

What Does Musicology Have to Do With Archiving? Three Experiences of Engagement

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Article abstract

Musical practices derived from post-1960s experimental music created heterogeneous musical materials and traces—including scores, preparations and instrument modifications, electronic instruments, custom-made devices, and recordings. The Romantic work concept on which most traditional musical archives are based is unsuitable to preserve this expanded apparatus of objects and concepts, and rethinking the musical archive is becoming urgent.

This colloquy collected the experiences of three researchers, engaging with five institutions, three creators, and four countries. Yet the archival issues presented are eerily similar. These experiences involve David Tudor (paper-based archive at the Getty Research Institute, Los Angeles, CA, and the David Tudor Instrument Collection at Wesleyan University, Middtown, CT); Mario Bertoncini (paper-based archive at the archive of the Akademie der Künste, Berlin, and his object collection at the moment stored at the Fondazione Isabella Scelsi, Rome); Gayle Young (who still owns all her production).

WHAT DOES MUSICOLOGY HAVE TO DO WITH ARCHIVING?

THREE EXPERIENCES OF ENGAGEMENT

Valentina Bertolani, You Nakai, and Luisa Santacesaria

What are musical archives? Answering this question from a Eurocentric, Western-art-music perspective, it seems natural to assign a crucial role to institutions such as the Beethoven-Haus or the Mozarteum. These iconic places are products of the history of museification of Western music based on composer veneration: created in the late nineteenth century as shrines to solemnly store relics of composers revered as supernatural beings (Fine 2017). That these physical museums are furthermore complemented and augmented by “the imaginary museum of musical works” has been well discussed by Lydia Goehr (2007).

Lurking behind this historical impulse to preserve materials of past music considered worth preserving is the scholarly endeavour of studying past music thus preserved, a discipline also born in late nineteenth-century Europe named musicology. Given this tight nexus between archiving and studying what has been archived, music of the twentieth century, more than any previous century, has been well documented, because by the time of death of most twentieth-century musicians, musicology was a well-established discipline—so musicologists and/or institutions were ready, able, and willing to preserve materials related to their activity as important documents for the study of music whose creator was no longer with us.

Many new places of memory were established in the second half of the twentieth century. Some institutions hold physical collections and non-physical recollections about the work of a specific composer, such as the Arnold Schönberg Centre and the Archivio Luigi Nono. Archives grown out of private collections such as the Paul Sacher Stiftung, the Fondazione Cini, or the Getty Research Institute have also been founded. At the same time, universities and colleges as well as research institutions have become repositories of materials of significant musicians who worked there or in connection to them, such as the archives of IRCAM in Paris, or the Akademie der Künste in Berlin. And then there are national archival endeavours such as the Canadian Music Centre, Spain’s Centro de Documentación de las Artes Escénicas y de la Música, or the discontinued Centre belge de documentation musicale.

So we find ourselves today surrounded by these and many more archives dedicated to one music or another, attracting musicologists from around the world who wish to investigate the music of the past by delving into the surviving materials thus preserved. However, given the finite resources—both physical and financial—preservation is always an act of selection, and not everything that can be preserved has been preserved. And while it is often said that twentieth-century music underwent a radical change, the primary criterion adhered to by most musical archives continues to be the “strong work concept” (Dahlhaus 1983), inherited from the idealist philosophy of the nineteenth century, for which a composition is considered unalterable and permanently codified in a score (Sallis 2015). As a result, the primary materials to be archived are things written on paper: from sketches, diagrams, manuscripts, to correspondences and program notes. Even when dealing with non-traditional electronic music, as long as the “strong work concept” is strongly held onto, the archive would simply switch its focus from collecting things written on paper to things recorded on tape (De Benedictis). The medium changes but the basic idea of archival material as information *written* in one form or another remains. The focus is still on “text” in a broad sense.

But what happens to music that does not fit the “strong work concept” and the text-biased idea of work as something that is written? This article presents three case studies of archival research characterized by two features. On the one side they present a direct engagement with the collection, meaning an exploration of the collection as a whole and with the desire to understand its archival formation as a whole rather than a source from which to sporadically extract information. On the other hand, these case studies present archival research where the traditional archival framework has been difficult to maintain as a result of the idiosyncratic nature of the music to be preserved—music made by composer-builder-performers who composed not (only) scores but *physical instruments*¹ which they often performed themselves: the American David Tudor (1926–96); the Italian Mario Bertoncini (1932–2019); and the Canadian Gayle Young (1950–). The challenge they pose to the conceptual distinction between composers, performers, and instrument builders traditionally adhered to in musicology directly results in the challenge they pose to the archiving of their materials—what counts as materials and what is the best way to preserve them and make them available to researchers. The partial record of their activities might be saved in the good old ways. However, if the conceptual criteria underlying the *modus operandi* of archives is not rethought, their practices might be lost for good.

This dangerous prospect is far from being relegated to the three examples discussed here; it concerns the work of many other experimental composer-builder-performers of the twentieth century as well as those currently active. Given the process of judgment and selection that always underlies any act of preservation, archival practice is seen as political and “actively engaged in

¹ The term “instrument” here is used in a broad sense, covering any bespoke or commercial objects and tools used for sound production and composition.

radical or counter-hegemonic public history-making activities” (Flinn 2011), with the awareness that “rather than a destination for knowledges already produced or a place to recover histories and ideas placed under erasure, the making of archives is frequently where knowledge production begins” (Eichhorn 2013, 3). Ann Laura Stoler describes archival practices of anthropologists studying colonialism as extractive practices, and she supports a move from “archive-as-source to archive-as-subject” (Stoler 2002, 93) to fully understand the archive as an expression of state power. While this relates to anthropology, musical archives have similarly worked as a strong canonizing force. This becomes apparent in other scholars’ work that grapples with the problem of musical archives. Mark V. Campbell and Maya Stitski (2018) lucidly show how, in the case of Canadian hip-hop, the lack of archival resources is part of a systematic erasure of the genre and of Black Canadians, and a similar argument is articulated by Daphne A. Brooks (2021) on the erasure from music history of Black women. Dylan Robinson elucidates the dangers of preserving “the life of indigenous song,” in recordings made by ethnographers, “incarcerated and trapped against its will in its current locations within the archive and within other classical music compositions” (Robinson 2020, 151). Engaging critically with *archives as subjects* (in any genre of music) is a long-term investment that will ensure a diversity of resources necessary to redress the imbalances in canon formation.

The three case studies of composer-builder-performers working in experimental music provide an interesting entry point into this general problem as all of these artists engaged critically with *physical materials as subjects* as they composed instruments, which they then brought into selective and active connection with their own bodies and other instrumental bodies during performance. There might be something to be learned from their own practice on how their materials might be best archived. Thus, the absence of a discourse on archival practices in experimental music made by composer-builder-performers might be complemented by looking into the practical knowledge of and attitude toward archiving of the same composer-builder-performers, providing vistas into these questions we started with: How to take responsibility, as musicologists, for that liminal and critical space in which the output of a composer-builder-performer moves from the stewardship of its creator to an uncertain new phase? How, as musicologists, can we facilitate this transition? What knowledge do we have to produce to better collaborate with all actors involved, which includes not only human actors such as creators, heirs, archivists, curators, museum workers, future generations of musicologists, and performers, but also instruments?

ARCHIVAL WEATHERINGS (IN THE CASE OF DAVID TUDOR)

You Nakai

There are three major repositories for the materials David Tudor left behind when he passed away in August 1996: the David Tudor Papers at the Getty Research Institute (GRI) in Los Angeles; the David Tudor Instrument Collection

at Wesleyan University in Middtown, CT; and the minds and homes of friends around the world who knew Tudor at different points of his life (mostly in the United States, where Tudor lived, but also in places he visited often such as Japan, Sweden, England, France, Germany, and India).

The nature of materials collected in each archive differs considerably. GRI houses 177.5 linear feet of information inscribed either on paper or tape by human hand, printing machine, or magnetic energy—scores, notes, correspondence, sketches, schematics and diagrams, lists of components, cut-outs of popular electronic magazine articles, receipts, notebooks, customs declaration forms, articles and reviews, programs, photographs, sound recordings, and a few videotapes. Wesleyan takes care of all instruments that Tudor owned, a variety of about 400 physical objects made by him, an acquaintance, or some commercial company—modular electronics, guitar pedals, things to prepare the piano or amplify its sound, and lots of plugs and cables.² Tudor's collaborators hold on to personal memories and personal relics from their time together.

The nature of each archive also differs considerably. GRI is well funded and very organized, requiring reservations for open time slots, and taking extreme care to protect the materials: photographs can be taken, but papers cannot be removed from the protective mylar, and most of the accessible recordings have been digitized. Wesleyan is much more relaxed about everything: a simple email to check if the archive is available, instruments clustered in cabinets and suitcases (recently moved into cardboard boxes)³ for anyone to access. You can stay overnight, touch the instruments, power them up, or even open them and unscrew the circuit board to see what is on the other side. Individuals vary in terms of accessibility (although most people are generous and friendly), how much they remember or think they remember, and feelings or moods.

My research over the last thirteen years has consisted of making a scholarly pilgrimage through these different types of archive and connecting the different materials like puzzle pieces to reimagine a past event: what Tudor did at a specific performance at a specific day and place, why, and how. The dispersion of materials across different types of archives with different modes of operation became a blessing for my project, since I could, (1) find receipts from the 1940s, or scribbles written on small pieces of papers at GRI, which probably would have been lost for good at Wesleyan; (2) open all the instruments to study their internal workings at Wesleyan, which would have been impossible

² In April 2017, I discovered through Ron Kuivila that Tudor's collection of books on electronics were casually assembled on the shelf of the backroom of the Wesleyan archive (a classroom to which the backroom serves as a space to work on projects) that I had seen many times since my first visit there in November 2011. It had never occurred to me that the treasure was right in front of me the whole time.

³ This was a collaboration with Michael Johnsen during our stay at the Wesleyan archive in May 2015.

to do at GRI; and (3) build personal friendships with Tudor's friends, which led into new archival projects,⁴ collaborative performances,⁵ record releases,⁶ and museum exhibitions.⁷

A typical case in this detective work of forensic musicology would start with a custom-made instrument at Wesleyan, which I would open and trace the circuitry and list the components with little understanding of what it does and no manuals to guide me through its workings. Then I would examine the papers at GRI and find a handwritten note with names of components that match those used in the instrument, which would connect to a cut-out article from a popular electronics magazine to reveal its function, while the hotel letterhead on the same note would reveal a location, which would be matched with the receipts from the same hotel to reveal a date, which would then connect to a specific performance around the date and location, which would lead to a photograph where this instrument is spotted among many others, which would be mapped onto a diagram showing how the instruments were connected, which would give an idea for how the music was performed, which would even lead to re-enacting the piece (that is a real story).⁸

With enough patience, coordinating materials works particularly well for Tudor, which has inspired in me a feverish imagination (or working hypothesis) that Tudor deliberately left all his materials as a giant puzzle for people like me to solve—perhaps a pertinent thought, given how Tudor was known for his love of puzzles and genius at solving or making them. But there is also an indeterminacy always involved in the effort to restore and revive the past

4 In June 2018, Tudor's long-time collaborator and friend Gordon Mumma invited me to visit him in Orinda, California, to look at his personal archive. He also drove me to a storage space where his old electronic instruments were kept. Afterwards I emailed Ron Kuivila, who is in charge of the David Tudor Instrument Collection, which led Mumma's instruments to be archived at Wesleyan as well. Also in January 2018, I interviewed the light artist Tony Martin, another long-time collaborator of Tudor, who showed me his personal materials. Afterwards I contacted the Fales Library of New York University, who already had Martin's papers in their archive, about this visit, which led these other materials also being moved to the library.

5 After I interviewed them in November 2011, John Driscoll and Phil Edelstein from Composers Inside Electronics, which Tudor founded with younger musicians in 1976, invited me to perform Tudor's music with them. I collaborated with them twice, performing *Rainforest I* and *Microphone* at the Socrates Sculpture Park on 21 June 2014, and *Rainforest IV* at the Caramoor Music Festival on 19 and 20 July 2014.

6 After meeting Julie Martin of Experiments in Art and Technology, who had collaborated with Tudor since the mid-1960s, I began working with her on Tudor-related projects, one of which was the release of *Monobirds: From Ahmedabad to Xenon* (Copenhagen: TOPOS, 2021), a double LP of Tudor's unreleased recordings she had found in her personal archive and asked me to evaluate. The record, produced by Martin and Jacob Kirkegaard, contains a long essay I wrote about the recordings, also available as a stand-alone publication (Nakai 2021b).

7 Some time after I interviewed them, John Driscoll and Phil Edelstein began planning an exhibition of Tudor's work, which they discussed with me from time to time and developed into *Teasing Chaos: David Tudor* held at the Museum der Moderne in Salzburg, Austria, from 3 July 2021 to 13 February 2022.

8 For a specific account of the trajectory, see Nakai (2021, chap. 7).

in this way—which is also pertinent, given how Tudor made his music by coordinating modular instruments, triggering them with noise that occurred in the mismatch between components, and performing his way through and out of the complexity that follows.

Part of the problem is the deliberate and not-so-deliberate weathering of materials. Although well intended, the desire to preserve things has led GRI to often provide researchers with the reproduction of materials instead of the original—photocopies of handwritten diagrams or digitized copies of analogue recordings—which is different when the materiality of the document is significant. At Wesleyan, the situation is quite the opposite, as their accommodating nature, allowing easy access to original instruments, has resulted in some of them getting damaged or lost over the years.⁹ Memory is faulty and biased, usually further distorted through the passage of time, making the act of retrieval difficult and the act of verification almost impossible. This weathering of information is further amplified by the fact that Tudor was a private person who often revealed something to only one person, or revealed something that was not quite true about things he did not want people to know.

But Tudor embraced such weathering of material as a working method: he deliberately used half-dead batteries for particular effects they produced in instruments, or half-dead instruments for specific results they produced in the music.¹⁰ Tudor even created a piece called *Weatherings* in 1978, which focused on the weathering of sound materials through modulation and manipulation in performance. So perhaps it is natural that the giant puzzle he left behind seems to reflect this nature of his music. Navigating the labyrinth of scattered materials, devising creative solutions to bridge the mismatches between them, getting carried away to unexpected places by things that seemed trivial at first turn the investigation into a performance of sorts. The indeterminacy of coordination and the weathering of materials prominent in Tudor's archives thus challenge the work of forensic musicology, but they are also spices to enliven the process of (re)activation, which is where my focus ultimately lies.

THE DOUBLE ARCHIVE OF MARIO BERTONCINI¹¹

Luisa Santacesaria

After the passing of Italian composer, pianist, and writer Mario Bertoncini (1932–2019), his legacy was divided between two places: the archives of the Akademie der Künste in Berlin and the Isabella Scelsi Foundation in Rome.

⁹ The situation has improved considerably as now the instruments are kept in a separate room with a lock and temperature control.

¹⁰ As John Driscoll recently recalled, “The performance started and was about 5 min in and I saw David gesturing to me to come over to his table. I went over and he said, ‘My filter is not working.’ David had a favorite filter that he had partially burnt out, but he loved the way it responded. So I said, ‘David, that filter hasn’t worked right for a long time.’ Then he responded, ‘I know, but now it really doesn’t work’” (Driscoll to Nakai, 7 October 2021).

¹¹ I am deeply grateful to Valeska Bertoncini for involving Valentina Bertolani and me in the transfer of the Bertoncini fund from the house in Cetona to the archives in Berlin and Rome, and for her continuous support for my research and practice.

What were the criteria for this division and what issues emerge from this choice? To understand these questions, it is necessary to highlight the nature of Mario Bertoncini's work.

After graduating in piano and composition, in the 1960s Bertoncini began experimenting with alternative notations, instrument preparations, and extended instrumental techniques.¹² A founder of the Gruppo di Improvvisazione Nuova Consonanza improvisation collective—of which he was a member from 1965 to 1972—Bertoncini taught at McGill University in Montreal (1974–6) and at the Universität der Künste in Berlin (1977–98).

Since the 1970s, Bertoncini explored a new approach to composition. Besides composing sounds through traditional (although prepared) instruments, he devised new objects with their own sonic features. He built Aeolian harps and gongs of various dimensions, which is why he described himself as a “composer-builder.” Some examples of compositions using custom-built objects are *Vele* and *Chanson pour instruments à vent*, but Bertoncini built many more objects.¹³ For him, these objects could not be considered musical instruments: while instruments are adaptable and flexible and can play several pieces of music, his objects were used exclusively to perform the specific compositions they were devised for. According to Bertoncini, these objects embody the functions of both sound source and score (since in many cases he did not provide a written score). In fact, these objects can produce a pool of sounds—wide but still limited—that is defined during the construction of the object. For him, “composing” means materially “constructing” the sound, from the choice of materials to be used for the transformation of traditional instruments to the creation of sound objects of various shapes and sizes.

While the construction of new sound sources has paved the way for unprecedented timbral possibilities and performance practices, it has also led to a distancing of the composer from traditional musical writing and sometimes, as we shall see, failure to transmit performance information via the written page (see Bertolani 2015).

Between 1998 and 1999, during his years in Berlin, Mario Bertoncini planned with the archives of the Akademie der Künste to give the paper documentation of the works he had produced from the beginning of his career up to that time.¹⁴

After his death, the archive at the Akademie der Künste acquired Bertoncini's paper documents still stored at his house, thus completing the collection

¹² For Bertoncini's biography and list of compositions, see Bertoncini (2022a). For a complete list of Bertoncini's recordings, see Bertoncini (2019).

¹³ For a complete list of Mario Bertoncini's works and photo galleries of his objects, visit Bertoncini (2022b).

¹⁴ As explained in the introduction to the findbook of Mario Bertoncini's documents at the Akademie der Künste, “The Mario Bertoncini Archive was handed over to the Akademie der Künste by the composer in 1998/1999 and comprises the documents of his work from the beginnings to the year of the handover. The 3.3 running m. contains music manuscripts and prints, sketches and drafts, among others for ‘Sei pezzi per orchestra,’ ‘Quodlibet,’ ‘Tune,’ ‘Cifre,’ ‘Spazio-Tempo,’ and ‘Venti,’ compositional exercises and study compositions from his apprenticeship with Goffredo Petrassi, manuscripts of his poetry as well as biographical documents and sound recordings” (“Mario-Bertoncini-Archiv” 2014, translated from German by Luisa Santacesaria).

they already had. There were longer negotiations over the physical objects (sound objects and instrument preparation kits), which the Fondazione Isabella Scelsi in Rome had welcomed to its premises.

In the light of possible future performances of Mario Bertoncini's works, how can the two archives cooperate and how can they serve musicians interested in performing these works?

I will try to answer this question from my experience as an interpreter of Bertoncini's prepared piano works, and as a repository of his performance practice, having worked directly with him to prepare these works.¹⁵

Since 2009, musicologist Valentina Bertolani and I have worked closely with Mario Bertoncini to build possible ways of preserving, enhancing, and disseminating his work. The first step was to ask the composer to teach me to play one of his works for piano. The work that Bertoncini chose was *Suite Colori*, a work from 1999 that includes five preparations for piano (a mix of custom-made objects, store-bought objects, and medium-sized objects composed of several parts). From our first meeting, Bertoncini explained the preparations to me in detail, from their application on the instrument to how to play them, and he provided a kit to prepare my piano at home. In addition, he gave me the score with the first two movements—with the third to be given to me about a year and a half later, and the pages relating to the last two movements after that first concert. All our initial meetings—which I would call lessons on how to learn to play a new instrument—were filmed and included in an extensive audiovisual documentation collected by Bertolani and me over about ten years. From 2009 to 2018, Bertolani and I visited the composer at his home in Cetona several times a year, collecting testimonies from him through video interviews, audio recordings, and photos; we also followed the composer in most of his concerts from 2009 to 2018 (Basel, Cremona, L'Aquila, Montreal, Rome, Bologna, Naples), filming and recording the set-up of the works and preparation of the instruments.

The performance of his pieces and the collection of the audiovisual documentation, in addition to the support given to Bertoncini during the preparation of the more complex works, made us realize the density of information needed to reactivate the works and how limited and insufficient—although important—the indications are in the paper documentation (scores, sketches, preparatory materials) for the works or the single physical object. For instance, after the composer's death and with the transfer to the archives of the Isabella Scelsi Foundation, the videos and images of the work's settings proved crucial in assembling the kits to play pieces for which we had collected audiovisual documentation. But not only that. As Nakai did with Tudor, it is proving increasingly important to connect the documents stored in Berlin and the

¹⁵ Among the performers who worked with Bertoncini are Francesco Dillon, Reinhold Friedl, Michela Mollia, Luisa Santacesaria, Angelina Yershova, Simone Beneventi, Carlota Cáceres, and Lorenzo Colombo. Also Bertoncini worked and shared his techniques with some of his students, such as the members of the Canadian collective Sonde: Keith Daniel, Charles De Mestral, Pierre Dostie, Chris Howard, Robin Minard, Michael O'Neill, and Linda Pavelka.

objects stored in Rome through the memory and experience of people who worked with the composer on those works.

While musical archives protect the material legacy of composers from disappearing, and the work of musicologists is crucial to the critical discussion of this material and its social and analytical content, performers and collaborators are the ones who actually allow the music to live on and be experienced. All their knowledge must be safeguarded and considered to identify the most effective ways to preserve and transmit the works.¹⁶ Composer-builders like Tudor, Bertoncini, and Young are crucial case studies to identify new possibilities for archiving complex music legacies and imagine archives not only as places almost exclusively for musicologists and sketch studies but as repositories of musical experience.

GAYLE YOUNG: ONE ARCHIVE PAST AND ONE NOT YET

Valentina Bertolani

Gayle Young (b. 1950) is an active Canadian composer who has no material stored in an archive and still owns and holds most products of her creative endeavours.¹⁷ Since the late 1970s, the time of her first compositions, Young has been experimenting with a wide variety of sounds and ways of composing and musicking. She has created installations and site-specific works and performances, music for videos and films; she has built her own instruments; she has worked with electronic music and acoustic instruments; and she is an improviser and performer.

Collaborating with Young is the perfect occasion to explore what kind of work a musicologist should produce to support her future preservation needs, even though this requires the uncomfortable and awkward position of interacting with a living person while keeping ends of life in mind (mine and hers).¹⁸ Interestingly, Young has also been instrumental in the preservation of the work of Hugh Le Caine, Canadian physicist, composer, and inventor (among the many instruments he developed are the electronic sackbut, Sonde, and the polyphonic synthesizer; see Young 1999). Her work with Le Caine showed her how difficult it was to secure objects and custom-made instruments, but it also gave her the chance to explore developments in museum curatorial trends. As a composer who created her own instruments too, she could gather her thoughts about curatorial and preservation practices. Her support for the preservation of knowledge about Le Caine reminds us of the need to challenge myopic institutional limits of academic practices. Her book on Le Caine (1989), based

¹⁶ The importance of the role of performers and collaborators has been widely discussed, notably by Zattra (2021) and Nickel (2016).

¹⁷ With some exceptions such as *Castorimba*, the pieces of wood selected for the second version of this installation are now kept by the curator in her garden (as communicated in a conversation with Young).

¹⁸ A panel titled “Better Off Dead? Challenges in Researching Living Composers,” with contributions by William Robin, Alice Miller Cotter, Alejandro Madrid, Cecilia Livingston, and Ana Alonso-Minutti, was presented at the 2021 meeting of the American Musicological Society. This group of researchers offered many reflections on this topic.

largely on a rich collection of interviews and conversations with collaborators of Le Caine, was not accepted by academic publishers because it relied too much on oral history (conversation with Young, 8 June 2020). This might be difficult to understand now, considering how oral history, ethnography, and participating observations are increasingly accepted practices in musicology. This experience prompts a question: What are the marginalized methodologies that can help us move beyond our constraints in relating to archival and musical issues?

Not all parts of archiving Young's work will be problematic. Her work will require archiving of traditional materials such as scores, sketches, audio recordings, photos, liner notes, etc. Her archive will also require strategies to preserve her musical instruments. It is hoped that the intrinsic value of custom-made instruments is now more widely recognized. Even though it is not yet easy to find spaces that welcome them, looting of parts or disassembly—which were possibilities that worried Young about Le Caine—are improbable now.

More ambiguity comes with the preservation of objects used during composition and performance. Indeed, objects need to be understood case by case, in their physical nature and function within the compositional process.

Example 1: Tuned Resonators

Young has used tuned resonators in installations or to record specific pitches in/from the environment since the 1990s.¹⁹ They are usually lightweight PVC tubes bought in hardware stores, not meant to be durable. Here is an extract of our conversation on resonators (called “tubes” during the conversation):

GY: I never thought of the actual tubes as being important artifacts because they were just plastic that you could buy at the hardware store.

VB: So if I invited you to recreate an installation with tubes here in Birmingham, you would find where to get the tubes.... And that's because the measurement of the tubes will change according to the specific place....

GY: They have to be a specific length and width, but as long as you know how long the tube is and what the diameter is, it'll sound the same from one place to the next one, even from one tube to the next.

VB: So you don't have an aesthetic for which kind of tube sounds better?

GY: No. For *Tonally Inclined*, which we did it at Caramoor in New York²⁰ in the summer of 2019, we used steel tubing that we had shaped for us by a company near where we live that does exhaust systems for very large trucks. All the exhaust systems are made of stainless steel and they have the equipment to bend them. We made C-shaped resonators for that piece, so that people could listen up and they could also bend over and listen down to the same length, the same frequency. And then we had three of

¹⁹ For more information on how Young started to use tuned resonators, see Young (2002), Bertolani (2020a).

²⁰ About *Tonally Inclined*, see Belaire (2017a).

those attached to each other in a stand and they supported a tree. Reinhard Reitzenstein works a lot with inverted trees.... So we are going to keep those stainless steel tubes. We could remount them pretty much anywhere. But I could also put them in the car and use them to record something and then put them back in the workshop after that.... And they come in pieces that can be screwed together and then unscrewed.

VB: Was it different to work with those tubes?...

GY: In terms of their tactile presence with people touching them, the metal ones are much better and they also look nicer. So if it was a public situation, I would want to use metal, but when it's a traveling situation where I have to carry them across a trail in a backpack, I like the plastic ones because they don't weigh as much. And they fit together very quickly with little plastic couplers. I don't need a screwdriver. There are reasons for both options. (Young and Bertolani, 20 June 2020, edited; used with Gayle Young's permission)

At their core, both options are tuned resonators. But the two options are different. The steel resonators are custom-made, and remaking them would be costly and require a lot of labour. Their preservation is worthwhile and saves embedded knowledge. PVC resonators do not need to take up storage space in a hypothetical archive or museum. Still, it is important to preserve how Young applied her theoretical knowledge of acoustic laws. Such a conversation with Tudor or Bertoncini would have helped us navigate the extremes of negligence in preserving important physical objects and a frenzy of hyper-conservation (e.g., for small piano preparations that can be bought in any stationery store, in the case of Bertoncini).

Example 2: Lithophones

Young also works with lithophones, exploring the resonance of different stones through improvisation.²¹ This is another interesting case from an archival point of view. Indeed, while Young or any other future performer might keep favourite found stones, each must collect and explore a unique set of stones. This requires a complex skillset. So it is not only a matter of oral history documentation but also a form of knowledge-based documentation. The materials to be preserved must help us answer questions such as, How do you choose a stone? How do you engage with it from an acoustic perspective to find its resonance? How do you best combine different shapes of stones? How do you arrange them while performing? Young and I discussed the possibility of organizing and recording workshops to enable practitioners to perform the lithophone ("to enable" is Young's choice of words to discuss the topic) as a conservation strategy. Here is an excerpt of our conversation:

VB: Do you think that finding someone willing to perform with you, to collaborate on performances, to improvise with you ... do you think this would be another possibility for the preservation of this knowledge...?

²¹ See Belaire (2017b), and Sound Symposium (2012).

GY: Yeah!

VB: ... You would enable someone to play lithophones through your knowledge. Then that person might be able to do what you taught them but also something else.

GY: I would be very happy if they did both.

VB: So you don't feel there should be boundaries and how much something else they can add.

GY: No....

VB: ... Would you like to have the knowledge that you pass on linked to your name?... Do you feel this would be an important acknowledgment?

GY: I would like it, but I wouldn't reject somebody who wanted to just take it over and do their own project with the knowledge they learned from me. It would be a mentorship probably in that second case....

VB: So the acknowledgment of the name is appreciated but not necessary.

GY: Yeah.

VB: ... Have you ever had any anxiety because of feelings that someone might steal your ideas; or feeling you were not acknowledged enough; or feeling that you were missing out and not putting your name more strongly on something?

GY: No, but maybe I should start. [*Laughter*]

Maybe I've just not been thinking clearly about the credit. Because when I look at the context of the oral history interviews I did on the Hugh Le Caine biography, I would like to put them online eventually so people could listen to them, but I would want them to know that it was me talking. So if we take that in a parallel situation with music ... Yes, I would want to be credited for sure. I haven't thought clearly about this....

I am feeling a bit naive! [*Laughter*]

VB: Oh no! I think these are very uncomfortable conversations to have.

GY: But it is very important. I really appreciate being invited to consider these questions. (Conversation with Young, 8 June 2020, edited. Used with Gayle Young's permission)

The prospect of disposing freely of knowledge acquired from someone else does not sit well with our constructed sense of authorship and more technically of copyright. The knowledge, co-created by Young and the workshop practitioners, would be stored on audiovisual recordings of hypothetical workshops, whose rights would belong to the author of the recording, and in the bodily memory of the workshop practitioners, who would be free to use the knowledge as they wish. Scholarship on ethnography has challenged that

the authorship of the recording should be credited to the recorder (Anderson 2012); but would it be fruitful to challenge the notion that our acquired knowledge belongs to us as individuals? In 2023 Gayle Young, Luisa Santacesaria, and I will work together for eight days to document exchange of performance techniques and ideas between Gayle and a performer.

CONCLUSION

The format of this article was chosen to amplify a dialogue among the authors born out of experiences with different stages of creating archive formations. We felt a growing sense of engagement toward the archival formation we were working with: not only a pool of documents to use but also a responsibility to share. For example, the major difference between the work that Luisa and Valentina have done on and with Mario Bertocini and the work they are doing with Gayle is that with Gayle they are thinking about preservation with the composer, collaboratively and before conservation is needed, rather than in an emergency when others' decisions (whether professionals, heirs, or friends) can influence the work done for decades to come. You's archival study of Tudor's instruments has led to collaborations to revive his music that was thought to have died with him. In July 2022, this endeavour culminated in a ten-day festival "Unexpected Territories" in Berlin, dedicated to Tudor's work, in which several pieces were performed with instruments that Michael Johnsen cloned from Tudor's original circuits. Furthermore, You is engaged in a three-year project to realize a project that Tudor left unfinished, which involves yet another shift of perspective on what archiving of instruments means, not only because the project was never realized, but also because Tudor's core idea was to turn an entire island into a musical instrument. Also, the three authors of this article presented a version of this same work at the biennial meeting of the American Musical Instruments Society in June 2022 in Calgary, which included a presentation by Young, detailing her conservation efforts on the music of Hugh LeCaine.

From the attempt to conserve the instruments of composers who are no longer with us, through collaboration with a composer that looks to the future, to a project that aims to realize an instrument only imagined but never realized—shifting attitudes are cultivated in conversations about current archival formations that create a canvas on which to draw our experiences. Some of these conversations are represented by interest shown by six panels at the 2021 annual meeting of the American Musicological Society, that were related to the topic of musical archives as subjects. Italian conversations are projects supported by *Tempo Reale's* online magazine *musicaelettronica.it*: a series of articles by Laura Zattra investigating the sources needed to study twentieth- and twenty-first-century music (see *Musica Elettronica.it* 2022); Bertolani (2020b); and "Ctrl+S," created by Federica Bressan and coordinated by *Tempo Reale*, focused on the conservation of electronic music.²² Within the

²² See <https://www.musicaelettronica.it/tag/ctrls>. See also Santacesaria and Sarno (in publication).

francophone world, the conference on the project Antony promoted by IRCAM has concluded.²³

This shows the dynamic conversation about the theory and practice of music archiving, built on the intersection of theoretical discourses, such as a more nuanced understanding of musical material, more awareness of preservation strategies of oral transmission and tacit knowledge,²⁴ and attention to the relationship of collective memory of a community and embodied memory of the individuals. Soon we hope to collect more specific case studies to measure the growing theoretical work, to propose more ways to help us preserve musical expressions that are tailored to the needs of musics that cannot rely on the traditional archive. Our work is also driven by a shared sense of urgency. Many of the first-generation composer-builder-performers of experimental music started their careers in the 1950s. This means that those among them who are still with us will no longer soon. Since the hands-on knowledge required to handle non-standardized and composer-builder-specific instruments is a “folk art”²⁵ passed on primarily through oral transmission, the living presence of the individual creator is often critical for understanding the material. As a result of the biased neglect of many archives, however, even when paper materials can be sold or donated, physical instruments are left covered with dust in the builder’s home with no place to go. In order to prevent these instruments from becoming homeless, it is time to think about their future.

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²³ See https://musinf.univ-st-etienne.fr/recherches/antony/conference_program.html.

²⁴ See, for example, the possibility of seeing music as intangible heritage and the consequences of its preservation in Broclain, Haug, Patrice (2019).

²⁵ “I think the reason I call it folk art has to do with its essentially being not mass-produced even though it might be used in some mass media way. However it’s basically not mass-produced and there’s no strong standardization. If David Tudor or David Behrman or Paul DeMarinis ... used all the same circuits, we might think of it another way. But in fact, they’re all very different; they even use them differently” (Gordon Mumma in Ashley 2000, 100).

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ABSTRACT

Musical practices derived from post-1960s experimental music created heterogeneous musical materials and traces—including scores, preparations and instrument modifications, electronic instruments, custom-made devices, and recordings. The Romantic work concept on which most traditional musical archives are based is unsuitable to preserve this expanded apparatus of objects and concepts, and rethinking the musical archive is becoming urgent.

This colloquy collected the experiences of three researchers, engaging with five institutions, three creators, and four countries. Yet the archival issues presented are eerily similar. These experiences involve David Tudor (paper-based archive at the Getty Research Institute, Los Angeles, CA, and the David Tudor Instrument Collection at Wesleyan University, Middtown, CT); Mario Bertoncini (paper-based archive at the

archive of the Akademie der Künste, Berlin, and his object collection at the moment stored at the Fondazione Isabella Scelsi, Rome); Gayle Young (who still owns all her production).

Keywords: archiving objects, music archive, experimental musics, musical instruments

RÉSUMÉ

Les pratiques musicales dérivées de la musique expérimentale depuis les années 1960 ont produit des matériaux et des traces musicales hétérogènes, comprenant des partitions, des préparations et modifications d'instruments, des dispositifs personnalisés, des enregistrements. Le concept d'œuvre sur lequel la plupart des archives musicales traditionnelles se fondent, remontant au romantisme, n'est pas adapté pour préserver ce complexe élargi d'objets et de concepts, et il est de plus en plus urgent de repenser les archives musicales.

Cette discussion rapproche les expériences de trois chercheur-e-s, qui s'intéressent à cinq institutions et trois créateur-ric-e-s dans quatre pays différents. Pourtant, les problèmes relatifs aux archives qu'on rencontre présentent des ressemblances troublantes. Ces expériences regardent : David Tudor (archives papier au Getty Research Institute à Los Angeles, Californie, et David Tudor Instrument Collection à la Wesleyan University à Middtown, Connecticut); Mario Bertoncini (archives papier aux archives de l'Académie der Künste à Berlin et collection d'objets hébergée actuellement à la Fondazione Isabella Scelsi à Rome); Gayle Young (qui est toujours en possession de toute sa production).

Mots-clés: objets d'archives, archive musicale, musiques expérimentales, instruments musicaux

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