

Ephemeral Music: Electroacoustic Music Collections in the United States¹

ADRIANA P. CUERVO

Assistant Archivist for Music and Fine Arts, Sousa Archives and Center for American Music at the University of Illinois at Urbana-Champaign

Abstract: Electroacoustic music, created in a digital environment without using traditional notation on paper, relies on the use of technology for its interpretation and performance. The widespread use of this compositional technique challenges archivists to guarantee the long-term preservation and access to the original sonic experience of these creative works which can be thought of as born-digital records. Composers often rely on a combination of commercial software and home-grown hardware to create electroacoustic compositions, and performance becomes the only avenue of experiencing the work as a whole. This music is slowly disappearing since standards for its long-term access have not been developed and the creators are not taking a proactive approach to move into a sustainable access model. This paper reports on the results of a recently completed study of electronic music collections in libraries and archives across the United States to establish the span of such collections, current collection strategies, and relevant preservation strategies. This study lays the foundation of future preservation and effective long-term access initiatives for born-digital music as well as similar born-digital artistic works.

Introduction

Electroacoustic music is created in a digital environment without traditional paper notation and it relies on the use of technology for its interpretation and performance. What has become music composed and performed exclusively through the use of a playback device, such as a reel-to-reel tape player, compact disc player or personal computer files, first emerged after World War II when recording technology became readily available to musicians and composers. For the past fifty years composers have often relied on a combination of commercial software and home-grown hardware to create this born-digital music. The performance of these creative works is the only avenue to interpret and realize the physical and intellectual context of the artistic work and its creation. These “new forms of uniquely digital music involving computer-aided algorithmic composition, interactive environments, and digital sound synthesis have created corresponding new varieties of digital documents.”²

Different born digital music has been in use by creators since the mid 20th century, but has only been collected by archives and libraries in recent years. In the following paragraphs I argue that the widespread use of this compositional technique challenges archivists to develop long-term preservation and access standards and best practices in order to safeguard to the original sonic experience of these creative works. This music is slowly disappearing as both custodians and creators are not taking the necessary steps to establish a sustainable long-term access model to preserve these vital cultural expressions.

¹ The author wishes to acknowledge the Research and Publication Committee of the University of Illinois at Urbana-Champaign Library, which provided support for the completion of this research.

² Brent Lee, “Issues surrounding the preservation of digital music documents,” *Archivaria* 50 (2000): 194.

There has been a shift in the literature regarding non-institutional electronic records over the past ten years. Among the few government funded and international research initiatives that have taken a closer look at these issues: the InterPARES³ or International Research on Permanent Authentic Records in Electronic Systems project embarked upon the long-term preservation, access and authenticity issues of interactive digital music among other manifestations of electronic records.⁴ The research team that is addressing this particular group of records partnered with the MUSTICA initiative as a case study.⁵ This group consists of an international collaboration between UCLA's Center for Information as Evidence, and two music research institutions in France, Institut de Recherche et Coordination Acoustique/Musique (IRCAM), and the Groupes Recherches Musicales (GRM), a subunit of the INA.

Within the InterPARES framework, the MUSTICA initiative focused on providing preservation and access guidelines for interactive digital music commissioned by the IRCAM over the past 35 years. The project concluded with the development of an interactive tool that provides a system to catalog and enable access to the different components of 69 works by 48 different composers. The case study also served as a starting point for the development of two sets of guidelines for the production, maintenance, and long-term preservation of records; one set for individual creators, and another set for archivists and records managers.⁶

Over the summer of 2008 I conducted a survey of electroacoustic music collections in colleges and universities across the United States.⁷ By conducting this survey I wanted to determine the extent to which these types of materials are currently held by libraries and archives in the United States. I also wanted to ascertain whether libraries and archives were actively collecting electroacoustic music materials, or if they were just a byproduct of other collection development policies and practices. And finally, I wanted to determine if libraries and archives with electroacoustic materials were pursuing preservation strategies to ensure long-term access to this born digital content. In the following paragraphs I will discuss preservation initiatives, collection management practices and the home institution's profile as three preliminary findings of the survey. I will then propose the next steps of my research to include: analyzing appraisal and collection development criteria for electronic archival materials, and assessing the processes used by creators of electroacoustic music. This information will help me propose a long-term preservation strategy of our born-digital music heritage.

Preliminary Findings

A fifteen question survey was sent to 499 college and university archivists and librarians all of whom are members of the Music Library Association or the Society of American Archivists' College and University Archives Section.⁸ The survey yielded a total of 43 responses for an 8.6% response rate. Figure 1 shows

³ The InterPARES project focuses on "developing the knowledge essential to the long-term preservation of authentic records created and/or maintained in digital form and providing the basis for standards, policies, strategies and plans of action capable of ensuring the longevity of such material and the ability of its users to trust its authenticity." <http://www.interpares.org> (accessed July 9, 2008).

⁴ Luciana Duranti, "Preserving Authentic Electronic Art Over the Long-Term: The InterPARES2 Project," Presented at the Electronic Media Group, American Institute for Conservation of Historic & Artistic Works, 32nd AIC Annual Meeting. Portland, OR, USA, June 14, 2004, InterPARES 2 Project Dissemination, http://www.interpares.org/ip2/ip2_dissemination.cfm?proj=ip2&cat=pl-conf (accessed July 4, 2008).

⁵ For a description and a theoretical framework of the project see Bruno Bachimont, et al, "Preserving Interactive Digital Music: A report on the MUSTICA Research Initiative," in Jaime Delgado, Paolo Nesi and Kia Ng (eds). *Proceedings of the Third International Conference on WEB Delivering of Music (WEB '03)*, Barcelona, Spain, IEEE Computer Society Press, 2004: 109–112.

⁶ The guidelines are available online in the form of booklets from the InterPARES website at http://www.interpares.org/ip2/ip2_products.cfm (accessed July 9, 2008).

⁷ Early development of this music is traced to research initiatives sponsored by Universities in the United States and radio stations in Europe during the 1950s.

⁸ The first electronic music studios developed to create this new form of music were housed in several Universities and radio stations in Asia, Europe and the Americas and were specifically established as research centers for the creation of new music.

that of the total respondents, 29 indicated that their institutions do not currently have collections or record series that contain electroacoustic music as part of their holdings. The remaining 14 respondents indicated that their institution indeed housed such collections.⁹ Among these 14 institutions, 13 have included the acquisition of this type of material in their collection development policies. This is a sign that the number of electroacoustic music collections is most likely to grow in the next 10 years given that the majority of these 14 institutions manifested an interest in growing their collections in this particular area. This is fundamental in the process of developing a uniform preservation strategy for electroacoustic music among the archives and library profession.

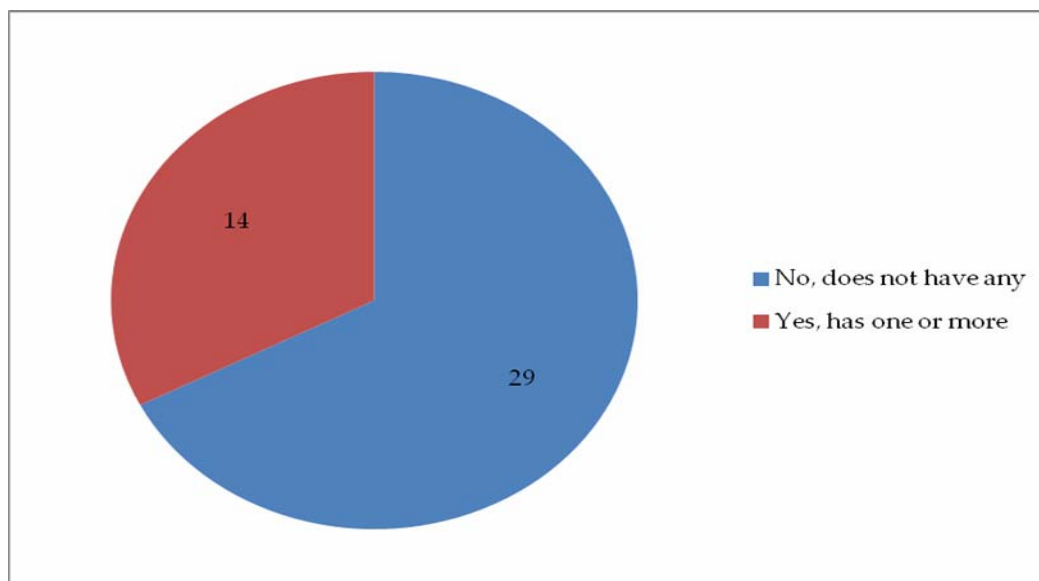


Figure 1. Institutions currently holding electroacoustic music collections

Addressing the institution’s preservation plans was a priority in this survey given the ephemeral nature of the materials used by the records creators. As far these plans are concerned, 9 of the 14 surveyed institutions don’t have preservation plans, 2 don’t know if these plans exist and 3 consider their plans to reformat the material the extent of preservation plans. While reformatting materials may cover basic access needs of most digital/analog sound recording formats, reformatting cannot be considered a full preservation plan. In the case of born digital music, both the final product as well as the tools that were used to create and access the music are related to one another and must be equally weighed when developing any preservation initiatives.¹⁰ Migration to new technologies decreases the theatrical dimension of original performance (Emerson, 2006, 215). When records that depend on proprietary technology for access are concerned, maintaining the connection to the contextual information not only serves the purpose of good management but also plays a major role in the development of appraisal criteria for these types of musical works.¹¹ One author summarizes the current situation of electroacoustic works when he says that “[t]he first years of electroacoustic music took place without regard to the future” (Teruggi, 2004, 57).

This survey was directed at colleges and universities in the United States given their connection to early electroacoustic music research.

⁹ Of these 29 respondents, 15 don’t know if their institution plans to acquire such records in the future, 13 stated that their institution doesn’t plan to acquire these types of collection, and just 1 indicated that even though their institution didn’t have any holdings at this point in time, they will acquire such collections in the future.

¹⁰ For further information regarding the importance of preserving the context of electronic music creation see for example, Canazza and Vidoli, 2001, Emmerson, 2006, and Wetzl, 2006.

¹¹ The broad category of contextual information of electroacoustic music collections includes other types of documents associated with the creative process such as concert programs, commercially released recordings, concert reviews, performance instructions, sketches, manuscripts, etc.

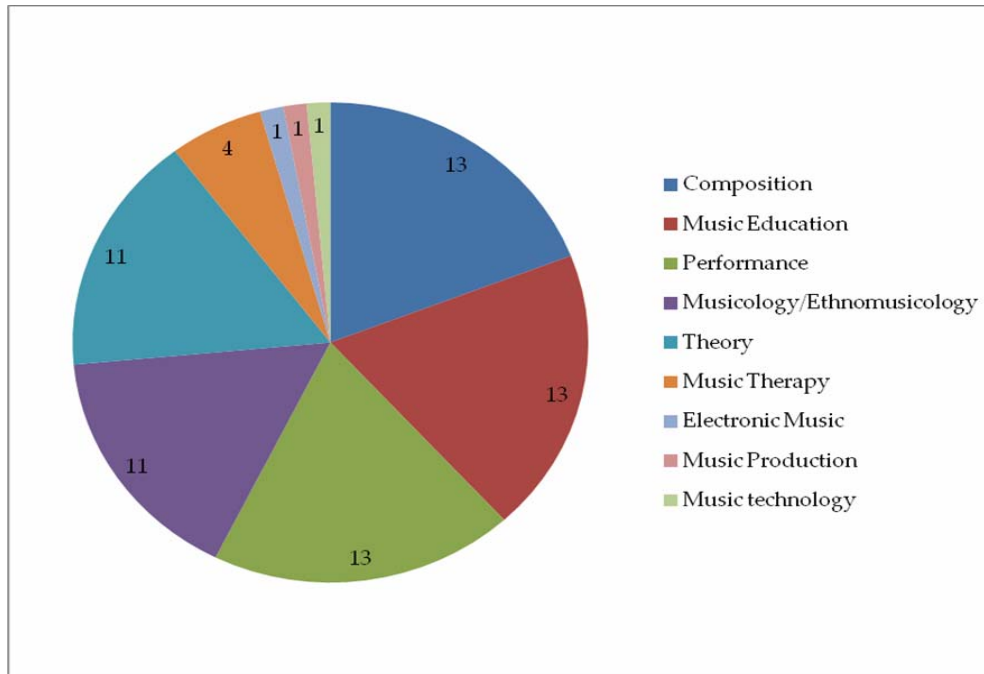


Figure 2. Degree programs offered by home institutions

The institutional environment in which electroacoustic music collections exist plays an important role in fully understanding the context and use of these materials and their future growth. All of the 14 institutions currently holding electroacoustic music collections have a college or department of music as part of their academic organizational structure. Furthermore, these institutions reported composition, music education and performance as the three most offered degree majors. Figure 2 shows the ranges of degree programs at the home institutions of the respondents. The academic pursuits of students and faculty at the home institution have a direct connection to its interest in collecting electroacoustic music. The fact that these collections exist in college and university libraries and archives in the United States and that there is also an interest in continuing to acquire such materials justifies further study of these collections so timely action can be taken by both creators and custodians of these born digital records to assure their continued and future access.

To establish the size the extent of existing electroacoustic music collections, the survey included open questions that inquired about the extent of electroacoustic music materials. Given that these collections depend on the longevity of sound recording technology, there were follow up questions regarding the types of sound carriers and the unit of measurement for such collections used at the home institution. It was difficult to establish concrete numbers because the responses show that the 14 institutions responding positively to having such collections use a wide variety of measurement units to manage their holdings. The responses were varied and include a total of 53 cubic feet plus 86 linear feet of materials across all 14 institutions. It is also important to highlight that only 7 institutions reported the usage of linear feet as a unit of measurement with the other 7 using individual item counts or cubic feet.¹² This lack of standardization in collection management practices makes it difficult to assess the size, even at an estimate level, of electroacoustic music either in cubic feet, hours of recorded music, or terabytes. This lack of standardization hinders our ability to accurately ascertain the extent of the preservation problem. Institutions need to improve how electroacoustic music collections are identified and managed in order to

¹² The units reported included single item counts; number of boxes; unidentified units, e.g., “120–150” and “around 1,000.”

develop a solid preservation plan and access strategy similar to those established for other types of media and electronic archival materials.

Assessing the intrinsic value of musical creations under a different light will bring a clearer understanding of the permanent value of electroacoustic music as a record because these born digital documents grow out of composers' combined scholarly research and creative artistic endeavors. This new dimension in appraisal criteria should be integral to the acquisition of electroacoustic music collections. It is crucial to evaluate existing criteria for electronic and paper records and test its relevance to born digital music collections in order to better inform our acquisition practices. After reviewing these preliminary results we can start to work towards preservation and access initiatives that grow out of solid appraisal criteria in order to maintain good stewardship and to make sure that we, as a profession, are not collecting just for the sake of collecting.

Next Steps

I intend to develop a profile for existing collections consisting of and containing born-digital music in order to better understand what libraries and archives are acquiring. This profile would target, for example, institutions that fall within the demographic characteristics established through this survey which now points to well-known Electronic Music teaching and research centers, as possible niches of such collecting interests. I will also examine the existing appraisal and acquisition criteria used by institutions with electroacoustic music collections for the purpose of proposing a standard set of criteria that specifically includes contextual information of the finished work for future access and also incorporates the InterPARES guidelines. The dependency on proprietary and homegrown technology for the creation of these artistic born digital records makes preserving the context in which these were created a priority in order to provide access to them in the future.

It is imperative that we develop solid preservation and access strategies, especially bridging the needs of those who care for the material with those who create the music in the first place. I plan to survey professional organizations that include both students and teachers such as the Society for Electro Acoustic Music in the United States (SEAMUS) to determine the current concerns about future access to electroacoustic music. I intend to gather data about the documentary output of composers as well as their level of awareness about archives available to them for depositing their material and the tools and processes used to create these artistic works.

References

- Bachimont, Bruno et al, "Preserving Interactive Digital Music: A Report on the MUSTICA Research Initiative," in Delgado, Jaime, Paolo Nesi and Kia Ng (eds). *Proceedings of the Third International Conference on WEB Delivering of Music (WEB '03)*, Barcelona, Spain, IEEE Computer Society Press, 2004: 109–112
- Canazza, S., and A. Vidolin. "Preserving Electroacoustic Music," *Journal of New Music Research* 30.4 (2001): 289–293
- Duranti, Luciana. "Preserving Authentic Electronic Art Over the Long-Term: The InterPARES 2 Project," presented at the Electronic Media Group, American Institute for Conservation of Historic & Artistic Works, 32nd AIC Annual Meeting. Portland, OR, USA, June 14, 2004. InterPARES 2 Project Dissemination, http://www.interpares.org/ip2/ip2_dissemination.cfm?proj=ip2&cat=pl-conf Accessed July 4, 2008.
- Emmerson, Simon. "In What Form Can 'Live Electronic Music' Live On?" *Organised Sound, an International Journal of Music Technology* 11.3 (2006): 209–219.

Lee, Brent. "Issues Surrounding the Preservation of Digital Music Documents," *Archivaria* 50 (2000): 193–205.

Teruggi, Daniel. "Electroacoustic Preservation Projects: How to Move Forward," *Organised Sound, An International Journal of Music Technology* 9 (2004): 55–62.

Wetzel, David Brooke. "A Model for the Conservation of Interactive Electroacoustic Repertoire: Analysis, Reconstruction, and Performance in the Face of Technological Obsolescence," *Organised Sound, an International Journal of Music Technology* 11.3 (2006): 255–272.