Hollens Virtual Choir feat. 500+ Patrons!*. 6/10/2017. Available at: <https://www.youtube.com/watch?v=7k8PFMQQIXI> (Accessed: 8/1/2020).
- Phelan, P. (1993). *Unmarked: The Politics of Performance*. London: Routledge.
- Phelan, S. (2015). 'The Flicker at the Threshold of Societies Control', in Causey, M., Meehan, E., & O'Dwyer, N. (ed.) *The performing subject in the space of technology: through the virtual, towards the real*. Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, pp. 53-68.
- Philip Eoute (2013). *Eric Whitacre's Virtual Choir 4 - "Fly to Paradise" (formerly "Bliss") Solo Audition by Nikki Eoute*. 15/6/2013. Available at: <https://www.youtube.com/watch?v=yt0KpoUvn94> (Accessed: 8/1/2020).
- Price, L. (2020). 'Fanworks, publishing, and the library' [Recorded lecture]. *INM307: Information Resources and Documentation*. City University of London. 4 March. Available at: <https://youtu.be/pdKgw3yiGcU> (Accessed: 4/3/2020).
- Rguillenmusic (2020). *#LeanOnUs - Arlington High School Music Department Virtual Ensemble*. 1/5/2020. Available at: <https://www.youtube.com/watch?v=onzOksWsRgw> (Accessed: 24/8/2020).
- Robin von Youtube (2009). *Lux Aurumque*. 26/1/2009. Available at: https://www.youtube.com/watch?v=H3hy3umtflM&feature=emb_logo (Accessed: 8/6/2020).
- Robin von Youtube (2008). *Wise Guys - Mädchen lach' doch mal*. 7/11/2008. Available at: https://www.youtube.com/watch?v=umrRXwx_36E (Accessed: 8/6/2020).
- Sager, C. (2020) 'World peace is already here. Are you listening for it?', *Desert News*. Available at: <https://www.deseret.com/opinion/2020/12/22/22195891/eric-whitacre-virtual-choir-6-sing-gently-world-peace-christmas> (Accessed: 23/12/2020).

- San Diego Union-Tribune, The (2020). *Trumpet teacher forms a virtual brass ensemble with 40 quarantined students*. 24/3/2020. Available at: <https://www.youtube.com/watch?v=YGmuaxsgFV8> (Accessed: 18/7/2020).
- Sesigur, O. (2020). *Remediation of the Music Collections Through Digital Curation*. Digital Research in the Humanities and Arts 2020, 9 September, Salford.
- Sing Out Strong (2020). *Baba Yetu by Christopher Tin - Performed by Sing Out Strong global choir*. 24/8/2020. Available at: <https://www.youtube.com/watch?v=J3EadiLNcj8> (Accessed: 24/8/2020).
- Stay at Home Choir (2020). *And So It Goes - Stay At Home Choir with The King's Singers*. 7/5/2018. Available at: <https://www.youtube.com/watch?v=HINNVwddDJU> (Accessed: 20/5/2020).
- St Clair, F. (2020). *Virtual Choir 6 - Official* [Facebook] 21 July. Available at: <https://www.facebook.com/groups/virtualchoir6/permalink/1557865364380154> (Accessed: 21/7/2020).
- Steal This Film II*. (2007) Directed by King, J. [Featured film] United Kingdom : The League of Noble Peers.
- TED (2011). *A virtual choir 2,000 voices strong | Eric Whitacre*. 4/4/2011. Available at: <https://www.youtube.com/watch?v=2NENIXsW4pM> (Accessed: 8/1/2020).
- TED (2013). *Eric Whitacre: Virtual Choir Live*. 22/3/2013. Available at: <https://www.youtube.com/watch?v=cnQFvrWDYsU> (Accessed: 8/1/2020).
- The Nerd Lord (2017). *Dear Evan Hanson Virtual Choir "You Will be Found" Submission*. 8/11/2017. Available at: <https://www.youtube.com/watch?v=o7CEAtMyerI> (Accessed: 8/1/2020).
- Tidline, T. (2003). *Making Sense of Art as Information*. PhD dissertation. Degree statement. University of Illinois Urbana–Champaign. Available at: <https://www.ideals.illinois.edu/handle/2142/81531> (Accessed: 22/6/2020).
- Virtual Musicians Group (2012). *"Sleep" (2009) - The Original Virtual Choir Experiment*. 29/2/2012. Available at: <https://www.youtube.com/watch?v=8gg86GjMNqU> (Accessed: 8/1/2020).

Watkins, J. (2020). *Enhancing Artistic Practice Through Digital Curation*. Digital Research in the Humanities and Arts 2020, 9 September, Salford.

What Would Beethoven Do? (2016). Directed by Keijser, J. [Featured film] Burbank, CA : Magnetic North Pictures. Wire Walkers Studio.

Whitacre, E. (2009). 'Oh my god, oh my god, I just had the coolest idea!', *ericwhitacre*, 15 May. Available at: <https://ericwhitacre.com/blog/oh-my-god-oh-my-god-i-just-had-the-coolest-idea> (Accessed: 8/6/2020).

Whitacre, E. (2020). *Sing as one: ten years of Eric Whitacre's virtual choir*. Uquiet.

Appendix 1: Proposal

Arianna Dahlia

Dissertation Project Proposal

INM363 Dissertation Project

Supervisor: Joseph Dunne-Howrie

City, University of London, MSc Library Science

Dissertation Proposal

Working Title:

The web is alive with the sound of music:

an analysis of the history and future of virtual ensemble performances as performance documents

Introduction:

As technology has advanced over the twenty-first century, more and more of what we do has gone digital or at least had digital options. School, work, shopping, networking, and connecting with others, all of these things became things that could be done online. As more and more of life moved online, discussions began as to the merits and drawbacks of digitizing art, including the performing arts, including the question of the possibility and potential of digitally-born performance art. As the performing arts slowly digitized performance by recording them, musicians began to utilize these technological advances to create and share their performances online. Before I go any further in my dissertation proposal, I would like to clarify what I mean by some of the terms I will be using throughs my project:

- *Performance document*: When it comes to the term “performance documents” there has been some disagreement about what this term means. There have been to main understandings of the term; one is a more theatrical understanding as something has been documented through an performance, an example being an interpretive dance of an event. The second understanding being from a document perspective as a document that contains information about the performance itself, such as a recording of the performance, a playbill, sheet music

from a performance, or a set list, however (Auslander 2006). In the context of my research, a performance document will refer to a document which records a performance in such a way the document attempts to capture the performance through recording it in a way that aims to allow for the performance to be relived, such as a pro-shot recording of a theatre performance or a sound recording of a concert.

- *Performance documentation*: the act of documenting a performance in a way in which it can be re-experienced later on in the future.
- *Virtual ensemble*: group of multiple people who have digitally come together to make music together online rather than meeting in person, not a digital recording of people playing together in the same physical space.
- *Multitrack performance document*: A performance document created by layering more than one pre-recorded track of a performance to create a new or more complete performance.

The most prominent example form of virtual ensemble performances has been what is referred to as “virtual choirs.” Virtual choirs use multi-tracking to layer recording of different singers from around the world singing their separate parts in the choir. They do this alone in their own homes, and the recordings are put together to create a full choir with all its parts made up of individual videos and singers. This is a particularly intriguing form because the virtual ensemble performances can only be experienced in document form. Only the individuals involved in creating the document, or anyone within earshot of their recording space, will experience their live performance, but this is complicated because the individual parts simultaneously are and are not the performance. They are parts of a whole, and the whole can only be experienced in the digital document.

Virtual choirs have been growing phenomena since 2009 (About the virtual choir 2020). They have seen extensive growth during this time of social distancing and lockdown as the music community utilizes new technologies to keep in contact and continue making music with each other. There is limited academic research on the topic of virtual ensembles because they are still relatively new and not particularly well known outside of niche circles. I anticipate that this will change with the flood of new virtual ensemble documents being created and shared while

under the order to social distance. This project aims to examine and evaluate virtual ensembles as a performance document and their impact on performance documentation in the past and future.

Aims and Objectives:

This project will be looking at and analyzing virtual ensembles from a document and documentation perspective. The aim of this project is to contribute to the conversation of digital performance documentation from a library science perspective by evaluating and analyzing virtual ensembles as a performance document. Another aim is to understand better the connection and developments of the connection between performance and documentation of a performance as the line between the two is blurred by its integration into the digital world.

The objectives that will guide my dissertation will include:

- Defining what a virtual ensembles is and other relevant terminology related to the virtual ensembles phenomena and community.
- Explaining the history of virtual ensembles by addressing where they come from and how did they got started.
- Examining the place of virtual ensembles as performance documents and speculating how they may impact the future of performance and music documentation.

Scope and definition:

This paper will be focusing on virtual ensemble performances as documents, as defined in the introduction of the dissertation. I will not be looking into the participatory nature of virtual ensembles or the fandom aspects except in so much as they relate to documentation. While part of the focus will revolve around Eric Whitacre's virtual choirs, as he is credited with popularizing the concept of virtual ensembles, the scope will extend to all virtual ensembles performance created using a similar method, and that is freely accessible. I will be limiting myself to virtual ensembles that are made freely available either over social media or Youtube. The focus will be primarily on multi-contributor works that use the recording from more than one person rather than multi-track performances recorded by a single artist. I will not limit myself to choir performance and will use any instrumental works I can find and access. I will be

focusing on the document aspects of performing art documents and not the “performativity” (Auslander 2006) involved in these documents. There has been debate as to the nature of performances and how the digitization of performing arts has affected and changed it. This has led to further debates among some as to whether performance documents can be considered performances and to what extent (Allen 2010). However, these debates will not be dwelt upon in this paper in order to keep this project more relevant to library science. It may briefly come up in discussing the future of this model of performance documentation but will not be the central issue of this paper.

Research context/Literature review:

Due to the nature of the document being studied and its newness, much of the available literature directly related to virtual ensembles is in the form of videos shared over Youtube or social media. Also, due to limited research directly related to virtual ensembles, much of the information I currently know of at the beginning of my research comes from the personal website of Eric Whitacre and various specific ensemble projects, rather than scholarly officially peer-reviewed works. There are some exceptions to that, however, such as Dr. Fancourt’s work on the psychological effects on the mental health of singing in a virtual choir compared to an in-person choir (2019). I have also been granted access to a documentary, called *What Would Beethoven Do?* (2016), that touches on topics of changes in the performance arts, focusing on classical music, that has come about from technological advances and changes in culture. However, I anticipate I will find more scholarly works that discuss the broader themes of digital performance documentation and its uses in the performing arts as I get further into my research. I have already begun to look into the works of Causey (2015), Allen (2010), and Auslander (2006), who have research on the topic of digital documentation of music.

Methodology:

The main form of methodologies that will be used for this project is desk research and literary analysis. A conceptual and philosophical analysis will also be used for assessing virtual ensembles as performance documents. Some performance analysis will also be necessary but

will be limited to the performance as a document and form of documentation. A brief historical analysis will also be used to assess the developments in the virtual ensemble production and documentation of the various projects. I will be trying to focus on the virtual ensembles that are most accessible and have had the most significant impact. For example, virtual choirs have been popular because everyone can sing. However, virtual handbell ensembles will not have the same level of content or accessibility because not everyone has a set of handbells they can use. I have participated in a few virtual choir ensembles in the past, which may affect my perspective on them. However, this also means I am more knowledgeable on the subject than someone who has not participated in a virtual ensemble, and when appropriate, will be objectively reflecting on my own experiences participating in the creation of these performance documents.

Dissemination:

I am currently planning on writing a series of blog posts and tweets throughout my research and writing process to promote interest in my work and topic. I also plan on promoting it within relevant virtual choir Facebook groups to share my work with the virtual choir community. I intend to share my dissertation on the CityLIS Humanities Commons repository after it has been completed. I am also exploring ideas of presenting my work at relevant conferences, such as at a future Doc perform conference or an international equivalent to be discussed with my supervisor at a later time.

Work Plan:

Month	Days	Stage
June	1-14	Literature Review
	15-30	Further reading and dissertation outline
July	1-14	Start introduction and define key terms
	15-19	Look into sources expressing reception of virtual ensembles as performance document.
	20-31	start writing history of virtual ensembles and finalize further reading for history
August	1-12	Write analysis of virtual ensembles as performance document current
	13-23	write future of virtual ensembles as performance document
	24-31	Conclusion
September	1-15	Proof reading and editing
	16-29	Write abstract and acknowledgements, finalize editing and clean up presentation
	30	Submit Final dissertation

Resources:

- The resources I need for this project are a computer and internet access. I will also be collecting literature and performance analysis notes and drafting overarching ideas in a physical notebook kept in my dorm.
- Research on the topic of virtual ensembles is limited, and due to the nature of the text, most of what I have seen is accessible in a digital format.
- At the time of this proposal, London is under orders to stay at home with no official end date announced, and most libraries are closed. This means access to physical texts will be limited to the books I already have in my dorm, can inexpensively purchase, and whatever is digitally accessible. Due to the nature of virtual ensembles, most resources and research should be available digitally and open access.
- My funds are limited due to a lack of work during the stay home order and uncertainty over how long it will last.

- I do not anticipate any travel costs due to the stay-home order, which has no official end date at the time of this proposal. I would love to attend a conference about performance documents and documentation as part of my research, such as DRHA2020 or TaPRA2020. However, at the moment, it seems likely they may be canceled, moved online, or rescheduled for a date past the dissertation due date due to COVID-19 restrictions. Even if they do go on, I do not know if I would be able to fund my attendance anyway because of the lack of income during the stay home order.

Ethics:

This project will follow the guidelines for safe and ethical research set out by City University of London. Most of my desk research will involve openly accessible materials that have been openly and publicly shared and are not sensitive. There may be some virtual ensemble participants who fall under the vulnerable category; however, in order to participate in most virtual ensembles projects, there is content given for their video to be included in the work. Additionally, my research will be focusing on the document itself, not the participants and their classifications. I will be using a documentary that is not openly accessible but has received permission from the director to access and use his documentary as a part of my research on the condition that I do not share access to the film.

A.1 If you answer YES to any of the questions in this block, approval will be needed from an appropriate external ethics committee for approval. Consult your supervisor if you think this may be the case.		<i>Delete as appropriate</i>
1.1	Does your research require approval from the National Research Ethics Service (NRES)? <i>e.g. because you are recruiting current NHS patients or staff?</i> <i>If you are unsure try - https://www.hra.nhs.uk/approvals-amendments/what-approvals-do-i-need/</i>	NO
1.2	Will you recruit participants who fall under the auspices of the Mental Capacity Act? <i>Such research needs to be approved by an external ethics committee such as NRES or the Social Care Research Ethics Committee - http://www.scie.org.uk/research/ethics-committee/</i>	NO
1.3	Will you recruit any participants who are currently under the auspices of the Criminal Justice System, for example, but not limited to, people on remand, prisoners and those on probation? <i>Such research needs to be authorised by the ethics approval system of the National Offender Management Service.</i>	NO
A.2 If you answer YES to any of the questions in this block, approval will be needed from the Senate Research Ethics Committee. Consult your supervisor if you think this may be the case.		<i>Delete as appropriate</i>
2.1	Does your research involve participants who are unable to give informed consent? <i>For example, but not limited to, people who may have a degree of learning disability or mental health problem, that means they are unable to make an informed decision on their own behalf.</i>	NO
2.2	Is there a risk that your research might lead to disclosures from participants concerning their involvement in illegal activities?	NO
2.3	Is there a risk that obscene and or illegal material may need to be accessed for your research study (including online content and other material)?	NO
2.4	Does your project involve participants disclosing information about special category or sensitive subjects? <i>For example, but not limited to: racial or ethnic origin; political opinions; religious beliefs; trade union membership; physical or mental health; sexual life; criminal offences and proceedings</i>	NO
2.5	Does your research involve you travelling to another country outside of the UK, where the Foreign & Commonwealth Office has issued a travel warning that affects the area in which you will study? <i>Please check the latest guidance from the FCO - http://www.fco.gov.uk/en/</i>	NO
2.6	Does your research involve invasive or intrusive procedures? <i>These may include, but are not limited to, electrical stimulation, heat, cold or bruising.</i>	NO
2.7	Does your research involve animals?	NO
2.8	Does your research involve the administration of drugs, placebos or other substances to study participants?	NO

A.3 If you answer YES to any of the questions in this block, then approval will be needed from the Computer Science /Library and Information Science Research Ethics Committee (CSREC). Consult your supervisor if you think this may be the case.		<i>Delete as appropriate</i>
3.1	Does your research involve participants who are under the age of 18?	NO
3.2	Does your research involve adults who are vulnerable because of their social, psychological or medical circumstances (vulnerable adults)? <i>This includes adults with cognitive and / or learning disabilities, adults with physical disabilities and older people.</i>	NO
3.3	Are participants recruited because they are staff or students of City, University of London? <i>For example, students studying on a particular course or module. If yes, then approval is also required from the Head of Department or Programme Director.</i>	NO
3.4	Does your research involve intentional deception of participants?	NO
3.5	Does your research involve participants taking part without their informed consent?	NO
3.5	Is the risk posed to participants greater than that in normal working life?	NO
3.7	Is the risk posed to you, the researcher(s), greater than that in normal working life?	NO
A.4 If you answer YES to the following question and your answers to all other questions in sections A1, A2 and A3 are NO, then your project is of minimal risk. If this is the case, then you can apply for approval through your supervisor under PROPORTIONATE REVIEW. You do so by completing PART B of this form. If you have answered NO to all questions in the checklist, including question 4, then your project does not require ethical approval. You should still include the form in your dissertation proposal.		<i>Delete as appropriate</i>
4	Does your project involve human participants or their identifiable personal data? <i>For example, as interviewees, respondents to a survey, or participants in testing.</i>	NO

Confidentiality:

The documentary will be accessed alone in a private location behind locked doors and while wearing headphones. Information regarding its accessed, for example the link used to access it, will not be shared as requested by the rights owner.

References:

- About the virtual choir* (2020). Available at: <https://ericwhitacre.com/the-virtual-choir/about>
(Accessed: 11/2/20).
- Allen, J. (2010). Depth-charge in the archive: The documentation of performance revisited in the digital age. *Research in Dance Education*, 11(1), 61-70. doi: 10.1080/14647891003653401
- Auslander, P. (2006). The performativity of performance documentation. *PAJ: A Journal of Performance and Art*, 28(3), 1-10. doi:10.1162/pajj.2006.28.3.1
- Causey, M., Meehan, E., 1981, & O'Dwyer, N., 1979 (2015). *The performing subject in the space of technology: through the virtual, towards the real*, Palgrave Macmillan, Houndmills, Basingstoke, Hampshire.
- Fancourt, D., & Steptoe, A. (2019). Present in body or just in mind: Differences in social presence and emotion regulation in live vs. virtual singing experiences. *Frontiers in Psychology*, 10 doi:10.3389/fpsyg.2019.00778.
- What Would Beethoven Do?* (2016) Directed by Keijser, J. [Featured film] Burbank, CA : Magnetic North Pictures. Wire Walkers Studio.

Appendix 2: Bibliography

- Andy Willis (2019). *A mighty Fortress is our God Baritone (David Wesley Virtual Choir #4)*. 28/11/2019. Available at: <https://www.youtube.com/watch?v=es7veJMnfow> (Accessed: 8/1/2020).
- Bartlett, V. (2017). 'Web archiving and participation: The Future History of Performance?', in Sant, T. (ed.) *Documenting performance: the context and processes of digital curation and archiving*. London: Bloomsbury Methuen Drama, pp. 131-148.
- Belting, H. (1994). *Likeness and Presence: A History of The Image Before the Era of Art*, University of Chicago Press, Chicago, IL.
- Benford, S. & Giannachi, G. (2011). *Performing mixed reality*. London;Cambridge, Mass;: MIT Press.
- Bucknall, J., Sedgman, K. (2017). 'Documenting Audience Experience: Social Media as Live Stratification', in Sant, T. (ed.) *Documenting performance: the context and processes of digital curation and archiving*. London: Bloomsbury Methuen Drama, pp. 113-130.
- Dekker, A., Giannachi, G., van Saaze, V. (2017). 'Expanding documentation, and making the Most of 'the Cracks in the Wall'', in Sant, T. (ed.) *Documenting performance: the context and processes of digital curation and archiving*. London: Bloomsbury Methuen Drama, pp. 61-78.
- Eric Whitacre (2020). *Eric Whitacre in conversation with Dr Daisy Fancourt, Associate Professor at UCL*. 4/6/2020. Available at: https://www.youtube.com/watch?v=mnGth24A6AQ&feature=emb_title (Accessed: 30/6/2020).
- Eric Whitacre (2020). *First rehearsal, second try!*. 5/5/2020. Available at: https://www.youtube.com/watch?v=4J_3Kl_5Bhg (Accessed: 5/5/2020).
- Eric Whitacre (2019). *Virtual Choir 5: Interview with Eric Whitacre and Jack Rowland (Virtual Choir Support Team Leader)*. 19/2/2019. Available at: https://www.youtube.com/watch?v=yjU_pLOq6jM&t=1001s (Accessed: 8/1/2020).
- Eric Whitacre's Virtual Choir (2013). *Introducing the Virtual Choir 4*. 17/5/2013. Available at: <https://www.youtube.com/watch?v=u3HfS-ZeF34> (Accessed: 8/1/2020).

- Eric Whitacre's Virtual Choir (2010). *Singer Instructional for Eric Whitacre's Virtual Choir 2011*. 21/9/2010. Available at: <https://www.youtube.com/watch?v=dWCTKnbnqE6s> (Accessed: 8/1/2020).
- Eric Whitacre's Virtual Choir (2020). *Make Music Day: A Boy and a Girl Rehearsal and a conversation with Alex Lacamoire*. 21/6/2020. Available at: <https://www.youtube.com/watch?v=bvdyKev0G7Y> (Accessed: 29/6/2020).
- Eric Whitacre's Virtual Choir (2013). *Virtual Choir 4 - How to record and submit your video*. 27/5/2013. Available at: <https://www.youtube.com/watch?v=8vPqtu02BXM> (Accessed: 8/1/2020).
- Finnish Institute in London, The (2020). *Expanding live experiences: The digital future of theatre is starting now*. Present, 9 September, London.
- Fox, A. (2010). 'Inclusive Arts Practice: Using Collections to Maximize Inclusivity', in Abery, N. (ed.) *The new museum community: Audiences, challenges, benefits : A collection of essays*. Edinburgh: MuseumsEtc, pp. 196-215.
- Frohmann, B. (2009). "Revisiting 'what is a document?'"', *Journal of Documentation*, Vol. 65 No. 2, pp. 291-303.
- Giannachi, G. & Westerman, J. (2018). *Histories of performance documentation: museum, artistic, and scholarly practices*, Routledge, Taylor & Francis Group, London.
- Harrison Shacker (2020). *"You'll Never Walk Alone" Virtual Choir/Orchestra 15 Countries: 300 People*. 1/5/2020. Available at: <https://www.youtube.com/watch?v=6gpoJNv5dlQ> (Accessed: 24/6/2020).
- Hayward, P. (1990). *Culture, technology & creativity in the late twentieth century*. Libbey, London.
- Hollins, H. (2010). 'Mainstreaming Outreach: Taking Audiences to the Core', in Abery, N. (ed.) *The new museum community: Audiences, challenges, benefits : A collection of essays*. Edinburgh: MuseumsEtc, pp. 236-271
- Irish Blessing 2020, The (2020). *The Irish Blessing - over 300 churches from our island sing a blessing over Ireland and beyond*. 31/5/2020. Available at: <https://www.youtube.com/watch?v=TascS WZPj8U> (Accessed: 24/6/2020).

- Jalhartdavis (2009). *Eric Whitacre's Virtual Choir-"Sleep" Alto I*. 11/6/2009. Available at: <https://www.youtube.com/watch?v=GtRoDXGX7HY> (Accessed: 8/1/2020).
- Job Burgess (2020). *Joby Burgess' Virtual Marimba Choir Presents Eric Whitacre's 'Sleep'*. 29/5/2020. Available at: <https://www.youtube.com/watch?v=YN16y1pvEp0> (Accessed: 22/6/2020).
- Julie Gaulke (2017). *Baba Yetu (Civilization IV) by Christopher Tin - MULTITRACK COLLABORATION PROJECT*. 8/8/2017. Available at: https://www.youtube.com/watch?v=36d_j48E_Mk (Accessed: 20/1/2020).
- Julie Gaulke (2018). *Fix You (Coldplay) "Virtual Choir Friends" Production*. 8/5/2018. Available at: <https://www.youtube.com/watch?v=de445ZwsNqw> (Accessed: 20/1/2020).
- Lund, N.W. and Buckland, M. (2008). Document, documentation, and the Document Academy: introduction. *Archival Science*, 8(3), pp. 161-164.
- Nash, A., Vaughan, L. (2017). 'Documenting Digital Performance Artworks', in Sant, T. (ed.) *Documenting performance: the context and processes of digital curation and archiving*. London: Bloomsbury Methuen Drama, pp. 149-159.
- Peter Hollens (2011). *Rihanna - What's My Name / Only Girl - Peter Hollens (A Cappella Cover)*. 14/1/2011. Available at: <https://www.youtube.com/watch?v=wOIozJ-636Y> (Accessed: 8/1/2020).
- Podd Brothers, The (2020). *How Can I Keep from Singing - NYC Virtual Choir and Orchestra*. 10/5/2020. Available at: <https://www.youtube.com/watch?v=VLPP3XmYxXg> (Accessed: 24/6/2020).
- Sant, T. (2017). *Documenting performance: the context and processes of digital curation and archiving*, Bloomsbury Methuen Drama, London.
- Spitfire Audio (2018). *Interview: Eric Whitacre*. 6/11/2018. Available at: <https://www.youtube.com/watch?v=Zqr88BMwtrU> (Accessed: 20/1/2020).
- TopCranialite (2013). *Skyepaphora Griffith (singing Bliss by Eric Whitacre - Virtual choir 4)*. 2/6/2013. Available at: <https://www.youtube.com/watch?v=q73zXYTr87s> (Accessed: 8/1/2020).

Wei Jiang (2013). *Fly to Paradise - Eric Whitacre's Virtual Choir 4 - Solo Audition (Wei Jiang)*.

5/7/2013. Available at: <https://www.youtube.com/watch?v=62PFOiamPOM> (Accessed: 8/1/2020).

Wintzerith, S. (2010). 'Inclusive Without Knowing It', in in Abery, N. (ed.) *The new museum community: Audiences, challenges, benefits : A collection of essays*. Edinburgh: MuseumsEtc, pp. 458-475.

Appendix 3: Reflection

Working on a dissertation during a pandemic was significantly more difficult than I thought it would be. When the stay home order had been issued, I wasn't too worried because I had been planning to hunker down in my dorm and or the library for most of the time anyway, and I thought it would just provide me with less distraction by not having other options of things to do. I underestimated the effects of the emotional and mental fatigue that come with living through a pandemic and continuously being bombarded with updates and fear about the future. The virtual study sessions with fellow students were helpful and helped with the feelings of isolation, but much like my research for this dissertation has shown that it just isn't the same when it comes to virtual performance. We would all meet on zoom, mute ourselves, and work silently and separately together. Having a scheduled time with people expecting me and who, in theory, would see if I got sidetracked helped get work done through the pandemic fatigue, although I still didn't get quite as much done as initially planned. One example is the blog posts I had been planning on writing during my research and mentioned in my proposal that did not end up being written.

Additionally, after much self debate, I ended up applying for and receiving an extension. The extension was helpful, but provided its own set of distractions and challenges in having to move back home to the United States, election stress, and having to continue working on it while home and returning to sharing a room with someone on a different sleep schedule. It did not help that there was also an important election that caused more stress, anxiety, and distraction that did not allow me to focus on this in the way I had naively thought I would or even could.

There was also a sense of fear and regret that I chose the wrong topic when I picked this one instead of another topic that I had been considering that might have been easier to write about and provide a greater sense of escape. However, this topic seemed more worthy of discussion and relevant with the recent boom in material and use of virtual performances for the indefinite future. By doing this dissertation topic, I learned more about document theory, especially as it pertains to performance, performance documentation, and the debate around it. I have been involved in virtual choirs off and on since 2012, so it was interesting to dig a little

deeper into them from a documentation and library science perspective. I am still a bit nervous about how accepted Youtube videos will be as academic research and how my use will affect my dissertation's overall academic acceptance. Nevertheless, in the context of my topic and the pandemic, I do not see a way around using them. I believe specific videos are of academic value, and whether they are posted on Youtube or another more scholarly website does not change the inherent value of the information communicated through certain videos. The professors of some of the courses used and taught over Youtube, and various scholarly organizations used Youtube to post and share lectures that could not be done in person or shared more widely. While not all Youtube videos are necessarily of scholarly value; I hope my sources will not be discredited based solely on the medium by which they were published. Particularly as this pandemic has shown that Youtube can be a valuable tool for information dissemination when we cannot meet together in person if that is what you chose to use it for.