iasa

International Association of
Sound and Audiovisual Archives

Internationale Vereinigung der
Scall- und audiovisuellen Archive

Association Internationale
d'Archives Sonores et Audiovisuelles

Asociación Internacional de
Archivos Sonoros y Audiovisuales

iasa journal

No 55, August 2025

www.journal.iasa-web.org

CONTENTS

In order to ensure diverse and clearly-articulated viewpoints in each issue of the journal, the IASA Journal solicits input and guidance from an Editorial Board consisting of the current IASA journal editors and president as well as an invited group of IASA member representatives from geographical regions throughout the world.

The IASA Journal Editorial Board provides general review and guidance on direction of the IASA Journal, meets once yearly during the IASA annual conference, assesses previous year's journal issues and makes general suggestions for future activities.

Board positions are entirely voluntary and receive no remuneration or financial support from IASA.

Current IASA Journal editorial board members

DOI: 10.35320/ij.181

This issue marks the end of my fifth year as Editor of the IASA Journal and comes at a time of rapid political, cultural, and economic shifts that are impacting archives and archival workers. An American living in the Czech Republic, I have watched with great dismay as a coordinated, multifaceted assault on institutions of memory, knowledge, and public access has been launched by the new administration in the U.S.: firings of the Archivist of the United States, the Librarian of Congress, and the Director of the Copyright Office; the defunding of the Institute of Museum and Library Services; cancellation of grants from the National Endowment for the Humanities and National Endowment for the Arts; book bans; and the purging of public data from the internet. The rescission of funding for the Corporation for Public Broadcasting threatens not only journalism and programming from PBS and NPR, but those who work in public media's audiovisual archives. My own employer, Radio Free Europe/Radio Liberty, was defunded in March 2025 along with several other international broadcasters including Voice of America. RFE/RL's future is still uncertain: after a lengthy lawsuit, its funding is secured only through the end of September. Still quite a new department, RFE/RL's Digital News Archive was already facing numerous challenges, and much of its legacy data from the past 25 years has not yet been processed, backed up, or formally archived. Many IASA members and archivists from around the world have reached out to help, which I am incredibly grateful for. These actions and many other policies of the new administration will surely have a knock-on effect globally. It's a troubling time for American archivists (and a terrifying time to be queer, disabled, an immigrant, or someone holding unpopular political opinions, among other things), and I hope that IASA remains in a strong position and its membership continues to seek ways to support colleagues and institutions facing threats. While I am powerless as an individual to stop these attacks, there is power in collective action and care.

Unfortunately, I will not be able to attend the joint conference with SEAPAAVA this year. I will miss seeing friends and colleagues, and I wish everyone a safe and productive conference. I speak to many presenters, encouraging them to submit to the journal. This year I will review presentations after the event, due to the 12 hour time difference. I welcome any interested conference presenters reading this editorial to contact me or Managing Editor Dr. Marija Dumnić Vilotijević with abstracts, ideas or questions. At this time, we are still accepting submissions on a rolling basis, with no current deadline for next year's issue.

The Editorial Board continues to grow and take shape. Members of this body have been a great support to myself and Marija, offering their expertise, time, and editorial experience. Shortly after last year's conference in Valencia, Dr. Jesse Johnson joined our E.B. as a North America representative. We are delighted to have him on board, but were also sad to lose Dr. Lindsay Mattock, a long-time member who was instrumental in planning the journal's transformation to an Open Access, online-only format and in establishing the editorial board. Recently, some members of the board have been dedicated to the creation of an official style guide for the journal, which will be published online soon. Another group has been investigating potential aggregators and indexers for the journal to be included in, increasing our reach and bringing more attention to the authors it features. Marija and I are always looking for new members to join this advisory body—please contact us if you are interested in serving.

Issue 55 of the IASA Journal brings together six articles that reflect a range of approaches to digitizing, recovering, and reinterpreting audiovisual collections across diverse archival, geographic, and historical contexts. Authors from Germany, South Africa, Norway, the United States, Azerbaijan, and France are featured, with projects extending to Southeast Asia and the Caucasus. Together, these pieces illuminate audiovisual archival practice while reaffirming the field's critical role in safeguarding diverse expressions of human experience.

Ruprecht Langer presents the results of a mass digitization project at the German National Library involving over 50,000 commercial audio recordings. He describes the development and operation of a large-scale digitization workflow designed to meet the demands of legal deposit, long-term preservation, and access, highlighting practical challenges around staffing, infrastructure, and quality control.

Andrea Walker and Susan Mvungi offer a compelling account of post-disaster archival recovery at the University of Cape Town Libraries. The devastating 2021 Jagger Library fire destroyed irreplaceable archival collections, but the disaster became an opportunity to digitize thousands of audiovisual items, as well as to improve disaster preparedness and to conduct a large-scale inventory of collections.

David M. Walker and Crystal Sanchez document a unique capacity-building collaboration with the Tbilisi State Conservatoire to digitize endangered recordings of traditional Georgian music. Their project resulted not only in the safeguarding of intangible cultural heritage, it also strengthened regional infrastructure in Georgia and empowered Conservatoire staff with technology, best practices, and training. Ketevan Davitashvili, a key project participant, recently recounted some of her own experiences with this project in an online interview: https://easterndaze.net/recordings-belong-to-the-people-an-interview-with-sound-archivist-ketevan-davitashvili. I've spent time getting to know Keti in Istanbul and Valencia—she is both a talented emerging professional and an IASA member (both, possibly, as a result of this project!).

Karl Peder Mork presents a unique and intimate collection of audio letters recorded by Norwegian-American Owen Veum, offering insights into second-generation immigrant identity and transatlantic cultural memory. Veum's letters were recorded and sent to relatives in Norway between 1964 and 1983 and form the basis for Mork's analysis of transnational family memory and everyday communication. Mork connects the collection to broader questions about archival value, vernacular media, and the preservation of informal, affective sound recordings that often fall outside traditional institutional frameworks.

Joséphine Simonnot and Dana Rappoport introduce the Pratinada platform, which supports the identification and study of Southeast Asian musical materials dispersed across European archives. Developed in collaboration with musicians, researchers, and heritage stakeholders from the region, the project aims to promote equitable access, support shared knowledge production, and contribute to the broader decolonization of archival practices.

Finally, Dr. Sanubar Baghirova examines early 20th-century recordings of Azerbaijani traditional music within the context of Caucasian discography and regional cultural politics. Her analysis traces how these recordings were shaped by the commercial agendas

of recording companies and the geopolitical tensions of the time, offering insight into how musical heritage was framed, marketed, and preserved across shifting historical contexts.

At first glance, the contributions span vastly different geographies, formats, and institutional settings. But a shared set of concerns emerges around how audiovisual archives are managed, interpreted, and mobilized in response to institutional, technological, and historical challenges. Whether addressing large-scale digitization in a national library, restoring access in the wake of disaster, or tracing the cultural circulation of recordings across regions and diasporas, each contribution foregrounds the operational and interpretive decisions that shape audiovisual archival work. Collectively, they highlight that audiovisual archives are not static repositories but active sites of negotiation between access and restriction, memory and infrastructure, local context and transnational relevance.

Happy reading,
Jennifer Vaughn
IASA Editor

A LETTER FROM IASA'S PRESIDENT

Patrick Midtlyng, Library of Congress, USA

DOI: 10.35320/ij.182

Dear IASA Community,

Hello again! To start, I would like to sincerely thank everyone who provided feedback following the conference in Valencia and in the lead-up to this year's conference, including those who participated in the survey on safety concerns. There have been several unanticipated challenges that have threatened our ability to hold a conference in the United States, and the Executive Board has been committed to exploring every possible avenue to ensure the safety of our members.

I'm thrilled that the conference is moving forward with only minimal changes. This September's event at the University of Hawai'i at Mānoa features thematic streams on the preservation of climate-impacted media and intersections of climate, culture, and marginalized identities. The programme for this conference is outstanding, and I hope that many of you will be able to attend in person or online.

It has been 17 years since the IASA conference was held in Sydney, Australia, and 25 years since the joint SEAPAVAA event in Singapore. A return to the Asia-Pacific region, and the opportunity to reconnect with SEAPAVAA, were both highly desired. I am grateful to the IASA Executive Board and the SEAPAVAA Executive Council for working hard to make this possible.

At the Singapore Conference in 2000, Presidents Ray Edmondson (SEAPAVAA) and Crispin Jewitt (IASA) introduced three resolutions that addressed the shared and long-ranging vision of the partnership between their organizations and our partners in the CCAAA:

1) IASA and SEAPAVAA believe there is an urgent need to develop the CCAAA as an effective coordinating body for the strategic development of the global audiovisual archiving sector. Both associations are keen to play an active and appropriate role within this Council, and urge UNESCO to afford it due support and recognition on a part with existing levels of support for the libraries, archives, and museums peak bodies.

2) IASA and SEAPAVAA support the principle of the adequate and equitable development of audiovisual archiving skills and infrastructure in all countries of the world. The audiovisual memory of the 21st century should be truly and equitably reflective of all nations and cultures; the failures of the 20th century to secure this memory in many parts of the world must not be repeated. This principle is consistent with the development of mutual support and encouragement which are part of the raison d'etre of both associations.

3) IASA and SEAPAVAA recognise that the emerging profession of audiovisual archiving now requires the recognition and availability of formal professional training at both the undergraduate and postgraduate levels. This will improve options for the personal development of existing practitioners and it will also open the way for young people to pursue a long term career in the profession. Both organisations encourage the development of existing and future programs to this end.

As we mark the 25th anniversary of these resolutions, I find it remarkable to reflect on how far we've come, yet how far we still have to go. The "Singapore Declaration" is both a challenge to do better, and a recognition that doing so requires us to be better stewards of our resources and better caretakers of our collections, our knowledge and ourselves.

We've seen a rise in the professionalization of many aspects of audiovisual archiving, but the establishment of formal preservation programs still lag behind our collections' needs. IASA's Education and Training Committee has worked tirelessly to help build infrastructure and skill sets around the world and is a model for effective collaboration, promoting AV education, and building hands-on experience.

Technological advancements have made the adoption of "Good, Better, and Best" practices more obtainable than ever. However, the framing of best practice as the *only* acceptable practice has introduced unnecessary tensions. I appreciated the recent, wide-ranging exchange on the IASA listserv concerning preservation strategies, global realities, equipment obsolescence, storage conditions, and practical limitations across different regions. It was precisely the kind of conversation we should be having more of: intentional, insightful, and collegial. Revisiting past guidance in light of new developments and refocusing our efforts on practical, achievable results without judgment will certainly advance our work.

Lastly, in putting together the plenary on the anniversary of the Singapore Declaration, I learned that Mr. Jewitt passed earlier this summer. Albrecht Häfner, who was Secretary General during Mr. Jewitt's presidential tenure commented on learning the news, "[Crispin] was a quiet, unassuming, disciplined leader, with careful decisions" and that the resolutions were "proof for Crispin's farsightedness." Christopher Clark, former IASA Editor who also worked with Mr. Jewitt at the British Library, offers his own tribute in this issue.

Best wishes,
Patrick Midtlyng
IASA President
August, 2025

CRISPIN JEWITT (1949–2025)

Christopher Clark, Retired, United Kingdom[1]

DOI: 10.35320/ij.183

Crispin was Head of the Sound Archive at the British Library from 1991–2007 and IASA President from 1999–2002. His proudest career moment, I believe, was hosting the IASA Conference at the British Library in London in 2001, especially the farewell dinner at the Institute of Directors. But before considering his contribution to IASA, let's go back a decade.

The summer of 1991 was a milestone for Crispin, as it was for me. Big changes were made at the Sound Archive while I was away on a Fulbright Fellowship: I returned to find that Crispin Jewitt had replaced Christopher Roads as director and a team of management consultants was busy preparing the ground for a computerised catalogue and data conversion project. We both played a major part in bringing that project to a successful conclusion. Both of us had to set aside pet interests (for Crispin it was maps and for me, jazz recordings) in favour of project and data management respectively. Crispin drank deeply from the PRINCE and PRINCE2[2] manuals, became adept at winning European Commission-funded partnership projects and gained a reputation for timely delivery with minimal overspend. He became a master of the Work Package, but he also grasped the bigger picture, engaging comfortably with strategy and the inevitable structural adjustments that followed.

His election to the IASA presidency came later than expected. I travelled with him to the conference in Bogensee in 1994 to report on accomplishments back home. Shortly after his return from Bogensee he was diagnosed with leukaemia. Miraculously, he survived and although he missed the heat and hype of the conferences in Washington and Oman he was back as Chair of the National Archives Committee in time for Paris in 1998 and was elected President in Vienna the following year.

Crispin liked to feel in control of any work-related process, the "inputs and outputs", as he would say. For some people that made him appear overly bureaucratic. I think of it rather as adopting a business-like approach coupled with a wariness about any sense of privilege or entitlement. A renowned subject specialist himself (Who's Who lists him as a historian of cartography and specialist adviser to the British Library on military cartography), Crispin was acutely aware of the dangers of allowing singular interests to dictate policy—tails wagging dogs. He was less interested in collection building per se, more interested in accountability, quality of service and delivery. By paying so much attention to internal processes, he believed that the taxpaying user was getting a poor return and that they were right to ask, seeing the slogan "preserving for future generations", if that future was ever likely to begin soon.

1 Christopher Clark worked at the British Library in various capacities, including Head of Cataloguing and Head of Digital Research from 1978–2013. Now retired, he was a long-time IASA member, serving as IASA Editor from 1996–2002. He chaired the IASA Cataloguing Committee from 2002–2009 and contributed the chapter on metadata in TC-04. He received the IASA Award in 2006 for cataloguing and documentation standards.

2 https://www.prince2.com/uk/what-is-prince2

He made the Sound Archive and IASA more rounded and interoperable with the larger knowledge community. In this respect he was helped by the rapid adoption of international standards for delivering sound files across networks. He made sure that his staff and IASA members gained competence in those new technologies. The standard of IASA conference papers broadened and their quality improved, I think, during Crispin's era.

As Director and President, he also understood the importance of external relationships. He cultivated good relations with IFPI and the BPI, the representative bodies for the international and national recording industries, in a bid to reduce the severity of copyright barriers to collection digitisation and online access at scale. Recognising that digitisation brought recording media closer together and made the world an even smaller place, the Singapore conference in 2000 was shared with SEAPAVAA and London with ARSC, while in 2001 he led the IASA presence at the first Latin American audiovisual conference in Mexico City, where FIAF and FIAT were also major participants. Crispin received the IASA Award in 2007 "for significant contributions in promoting a broader vision for IASA and as ambassador to external associations culminating in his success as Convenor of the CCAAA since 2002". IASA Awards were established by the IASA Board under Crispin's presidency at the London conference in 2001.

Crispin retired from the Sound Archive and from IASA in the same year, 2007. One of his leaving gifts from the British Library was a 35-year-old bottle of whiskey that had been working for as long as he did. I do hope he had time to enjoy it.

HOW THE GERMAN NATIONAL LIBRARY MIGRATED 770,000 COMPACT DISCS AND DIGITIZED 50,000 AUDIOCASSETTES

Ruprecht Langer, Head of German Music Archive, German National Library[1]

DOI: 10.35320/ij.170

Abstract

The German Music Archive of the German National Library collects copies of every sound carrier published in Germany. It began collecting audio CDs in 1982, and growing at a rate of more than 20,000 units per year, the collection contains 770,000 items today. Though the most significant part of the archive's collection of analogue sound carriers consists of vinyl and shellac records, there is also a substantial number of audio cassettes.

Over the last 15 years, the German National Library has put two digitization projects into practice to preserve its library holdings and to make music more easily accessible via the reading rooms' computers at its Leipzig and Frankfurt am Main locations. One project focused on migrating the digital content of all its audio CDs to the digital repository, and another initiative managed the digitization of the archive's 50,000 audiocassettes. The German Music Archive can now provide more than 500,000 hours of digital music to its on-site users.

This article explains the processes and workflows of both projects, challenges encountered, quality control applied, and lessons learned. It describes how the library dealt with hidden tracks, additional materials, non-circular CDs, faulty tapes, audible errors within a CD, and why sound carriers with electronic music seemed particularly complicated.

Keywords: digitization, content migration, compact disc, audiocassette, semi-automated workflow, conservation

Introduction and Background

The German National Library was founded in 1912 in Leipzig as the Deutsche Bücherei. After World War II, Germany was separated into East, the German Democratic Republic (where Leipzig is located), and West, the Federal Republic of Germany. While the Deutsche Bücherei was responsible for collecting all published media in the East, the West lacked its own national library. Therefore, the Deutsche Bibliothek was founded in Frankfurt am Main in 1947 (Rausch, 2023). While Leipzig had already started to collect East Germany's sheet music in the 1940s and vinyl music records in 1970, the Deutsche Bibliothek in Frankfurt founded the German Music Archive (Deutsches Musikarchiv) as one of its departments in West Berlin in 1970. Therefore, beginning in the early 1970s, sound carriers were collected systematically in both East and West Germany. In 1973, the German Music Archive received the legal deposit right.

One of the crucial aspects of the German Music Archive to this day is its agnostic collection policy. The archive does not evaluate whether one kind of music, genre, composer, or artist is worthy of being collected, and is not concerned if an item is economically

1 Ruprecht Langer studied Musicology and Theology in Leipzig, Germany. After working as a researcher at the Johann Sebastian Bach Archive and as a project manager for two independent CD labels, he has held the position of Head of the German Music Archive at the German National Library since 2017. He is currently the chair of the Research Library Section of IAML and the president of IAML Germany.

successful or of particular interest. Mandatory deposits must be made by all companies, institutions or persons who have the right to distribute the media work or to make it available to the public, i.e. publishing companies, originating authorities or self-publishers, and whose headquarters, business premises or primary residence is located in Germany (DNB, n.d.).

Figure 1. CDs inside the stacks of the German National Library in Leipzig. Photo: German National Library.

With the reunification of the two German states, the two national libraries were also united into Die Deutsche Bibliothek (The German Library) and later into Deutsche Nationalbibliothek (German National Library). In 2010, the German Music Archive changed its location from Berlin to part of the building complex of the Leipzig site of the German National Library. The Berlin and Leipzig music collections were merged, and all duplicates were sent to the site in Frankfurt.

According to the library's legal mandate, the German National Library has to collect, safeguard and make available all kinds of media in text, image and sound that have been published in Germany since 1913 (DNBG, 2012). The German Music Archive is responsible for the collection of sheet music, sound carriers published in Germany, as well as digitally published scores and recordings.

Over the years, approximately 2.5 million sound carriers have been accumulated in the library's collections, including wax cylinders, shellac and vinyl discs, audiocassettes, and most often compact discs (DNB, Statistik 2023, 2024). Over the last 20 years, an average of 1,100 sound carriers was delivered to the German Music Archive weekly. Since the German National Library collects two copies of each publication, these numbers should be approximately halved to determine how many unique copies of sound carriers the library holds. In total, there are approximately 770,000 titles on CD and 50,000 on audiocassette today. All in all, audio CDs account for approximately three quarters of the German Music Archive's audio collections.

The library stacks both in Leipzig and in Frankfurt (Figure 1) provide ideal storage conditions. The collected media is protected from sunlight, and kept at a temperature of 18 °C and a relative air humidity of 50% for paper-based media and 30% in the CD stacks. However, the German Music Archive's sound carriers are still endangered due to decomposition.

From Bad to Worse: Endangered Audio Cds

Due to the mix of different layers and materials like polycarbonate, metal, glue, ceramic, and paint (Figure 2); and also because these materials behave differently under changing circumstances like temperature and humidity, physical and chemical changes to the makeup of a CD might make it become unplayable (Youket, 2007).

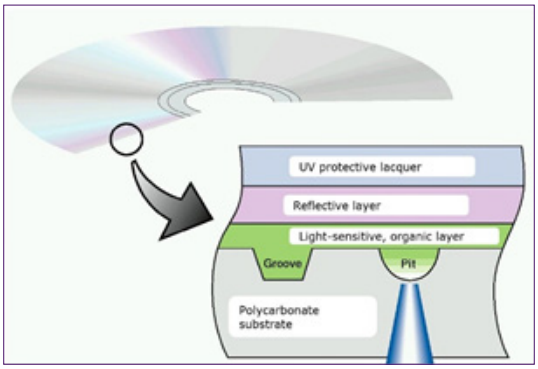


Figure 2. Layers of a standard CD (simplified). Graphic: German National Library.

Even industry-pressed CDs produced by Red Book[2] standards can consist of a wide range of materials. In 1993, the German Music Archive analysed the condition of its CDs. During this process, the archive's staff picked one hundred CDs for a long-term test using a CDQC2, a compact disc test system analyser made by Koch International. Fifteen years later, the same hundred CDs were tested again, using the exact same methods as in 1993. The German Music Archive tested them according to the Red Book specifications, checking for Block Error Rate, E22, and E32 errors (jitter, radial noise, etc.).

As shown in Figure 3, already in 1993/94 only 18 CDs out of 100 could be labelled 'good', 47 were 'OK', 34 'bad', and 1 'defective'. Fifteen years later, the results were much worse: 80 were now 'bad' or 'defective', and only 6 remained 'good'. These analyses were time- and resource-intensive, but the results are not meaningful in the long term, since new damage can occur at any time.

2 The Red Book is the colloquial name for IEC 60908, the International Electrotechnical Commission's standard for the audio CD.

Evaluation of the tested CDs

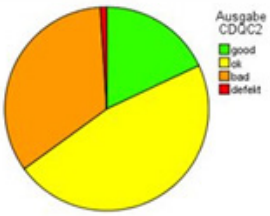
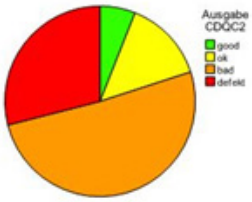
	1993/94		2007/09
			
Category	**Amount = %**		**Amount = %**
good	18		6
ok	47		14
bad	34		51
defective	1		29
Total	100		100

Figure 3. Quality decrease of the CDs in 15 years' time. Graphic: German National Library.

Of particular interest to the German Music Archive was the realization that visible damage only occurs when it is already too late to save a CD. So, it did not seem reasonable to merely check for tarnished or discoloured CDs. But since it was unknown if there was any available procedure to stop the decomposition processes sustainably, the German Music Archive focused on safeguarding the sound itself, rather than the sound carriers.[3]

When digitizing analogue audio content, it is difficult to tell how good the results will be in comparison to the technical knowledge and equipment that might be available in ten or twenty years' time. Luckily, this is not the case with audio CDs. Their audio signal is already digital, consisting of zeros and ones. So, when copying the entirety of zeros and ones from a CD, there will be no loss in quality and no media disruption, so long as the CD can be read without errors.

During the project preparation which started in the early 2000s, the German National Library stated that during the entire process of mass digitization and long-term archiving, it only needed to be informed if a CD was *not* able to be read faultlessly. Therefore, a key element of this project was to establish a robust quality management with a particular focus on precise detection and documentation of any reading errors.

3 The physical audio CDs (as well as the digitized audiocassettes) are still kept under ideal storage conditions. Covers, booklets, and other accompanying material were only digitized in a test phase. It was considered too expensive and not urgent since paper-based media is more stable in the long term.

Reading Errors

CDs and their players are error-prone (IASA Technical Committee, 2009, pp. 132–134). Dust, scratches, or fingerprints can cause data segments to become unreadable. Furthermore, there are technical issues that make it harder to transfer disc data to mass memory: the compact disc is not a storage medium for IT systems and it does not have its own file system. There are some error correction systems, but these are designed to hide errors from the listener so that they can enjoy the music. Those reading errors were never intended to be reported or presented.

Following IASA's guidelines (IASA Technical Committee, 2009, pp. 132–134), the German National Library was looking for C1 and C2 reading errors (small and larger singular errors caused, for instance, by scratches), sub-channel errors (additional information to the music data), bad blocks (duplicate frames or faulty sectors), frame loss, sample holds (where the laser is not able to measure a single sample correctly), and clicks.

In-House Processing

Once the scope and goals of the project had been established, the library decided not to outsource but to run it with the library's own resources. The members of the project team had to develop their own know-how by consulting digitization experts within the German National Library, colleagues from other libraries and sound archives as well as its own external IT partner. Once a certain degree of expertise had been achieved, library staff was able to supervise the whole process, including quality management, and quality control could be far stricter than with a vendor. In-house projects also provide an institution with greater control to alter or expand the project as needed, or to continue digitizing newly-received discs after an official project has concluded.

Since the greatest part of the project funds had to be invested during the project's initial phase, the cost of digitization per CD decreased considerably over the years. According to internal calculations, the cost per item started at 1.67€ for the first year and dropped to 0.72€ for the following years. According to contractors' offers, the outsourced cost per CD would have been a constant 2.70€. Over a period of five years and for 500,000 CDs, outsourcing would have cost almost three times as much in comparison to doing this project in-house.

CD Inspector, Cube Workflow and Dobbin

The German National Library chose Cube-Tec as its external IT partner. Located in Bremen, Germany, Cube-Tec specializes in audiovisual quality management (Cube-Tec, n.d.). They created software specifically geared to the needs of the German National Library. This so-called ingest system consists of three scalable system units that are able to exchange information with each other:

- CD Inspector: an ingest software to migrate information from CD to the library's storage system, and to control the hardware
- Cube Workflow: controls the workflow of the entire migration process
- Dobbin: an audio processing and analysis engine for audio files.

For hardware, the library purchased an NSM 7000, a so-called 'optical jukebox' or robotic data storage device (Cube-Tec, n.d.-b), as well as a computer with matching specs. This jukebox is fitted with five internal and three separate drives and can be filled with up to 500 CDs at once. The library trained staff to operate the entire process. These colleagues had to be able to detect audible errors both by listening and by analysing visualisations of the CDs' content.

Three Steps to Migrate 770,000 CDs

In 2008, the CD migration project started. The transferring process can be divided into three steps. First, the shelf numbers of the CD batch are scanned, and the jukebox is loaded with up to 500 CDs. Loading and unloading takes approximately 27 seconds per CD. Once this is done, the CDs are read and the CD Inspector starts ingesting the lossless files. This process only begins when a CD matches with an existing catalogue record.

Second, parallel to the ingest process, the Cube Workflow software picks up the finished folders and enhances each item's metadata, adding the German National Library identifier code, the German Music Archive shelf number, and technical metadata including an MD5 checksum.

The Dobbin software analyses the created audio and metadata files and categorises the results. It checks the audio file for digital signal errors (clicks, digital zero or block repeating), generates markers (beginning and ending of tracks), generates MD5 checksums and merges all this information into one XML file. According to the analysis' results, the files will then be categorised and moved into one of the following folders:

- OK
- Probably not OK
- Audition temp
- Audible OK
- Audible not OK
- Missing metadata

Over the course of the project, 98% of the CDs have ended up in the 'OK' folder. Of the remaining 2%, most items can be migrated using the manual single drives.

CDs in the 'OK' folder can be processed into the library's long-term storage[4] without being checked manually. If the system detects a media read error, it sends the file into the 'Probably not OK' folder. Media read errors can include duplicate frames or faulty sectors. The system checks for calculated audible defects and audible verified defects. Not every one of the mentioned errors results in audible errors. If there is evidence that errors might be audible, the files are sent to the 'Audition temp' folder, where sections of the files with potential audible errors are manually auditioned. The selection and analysis of these segments in question take an average of five to six minutes per CD.

Over time, the staff and the IT contractor fine-tuned the software to be more and more reliable in the distinction of audible and non-audible errors. CDs that only contain non-audible errors can be archived without manual post-processing.

4 The audio files, XML files including cue sheets and all data from the migration process (reading errors, events, some bibliographic metadata) are currently stored in a file system on a mass storage system (ESS from IBM) at the Frankfurt site of the German National Library. The system is mirrored at the Leipzig site. Additionally, the data is stored in a tape library (TSM).

To process one batch of up to 500 CDs takes approximately six to eight hours and usually happens during the night. The next morning, machine-readable protocols (log files) are available for each processing stage of each CD, and an audio file in a lossless format (wave format)[5], accompanied by a set of metadata in an XML file, that provides information about track data, track positions, CD-Text and technical metadata.[6]

The third and final step is manual quality control. CDs categorized as 'Audible not OK' need to be manually post-processed. For this, the German National Library uses the Dobbin ResultViewer interface (Figure 4), which shows what errors have occurred. This is then linked to the Dobbin EventPlayer (Figure 5), which provides a visualisation of the audio as a wave form. By carefully inspecting this visualisation and listening to the audio, the quality manager decides whether an error is audible.

Figure 4. Dobbin ResultViewer (Cube-Tec). Screenshot: German National Library.

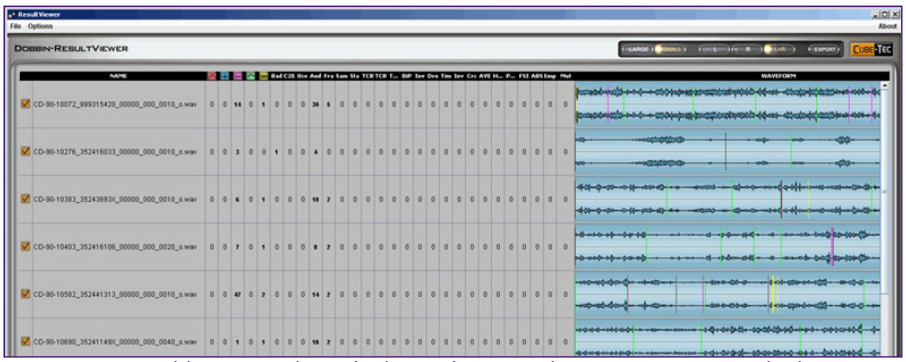


Figure 5. Dobbin EventPlayer (Cube-Tec). Screenshot: German National Library.

5 The chosen resolution is 44.1 kHz / 16-bit. Currently, the German National Library uses WavPack (a losslessly compressed Broadcast Wave Format with additional sections for metadata), as recommended by IASA. In the near future, the library plans to switch to uncompressed, and more widely used, BWF, as the 30% savings in memory space is now of less consequence with the current infrastructure than it was when the migration project began.

6 Part of the migration was to extract the CD-Text, which often but not always contains track titles. Due to technical reasons, this was not done for the whole project. For every CD the track positions are stored in a cue sheet. As all the audio information is stored in one audio file, these track positions are essential to address different tracks.

The migration process (shifting CDs from the library stacks to the migration system, scanning barcodes, entering CDs into the jukebox, starting and controlling the migration, quality control, removing CDs from the jukebox, putting them back to the CD cases, sending them back to the library stacks) is usually done by two to three library staff members. Throughput increases with the number of staff involved.

If a CD has audible errors, the examiner tries to locate its origin. Discs with dirty reflective layers, often caused by fingerprints, dust or stickers, are cleaned with distilled water and ingested once again. If the reflective layer is scratched, the CD is carefully cleaned and ingested manually. Since the German Music Archive receives two copies of each published sound carrier, the staff can use this second available copy if the cleaning and manual ingestion does not lead to the desired result. Additionally, staff randomly picks CDs from different folders to check if the system worked flawlessly and that the CDs are in their correct folders.

Particular Types and Specific Problems

While this process worked fine for 98% of the CDs, there were, however, non-standard disc types that required special workflows. The robotic parts of the jukebox could only handle standard CDs with a 12 cm diameter, so custom shapes and sizes could not be processed. The same went for CDs with an abnormal reflexion layer (like transparent or coloured CDs), because the robot's optical barrier could not see them. Those CDs had to be ingested manually using the jukebox's single drives.

Also, CDs with electronic music were more challenging to deal with. If such a CD was documented to have audible errors, it could be tricky for quality control to differentiate between technical errors and intentional audio effects. Most CDs with audible errors contained C2 reading errors, which can only be detected by listening when each error lasts more than 30 or 40 milliseconds. If the errors are shorter, they can be interpolated, and the human ear won't be able to detect them, even though they may be visible in the file's waveform. During the migration process, the library staff encountered sections with more than 100 C2 errors per second or errors lasting longer than 100 milliseconds. In such cases, these errors are audible as clicks or small skips. Other errors, like 'digital zero', result in sections with no amplitude in the waveform, while 'frame loss' causes one peak on a sine wave to abruptly change into the following peak. While these errors create unnatural artefacts in traditionally recorded music (e.g., via microphone), they can be purposefully created in computer-generated electronic music. To differentiate an error from a stylistic musical event, the library created an ideal listening environment and combined trained listening skills with the ability to detect errors through audio visualization.

Errors can also occur if a CD's structure differs from a standard CD. For instance, drives cannot recognize non-hybrid Super Audio CDs, video data, or hidden tracks. Everything that is not readable audio is saved as an ISO image and stored in a separate folder connected to the CD's audio folder.

Incidentally, technological protection measures like Digital Rights Management are not an issue for the German Music Archive. Since the German National Library is legally mandated to collect music in digital form, it is entitled to use software that overrides those protective systems. This is integrated into the migration process.

Cost Assessment and Current Workflow

While the above-mentioned cost per CD was 0.72€ for the duration of the five-year project, the price keeps decreasing. By 2024, after having migrated more than 770,000 CDs, the cost per CD is closer to 0.40€. Meanwhile, the German National Library has migrated all audio CDs currently in its collections. This process will be continued and is now a regular feature of the cataloguing and ingesting procedure of the German Music Archive.

Together with other digitized music media, there are more than 500,000 hours of digital music available from the computers in the Germany National Library's reading rooms now. Users search the catalogue for a recording and access its audio files via an HTML5 media player. Using the XML, the audio player shows track positions, track durations and track titles, if available. By default, the user is presented with an ad-hoc transcoded MP3 version of the WAV file, but it is also possible to listen to the uncompressed audio.

Digitization of all CDs in the library's collection has also resulted in less physical wear and tear on the physical carriers, since they are only circulated in justified individual cases. The German Music Archive is confident that its physical sound carriers will be accessible for quite some time into the future.

Digitizing Audio Cassettes

For audio cassettes, the German Music Archive took a different path. With its oldest compact audiocassettes dating back to 1978, they, too, are in great peril of being destroyed over time due to decomposition processes (IASA Technical Committee, 2017 p. 7) For analogue sound carriers, the German Music Archive has established an ad-hoc digitization workflow: When a user needs to listen to a sound carrier (e.g. shellac record, audiocassette) that is in the library's holdings but not yet digitized, the German Music Archive's audio engineer (Figure 6 illustrates an engineer's workspace) has all the necessary tools and knowledge to create an authentic digital reproduction of a sound carrier's signal. This file and its corresponding metadata can then be accessed via the computers in the library's reading rooms. Using this process, approximately 5,000 audio cassettes have been digitized since 2012.

Figure 6. View inside the cassette digitization studio in Leipzig. Photo: German National Library.

But with more than 50,000 cassettes, this ad-hoc process is far too time-consuming and, therefore, too expensive. Like with the music archive's CDs, the German National Library created a workflow that was able to mass-process all of its cassettes. For this,

the library carried out a Europe-wide tender in 2017 to find an external contractor. The Leipzig-based company AVI.DAT (Avi.dat, n.d.) received the acceptance.

Thorough Preparation

Before the actual digitization process could start, numerous preparations had to be made. For example, the German National Library had to evaluate what kind of cassettes were actually in the collections and where they were kept. Being part of different collections, they were stored in different locations, some in Frankfurt, but most of them in Leipzig. The most significant part was commercial cassettes, but there were also some private recordings. Most were still in excellent condition and could be digitized without any pre- or post-treatment. Others had to be cleaned or repaired by the conservation department. And because some of the special collections items did not contain standard metadata, library staff had to correct or complete metadata and shelf numbers.

In order to save on resources, it was crucial to avoid redundancies. For example, cassettes were not digitized when the same audio content had also been released on vinyl record or CD. Also, paper artwork was not digitized because it was not deemed time-critical, unlike the more vulnerable cassettes, and could be addressed in a later project. Overall, the German Music Archive identified more than 50,000 cassettes with an average duration of 27 minutes per side. So in total, approximately 2.7 million minutes of audio content were eligible for digitization.

According to the project documentation, the library aimed for lossless, true to original and quality-assured, 1:1 digital copies of the analogue source material with no qualitative variation (with two exceptions: if necessary, manual azimuth corrections were done in individual cases, as well as a digital level alignment). Following IASA guidelines, the cassettes were digitized in 24 bit, 96 kHz. The audio was saved as lossless Broadcast Wave Format (IASA Technical Committee, 2017 pp. 12–14).

During digitization, tapes were played back at normal speed within the building of the German National Library in Leipzig. For the digitization AVI.DAT used eight Tascam 122 MK III cassette decks and a Cube-Tec Quadriga, including a software called Audiofile Inspector that can detect errors. Before the actual digitization, the tape decks were calibrated and the tape heads cleaned.

Semi-Automatic Quality Control

Once the workflow was well established, an average of 49,000 minutes per month were digitized, or approximately 220 cassettes per week. The project started in January 2018 and finished in June 2022. After that, only newly received cassettes were added to the workflow until the autumn of 2023. After that, the audio cassette digitization project was evaluated, considered a success, and finally terminated.

During this whole process, the library staff oversaw the creation of METS-XML metadata that contained bibliographic information, condition description of the cassette, type of cassette, and results of the automatic quality control (azimuth value, bandwidth, workflow information, the ID of the tape deck, clearance information, etc.). This metadata was generated automatically by the software system that was provided by AVI.DAT.

If the inspector software or one of the random listening tests reported a possible error or problem, the cassette was manually inspected once again. If necessary, the library's

staff could clean it and/or calibrate the tape head again, too. The biggest part of the collection could, in this way, be handled semi-automatically. Staff just had to insert the cassettes into the tape decks and remove them afterwards. Manual interference was needed only in special cases (for example, after an error or problem occurred).

Project Completion

After completing the project and with 50,000 audiocassettes digitized, it became clear that less than one percent of these cassettes could not be digitized. For example, failure could be due to broken tape. Approximately two percent were re-digitized with corrected azimuth. Other common issues were crumbled tape or worn-off pressure pads. These cassettes were digitized anyway, but with damage documented so that listeners knew what to expect.

While 90 percent of the 50,000 cassettes were in good or very good condition, the German Music Archive discovered a drop in quality (both manufacturing and audio quality) in cassettes from the early 1980s (Figure 7). This drop could be due to mass production using inferior components (Casey, 2007).[7] [8] The manufacturing quality was determined to be poor when the library's staff discovered worn felt, noise during the process of unwinding the tape, or corrugated/creased tape, even if the cassette's overall condition suggested that it hadn't been played often. Poor audio quality was noted when the cassette's sound was muffled or when there were notable level differences between the stereo channels.

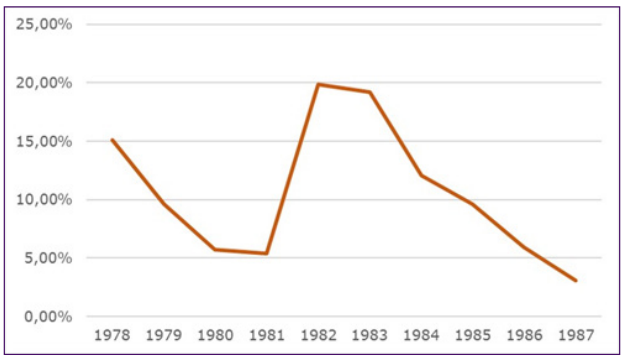


Figure 7. Quality Drop: The y-axis indicates the number of cassettes in bad or mediocre condition. Graphic: German National Library.

Results and Discussion

The two projects described in this paper were both highly ambitious, and the German Music Archive of the German National Library considers that they worked out exactly as intended. By digitizing all its audio CDs and music cassettes, the library can now provide the output of the German music industry in its reading rooms without putting further wear on sound carriers or exposing them to light, touch (fingers, CD trays, cas-

7 For more information about the early history of audiocassettes, problems during the production process and the search for the perfect sound, see interview with Gregg Schnitzer, former Director for Product Development at Mobile Fidelity Sound Lab (Schnitzer, 2004).

8 For further information about long-term stability of music cassettes see Casey, 2007. For a detailed description of the correlation between chemical components, tape thickness and music cassettes' durability, see pages 39–40.

sette players, etc.), or adverse environmental conditions. Furthermore, providing music digitally reduces the waiting time for patrons, who previously had to order media from the library's holdings, from several hours to just seconds. This is especially welcomed by a user community that is used to having immediate access to music provided by streaming platforms.

While planning these projects, the German National Library learned a lot about the condition of its analogue and digital sound carriers. While the outcome of both projects is largely comparable, the processes differed significantly. On one hand, it made financial, technical and organizational sense to train library staff to migrate CDs. Today, employees use skills gained from this training as well as the hardware and software acquired for the project to ingest newly-issued CDs, and acquired institutional knowledge will surely help in future project planning. On the other hand, for the audiocassettes, the library dealt with a more or less bounded collection, since the number of newly released music cassettes in Germany is marginal in comparison with CDs and vinyl records. Therefore, more responsibility was given to the external contractor.

Still, some of the insights from the CD project could be applied to the cassettes project. This includes the XML schemes that document the migration and digitization processes, and the output data and results. Instead of using the proprietary scheme offered by Cube-Tec for the cassettes digitization project, the German National Library decided to adopt standard schemes such as METS (used as a container for documenting the migration/digitization process, including details of the hardware and software used), MODS (to document both technical and bibliographical metadata, such as information about the musical work), and other metadata standards maintained by the Library of Congress. In general, when documenting metadata and establishing digitization and migration workflows, the German National Library follows the guidelines of IASA as well as the Deutsche Forschungsgemeinschaft (German Research Foundation). Other examples where the cassettes project benefitted from the CD project were basics like dataset naming, the structure of transfer packages and audio data formats, as well as import workflows.

One of the most important differences between both projects might be the quality management workflow. Since the library staff was not fully integrated into Cube-Tec's digitization system for the cassettes, the staff merely received the final results instead of being involved in the monitoring process. While some of the cassette listening tests used similar methods as for the CDs, the overall quality management process differed significantly.

All in all, the two projects were challenging but rewarding and, most importantly, successful. By migrating and digitizing the German Music Archive's 770,000 CDs and 50,000 audiocassettes, the German National Library not only fulfils its legal mandate but also preserves a significant part of Germany's musical heritage.

References

AVI.DAT (n.d.). *Landing page.* Available at: https://avidat.com [Accessed 17 December 2024].

Casey, M. (2007). *Facet: The Field Audio Collection Evaluation Tool: Format Characteristics and Preservation Problems.* Version 1.0. Bloomington: Indiana University.

Cube-Tec (n.d.-a). *CD-inspector features.* Available at: https://www.cube-tec.com/en/solutions/audio/media-inspectors/cd-inspector/features [Accessed 17 December 2024].

Cube-Tec (n.d.-b). *Landing page.* Available at: https://www.cube-tec.com/en [Accessed 17 December 2024].

DNB (n.d.). *Our Collection Mandate.* Available at: https://www.dnb.de/EN/Professionell/Sammeln/sammeln_node.html [Accessed 9 February 2024].

DNB (2023). *Statistik 2023.* Available at: https://jahresbericht.dnb.de/Webs/jahresbericht/SharedDocs/Downloads/DE/2022statistikenGesamt.pdf?__blob=publicationFile&v=2 [Accessed 21 August 2024].

DNBG (2012). *Gesetz über die Deutsche Nationalbibliothek (DNBG).* Available at: https://www.gesetze-im-internet.de/dnbg/BJNR133800006.html [Accessed 9 February 2024].

IASA Technical Committee (2009). *Guidelines on the Production and Preservation of Digital Audio Objects.* Kevin Bradley, ed., Version 2. International Association of Sound and Audiovisual Archives. Available at: https://www.iasa-web.org/audio-preservation-tc04 [Accessed 17 December 2024].

IASA Technical Committee (2017). *The Safeguarding of the Audiovisual Heritage: Ethics, Principles and Preservation Strategy.* Will Prentice and Lars Gaustad, co-eds., Version 4. International Association of Sound and Audiovisual Archives. Available at: https://www.iasa-web.org/tc03/ethics-principles-preservation-strategy [Accessed 17 December 2024].

Rausch, H. (2023). *Wissensspeicher in der Bundesrepublik.* Göttingen: Wallstein.

Schnitzer, G. et.al. (2004). *Mobile Fidelity Sound Lab Interview.* Available at: https://web.archive.org/web/20041016145233/www.aurealm.com/violet.htm [Accessed 9 February 2024].

Youket, M. et al. (2007). *Compact Disc Service Life Studies by the Library of Congress. Proc. IS&T Archiving 2007* pp. 99–104. Available at: https://doi.org/10.2352/issn.2168-3204.2007.4.1.art00024 [Accessed 16 December 2024].

THE DIGITISATION OF AUDIOVISUAL ASSETS SALVAGED FROM THE JAGGER LIBRARY FIRE: A PRACTICAL OVERVIEW

Andrea Walker[1] and Susan Haikaeli Mvungi[2], Special Collections, University of Cape Town Libraries, South Africa

DOI: 10.35320/ij.168

Abstract

When a wildfire ripped through the Jagger Library on 18 April 2021 at the University of Cape Town (UCT), firefighters engaged in strenuous efforts to control the flames. Within days of the fire, a formal disaster management project was initiated, led by UCT Libraries. While the Reading Room was destroyed by the fire, the basements housing Special Collections survived. Within days, the flooded basement was drained and teams of volunteers arranged by UCT Libraries were organised to extract the materials, carrying labelled crates to the surface. In the lowest basement underground, significant flooding occurred, and audiovisual materials below the water mark were impacted, including video and audio tapes, causing water damage and instances of mould infestation. Following extraction, the Audiovisual Digitisation Project (AVDP) was launched to mitigate the potential loss of data on already-fragile carriers. The project formed part of a broader, ongoing disaster recovery response to salvage and recover Special Collections surviving the Jagger Library fire. With nearly 35,000 unique items affected and a range of damage to the carriers, the project was expedited at a scale of operation unprecedented within UCT Libraries. With little time to plan, the team had to execute a comprehensive audit and digitisation project of all the materials exposed to moisture during the fire. While planning is a critical part of any project, the circumstances of the AVDP were unprecedented and required significant agility and dedication by the team involved. The digitisation itself was outsourced to a company known as Video Restoration Television (VRTV), with UCT Libraries working closely with the vendor to digitise these fragile holdings. This article outlines the processes involved in the successful completion of the AVDP, unique not only as a digitisation project but also as a disaster recovery project, which resulted in the comprehensive audit and digitisation of the entire audiovisual archive in Special Collections.

Keywords: audiovisual digitisation, audiovisual audit, digitisation project, preservation, disaster recovery

Introduction

In April 2021, a runaway fire on Table Mountain caused the destruction of the almost 100-year-old Jagger Library Reading Room (Figures 1–3), home of the University of Cape Town Libraries' (UCTL) Special Collections and impacted several other buildings at the University. Due to the fire, much of the Government Publications and African Studies Libraries was lost, along with some of the Rare Books collections, and most of the African Film Collection (Singer and Noble, 2022, p. 11; Jethro and Karina, 2024, p. 9; Kirkwood, Noble, and Singer, 2023, p. 12). In addition to the published material housed

1 Andrea Walker is an Archivist at the University of Cape Town Libraries Special Collections Department. Andrea focuses on metadata and Intellectual Property law. She spends most of her time working on the UCT Libraries Audiovisual Archive.

2 Susan Haikaeli Mvungi is an Archivist at the University of Cape Town Libraries Special Collections Department. Susan is passionate about implementing Artificial Intelligence (AI) and becoming an expert archivist specialising in AI and cloud technologies. Susan works mainly with audiovisual material and photography.

in the library, there were over seventy archival collections that were completely or partially lost in the fire (Singer and Noble, 2022, p. 9).

Figure 1. Jagger Library Reading Room before the fire (image: UCT Libraries, 2021).

Figure 2. The Jagger Library in flames (image: Jennifer Cooke, 18 April 2021).

Figure 3. Jagger Library Reading Room after the fire (image: Michal Singer, April 2021).

The Audiovisual Archive's (AVA) tape collections, chiefly stored in the Jagger building's basement, were water-logged during firefighters' efforts to douse the flames. A plan to preserve the badly damaged and water-logged tapes, called the Audiovisual Digitisation Project (AVDP), was initiated. There was limited time to scope the project due to the urgency of the situation. This project was guided by best practices. Problems such as lack of funding, insufficient technology, and the ongoing South African energy crisis (Rathi, 2022) affected the digitisation project. Despite these challenges, the project was successful in recovering over 90 percent of the content stored on audiovisual carriers salvaged from the fire.

In addition to the UCTL reserve funds and a portion of the insurance claim, two Belgian groups, the Government of Flanders and KU Leuven, donated resources to support the project (Satgoor, 2024, p. 27). Additional financial support was received from the University of Cape Town's Centre for Film and Media Studies. The Centre also participated in the organisation of a student intern program to assist archivists (Satgoor, 2024, p. 23). Students created metadata to make the AVA collections discoverable, including participating in a pilot program testing the use of automated speech recognition to generate transcripts for collection items.

This article begins with an introduction to the fire and salvage operation, a discussion of the AVA and the various collections that were included in the Audiovisual Digitisation Project, followed by the details of the AVDP itself and a discussion of lessons learned throughout this multi-year, ongoing initiative.

The Fire and Its Aftermath

The impact of the Jagger Library fire was widely felt in the days immediately following the disaster. The library was not safe to enter until a couple of days after the fire, and additional time was then needed to pump water out of the basement (Figure 4). The prolonged waterlogging of some materials created conditions highly conducive to mould growth (Van Malssen, 2013, p. 36).

Figure 4. The Jagger basement with water at almost waist-height (image: Michal Singer, April 2021).

Volunteers were recruited from the community to provide much-needed salvage assistance. About 2,000 people helped remove materials from the Jagger Library over a period of seventeen days (Figure 5) (Minicka, 2021, p. 13; Sung et al., 1990, p. 300). The response was overwhelming and included alumni, academics, students, retired and current UCT Libraries staff, conservators, staff from UCT and other institutions, and people from the local Cape Town community. A website was set up to regulate the number of volunteers each day[3]. Volunteer efforts were coordinated during the height of the COVID-19 pandemic, and there was not a single infection during the whole recovery process. The risk of infection was mitigated by the use of Personal Protective Equipment (PPE) such as masks and hand sanitiser supplied by the University. Volunteers went through an induction on their first day, which included protocols for general safety and avoiding COVID infection.

Figure 5. A line of volunteers removing crates of material (image: Thomas Slingsby, April/May 2021).

A triage tent set up close to the Jagger Library was used to separate wet from dry materials. The triage area was staffed by expert conservators and volunteers (Jethro and Karina, 2024, p. 2; Sung et al., 1990, p. 305, 308). Materials were placed in crates and boxes donated by supermarket chains and wine farms and moved out of the library. A crate numbering system was devised to keep track of the salvaged items. The locations were recorded, and a quality controller confirmed the numbering, recording the details of each crate before it was sent to either triage or storage (Crowster, 2021, p. 30; O' Connell, 2015, p. 25). Water-logged material was placed in cold storage at –25°C (Jethro, 2021, p. 674). In total, 13,000 crates of salvaged material were rescued (Crowster, 2021, p. 31).

Recovery premises were set up close to the university. Crates were sequentially ordered by a cartage team from December 2021 to January 2022 (Singer and Noble, 2022, p. 10). Approximately 4,000 crates of material was received at the recovery premises (Singer and Noble, 2022, p. 10). This allowed archivists to begin to reassemble collections. The audiovisual material was stored in the Libraries' Immelman building, a 24-hour study space area. In January 2022, the digitisation project for the audiovisual material began. This project oversaw the digitisation of more than 25,000 items[4], which included film reels stored in a cold room that were not affected by the fire.

3 https://ibali.uct.ac.za/s/jagger/page/jagger-public-offer
4 For further information on the recovery process and UCTL Special Collections' other projects see: https://blogs.uct.ac.za/memory/

Audiovisual Archive Overview

At the time of the fire, UCTL Special Collections were housed in the Jagger Library's basement. There are two main sections within Special Collections: Published Collections and Primary Collections. Published Collections includes Rare Books, Government Publications, the African Studies Library, and the African Film Collection. Primary Collections includes Manuscripts and Archives, the Contemporary Photography Archive, and the AVA.

The AVA consists of nearly 50 separate collections, which are stored on a wide variety of formats, most commonly 16mm film, U-matic, Betacam, BetaSP, miniDV, and VHS tapes, as well as CDs, DVDs, and audio cassettes. Five of the collections in the AVA consist of news footage, five represent material from film festivals, five are the output of research projects, and nine are organisational collections. The remaining nineteen collections feature the work of eight amateur and eleven professional filmmakers.

The various collections came to UCTL in a variety of ways, some through the closure of other UCT units or departments, others through personal connections, and some had been quietly and clandestinely deposited for safe keeping during the political upheaval of late 20th Century South Africa. As a result, not all the collections had donation or deposit agreements in place, and most came without inventories or only with partial inventories. The accumulation of audiovisual materials eventually necessitated the creation of the AVA as a repository within Primary Collections. As an academic archive, UCTL continues to collect audiovisual content that is representative of the social and political history of South Africa and supports teaching and learning as well as research needs both at UCT and for the broader academic community.

After the fire, 38 collections from the AVA were included in the AVDP. Additionally, the AV material housed within the Manuscripts and Archives repository was digitised. Collections that were stored elsewhere at the time of the fire or were already fully digitised were not included in the project.

Conservation and Preservation

Other items from the collections that were salvaged during recovery efforts were not included in the preservation project. Some items were sent to cold storage as part of the triage process. These materials were very badly impacted by being submerged in water and the majority consensus was that halting the growth of mould through freezing the items was the most beneficial course of action during the salvage. This recommendation made by the conservators on site was that as the items could not be adequately treated immediately, it was better to freeze them until each item could be given the attention it required.

Prior to the fire, staff were conducting an item-level audit of the AVA, since existing inventories were inaccurate or inadequate. Because there was not a full account of items before the fire, it remains unclear exactly how many items were sent to cold storage. Due to the crate numbering system it has been possible to identify which collections the AV material sent to cold storage came from. The variations in format, and therefore size and dimensions of the items, makes it impossible to accurately calculate how many AV items this encompasses.

Among the thousands of books, papers and heritage objects, these items remain in cold storage more than four years after the fire. With such a volume of material to be conserved, the triage batch was sent in its frozen state to the Belfor Fire Recovery fa-

cility in Belgium to be freeze-dried and exposed to gamma radiation to kill any mould. Freeze-drying of video tapes has been shown to be a promising way to mitigate water damage (Jarczyk, 2013, p. 71, 73). Nagai et al. (2024, p. 1) states that "results showed that gamma irradiation significantly improved tensile strength and strain in mould-contaminated tapes, with no observable changes in their visual appearance". Nagai et al. (2024, p. 1, 7–8) goes on further to say that gamma radiation has a dual function of disinfecting and mechanically reinforcing VHS tapes. This shipment was arranged by the university management to expedite the recovery of its special collections and at the time of writing, processes are underway. On their return, items will be placed in the Conservation Unit for assessment and any further needed treatment. The Conservation Unit was established in Special Collections in 2022 to provide ongoing support for the broader recovery project as well as the ongoing requirements of the university.

Some formats could not be included in the AVDP, as the appropriate digitisation equipment was not available in South Africa and the cost of sending the material overseas was prohibitive. These formats included open reel video tapes, Betamax tapes, and a single MII videotape.

Orphaned Materials

The project provided opportunities for digital transformation and the archivists involved considered how to optimize available resources. Thus, while the collections of film reels were not impacted by the fire, their digitisation was included in the AVDP since UCTL does not have the capacity to digitise film in-house.

During initial recovery efforts, no items were identified as belonging to two of the collections: Qamata Uvumile and Colette Thorne. Items may have been misshelved in another storage facility and were therefore not damaged in the fire, or they could have been misidentified as belonging to another collection during triage. It is also possible that the items went to cold storage after triage and are temporarily unaccounted for, or that they were removed or lost at some point previously.

Before the fire, the 'Orphans' collection had consisted of fewer than thirty film reels and tapes that were not part of a larger collection. During the audit, more than eight hundred additional items were assigned to this collection, as not all the material salvaged from the Jagger basement could be identified as belonging to a specific collection. Many collections had been accessioned without accompanying inventories or had incomplete inventories. Exposure to water removed some labels, further exacerbating problems with identification. Upon completion of the audit, the list of materials with unknown provenance will be sent to donors and depositors, film historians, and other interested parties in the hopes of linking items to their appropriate collections.

This project provided an opportunity to consolidate audiovisual holdings across Special Collections. In addition to the 38 AVA collections identified in the AVDP audit, several collections from the Manuscripts and Archives and the Contemporary Photography Archive repositories contained audiovisual material. While some of these collections included only one or two AV items, others are primarily composed of audiovisual material. A few of the collections now in the AVA, such as Ken Howes-Howell and the Community Arts Project, were originally accessioned in the Manuscripts Archive and later transferred to the AVA. Some of the collections, such as Georgina Karvellas, have related collections in the Contemporary Photography Archive.

The largest non-AVA collection included in the AVDP is the Centre for Popular Memory. This collection is almost entirely made up of audiovisual items and was housed in the Jagger basement with the AVA. While much of it had already been digitised, a significant portion remained in physical format only. Its inclusion in the project consequently enlarged the digital repository for this collection.

The entire African Studies Library's African Film Collection (AFC) was initially believed to have been destroyed in the fire. Established in the 1980s, the AFC was a collection of 3,500 titles encompassing both African film and television along with material about Africa. It was a large and unique collection holding some of the only known copies of certain titles (Walker and Angus, 2023). AFC's DVDs were housed in a section of the Jagger Reading Room, which was completely burnt (Rijsdijk & Evans, 2024, p. 93). However, a few DVDs survived, due to being misshelved or located elsewhere at the time of the fire (Figure 6).

Originally, the AFC was housed on VHS tapes, but when the format became obsolete, tapes were copied onto DVDs. For legal reasons, the VHS tapes were retained in the Jagger basement with the AVA at the time of the fire. As a result, nearly a quarter of the AFC survived, and these tapes were included in the AVDP.

Figure 6. Film Librarian Bev Angus holds a surviving African Film Collection DVD found in Jagger during the salvage (image: Michal Singer, May 2021).

Audiovisual Digitisation Project

The ongoing digitisation project was part of a large project to salvage the entire archive. Throughout the recovery process, the work was reported in blogs, many photos were taken to document progress, narratives were provided as well as marketing posts, and the fire was spoken about at multiple conferences/interviews. A lot of attention from the press resulted in funding for the recovery process. "... the local press has remained engaged with the Financial Mail and Rapport running articles on the ongoing recovery process" (Satgoor, 2024, p. 16). People responded to the call for the Jagger Library recovery. Receiving funding resulted in three major restoration projects: DK Conservators contracted to restore the damaged antiquarian books from the rare and antiquarian books collection; funding received from the two Belgian groups, the Government of Flanders and KU Leuven and from the UCT Centre for Film and Media studies resulted in the digitisation of the AV archive; the National Institute for the Humanities and Social

Sciences (NIHSS) grant supported a project to conserve and digitise selected collections in Special Collections (Satgoor, 2024, p. 23).

Due to the scale of the project, digitisation was outsourced to an independent contractor called Video Restoration Television (VRTV). VRTV set up a digitisation unit in one of the Library's study spaces (Figure 7). Student access to the area was suspended for the duration of the project. The digitisation unit consisted of several machines that could digitise formats including Betacam, U-matic, DVD, and miniDV. VRTV used the open-source software Audacity[5] for audio and Open Broadcaster Software[6] for video digitisation.

The ongoing South African energy crisis caused frequent loadshedding, which disrupted the digitisation process (Ogugua and Ofordile, 2022, p. 116). After VRTV was forced to stop ingesting tapes during a rolling blackout, electricians installed an Uninterrupted Power Supply, which supplied power to all the power sockets in the digitisation unit. The outside box main switch tripped often and had to be manually switched back on. A surge arrester was added to the main distribution board, which ensured that there were no fluctuations of voltage if the power went off and on. The Libraries' 24/7 study space already had a generator installed which helped ease the burden of the energy crisis.

Figure 7. The digitisation unit set up by VRTV in early 2022 (image: Susan Harris).

Tapes that were part of the AVDP were covered in ash and others were mouldy. The post-salvage condition of the material was further impacted by the condition of the items prior to the fire. Some of the items were mouldy when received from the donor/depositor and the impact of the moisture on these items was therefore greater than on others. Prior to the AVDP a lot of cleaning, drying, and attention was given to the audiovisual materials by the volunteers during the salvage process, laying out items beside their cases to air dry where possible (Van Malssen, 2013, p. 35). Tapes that were still covered in ash (Figure 8) had to be cleaned with alcohol before the project could begin (Brown, 2020, p. 284; Iraci, Hess, and Flak, 2020). The heads of the machines regularly needed to be cleaned because of the ash as well as tapes with sticky-shed syndrome (Brown, 2020, p. 284).

5 https://www.audacityteam.org/
6 https://obsproject.com/

Figure 8. A tape with ash before it was cleaned during the recovery process (image: Susan Harris).

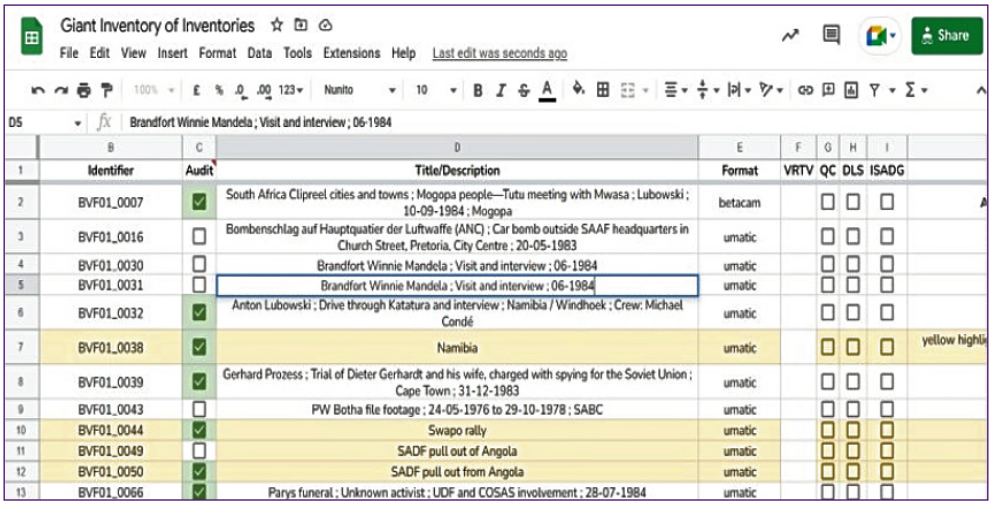
Figure 9. VRTV's Andrea Petersen manually rewinds a tape (image: Susan Harris).

Before the audiovisual digitisation project could commence, all the tapes had to be rewound. If tapes snapped when being rewound, they had to be spliced, though this was not always possible. To avoid breakage, some of the tapes were rewound manually (Figure 9). The snapping was a result of moisture exposure, which caused tapes to shrink and tighten as they dried.

Auditing

According to Van Malssen, "[i]ntellectual control of an archive is a goal that collecting institutions strive for but often struggle with" (Van Malssen, 2013, p. 37). It is not uncommon for an organization to have an unclear picture of its holdings." At UCTL, the AVA was known to consist of 20,000–30,000 items, but with the limited inventories available, exact contents were unknown. While a full-scale audit of the AVA had commenced in 2019 with the intention of creating a full inventory of its holdings, the COVID-19 lockdown interrupted its progress. This impacted archivists' ability to provide access to researchers and filmmakers. Prior to the AVDP, digitisation was undertaken by UCTL's Digital Library Services (DLS) on an ad-hoc basis when material was requested by users. The scoping of the AVDP was inhibited by the lack of a full inventory of the AVA, as it was necessary to work with estimates. Following the fire, the audit was restarted as it was necessary to account for each item that was salvaged.

For the audiovisual audit, a spreadsheet entitled 'Giant Inventory of Inventories' (GIoI) was created. This was first populated with any available inventories of the 44 AV collections. It is a control document that allows searching across collections, though the metadata is currently quite limited. Each item was assigned a unique identifier to tie the digital object to the physical object. The unique identifier comprised the archival collection number and a sequential number e.g., BVF01_1456. Basic metadata including title, physical format, and a brief description of the contents was included.


Giant Inventory of Inventories

File Edit View Insert Format Data Tools Extensions Help Last edit was seconds ago

Share

D5 Brandfort Winnie Mandela ; Visit and interview ; 06-1984

	B	C	D	E	F	G	H	I	
1	Identifier	Audit	Title/Description	Format	VRTV	QC	DLS	ISADG	
2	BVF01_0007	☑	South Africa Clipreel cities and towns ; Mogopa people—Tutu meeting with Mwasa ; Lubowski ; 10-09-1984 ; Mogopa	betacam		☐	☐	☐	A
3	BVF01_0016	☐	Bombenschlag auf Hauptquatier der Luftwaffe (ANC) ; Car bomb outside SAAF headquarters in Church Street, Pretoria, City Centre ; 20-05-1983	umatic		☐	☐	☐	
4	BVF01_0030	☐	Brandfort Winnie Mandela ; Visit and interview ; 06-1984	umatic		☐	☐	☐	
5	BVF01_0031	☐	Brandfort Winnie Mandela ; Visit and interview ; 06-1984	umatic		☐	☐	☐	
6	BVF01_0032	☑	Anton Lubowski ; Drive through Katatura and interview ; Namibia / Windhoek ; Crew: Michael Condé	umatic		☐	☐	☐	
7	BVF01_0038	☑	Namibia	umatic		☐	☐	☐	yellow highli
8	BVF01_0039	☑	Gerhard Prozess ; Trial of Dieter Gerhardt and his wife, charged with spying for the Soviet Union ; Cape Town ; 31-12-1983	umatic		☐	☐	☐	
9	BVF01_0043	☐	PW Botha file footage ; 24-05-1976 to 29-10-1978 ; SABC	umatic		☐	☐	☐	
10	BVF01_0044	☑	Swapo rally	umatic		☐	☐	☐	
11	BVF01_0049	☐	SADF pull out of Angola	umatic		☐	☐	☐	
12	BVF01_0050	☑	SADF pull out from Angola	umatic		☐	☐	☐	
13	BVF01_0066	☑	Parys funeral ; Unknown activist ; UDF and COSAS involvement ; 28-07-1984	umatic		☐	☐	☐	

Figure 10: Spreadsheet used to audit the audiovisual items.

The 'audit' check box depicted in Figure 10 is ticked when an archivist has either matched the physical item to one already listed in an inventory, or added the item to the appropriate collection, and labelled the tape with the appropriate identifier. Several Boolean fields were also employed. The "VRTV" column indicates whether an item has been digitised by VRTV. The "QC" check box shows that an item has undergone quality control. "DLS" gets ticked if the item has previously been digitised by Digital Library Services (DLS). The "ISADG" check box means that the item is included in a finding aid. The last column (partially visible in Figure 10) is a notes field, used to enter information about the condition of the material, such as "tape damaged" or "no sound". The AVA audit involved an enormous contribution made by staff and student interns, handling 27,531 individual items. This aspect of the project took thousands of working hours and spanned over two years.

The Centre for Popular Memory collection posed a particular problem for the auditing process. CPM had assigned identifiers to some of their items, but not all. Items that were not assigned a CPM identifier received a generic identifier, e.g. BC1223_001. Unfortunately, changes over the decades to the identification processes at CPM led to items having up to three separate identifiers. Where possible, these items were assigned identifiers according to the archival hierarchy. For example, CPM originally assigned the identifier of I.08 to an audio cassette. Later, this was changed to Im.08, and later still it became Wti8.05. The item now has the archival identifier BC1223_J2_8_05.

In addition to the archival identifier, other known IDs are recorded in the spreadsheet as either legacy or interim identifiers. This ensures that there are multiple ways to tie

the physical item to the digital item, in case one of the identifiers is somehow detached from either format (Van Malssen, 2013, p. 33, 37). Prioritization for digitisation was determined chiefly based on the item's physical format, though some items had been digitised prior to being audited by the archivists. When an item was digitised prior to having an ID assigned, VRTV assigned an interim identifier, which was used as the digitised version's file name, and as stated above, this information was also recorded in the spreadsheet.

Tracking Progress

Since processing crates contained a mixture of archival materials, it was challenging to ensure that no items were inadvertently overlooked. Initial attempts to track progress involved placing black stickers on each crate that had been audited. Items that were digitised had a 'D' sticker placed on them. However, the stickers did not always remain in place and the crates became increasingly disordered over time. Once the digitisation was finished, the volume of storage space required was unknown and needed to be calculated (Figure 11).

Figure 11. Repacking crates according to categories of material (image: Andrea Walker, October 2023).

A system of colour-coded labels was created to keep the crates organised (Figure 12). Near the end of the audit process, pink 'not done' labels were placed on each crate containing items that still needed to be digitised. In addition, crates were categorised according to how accessible they needed to be to the archivists. If a crate was packed with unaudited items, then it received a green 'access' label, signifying that the archivists needed immediate access to the items to complete the audit.

Figure 12. Examples of the labels applied to each crate.

Once items had been audited, they were categorised according to whether they needed additional follow-up by archivists. Some of the items' cases or labels contained more granular metadata, but in some cases only a title or a very brief description could be captured during the auditing process. Crates with items needing additional metadata received blue 'store' labels. These crates required space at Special Collections' interim premises, so archivists could access items for reference. Purple 'deep store' labels were given to crates that had no additional metadata to be transcribed. These crates were intended for one of the off-site storage locations, but a lack of space due to the need to rehouse other recovered material meant that all the AV crates remained together at the interim premises.

AV material found amongst the manuscript collections continues to be added to the GIoI as the recovery of those collections continues. Enhanced metadata is being created by transcribing additional information from the 'store' tapes. Once all the tapes in a crate are completed, the crate is then relabelled as part of the 'deep store' category. Generating complete metadata requires access to the digitised footage, but since mounting the 350+ TB of digitised data onto a server is not yet possible, this remains a project for the future.

Artificial Intelligence in the Archives

UCT Libraries' Special Collections embarked on a pilot project to investigate incorporating the use of Artificial Intelligence (AI) into archive cataloguing workflows. This project aimed to enhance discoverability of the AV Archive using the Cockatoo Speech-to-Text AI technology. The Cockatoo Speech-to-Text AI technology is a high-accuracy speech recognition software, capable of accurately transcribing audio and video content into text with timecodes, which help identify the precise parts of the footage that researchers are interested in viewing.

In October 2024, three Film and Media Studies student interns began to pilot test the software with previously digitised content on the Libraries' server. The interns used Cockatoo to transcribe audio and video in English and in Afrikaans. They worked with the AVA collection and with Cockatoo for four hours a week for ten weeks. The project's main objective was to enhance the metadata of AV holdings affected by the fire through the inclusion of a generated transcript. Previously, any transcripts included were manually created, which was a time-consuming and laborious process.

The interns proofread the transcripts generated to ensure precision. Generally, only minor corrections were needed for transcribed English text, but more substantial edits were needed for Afrikaans. The transcripts generated were saved on a OneDrive folder for easy access and were saved as .docx files. The pilot project was considered a success and AI is likely to be used in the future to enhance the accessibility of the AV Archive after gaining access to the material that was digitised following the fire as well as for future acquisitions.

Lessons Learned

A comprehensive disaster recovery plan is essential for protecting irreplaceable materials (Iyishu, Nkanu, Ogar, 2013, p. 42). Among other things, this plan should outline specific salvage and recovery procedures to be followed immediately after a crisis (Sung et al., 1990, p. 311). Because disasters often strike without warning (O'Connell, 2015, p. 23; Sung et al., 1990, p. 308), organizations must prepare in advance to minimize damage and ensure rapid response. At UCTL, a post-incident review was conducted to assess

what happened, what was affected, and how the Libraries responded. A timeline of events was conducted, and the damage was assessed.

UCT Libraries now has an updated disaster recovery plan particularly focused on its Special Collections, which were significantly impacted by the Jagger Library Fire in 2021. The plan in place at the time of the fire was found to be outdated, referring to people no longer on staff and did not accurately reflect the Libraries' current organisational structure. This made it difficult to implement a well-coordinated response to the fire. The updated UCT Libraries disaster recovery plan focuses on transitioning from salvage and recovery to a more permanent recovery phase. Recovery procedures were revised, especially response to a fire and fire suppression techniques.

Improved records management will also mitigate recovery efforts in the event of a future disaster. After the loss of many of Special Collections' administrative records in the fire (Figure 13), UCT Libraries consulted with both UCT's Legal Services and Risk Office to ensure that UCT Libraries' donation and deposit agreements meet university standards. Collections can no longer be accepted without an adequate inventory accompanying the material, as "[c]ollections that are unfamiliar, unprocessed, or have no identification are almost impossible to prioritise for recovery" (Northeast Document Conservation Center, 2022, p. 45).

Figure 13: Initial inspection of the surviving administrative files (image: Michal Singer, April 2021).

Good building management policies reduce the potential impact of a disaster. Institutions should prioritise providing safe conditions for collections they hold (Institute of Museum and Library Services, 2019, p. 19). Housing collections in a climate-controlled environment where temperature and humidity remain stable is essential, even if South Africa's climate and energy challenges prevent achieving ideal conditions (IASA Technical Committee, 2014, pp. 32–34; Wilsted, 2007, pp. 69, 74). Temperature and humidity monitoring have now been implemented by the Conservation Unit, though this has been difficult in the temporary premises. The space is essentially open plan, with exterior windows on all four sides of the building, making it difficult to maintain stable conditions in the South African environment.

In general, collections should not be stored below ground level, especially in areas where flooding is common (Pacifico and Wilsted, 2009, p. 20). While the cool tempera-

ture and steady humidity of a basement seem to make it a good location for storage, the significant risk of flooding in the event of a disaster must be considered (Van Malssen, 2013, p. 37). While much of the AV material was able to withstand being submerged for a few days this is a situation UCT Libraries will avoid in the future. Currently, some of the manuscript material from the archive has been shelved in other stores, but the majority of collections, including the AVA, remains in crates in temporary premises.

Archival facilities always require a higher level of fire safety than normal commercial buildings (Pacifico and Wilsted, 2009, p. 45). Fire guidelines and principles are constantly evolving, so it is paramount to stay abreast of these changes (Pacifico and Wilsted, 2009, p. 45–46). In developing countries archives are not always considered a priority and are often kept in inadequate buildings (Feni-Fete and Khayundi, 2023, p. 77). Moreover, sometimes trying to adapt existing buildings into archival facilities is even more difficult than starting from scratch (Feni-Fete and Khayundi, 2023, p. 77–78). At UCT Libraries, where parts of the archival infrastructure predate current preservation standards, these challenges are particularly relevant and call for both short-term mitigation and long-term infrastructure planning.

All of these factors need to be considered for the permanent premises that Special Collections will eventually settle in. The rebuilding of the Jagger building has not yet begun, and it is not yet clear whether the archive will return to that building or if it will be given a new home. While the authors of this article do not have direct input in these decisions, the archive staff have drafted a document outlining best practices and highlighting future needs with the lessons learned from the fire recovery experience serving as examples that underline the required design principles.

Although digitisation is good for preservation of assets, accurate budgeting can be difficult as the costs of ongoing storage, preservation, and access may not be considered (Rijsdijk and Evans, 2023, p. 93). Backups of the already digitised material will need to be kept in geographically separate locations, adding to storage costs. Due to the fact that the AVDP was an emergency response, budgeting was not properly scoped and funding is lacking. While priority is often given to collections, UCT Libraries cannot function effectively without its own administrative records. In a separate NIHSS-funded project, a team from Memorist digitised the surviving administrative records at the Libraries' interim premises.

Libraries often lack the resources to recover on their own, that is why external support was much needed during the recovery process. Comprehensive insurance coverage and documentation aided the recovery process. The recovery process, including loss assessment, insurance claims, and salvage tracking was supported by UCT Libraries' internal systems and tools. (Satgoor, 2021, p. 23).

Conclusion

As of July 2025, UCTL Special Collections has not yet fully recovered from the fire (Figure 14 shows statistics from the prior year). The temporary premises do not have a proper reading room to accommodate visitors. Work continues out of crates. Users are still not fully serviced. There is much work remaining to be done, but important first steps towards a more accessible Audiovisual Archive have been made.

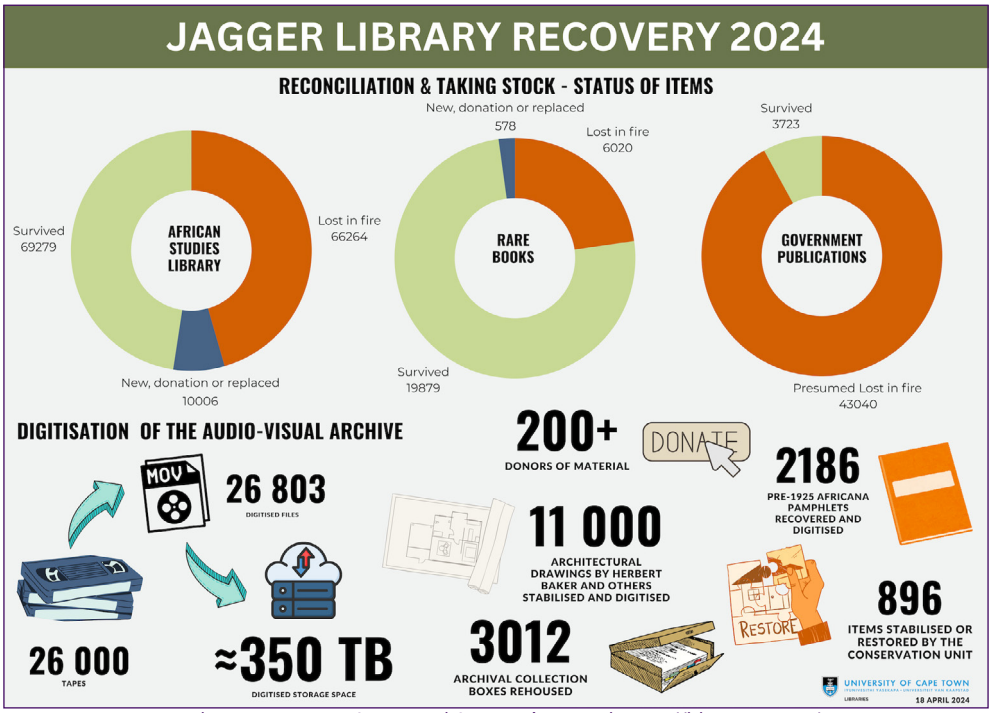


Figure 14: Jagger Library recovery facts and figures (image: https://lib.uct.ac.za/jagger-recovery, September 2024).

The digitisation of audiovisual assets salvaged from the Jagger Library Fire represent an important step in preserving cultural heritage and ensuring that these invaluable and fragile resources remain accessible for generations to come (Groo, 2019, p. 6). By assessing, restoring, and digitising these assets, content can be safeguarded and at the same time its discoverability may be improved (Van Malssen, 2013, p. 38).

While the Jagger fire was devastating for the UCTL Special Collections as a whole, the disaster was turned into an opportunity for its audiovisual archive. The coordinated response to the fire, which initially included enormous community efforts during salvage, resulted in the establishment of the Audiovisual Digitisation Project. Over 25,000 items were digitised in a two-year period following the fire. This would likely have taken many years to accomplish had the fire not occurred.

Creation of full metadata and finding aids will take years to complete and efforts are ongoing. Meanwhile, the completion of a comprehensive audiovisual materials audit resulted in a reliable, accurate inventory of the entire archive for the first time. It will be far easier to locate footage that users are interested in viewing. Once digitised footage becomes available, users will have access to audiovisual content that will no longer be dependent on utilising increasingly obsolete playback equipment or requiring wear on fragile carriers.

The Jagger fire has also brought a new attention to disaster awareness and conservation at UCTL. A Conservation Unit was established in Special Collections. An improved disaster recovery plan, updated donation and deposit agreements, staff training, and ongoing efforts to improve building, storage and environmental conditions will mitigate

the effects of future disasters. The AVDP illustrates the importance of resilience in the face of challenges. This project will eventually enable greater accessibility to digitised audiovisual items, benefiting researchers, staff, and students.

References

Brown, M. (2020). "A Sonic Step Closer: Master-Tape Preservation at the Alexander Turnbull Library", *Popular Music History* 13(3), pp. 273–297. Available at: https://doi.org/10.1558/pomh.40992 [Accessed 13 June 2025].

Crowster, N. (2021). "Volunteers and the Jagger fire: Observations from the Salvage Project Lead", *Samantics: Special Edition on Disaster Management*, pp. 28–31.

Feni-Fete, V.E. and Khayundi, F.E. (2023). "The Effect of Converted Buildings on the Management of Records and Archives in the Eastern Cape Provincial Archives of South Africa." *Journal of the South African Society of Archivists*, 56, pp. 74–87. Available at: https://www.ajol.info/index.php/jsasa/article/view/260306/245747 [Accessed 13 June 2025].

Groo, K. (2019). "Let it Burn: Film Historiography in Flames", *Discourse* 41(1), pp. 3–36. Available at: https://dx.doi.org/10.13110/discourse.41.1.0003 [Accessed 13 June 2025].

Institute of Museum and Library Services. (2019). *Protecting America's Collections: Results from the Heritage Health Information Survey*. Available at: https://www.imls.gov/sites/default/files/publications/documents/imls-hhis-report.pdf, February 2019 [Accessed 13 June 2025].

IASA Technical Committee (2014). *Handling and Storage of Audio and Video Carriers*. Dietrich Schüller and Albrecht Häfner, eds. International Association of Sound and Audiovisual Archives. Available at https://www.iasa-web.org/handling-storage-tc05 [Accessed 26 July 2025].

Iraci, J., Hess, R., and Flak, K. (2020). "The Digitization of Audiotapes", *Technical bulletin* 30. Available at: https://www.canada.ca/en/conservation-institute/services/conservation-preservation-publications/technical-bulletins/digitization-audio-tapes.html [Accessed 13 June 2025].

Iyishu, V.A., Nkanu, W.O., and Ogar, F.O. (2013). "Preservation and Conservation of Library Materials in the Digital Age", *Journal of Information and Knowledge Management* 4(2), pp. 36–45. Available at: https://www.ajol.info/index.php/iijikm/article/download/144621/134269/0 [Accessed 13 June 2025].

Jarczyk, A. (2013). "Restoration of Molded Videotapes: Research on Vacuum-Freeze-Drying of Water Damaged Videotapes", *The Electronic Media Review* 2 (2011–2012), pp. 67–75. Available at: https://resources.culturalheritage.org/emg-review/volume-two-2011-2012/restoration-of-molded-videotapes-research-on-vacuum-freeze-drying-of-water-damaged-videotapes/ [Accessed 13 June 2025].

Jethro, D. (2021). "ASH: Memorialising the 2021 University of Cape Town Library Fire," *Material Religion* 17(5), pp. 671–677. Available at: https://doi.org/10.1080/17432200.2021.1991117 [Accessed 13 June 2025].

Jethro, D. and Karina, A. (2024). "After the Fire: Loss, Archive and African Studies", *Social Dynamics* 50(1), pp. 1–15. Available at: https://doi.org/10.1080/02533952.2024.2333213 [Accessed 13 June 2025].

Kirkwood, C., Noble, M., and Singer, M. (2023). "What We Lost in the Jagger Library Fire", *Africa Bibliography, Research and Documentation* 2, pp. 12–29. Available at: https://www.vassa.org.za/wp-content/uploads/2024/03/what-we-lost-in-the-jagger-library-fire-1_231211_224452.pdf [Accessed 13 June 2025].

Minicka, M. (2021). "Beyond the Fire: Responding to the Unthinkable: The Salvage of the University of Cape Town's Surviving Library and Archives Collection after the Devastating Fire of 18 April 2021", *Samantics: Special Edition on Disaster Management*, pp. 13–22.

Nagai, M.L.E., Dias, D.B., and Vasquez, P. 2024. "Gamma Radiation for Preservation: A Novel Approach to Disinfect VHS Tapes in Historical Archives", *Brazilian Journal of Radiation Sciences* 12(4A), pp. 1–12. Available at: https://doi.org/10.15392/2319-0612.2024.2535 [Accessed 13 June 2025].

Northeast Document Conservation Center (2022). *Fundamentals of AV Preservation Textbook*. Available at: https://www.nedcc.org/assets/media/documents/Publications/fundamentals-av-preservation/nedcc-AVFun-5.22-final3.pdf [Accessed 13 June 2025].

O'Connell, M. (2015). "The Day the Earth Moved Under Our Feet", *IASA Journal* 44(5), pp. 23–28. Available at: https://www.iasa-web.org/book/export/html/96 [Accessed 13 June 2025].

Ogugua, U.J. and Ofordile, J.O. (2022). "Redefining Reference and Information Services in Nigerian University Libraries: A Digital Paradigm", *International Journal of General Studies* 2(3), pp. 116–130. Available at: https://nigerianjournalsonline.com/index.php/IJGS/article/download/2927/2843 [Accessed 13 June 2025].

Pacifico, M.F. and Wilsted, T.P. (eds.). (2009). *Archival and Special Collections Facilities: Guidelines for Archivists, Libraries, Architects, and Engineers*. Chicago: Society of American Archivists.

Rathi, A. (2022). "Why South Africa Is in the Dark, Again", *Foreign Policy*, 8 July 2022. Available at: https://foreignpolicy.com/2022/07/08/south-africa-energy-crisis-eskom-power-cut/ [Accessed 13 June 2025].

Rijsdijk, I-M. & Evans, M. (2024). "'All Who Care to Look': Loss and Renewal in the Wake of the Jagger Library Fire", *Social Dynamics* 50(1), pp. 92–96. Available at: https://doi.org/10.1080/02533952.2024.2320576 [Accessed 13 March 2025].

Satgoor, U. (2021). *UCT Libraries Report 2021*. Cape Town: University of Cape Town Libraries.

Satgoor, U. (2024). *UCT Libraries Report 2022/3*. Cape Town: University of Cape Town Libraries.

Singer, M. and Noble, M. (2022). "One Crate at a Time: Recovering the University of Cape Town Libraries' Special Collections", *Bulletin of the National Library of South Africa* 76(2), pp. 3–18.

Sung, C.H., Leonov, V.P., and Waters, P. (1990). "Fire Recovery at the Library of the Academy of Sciences of the USSR", *American Archivist* 53(2), pp. 298–312. Available at: https://doi.org/10.17723/aarc.53.2.j425553q122150m1 [Accessed 13 June 2025].

Van Malssen, K. (2013). "The Recovery of Eyebeam Art+ Technology Center's Multimedia Collection Following Superstorm Sandy: A Case Study", *International Association of Sound and Audiovisual Archives (IASA) Journal* 41(5), pp. 29–39. Available at: https://www.iasa-web.org/book/export/html/96 [Accessed 13 June 2025].

Walker, A. and Angus, B. (2023) *Fragments of the African Film Collection Survived the Fire*. Available at: https://blogs.uct.ac.za/memory/2023/01/fragments-of-the-african-film-collection-survived-the-fire/ [Accessed 13 June 2025].

Wilsted, T.P. (2007). *Planning New and Remodeled Archival Facilities*. Chicago: Society of American Archivists.

BUILDING AUDIO PRESERVATION CAPACITIES FOR GEORGIAN ETHNOGRAPHIC RECORDINGS AT THE TBILISI STATE CONSERVATOIRE

David M. Walker, Audiovisual Archivist, Center for Folklife and Cultural Heritage, Smithsonian Institution, United States[1]
Crystal Sanchez, Digital Asset Management System, OCIO, Smithsonian Institution, United States[2]

DOI: 10.35320/ij.172

Abstract
From October 2021 to December 2023, the Smithsonian Center for Folklife and Cultural Heritage and the Vano Sarajishvili Tbilisi State Conservatoire (TSC) embarked on a multi-year project to build institutional capacity for preserving and disseminating critically at-risk audio recordings of traditional Georgian music. Funded by the 2021 U.S. Ambassador's Fund for Cultural Preservation, the project "Conservation of Endangered Georgian Traditional Music Recordings at the V. Sarajishvili Tbilisi State Conservatoire, Phase 1" focused on safeguarding more than 200 hours of Georgian musical heritage on endangered media formats, established infrastructure and workflows for specialized media conservation by TSC staff, and ensured continued access to these rich cultural resources for generations to come. Promoted through various televised and streamed channels, this project laid the groundwork for future cultural heritage preservation activities at TSC, strengthening it as a regional leader in this preservation and access work.

Keywords: collaboration; audiovisual media conservation; magnetic audio tape; Tbilisi, Georgia

Introduction
The Tbilisi State Conservatoire (TSC) maintains the recorded audio legacies created between 1960 and 1980 by the premier Georgian ethnomusicologists Grigol Chkhikvadze, Kakhi Rosebashvili, Kukuri Chokhonelidze, and others. TSC's Georgian Folk Music Laboratory, also known as the Grigol Chkhikvadze Ethnomusicology Laboratory, houses these audio legacies that exemplify the rich variety of Georgian polyphonic singing traditions. Recorded on deteriorating magnetic audio tape, these unique performances and oral histories are in danger of being lost forever if left undigitized. Prior to this project, TSC staff lacked the equipment and technical expertise to perform this preservation work and ensure access by future generations.

1 David M. Walker serves as the audiovisual archivist at the Smithsonian Center for Folklife and Cultural Heritage, Ralph Rinzler Folklife Archives and Collections. He specializes in conserving, preserving, and digitally reformatting analog audio media, particularly open reel tapes.
2 Crystal Sanchez is a media archivist at the Smithsonian Institution on the Digital Asset Management team (DAMS), working with digital collections from across the Smithsonian's diverse Museums, Archives, Libraries, Research Centers, and the Zoo. She loves to stroll through fine art museums and to cook.

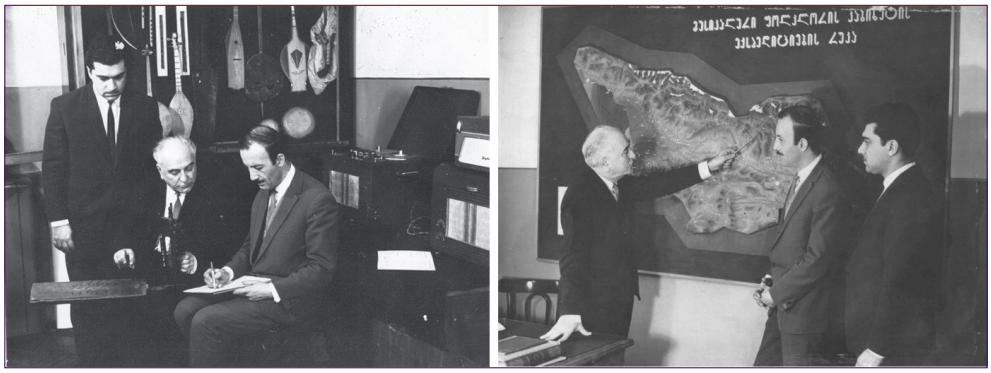


Figure 1. Georgian Ethnomusicologists Chkhikvadze, Rosebashvili, and Chokhonelidze, 1966. Photos courtesy of the Tbilisi State Conservatoire.

Traditional Georgian polyphony is a cultural practice that holds high significance in Georgian culture. Having been recognized by UNESCO in 2001 as a Human Masterpiece of Oral and Intangible Heritage and inscribed in the UNESCO Representative List of the Intangible Cultural Heritage of Humanity in 2008, this singing style plays a crucial role in shaping and defining Georgian identity (UNESCO Intangible Cultural Heritage, 2008). The recordings at TSC captured in the mid-to-late 20th century represent the tradition as it existed before influences brought on by globalization and convey the vast regional differences in the tradition as practiced across the Kakheti, Kartli (East Georgia), and Mountainous regions. The intonations used, specific songs performed, and song variations are some of the features showcased in these recordings that shed light on the tradition's development over time. In most cases, these recordings were captured by Georgian ethnomusicologists at the Conservatoire (Figure 1) and are rare examples of orally transmitted practices (International Research Center for Traditional Polyphony, no date). By digitally preserving the content of these tapes and making them accessible, TSC's collections contribute to the Georgian polyphony canon through the broader dissemination of the material for research, educational, and artistic purposes.

Project Origin

In 2020, the Rector of the Tbilisi State Conservatoire contacted staff at the U.S. Embassy in Georgia requesting technical assistance with digitizing traditional Georgian polyphony vocal music from the TSC archives. Shortly after this discussion, the U.S. Embassy's cultural attaché approached the Smithsonian Institution about a potential partnership opportunity with the Conservatoire to help them meet these goals. The Smithsonian's Office of International Relations forwarded this inquiry to staff at the Center for Folklife and Cultural Heritage (CFCH), a leader in audiovisual preservation and the largest repository of audio and video recordings at the Smithsonian Institution (SI). Once connected, CFCH, TSC, and the U.S. Embassy team discussed the parameters of a potential grant project and submitted a proposal to the 2021 U.S. Ambassador's Fund for Cultural Preservation. Included with the proposal were Memorandums of Support from the Georgian Ministry of Education, Science, Culture and Sport and the CFCH. The project proposal was accepted and officially began in September 2021.

Urgency of Media Conservation

The subset of traditional Georgian field recordings held at TSC required immediate conservation intervention. Many of these tapes were produced in the mid-20th century and are composed of chemically unstable plastics. Tapes treated included those manu-

factured by the Pereslavsky and Shostka chemical plants, as well as by brands such as Svema (Свема), Tasma (Тасма), and Agfa. Over time, these tapes had become brittle, lost their lubrication, and signals were beginning to fade away.[3] This challenge was further compounded by globally declining technical expertise on tape formats and a need for Georgian-language documentation on their care and handling. The equipment and technical expertise gained by the TSC through this project enabled its staff to create preservation-grade digital copies of its unique ethnomusicological collections and to make more informed preservation decisions in the future.

Proposed Objectives and Anticipated Outcomes

In the proposal, CFCH and TSC staff, referred to in this article as the 'project team', identified six key objectives to ensure that the success of the project will endure beyond the lifecycle of the grant:

1. Establish a space at TSC's Georgian Folk Music Laboratory suited not only for digitization but for a range of audio media conservation activities.
2. Conduct assessments of TSC's collections to determine needs and priorities.
3. Participate in preservation trainings and develop documentation that can continue to be used in media conservation processes.
4. Facilitate virtual exchanges to continue developing skills and topics beyond those covered in the core workshop.
5. Finalize the preservation of any undigitized tapes and develop an access plan for broadly publishing and distributing the preserved recordings to the public.
6. Promote the project in Georgian media and through Smithsonian social media channels.

Programmatic Achievements and Technical Evaluation

Objective 1: Establish Media Conservation Lab

Media conservation requires specialized equipment and supplies to perform the work effectively and efficiently. In this project, the project team's goal was to not only outfit the Georgian Folk Music Laboratory with the equipment and supplies necessary to safeguard its recordings, but also to train TSC staff on the various techniques for dealing with complex and deteriorated media objects. Throughout the project, the project team worked closely together to quantify TSC's needs and capacities and to identify local sources for needed materials when possible.

In initial conversations about existing resources and practices at TSC, staff indicated that for many years, they had used a tape machine and other equipment to make copies of audio tapes onto CDs. They recounted, however, that many of their field recordings – especially smaller format ones – played back too quickly and sometimes with multiple performances overlaid on each other. This issue was due to the limitations of the Soviet-era studio tape machine they were using, which could only operate at faster tape speeds and handle tapes with specific recording configurations.

Many of these field recordings were recorded decades ago on different, likely portable machines at slower speeds to maximize recording time per tape. When these tapes were played back on TSC's existing machine, they sounded sped up twice to four times as

3 These details were conveyed by the Rector of the Tbilisi State Conservatoire and included in the initial grant proposal to the *U.S. Ambassador's Fund for Cultural Preservation*, 2021.

fast as normal. Furthermore, many of these tapes featured multiple "tracks" (discrete recordings spanning the width of each tape) that could not be read independently on this machine, causing overlap between adjacent recordings on a single tape.

When outlining the required equipment and supplies for the lab, it was essential to identify and acquire a machine that could handle the various technical nuances of tapes in the TSC's collection. However, without first manually inspecting each tape, predicting the exact technical characteristics of the recordings was impossible. Therefore, a multi-function machine was needed, suitable for preservation playback that could handle up to two dozen possible tape configurations. CFCH located a recently restored Studer A810 for sale, which was customized for archival playback and configured with selectable tape heads and variable speed control. This machine would be able to increase TSC's capacity to digitize various recordings and was well-suited for fragile field recordings with different track configurations and inconsistent tape speeds. SI staff thus swiftly procured this machine ahead of the in-person workshops and later procured large-format reel platters to allow digitization of larger format tapes stored as "pancakes" (i.e., without reels) in the TSC collection.

In addition to providing an archival tape machine, it was a priority to include professional and reliable audio digitization and monitoring hardware to permit digitization at the highest quality. This equipment replaced the existing consumer-grade hardware, which TSC staff had noted introduced audible, additional noise into the signal during digitization. An uninterruptible power supply was integrated to protect the new equipment and prevent damage caused by power disruption. This piece of equipment proved especially important, since TSC facilities staff manually shut off all power to the room each evening, which could damage sensitive audio equipment. With funds from an additional grant, TSC purchased a high-performance computer for this project. TSC also acquired an additional file storage device, a 5.5 TB Raid Network Attached Storage device with four separate hard drives configured for extra redundancy.

Beyond equipment, specific consumable supplies were acquired for use in the conservation process and to help protect the audio tapes over time. Based upon the estimates provided by TSC in early 2022, SI staff procured and shipped new archival tape reels, boxes to house individual reels, and larger containers to improve storage conditions for the 63 audio tapes identified. 221 additional tapes were later discovered in need of similar supplies, which were eventually procured and shipped to TSC.

To further improve the condition of the collection and increase physical access, the team sought alternative storage solutions to keep materials off the floor and desks. In April 2023, the team identified a local source for archival cabinets to store the collection securely, minimize the risk of damage and debris to the recordings, provide physical security, and facilitate improved access for TSC staff involved in the digitization process.

Due to the sensitivity of the electronics, equipment, and supplies acquired for this project, SI staff decided to contract with a reputable art courier experienced with international shipments. On 27 September 2022, the courier picked up the first shipment—two large wooden crates containing the tape machine, essential digitization hardware, and supplies—and delivered them to the U.S. Embassy in Tbilisi two days later. Highly sensitive pieces such as the magnetic tape heads and calibration tapes were hand-carried by SI staff during travel to prevent accidental damage during shipment. A second shipment of equipment supplies was sent in April 2023. As initially anticipated in the early project planning stages, most of the equipment and supplies essential for enhancing

TSC's existing lab for professional audio media conservation had to be imported from outside Georgia.

The newly purchased equipment and supplies were envisioned as a way for TSC to encourage preservation activities and to collaborate with other institutions in the region. After press appearances in October 2022, the Conservatoire received regional inquiries for assistance in digitizing materials in personal collections. Furthermore, the project team chose an archival tape machine found in other preservation facilities across Europe and Asia, increasing the chance of finding replacement parts and technicians experienced with this particular mode in the future, thereby keeping it available as a resource for future projects.

Figure 2. TSC staff rehousing tapes and preparing for filing in new storage, September 2023. Photo by David M. Walker.

Objective 2: Collections Assessment

A foundational part of this project was the collections assessment that was collaboratively conducted during the two weeks of workshops held at the Conservatoire from 17–28 October 2022. SI staff members David Walker and Crystal Sanchez demonstrated the process of performing physical inspections and proposed methods for tracking this information to support preservation decisions and actions. Before the workshops, TSC staff had identified only 63 audio tapes needing preservation. However, this number increased as inspection and tracking commenced.

The project team documented the following about the state of the collection:

- The collection of open reel audio tapes featured a mix of sizes and material types from various years and in varying conditions.
- 227 previously digitized reels were housed in their original boxes and stored vertically in closed cabinets in another room.
- An additional 200+ tapes were stored stacked on their sides on tables in the lab in their original boxes and on original reels, sometimes inside plastic bags.
- Some tapes were not on reels or hubs and required manual winding onto appropriate reels.
- Leader tape was intermittent, and the ends were not secured, leading to unraveling when opening boxes.
- Descriptive information was robust but existed solely on the boxes or on paper sheets inside the boxes with the reels.
- These materials did not originally contain identifiers or catalog records.

In the workshop, Walker and Sanchez introduced concepts of high-level inventory and condition assessments of materials before digitization and cataloging. The assessment framework was informed by standard archival practices and adapted in real-time to address the specific materials and challenges presented in the session. Key metadata fields, including tape width, reel dimensions, hub type, composition, and physical condition, were prioritized to ensure thorough documentation and to guide future digitization and cataloging efforts. To illustrate these concepts, the team prepared a Google spreadsheet to gather basic technical and condition information about each item. Sticker labels were generated following the naming convention "TSC_####" and applied to tapes and their boxes after being tracked in the spreadsheet. Over 200 unique tapes were identified in this process, and the team developed preservation priorities based on the information gathered about uniqueness and condition. The team also put tapes into archival containers to keep them in a vertical orientation, and priority items were re-housed and given new reels (Figure 2). By the end of the workshop, the team had completed this collections assessment which now serves as the primary digitization prioritization and tracking tool for the TSC.

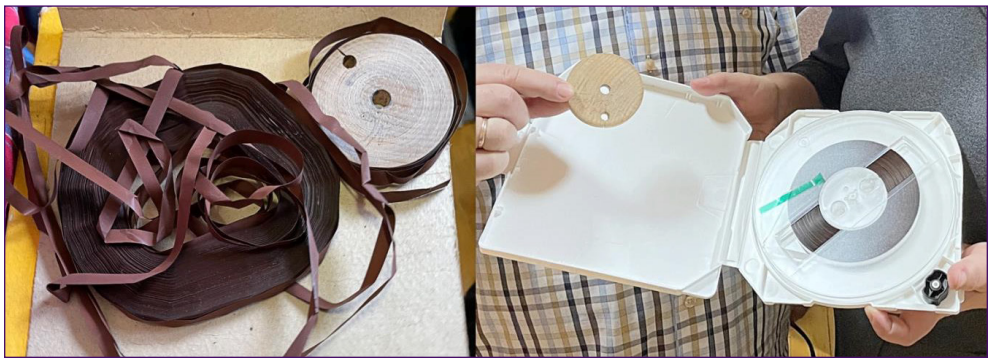


Figure 3. Tape previously stored on hand-made wooden core now made playable. Photo by David M. Walker.

During the collections assessment, the project team noted some interesting technical features about tapes in the collection. A small subset of tapes was stored on what appeared to be hand-made wooden cores (Figure 3). They also noticed many tapes on small 5" reels that had non-standard center holes, which were incompatible with both the old and new tape machines. Fortunately, TSC staff had a small portable tape machine that could be used to "shuttle" the tapes onto new, standard reels before digitization. The project team also found several tapes recorded at very slow speeds, each containing up to four discrete audio tracks and estimated to contain upwards of six hours of unique performances.

Objective 3: Preservation Training and Documentation

In the workshops held at the Tbilisi State Conservatoire from 17–28 October 2022, David Walker and Crystal Sanchez trained TSC staff and students in a series of preservation workshops covering many aspects of magnetic media preservation.

Walker and Sanchez used real examples from the collection to demonstrate key concepts and inform final recommendations, drawing from and referencing common best practice documents. Documents referenced in workshop curriculum include *IASA TC-*

04: Guidelines on the Production and Preservation of Digital Audio Objects,[4] *IASA TC-05: Handling and Storage of Audio and Video Carriers,*[5] *and Canadian Conservation Institute (CCI) Technical Bulletin 30: The Digitization of Audiotapes.*[6] Six TSC staff members, five music technology students, and occasional guests participated in the sessions. In the first week, prioritized concepts included identifying media materials, performing condition assessment and stabilization on tapes prior to digitization, assessing track formation and speed of tapes to prepare for transfer, calibrating and cleaning machines for optimal transfer, digitization workflows, file format technical specifications, metadata and cataloging standards, end-to-end workflows, digital preservation fundamentals, and basic restoration.

In the second week, staff and students continued work on preservation workflows and made further progress on the essential inventory work started in week one. The latter activity helped the team to better understand the collection, target materials in urgent need of prioritization, identify additional resource needs, and plan future work. Slideshows of each training module were saved and uploaded to shared spaces on Google Drive.

Figure 4. Workshop participants learning about tape characteristics. Photo by Crystal Sanchez.

While most of the TSC staff had some hands-on technical experience digitizing recordings in their collections, the workshops provided a broad foundation in preservation-level digitization based on international best practices and standards. The guided preservation sessions in the second week allowed participants to become familiar with the new equipment and methods for capturing the tape content with the highest accuracy, such as isolating specific channels and adjusting tape head azimuth (Figure 4). The sessions also served as an opportunity to tackle particularly problematic tapes, such as those suffering from vinegar syndrome or ones that had become unspooled from their hubs.

During the trainings, the participants learned about recommended file formats for audio preservation and workflows for creating preservation-grade Broadcast Wave Files

4 https://iasa-web.org/tc04/audio-preservation (Accessed 17 May 2025).
5 https://iasa-web.org/handling-storage-tc05 (Accessed 17 May 2025).
6 https://www.canada.ca/en/conservation-institute/services/conservation-preservation-publications/technical-bulletins/digitization-audio-tapes.html (Accessed 17 May 2025).

at 96kHz/24-bit. Embedded metadata practices were demonstrated using FADGI's *Guidelines for Embedding Metadata in Broadcast WAVE Files*[7] and MediaArea's open-source tool BWF MetaEdit.[8] The project team devised a list of recommended metadata fields and collaboratively established a robust file naming convention to be used going forward. The team also defined data storage strategies, which include storing files on a separate drive on the audio computer, copies on the newly acquired 5.5 TB Raid purchased by the Conservatoire, and redundant backups held at the Smithsonian Institution in Washington, D.C.

Throughout the workshop, the project team created textual documentation and supplementary photos, audio and video recordings to serve as reference material on the procedures discussed. These materials were later used to create detailed procedure guides for TSC staff, illustrative materials for presentations, and content for project promotion. Team members were given Certificates of Completion at the end of the two-week workshop period (Figure 5).

Figure 5. Participants with Certificates of Completion. Photo courtesy of the Tbilisi State Conservatoire.

Objective 4: Virtual Exchanges

After the Smithsonian staff members had returned to the United States, the project team took part in several online meetings to resolve technical questions and share significant project updates. The project team had originally planned between eight and ten formal virtual training sessions to expand on the content covered in the in-person workshops. After the discovery that there were significantly more audio tapes to be preserved, the team realized this component was a bit ambitious and instead decided to focus on supporting additional technical work that needed to be done with the collection. The nine-hour time difference between Washington, D.C. and Tbilisi, Georgia was also not particularly conducive to scheduling extended sessions in real time.

Objective 5: Finalization of Preservation and Dissemination Plan

After the core workshops in October 2022, SI staff made two subsequent trips to Georgia in 2023 to continue collaborative preservation work and monitor the project's progress. From 5–20 April 2023, staff focused on preserving the most difficult-to-play tapes. TSC

7 https://www.digitizationguidelines.gov/guidelines/digitize-embedding.html (Accessed 17 May 2025).
8 https://mediaarea.net/BWFMetaEdit (Accessed 17 May 2025).

identified additional tapes in their collection that required extensive intervention using newly acquired supplies, including large-format reel platters, to digitize safely. During this process, the team thoroughly reviewed the tape inventory, updated existing labels as needed, and integrated revised information into the collection spreadsheet.

As part of the collaboration, staff received training in advanced equipment maintenance and calibration. They carefully measured, calibrated, and integrated the old tape machine into the new preservation system to provide additional space for hands-on tape repair and a backup playback device for specific tapes. To enhance versatility, they fabricated an extra set of cables to allow auxiliary devices such as audio cassette players and turntables to be connected temporarily for digitization purposes.

By the end of April, the team had successfully preserved 51 audio tapes from TSC's collection, with an estimated 170 tapes in the queue. Additionally, the 227 tapes that were digitized before the project also became candidates for re-digitization using new tools. The preserved recordings encompassed a wide range of unique musical performances and narrative interviews from across numerous villages in the regions including Abkhazia, Adjara, Guria, Imereti, Kakheti, Kvemo Kartli, Racha-Lechkhumi, and Samegrelo.

SI staff returned to the Conservatoire for a final trip from 18–22 September 2023 (Figure 6). In these last preservation sessions, the team undertook work on additional tapes requiring extensive intervention and developed workflows for scanning paper field notes and other handwritten information associated with the recordings. As of 2024, the team successfully preserved over 80 hours of unique Georgian musical and cultural heritage on 92 open reel tapes. During this trip, SI staff also made digital backups of the preserved recordings for redundancy, to be stored in Washington, D.C., ensuring their long-term safety.

Figure 6. Crystal Sanchez, Nini Kutelia, and Ketevan Davitashvili preserving recordings. Photo by David M. Walker.

In late September 2023, TSC received a separate U.S. Embassy Small Grant to support the production of an audio CD from preserved recordings titled *United Georgia*. This album was designed to further the Tbilisi State Conservatoire's principles and goals as a unique research center of Georgian traditional music, as well as to preserve endangered traditional music recordings, promote Georgian cultural heritage, and to generate interest in Georgian music for younger generations. The album's intended audiences included ethnomusicologists, folk music performers and choirs, professional musicians, students, and music enthusiasts.

Objective 6: Project Promotion

The project team participated in several significant promotional activities to showcase the partnership and support from the U.S. Embassy in this project. On 27 and 28 October 2022, SI and TSC staff participated in Georgian national media events led by the cultural attaché. In televised interviews on Georgia Public Broadcasting and the private Georgian TV channel Mtavari Shuadge, team members discussed the importance of preserving recorded Georgian cultural heritage and highlighted the vital work TSC is now able to do to protect and promote these rich documents. The project team also demonstrated work on-site at the lab, where videographers captured additional footage and conducted interviews for a documentary film sponsored by the Community Heritage Exchange Initiative. Upon returning to the US, the office of the Smithsonian Secretary Lonnie Bunch III published two posts on Twitter to raise awareness of the project and acknowledge the support from both the U.S. Embassy and TSC.

Continuing their commitment to promoting the project, SI staff conducted two significant presentations at audiovisual preservation conferences. On 19 May 2023, David Walker delivered a 45-minute technical presentation and led a discussion at the Association for Recorded Sound Collections conference in Pittsburgh, PA. Walker also participated in a panel discussion alongside two esteemed leaders in the field of audiovisual preservation at the Library of Congress's National Audiovisual Conservation Center on 3 June, 2023.

From 11–15 September 2023, the project team continued their public outreach initiatives by participating in the International Association of Sound and Audiovisual Archives (IASA) conference held at Istanbul University. With the support of travel grants funded IASA, staff from the Conservatoire and Smithsonian participated in outreach and networking events with professionals from neighboring regions, including Türkiye and Ukraine. On September 13, the project team delivered a joint presentation titled "Building Audio Preservation Capacities for Georgian Ethnographic Recordings at the Tbilisi State Conservatoire."[9]

Conclusion

The collaborative efforts between the Smithsonian Institution and the Tbilisi State Conservatoire have resulted in significant achievements in the preservation of Georgia's rich musical and cultural heritage. This project was initiated to address a critical need to preserve the endangered audio recordings of traditional Georgian music housed at the Vano Sarajishvili Tbilisi State Conservatoire. Audio tapes in the Conservatoire's collection were prone to embrittlement, loss of lubrication, and demagnetization; and required specialized expertise and resources for preservation. The Conservatoire's ethno-

9 Sanchez, C., Matiashvili, K., Davitashvili, K., and Walker, D., 2023. *Building Audio Preservation Capacities for Georgian Ethnographic Recordings at the Tbilisi State Conservatoire*. Presented at the International Association of Sound and Audiovisual Archives (IASA) Conference, 13 September 2023, Istanbul, Türkiye.

musicological recordings capture a diverse array of traditional music spanning numerous regions, offering unique instances of Georgia's cultural heritage. Overall, the project's success represented not only the digitization of audio recordings but also its broader cultural heritage impact. By preserving and promoting Georgia's traditional music, the project contributed to the global appreciation and understanding of this rich cultural heritage for generations to come.

The preserved recordings hold lasting relevance for the Georgian polyphonic singing tradition, featuring performances by rarely recorded practitioners in remote environments across the country. These recordings will continue to serve as primary sources for ethnomusicologists, scholars, and musicians; contributing to the study, appreciation, promotion, and revitalization of this endangered yet culturally significant tradition. Beyond preservation efforts, the project team actively engaged in promotional activities to raise awareness of the project's significance. Media appearances, appearances in documentary films, social media outreach, and presentations at prestigious conferences showcased the partnership's impact and highlighted the importance of preserving Georgia's cultural legacy. By participating in international conferences and networking events, the project team expanded their professional networks and shared best practices in audiovisual preservation. This bolstered TSC's internal capacity and fostered collaboration with institutions facing similar challenges in neighboring regions.

Acknowledgements
This project was made possible through the generous support of the U.S. Department of State's Cultural Heritage Center and the U.S. Embassy in Tbilisi, whose dedication to cultural preservation and international collaboration has been a guiding force throughout this endeavor.

We extend our deepest gratitude to our project partners at the Tbilisi State Conservatoire, with special thanks to the staff of the Georgian Folk Music Laboratory for their passionate engagement and unwavering commitment to safeguarding Georgia's rich musical heritage.

We are also sincerely grateful to our colleagues at the Smithsonian Institution for their invaluable time, expertise, and steadfast support. The dedication of the CFCH Administrative Team and the encouragement from Richard Kurin, former Acting Director of CFCH, played a vital role in bringing this project to completion.

References

International Research Center for Traditional Polyphony (no date). *Georgian Folk Music Laboratory of the V. Sarajishvili Tbilisi State Conservatoire*. Available at: https://polyphony.ge/en/about-us/related-struchtures/georgian-folk-music-laboratory/ [Accessed: 2 March 2025].

UNESCO Intangible Cultural Heritage (2008). *Georgian Polyphonic Singing*. Available at: https://ich.unesco.org/en/RL/georgian-polyphonic-singing-00008 [Accessed: 2 March 2025].

"TO PROVE TO YOU I HAVEN'T FORGOTTEN MY NORWEGIAN": THE AUDIO LETTERS OF OWEN VEUM

Karl Peder Mork, Consultant, Vestland County Council Archives, Norway[1]

DOI: 10.35320/ij.184

Abstract

Letters are important historical sources, not only for their textual content, which expresses a vast range of human interactions and thoughts, but also as a social practice. Immigrant letters, broadly defined, include all correspondence related to international migration. This article examines the collection of audio letters recorded by Owen Veum, a second-generation Norwegian in the United States. The audio letters were recorded between 1969 and 2001 and sent to relatives in Norway. In 2015, the letters were donated to the Vestland County Council Archives.

The aim of this article is to discuss similarities between the written letters of Norwegian immigrants to the United States and the Owen Veum tapes. The Owen Veum tapes, though audio rather than written, provide a unique perspective on Norwegian emigration history. They document the life of a second-generation American with Norwegian immigrant parents and offer insights into a Norwegian-speaking community in the state of Wisconsin in the United States. The collection highlights the diversity of historical sources and the adoption of audio recording technology by immigrants.

Keywords: audio letters, migration history, Norway, United States of America

Introduction

In 2025, Norway marks the 200th anniversary of the journey of the ship *Restauration*, which set sail from the city of Stavanger on 5 July 1825, for New York. This was the first organised voyage of Norwegian emigrants to the United States, sparking an important part of Norwegian history. From the first emigrants boarding the ship *Restauration* and the next hundred years onwards, the emigrant movement saw a significant part of the Norwegian population relocating across the Atlantic Ocean. Some 800,000 individuals had emigrated by 1925, making Norway second only to Ireland in total numbers of emigrated population to the United States. The total Norwegian population was just over one million in 1825. The emigration was primarily driven by overpopulation and economic crises, although the reasons for emigration were complex and varied throughout the first hundred years of migration (Østrem, 2014). Most Norwegians settled in the Midwest, in the states of Minnesota, Wisconsin, Illinois, the Dakotas and Iowa. Here, several Norwegian American communities arose and established businesses, churches, newspapers and colleges.

As the bicentennial of this historic migration is being celebrated across Norway and the United States throughout 2025, archival institutions are providing access to various sources on migration, enabling users to reflect on the legacy of Norwegian Americans and their cultural heritage.

1 Karl Peder Mork works as a consultant at the Vestland County Council Archives in Leikanger, Norway. His field of expertise lies in music and audiovisual archives, as well as other archives documenting intangible cultural heritage.

This article presents research on a collection of recorded audio letters Owen Veum sent to his cousin Bjarne Lunde in Norway between 1969 and 2001. By presenting the contents of his archive and the topics of conversation on the recorded tapes, we learn more about Owen Veum, who was born in the United States to Norwegian emigrants from Western Norway. The article sheds light on how the archive of Owen Veum share similarities with other collections of migrant correspondence and explains how the collection is unique in addressing Norwegian identity in the United States, language, and family contact across the Atlantic.

Biography of Owen Veum

Owen Veum was born on 24 May 1917, in Stoughton, Wisconsin. He was the son of Norwegian immigrants Kristoffer Larsson Veum (1879–1972) and Elsa Veum (1882–1964). The Veum farm from which his father originated is located not far from the town Hafslo in the Sogn region of Western Norway. Kristoffer L. Veum immigrated to the United States in 1899, where he Americanised his name to Chris, a common practice for many Norwegian immigrants (National Archives at Chicago, 1906). Owen Veum's mother Elsa was born Elsa Olsdotter Lunde. She was born in Jostedalen, some 30 kilometres north of Hafslo. She emigrated to the United States in 1901 (Vinda, 2007).

There are limited sources that document Chris and Elsa's life in Norway. As was common for emigrated Norwegians, Chris Veum went back to Norway to visit his family at least twice, in 1904 and 1908. Reflecting a protocol for emigrants in the city of Bergen, Chris Veum registered as a factory worker in August 1908 (National Archives of Norway, 1908). Chris and Elsa Veum got married in 1906, and settled down as farmers in Stoughton, Dane County, Wisconsin in 1919. Owen was their only child.

Chris Veum was not the only one in the Veum family to emigrate to the United States. Of his five brothers, three of them emigrated in the 1890s, all of whom settled in Dane County. Here, they had 19 children among them (Vinda, 2007). Dane County has a long history of Norwegian immigrants, and the city of Stoughton is known for its rich Norwegian heritage. The first Norwegians purchased land in Dane County as early as May 1840. Soon after, a Norwegian Lutheran congregation was established. Records show that over three thousand Norwegians had settled in Dane County by 1850, several of whom had immigrated from the Sogn district (Hedberg, 1994).

As mentioned, Owen Veum's father and mother were born in the Hafslo area. It is not known precisely how many immigrants to the United States originated from this part of the country. However, research on so-called priest's certificates, certificates of conduct issued by local priests, has shown that approximately 2,300 individuals from the Hafslo area received such a certificate before emigrating to the United States in the years 1845–1917. However, the numbers might be significantly larger, as other records show numbers that exceeds this, especially after the end of the American Civil War (Hess and Høyum, 2013). Many of these emigrants settled in Wisconsin, and later in other parts of the upper Midwest.

Owen Veum ran the family farm in Stoughton, raising cattle and growing tobacco. Reportedly proud of his Norwegian heritage, he spoke Norwegian with a distinct Sogn dialect, influenced by his parents' mother tongue. In many cases Owen Veum uses American words in his audio letters but inflects them according to his Norwegian Sogn dialect. In 1944, Owen Veum married Eunice Schachtschneider (1919–2011). They had seven children. Owen Veum passed on 30 July 2015. Their son Kenny Veum still lives on the farm as of 2025.

The Collection

The audio letters collection consists of 31 open reel tapes and three audio cassettes, includes a Panasonic RQ-103S reel to reel tape recorder, and is part of the collections of the Vestland County Council Archives in Norway. The reels are all 3 inches in diameter, 150 feet length, with a polyester base film. Based on the few preserved original packaging materials, the tapes appear to be Scotch 175 magnetic tape, though some reels by other manufacturers might appear in the collection.

Owen Veum recorded and sent the tapes to his cousin Bjarne Lunde in Marifjøra, a town close to the Veum farm in Norway. Unfortunately, accurately dating the tapes proves difficult. While some envelopes and postal cases were preserved (Figure 1), other tapes lack packaging. In some envelopes several tapes are included, but it is not known whether these tapes were recorded on dates close to another or not, or even if they were originally sent together. In those cases where postage stamps are preserved and possible to decipher, postmarks indicate that most of the tapes seem to have been recorded in the 1970s.

The preserved envelopes fall into two categories. Most of them are small cases made of either plastic or cardboard (Figure 1), specifically designed for mailing audio tapes. In addition, a few envelopes reinforced with bubble wrap are preserved. The envelopes and cases themselves provide no indication as to the dating of the individual tapes.

Bjarne Lunde also sent tapes from Norway to Stoughton, but these tapes were not preserved. Owen Veum's son Kenny remembered his father recording tapes and playing those he received for others in the Stoughton area, but wrote in an e-mail to the author that his father would tape over the tapes he received once he had listened and shared them (Veum, 2024).

It is evident from the tapes preserved in the Vestland County Council Archives that recording audio letters was a fulfilling activity for Owen Veum. He often states his motivation as "I'll send you a tape to prove to you I haven't forgotten my Norwegian", or simply "It is time to record a new tape, so that you may hear from us".[2] If his tape is a reply to a recently received tape from his cousin, Owen Veum sincerely thanks him, and expresses regrets at not sending his reply sooner. However, on several occasions Owen Veum requests more contact and tapes from his Norwegian relatives. It seems that Bjarne Lunde at one point rarely sent any correspondence at all: "It seems to me that you guys are afraid of us", Owen Veum commented on several tapes.

2 All quotations from Owen Veum that appear in this article were translated to English for this article.

Figure 1. Package dated 1978 containing one of the Owen Veum tapes. Photo: Javad Montazeri/ Vestland County Council Archives.

All the open reel tapes are recorded at 3¾ ips, which results in 8 minutes of recording time. This is the default speed setting of the Panasonic RQ-103S. However, 1⅞ ips is also possible by removing the capstan sleeve from the capstan. Owen Veum did not make this adjustment. All of Owen Veum’s tapes are recorded to their maximum capacity of 8 minutes. On several tapes, the reels are full before Owen Veum finishes his sentence, resulting in abrupt endings. Owen Veum himself comments that he talks a lot. For example, on a tape dated March 29, 1976, Owen Veum reports his wife Eunice saying that if he ever went to Norway, “it would result in me doing all the talking, and the people over there get to say nothing”. Several such small humorous comments or stories surface throughout the recorded tapes. In addition to talking, or rather in order not to leave any tape unused, it was also common for Owen Veum to record music onto the tapes if there was nothing more to add about recent events. The musical genre is usually American country, but there is no mention of whether the music is recorded from other tapes, from a disc or the radio, or if the recorded music bears any significance to Owen Veum himself, or to Bjarne Lunde.

Methodology

The tapes were donated by the Lunde family to the Vestland County Council Archives in late 2015, but no further preservation or digitisation actions were taken at the time. In 2022, attention was brought to the collection, and a plan for digitisation of the materials was initiated. During assessment of the contents in preparation for the digitisation process, some cases of oxide layer delamination were observed, which led to a temporary halt in the digitisation process while the condition of the material was further assessed. It was found that the extent of oxide layer delamination was less severe than initially assumed, and the digitisation work resumed after a two-year delay.[3] No additional preservation measures were implemented. The tapes exhibiting signs of oxide layer delamination were handled with care but otherwise digitised using the same pro-

3 Another reason for this delay was that other material was prioritised for digitisation during the same period the Veum tapes were further assessed.

cedure as the rest of the collection. The digitisation of the collection was completed in 2024. For research purposes, the digital preservation files were used to listen to the content of the tapes.

An inventory of the tapes was produced during the digitisation process, containing a summary, sometimes keyword-based, of the contents of each tape. The work on digitisation and the production of the inventory was carried out by the author of this article. The inventory also contains a field dedicated to overall comments, including information about the possible recording date. The keywords used were purely based on the topics of conversation and were not further categorised nor did they follow a pre-defined set of keywords. Later in this article, Alsvik's (1994) analysis of topics common in letters from the Haugesund area in Norway is presented. The inventory of the Owen Veum tapes was used to compare these two sets of correspondence.

An excerpt of the inventory follows (Table 1). As with quotations, descriptions were originally written in Norwegian and have been translated to English for this article.

Tape number	Contents	Comments
OV-013A	Olina and the sister Elene speaks. On family and their health. Olina was recently on a group trip to Chicago. Christmas cooking. Asks for a reply on Christmas mail and an invitation to visit the U.S. Traveling to Norway has become expensive. Recollections of a trip to Oslo. Owen has 12 cows. Has stopped eating meat and spicy food and drinking coffee.	Postal stamp 14.04.1975, but talks about Christmas?
OV-013B	Ola speaks. Christmas greetings. On the weather, a lot of snow. Petrol prices up. Layoffs. Nothing else to add. Olin does not want to speak on tape. Prices up on sugar, prices on livestock almost halved, pigs however not changed. Bad crop yield. Layoffs, strike in the auto industry. Taxes up. Ola has turned 97, his neighbour on the retirement home is 96 (he is also Norwegian). Those who have passed lately. Tobacco crops are OK. The children home for Thanksgiving, 19 in total. Cooking *flatbrød*[4], some talk about *lutefisk*[5].	Postal stamp 14.04.1975, but talks about Christmas?

Table 1. Excerpt of the inventory describing the Owen Veum tapes.

Comments were added to the inventory listing to note issues regarding the handling and analysis of the Owen Veum tapes. The excerpt in Table 1 describes a single tape that was recorded on both sides, hence the letters A and B in the tape numbering. The tape

4 *Flatbrød*, literally "flat bread", is a traditional Norwegian thin, dry bread. Today it is mostly eaten alongside soups and stews.

5 *Lutefisk* is a seafood dish made of cured and dried cod that is later rehydrated prior to eating. The dish is commonly eaten at Christmas in several of the Nordic countries.

was found in an envelope with a postage stamp dated 14 April 1975, but was most likely recorded in early December, as there is talk about a recent Thanksgiving celebration alongside talk of Christmas preparations. This indicates that relying entirely on information given on the preserved envelopes is insufficient to date the tapes. It is evident throughout the tapes that Owen Veum was eager to send his tapes without delay after he had finished recording them, as he often refers to previously recorded tapes and the frequency of tapes sent from Norway. Regarding the discrepancy between the postage stamps and the contents of the tape, it is most likely that the Lunde family did not always place recordings back into the same envelopes that they were received in.

As a result of difficulties in dating the tapes, the tape numbering in the inventory is not chronologically ordered. More emphasis is placed on the summaries of the contents in the catalogue, as this proves to be the most valuable indicator of the contents, rather than their assumed date.

There are only a few instances in which Owen Veum specifies the date of the recording, and typically this is limited to mentioning the day of the month, without indicating either the month or the year. In most cases, the tapes were further dated based on the information given by the individual speaking on the tape. For example, election results are sometimes referred to, making it possible to assume a year of recording based on the name of the current governor in Wisconsin. The same is possible based on references given to preparations for holiday celebrations, or the time of year in relation to the seasons of farming.

The inventory example also provides names of individuals other than Owen Veum speaking (or refusing to speak) on the tapes. This is valuable information and provides insights into the lives of other Norwegian Americans in Owen Veum's community at the time and is further discussed later in this paper. Ages of Owen Veum's relations were also occasionally mentioned on the tapes, and this information can also be used to infer the recording date.

The digitisation of the Owen Veum tapes, initially delayed due to preservation issues, has provided a valuable resource for research into Norwegian American communities. The inventory created during the digitisation process, despite its lack of a predefined keyword set, has proven instrumental in comparing correspondence topics with those identified by Alsvik (1994). In addition, the difficulty regarding dating of the tapes underscores the importance of contextual information in accurately dating historical recordings.

The Immigrant Letter as Historical Source

The correspondence of famous writers, politicians, and other notable figures has long been considered an important historical source. In the study of letter writing, much attention has been given to the contents of the letters, expressing the vast range of human interaction and thoughts in writing. Barton and Hall explain that letters may be considered not only as carriers of text, but as indicators of social practice as well: "through letters one can narrate experiences, dispute points, describe situations, offer explanations, give instructions and so on" (Barton and Hall, 2000, p. 1). Thus, immigrant letters contain not only discussions of historical events, but also contain important clues about the identity, beliefs and intentions of the author.

Migrant correspondence is not limited to letters written on paper. Throughout history, migrants have adopted emerging communication technologies to maintain contact with

relatives in their countries of origin. There is no doubt that the development of new modes of communication significantly influenced historical migration, just as it continues to shape contemporary migratory patterns (Oiarzabal and Reips, 2012). As audio recording equipment became more affordable and accessible to ordinary consumers after the Second World War, this technology enabled transnational communication in new ways. The art of letter writing requires individuals either to possess the necessary literacy skills to compose letters themselves or to rely on someone else to write on their behalf (Cancian and Wegge, 2016). The possibility of recording a tape or cassette, as well as communicating on the telephone, made oral communication over far distances possible. This oral mode removes certain issues of literacy, namely, the ability to write proficiently or to read and write in another language.

When discussing letters from immigrants to the United States, Sinke (2016) proposes a definition of the term "immigrant letters": "Broadly conceived the category could include all correspondence back and forth, to and from a person involved in international migration to the United States at some point in his or her life" (Sinke, 2016, p. 417). By defining the term broadly and describing the letters as "family papers" rather than immigrant letters, both correspondence sent from the emigrant and letters from the people in the homeland may be included.

Owen Veum and his cousin Bjarne Lunde exchanged audio letters. According to Sinke's definition, this correspondence would constitute a collection of "family papers." It is often the case that only one side of a correspondence between two family members has been preserved. This is also true of the archive of Owen Veum: the recordings made by Bjarne Lunde have been lost. In this instance, the absence of Bjarne Lunde's contributions is because Owen Veum utilised the same tape multiple times. It is not unlikely that there was an economic reason behind this. Nevertheless, the tapes recorded by Bjarne Lunde would have constituted a valuable supplement to the recordings of his American-born cousin.

In a Norwegian context, letters from emigrated individuals to the United States are referred to as *Amerikabrev* (America letters). The Amerikabrev served not only as a means of contact with the relatives in the homeland, but also likely played a significant role in motivating others to emigrate. Letters received from overseas held news value for the local community, and were often shared around town, some of them even printed in local newspapers; and are consequently believed to be a crucial part of the recruitment of new emigrants (Østrem, 2014). A sense of adventure and hope for a better future could be fostered by the image of Norwegian Americans depicted in these letters. Though negative voices appear less frequently in collections of preserved letters, there are also examples of preserved correspondence testifying to the harsh realities of emigration (Østrem, 2014).

By enclosing photographs with their letters, the senders and recipients had the possibility of sharing their lives through another type of media. Photographs served as visual reminders of the home country and established a link between the immigrant and the origin community (Reiakvam, 1997). For example, the Norwegian photographer Olai Fauske (1887–1944) received several requests from emigrants to photograph known landscapes and people for their own pleasure and reminiscence. The request was at times very specific on how a portrait was to be composed and at what time of year it was to be taken. The demand for photographs from Norway proved to be a business venture, as Fauske advertised in newspapers for people wanting to send their portrait or a picture of their home farm to emigrated relatives in the United States (Reiakvam, 1997).

Letters sent from Norway to the United States are sometimes referred to as *Noregsbrev* (Norway letters). Archival institutions in Norway hold several collections of Amerikabrev; however, the number of Noregsbrev collections is smaller compared to those of Amerikabrev. Some efforts have been made to collect Noregsbrev, and the National Library of Norway has published their collection of over 3,000 letters sent to Norwegian emigrants to the United States and Canada, as well as other parts of the world.[6]

Aside from praising life in the new country or encouraging relatives to also emigrate, immigrant letters also contain information about everyday life. This information may be interesting or relevant, such as the wellbeing of relatives, new additions to the family or other significant events in the lives of the senders, although many of the topics covered might be classified as "more or less relevant events from the lives in emigration and at home" (Kalc, 2015, p. 201). This too, is the case in the Owen Veum tapes. It is important to emphasize that Owen Veum himself was not an immigrant to the United States, and as such, his audio letters are not letters from a person personally "involved in international migration". There are still several similarities between the Owen Veum tapes and immigrant letters, and the recordings benefit from being studied in relation to immigrant letters. Comparing an analysis of a collection of Noregsbrev from the Haugesund area in Norway in the years 1879–1899 with other collections of family papers, Alsvik (1994) concludes that most of these letters follow a similar structure. The letters in question for the most part also follow this pattern:

- "Thank you for your letter"
- On the weather
- On the crops
- On the fisheries
- On the businesses in town
- Current topics in the public sector
- On spiritual/religious life
- On relatives and acquaintances
- Greetings

The Owen Veum tapes largely follow this pattern as well. For example, the contents of a tape probably recorded on April 12, 1975, are as follows:

- Greetings: "I thought I wanted to send you some words".
- On the weather: "We had a great deal of snow in March".
- On the health, death and funerals of relatives and acquaintances: "He had relatives in Lambhaug[7], so if you see any of them, tell them, please".
- On the livestock: "I'm planning on slaughtering five pigs in a couple of weeks. I'll keep one of them and give the other ones to the children. But I want to keep the trotters. I say to my wife, I'm so fond of 'syltelabbar'[8], you know".
- On prices on goods and current topics, mostly the war in Vietnam: "The people in Congress know that people are fed up with this, so it's a good thing the war comes to an end".
- Greetings: "This will be all this time. But it won't be long until I record a new tape (...) please try to send something so we can hear from you too".

6 The collection, along with collections of Amerikabrev, is accessible through the National Library's search engine here: https://www.nb.no/search?mediatype=brev-og-manuskripter (Accessed 21 May 2025).
7 Lambhaug farm is close to the Veum farm in Norway.
8 Syltelabbar is a traditional Norwegian Christmas dish of boiled cured pig's trotters.

The weather, the crops and livestock, as well as the health of relatives and acquaintances are the most prominent topics discussed, while fisheries and religion are never mentioned. This shows how the Owen Veum tapes bear similarities to what might be perceived as Amerikabrev in a traditional sense, even though the tapes are recorded later than most collections of such letters and despite the fact that Owen Veum himself was born in the United States.

Analysing the Contents of the Veum Tapes

The linguistic dimension of Owen Veum's audio tapes constitute a central aspect of the collection. Listeners proficient in Norwegian will immediately recognise that Owen Veum, as well as other relatives and acquaintances featured on the tapes, speaks in a dialect from the Sogn region. Owen Veum was not proficient in writing Norwegian, and it is therefore not unreasonable to suggest that one of the reasons for him to choose tape recordings as a form of communication was linguistically motivated. Earlier in this article, sources have been presented that highlight the emigration from the Sogn district to Dane County. The audio tapes of Owen Veum illustrate how a distinctive dialect from Western Norway continued to be maintained among second-generation immigrants in the United States. The persistence of such a dialect across generations of immigrants demonstrates how chain migration influences the dialects spoken by immigrant communities (Lykke, 2020).

The linguistic dimension of migrant audio letters is also addressed by Kalc (2015), presenting audio letters by emigrants from the multicultural Trieste, Italy (Trst in Slovenian) to Australia. Taking place on a different continent, the choice of language spoken by the protagonists on the tapes forms an interesting part of the analysis and thus highlights language choices as significant elements of migrant audio letters. The tapes presented by Kalc originated from a family with Slovenian and Croatian as their mother tongues, yet all communication on the tapes is in Italian. This contrasts with other emigrant correspondence from Slovenian-speaking emigrants to Australia. Kalc asserts that "this points out the complex matter of the identity of Triestine immigrants" and that it was an "adjustment strategy to avoid dividing ethnic and ideological sentiments, which had dramatically affected the history of Trieste and led thousands of inhabitants there to emigrate to Australia in the mid-1950s" (Kalc, 2015, p. 218).

Through his manner of expression on the audio tapes, it is evident that Owen Veum maintained a Norwegian identity. This suggests that his sense of cultural belonging was not significantly challenged by his upbringing in the English-speaking United States. In Kalc's (2015) study, Triestine emigrants navigated complex identity landscapes through language choices. In the censuses of 1920, 1930, and 1940, several residents in the vicinity of Owen Veum's home reported having Norway as their place of birth and Norwegian as their mother tongue (National Archives at Chicago 1920; 1930; 1940). This was also the case for Owen Veum's parents, who reported this in the census. He thus grew up in a typical Norwegian American environment. Owen Veum's use of his Sogn dialect may be interpreted as cultural continuity, reflecting a context in which linguistic heritage is preserved rather than negotiated.

At the same time, the correspondence with Bjarne Lunde emerged as both a linguistic and cultural lifeline, particularly as the older generation around him gradually passed away, a sentiment Owen Veum expresses on several occasions. This mirrors the emotional and identity-affirming function of migrant audio letters more broadly, where language becomes both a medium of connection and a marker of belonging.

Owen Veum at times invited some of his cousins to speak on tape, although some of them refused to do so. Of those who agreed to speak, most of them spoke Norwegian, indicating that several of the second-generation members of the Veum family had learned the Norwegian language from their parents. Owen Veum also invited individuals of his father's generation, those were themselves immigrants, to speak on the tapes. At the time of recording, these individuals were close to 90 years of age. By doing so, Owen Veum documented the voices of Norwegians who emigrated from Norway at the turn of the century. These voices are unique sources of history and language.

One of the elderly Norwegians in the community was a man named Karl, a Norwegian-born immigrant in his nineties. Owen Veum visited Karl several times, and Karl also spoke on multiple occasions on tapes from the late 1960s. Karl himself also maintained significant contact with Norway, and the recordings contain accounts that he both visited relatives there and made telephone calls with them. The encounters with Karl demonstrate how the local Norwegian American community changed during Owen Veum's lifetime. One of the most significant changes often touched upon by Owen Veum, is that "there are few left who speak Norwegian", which he says on several tapes. Over time, we hear about Karl's declining health, and on a tape dated 5 April of an unknown year, Owen Veum reports that Karl has passed away the previous night. On a tape recorded eight days later, details of the funeral were shared. According to Owen Veum, approximately 340 people attended the wake, and many were present at the funeral. Owen mentions the languages used during the service. As there were few people left who spoke Norwegian, the funeral service was held in English. However, one Norwegian hymn was sung: "Den store hvite flokk, å se". The hymn was first published in 1765 and is based on a folk tune from Heddal in central Norway. It is still used in Norwegian churches today (Kyrkjerådet, 2013). It is evident that the decline in the number of Norwegian speakers in the area was something Owen Veum found regrettable. There are few perspectives on the Norwegian community in Stoughton beyond the individuals Owen Veum speaks about or with. Consequently, it is challenging to engage in further speculation or discussion on his views regarding the Norwegian community in the area.

Conclusion

Owen Veum was a second-generation Norwegian in the United States, which must be considered in context when studying the audio letters he sent back to Norway. In this way, the archive of Owen Veum differs from other collections of Amerikabrev or migrant correspondence, in that he did not send letters back home per se. Instead, he sent audio tapes to a home he had never resided in, but which evidently held great significance to him. Important topics addressed on the tapes include family and acquaintances, and particularly the health of the older generation. There is also much discussion about the prices of goods, the harvests on the farm, and international news, such as the Vietnam War and unrest in the Middle East. Finally, there is an abundance of "more or less relevant events from the lives in emigration and at home," as Kalc (2015) found in his study; regarding the weather, that the car had been in for repairs, or that fact that Owen Veum stopped drinking coffee for his health. In this way, the audio letters of Owen Veum draw similarities to migrant correspondence from first-generation immigrants to the United States.

By inviting relatives and other individuals with Norwegian ancestry to speak on the tapes, the anticipated audience of the tapes is not only Owen Veum's cousin Bjarne Lunde but also includes other friends and relatives of people who had left the Hafslo area. This is another similarity between Amerikabrev and the Owen Veum tapes.

By studying the Owen Veum tapes, a source of Norwegian emigration that is rarely presented in the context of Norwegian migrant history may be explored: Owen Veum's recordings document the life of a second-generation American with Norwegian immigrant parents, providing insight into a local community with several Norwegian-speaking residents. Additionally, individuals are encountered who themselves emigrated from Norway at the turn of the 20th century. They tell their own stories and send greetings home, and listeners later hear second-hand accounts of their declining health and death. Thus, Owen Veum's tapes are a unique source about the generation of Norwegians who emigrated to the United States in the late 1800s.

Veum's use of audio tapes demonstrates that diverse types of historical source material complement each other. As audio recording technology became available to ordinary people, immigrants also began using it in their correspondence with relatives. Owen Veum's recordings provide a unique insight into a Norwegian-speaking community in Wisconsin, where several of the speakers on the tapes learned Norwegian in the United States. By making these sources accessible, archival institutions provide material for a range of scientific fields. It is not only the historical facts presented on the tapes that are worth preserving. Equally important are their formats, their materials, the collection history and the language used. This tapes and their contents contribute to a deeper understanding of the cultural and social dynamics of Norwegian Americans during the mid-20th century.

Acknowledgements

Several contacts in the United States deserve thanks for their invaluable assistance with this article. I would like to express my gratitude to The Norwegian Heritage Center in Stoughton, Wisconsin for helping me connect with Owen Veum's son, Kenny Veum. I also extend my thanks to colleagues at the National Archives at Chicago, Stoughton Public Library and the Wisconsin Historical Society for their contributions of archival material and newspaper clippings.

References

Alsvik, O. (1994). Brev fra Norge til Amerika – kilder til norsk lokalhistorie? [Letters from Norway to America – Sources for Norwegian Local History?] *Heimen* 31(3), pp. 185–195.

Barton, D. and Hall, N. eds. (2000). "Introduction". In *Letter Writing as a Social Practice.* Amsterdam: John Benjamins Publishing Company, pp. 1–14.

Cancian, S. and Wegge, S (2016). "'If It Is Not too Expensive, then You Can Send Me Sugar': Money Matters among Migrants and Their Families", *The History of the Family* 21 (3), pp. 350–367.

Hedberg, B. (1994). "Sogningar i Dane County. Koshkonong-kolonien 1844–1860" [People from Sogn in Dane County. The Koshkonong settlement 1844–1860]. *Årbok for Sogn* (40), pp. 113–120.

Hess, H. and Høyum, M. ed., (2013). *Gards- og ættesoge for Luster commune.* Vol. 10: Hafslo 2 [Farm and Family History of Luster Minicipality]. Gaupne: Luster kommune.

Kalc, A. (2015). "'In this Way We Can Feel Closer': Audio Letters between Australia and Trieste/Trst", *Studia Historica Slovenica* 15 (1), pp. 201–220.

Kyrkjerådet (2013). *Norsk koralbok* [Norwegian Hymnal]. Stavanger: Eide forlag.

Lykke, A. (2020). *Variation and Change in the Tense Morphology of Heritage Norwegian in North America*. [Doctoral dissertation, University of Oslo].

Oiarzabal, P. and Reips, U. (2012). "Migration and Diaspora in the Age of Information and Communication Technologies", *Journal og Ethnic and Migration Studies* 38 (9), pp. 1333–1338.
Reiakvam, O. (1997). *Bilderøyndom. Røyndomsbilde. Fotografi som kulturelle tidsuttrykk* [Image Reality. Reality Image. Photography as Cultural Expressions of Time]. Oslo: Det Norske Samlaget.
Sinke, S. M. (2016). "Written Forms of Communication from Immigrant Letters to Instant Messaging", In: *The Oxford Handbook of American Immigration and Ethnicity*. New York: Oxford University Press, pp. 416–429.
Veum, K. (2024). Personal email communication with the author, 30 September 2024.
Vinda, I. ed., (2007). *Gards- og ættesoge for Luster commune. Vol. 7: Dalen – Fevoll* [Farm and Family History of Luster Minicipality]. Gaupne: Luster kommune.
Østrem, N. O. (2014). *Norsk utvandringshistorie* [The History of Norwegian Emigration]. Oslo: Det Norske Samlaget.

Archival sources

National Archives at Chicago (1906) *The Municipal Court of the County of Dane: Naturalisation records of Kristoffer Veum*, 19 September 1906.
National Archives at Chicago (1920). *Department of Commerce, Bureau of the Census*. Census papers of Dane County, Wisconsin, enumeration district number 23, sheet 10B.
National Archives at Chicago (1930). *Department of Commerce, Bureau of the Census*. Census papers of Dane County, Wisconsin, enumeration district number 13, sheet 8A.
National Archives at Chicago (1940). *Department of Commerce, Bureau of the Census*. Census papers of Dane County, Wisconsin, enumeration district number 12-88, sheet 3A.
National Archives of Norway (1908). *Bergen politikammer, Emigrasjonsprotokoller, nr. 1-23: Emigranter over Bergen 1874–1930* [Emigrant protocol of the Bergen police district]. https://www.digitalarkivet.no/view/9/og00000000761712 [Accessed 30 December 2024].
Vestland County Council Archives (1993). *Arkivet etter Owen Veum* [The Archive of Owen Veum]. Catalogue number: SFF-2015186.

UNVEILING SOUTHEAST ASIAN MUSICAL DATA IN EUROPE WITH THE PRATINADA PLATFORM: FUNCTIONS, ORIGINS AND CULTURAL PERSPECTIVES

Joséphine Simonnot, Research Engineer, Centre National de la Recherche Scientifique, France[1]
Dana Rappoport, Director of Research, Centre National de la Recherche Scientifique, France[2]

DOI: 10.35320/ij.178

Abstract
Colonial-era sound recordings from Southeast Asia remain largely housed in European archives, historically inaccessible to the societies from which these archives come. The Pratinada website addresses this colonial legacy by democratizing access to collections held in France, the Netherlands and the United Kingdom. This online portal consolidates multiple European-held Southeast Asian sound databases, making thousands of historical recordings publicly available. However, the digital repatriation process raises complex cultural, ethical, and technological considerations that warrant careful examination.

Keywords: Sound archives, aggregated database, colonial heritage, Southeast Asia, web platform, decolonization

Introduction
The digital revolution has transformed the landscape of archival preservation and access, notably in the realm of sound recordings. While this transformation offers unprecedented opportunities for expanding access to cultural heritage, it also brings to the surface complex challenges at the intersection of colonialism, cultural ownership, and digital humanities ethics. The Pratinada platform,[3] a pioneering initiative to aggregate and provide online access to Southeast Asian music collections held in European institutions, exemplifies these tensions. Through the Pratinada website, historically overlooked sound archives are now available to international audiences, including originating communities previously disconnected from their cultural heritage. However, this digital repatriation occurs without direct consultation with the original performers, creating an ethical paradox: the imperative to provide access must be balanced against risks of cultural misappropriation and misuse. This dilemma raises fundamental questions about the cultural, ethical and technological considerations that should guide the digitization and dissemination of colonial-era sound archives.

The Pratinada website is hosted by the Centre National de la Recherche Scientifique (Délégation de Provence) in France and its database by the University of Amsterdam, which is also responsible for scientific and IT management. It is the result of a collective team managed by ethnomusicologist Dana Rappoport, sound database engineer Joséphine Simonnot and IT specialist Anas Ghrab. The present article first examines Pratinada's architecture and functionality, situating it within the broader historical context of French archival practices, before critically analyzing the cultural, ethical and technical implications of this digital platform.

1 Joséphine Simonnot is a Senior Sound Database Expert at Perception, Representation, Image, Sound, Music (PRISM), Aix Marseille Univ, CNRS, Marseille.
2 Dana Rappoport is a Senior Ethnomusicologist at the Centre Asie du Sud-Est (CASE), Centre National de la Recherche Scientifique (CNRS), Ecole des Hautes Etudes en Sciences Sociales (EHESS), and Institut National des Langues et Civilisations Orientales (INALCO).
3 https://pratinada.net/

General Information

Pratinada provides access to 7,304 recordings from Southeast Asia, including field recordings, radio programs and published recordings. These materials, all held in European archives, represent more than a century of sound recordings (1900–2023), now made accessible through a multilingual interface in nine languages, seven of which are Southeast Asian. Researchers and sound archive specialists from France, the Netherlands and the United Kingdom collaborated with academics and Southeast Asian partners to improve access to European sound collections from Southeast Asia, which have been largely inaccessible to the public. Historically, barriers to access have been numerous. Among them are language, lack of digitalization, physical distance, restrictive access policies, institutional staffing problems, legal issues and bureaucratic resistance. The creators of this website have attempted to overcome all these obstacles.

Launched in May 2024, Pratinada is the result of years of experimentation with ethnomusicological sound data on the internet. It was made possible thanks to the support of the European Hub Joint Program Initiative on Cultural Heritage and Global Change,[4] which funded a three-year project called *Decolonizing Southeast Asia Sound Archives* (DeCoSEAS).[5] This project involved the collaborative efforts of curators, ethnomusicologists, collectors, database managers, IT specialists and Southeast Asian partners. The French team[6] oversaw the creation of the Pratinada digital platform in a participatory way, aiming to design a new digital curational framework by aggregating various sound databases in dialogue with Southeast Asian partners.

Content

The Pratinada website aggregates the contents of three major European sound archives: Southeast Asian sound archives hosted in France; the Jaap Kunst Collection of wax cylinders hosted in Germany and managed by the University of Amsterdam,[7] and a set of radio programs broadcast in Southeast Asia from BBC Empire Service Broadcasts in the United Kingdom.[8] Thanks to this project, the archives of the Jaap Kunst and BBC sound collections are available online for the first time, and have been integrated into a single database with the French collections, which were already accessible but spread across different institutions with only French-language metadata.

The contents of these aggregated archives differ in various respects, including the nature of the sounds, quantity of recordings, and access rights. The sound archives provided by France offer a diverse range of collections comprising 6,500 mainly music items from the CNRS - Musée de l'Homme in Paris,[9] managed and disseminated online by the Centre de Recherche en Ethnomusicologie (CREM),[10] the French National Library

4 https://www.heritageresearch-hub.eu/joint-programming-initiative-on-cultural-heritage-homepage/. Each partner country finances its own team. The French team is funded by the Agence Nationale de la Recherche (ANR-21-CHIP-0001).
5 https://www.decoseas.org
6 In addition to the project managers, Pratinada benefited from the help of many French collaborators from Institut National des Langues et Civilisations Orientales (INALCO), the French Center for Southeast Asia Studies (CASE/CNRS-EHESS-INALCO) and Southeast Asian partners.
7 https://jaapkunst.org
8 https://omekas.seasia-hearing.org/s/bbc-sea/page/welcome
9 CNRS - Musée de l'Homme Sound Archives: https://archives.crem-cnrs.fr/; Centre National de la Recherche Scientifique (CNRS): https://www.cnrs.fr/.
10 https://lesc-cnrs.fr/fr/laboratoire/lesc-crem

(BNF-Gallica),[11] the Phonobase[12] and the Office de Radiodiffusion-Télévision Française (ORTF).[13] The sound archive at the University of Amsterdam consists of a collection of 600 wax cylinders collected by Jaap Kunst in Indonesia in the 1930s. 78 broadcast recordings from the BBC are also included, which are managed by the School of Oriental and African Studies (SOAS) and hosted at the British Library, though very few recordings are accessible because of copyright issues. This disparity between collections reflects divergent histories of archival work in Western Europe and the various levels of access provided to digital sounds in the international academic world.

The Pratinada sound archives primarily consist of field recordings of traditional Southeast Asian music, from 1900 to the present day, recorded in rural and urban areas across the region, from Myanmar to Papua New Guinea, including Thailand, Vietnam, Laos, Cambodia, Taiwan, Malaysia, Indonesia, the Philippines and East Timor.[14] The main categories of content are vocal music (3,300), instrumental (1,500) and mixed vocal-instrumental (1,000).[15] The extensive presence of vocal music may come as a surprise, in view of the prevalence of instrumental ensembles in the published recordings from this part of the world. Only 341 of the recordings in Pratinada were produced professionally.[16] Most of the recordings were gathered as part of field research, with the goal of preserving cultural heritage for future generations that was either undergoing profound changes or at risk of vanishing. The majority of collectors were ethnomusicologists, anthropologists, or linguists. Some were explorers or radio program producers, while a few were filmmakers, composers and missionaries.

Pratinada's primary mission is to reconnect Southeast Asian communities with sonic heritage currently housed in European institutions. This material is preserved in Europe for two main reasons: it was either recorded during the colonial period or collected later by European researchers as part of scientific investigations. These archives preserve irreplaceable cultural expressions, including musical traditions that have since vanished or evolved. For instance, the Toraja ritual music of Indonesia documented in the 1990s captures ceremonial ancient performances that were subsequently forbidden by Christian missionary influence.[17] Similarly, recordings in the Boutary collection[18] constitute the sole surviving documentation of extinct cultural practices and dialects, such as those of Vietnam's Lac people. These examples underscore the archives' significance not only as historical documents, but as vital cultural patrimony.

Historical Background and Context

From the 16th century onwards, Southeast Asia became a strategic region coveted by European powers for its natural riches and geographical position. The Portuguese were the first to settle there, notably in Malacca in 1511 and in East Timor, which was of-

11 https://gallica.bnf.fr/accueil/en/html/accueil-en
12 https://www.phonobase.org/
13 https://www.ina.fr/ina-eclaire-actu/1964-1974-naissance-et-disparition-de-l-ortf
14 One might question the inclusion of Taiwan and New Guinea in Southeast Asia. Much of the region shares a common Austronesian linguistic heritage, originating from Taiwan—where the oldest Austronesian languages are found—and extending westward to Madagascar and eastward to Easter Island, spanning maritime Southeast Asia, Melanesia, Micronesia, and Polynesia. Since Papuan languages are present in the Malay Archipelago, we include New Guinea in Pratinada as it can be considered as a transitional zone, even though it is not traditionally considered part of Southeast Asia.
15 Approximation is based on Pratinada search results.
16 Exhibitions, performances, studio recording sessions and radio programs comprise 5% of total recordings available.
17 Toraja-Sulawesi collection: https://pratinada.net/item/14486.
18 https://pratinada.net/item/20444

ficially colonized in 1702. The Spanish controlled the Philippines from 1565 until 1898, when the United States took over after the Spanish-American War; the Philippines then became an American colony until independence in 1946. The Dutch took control of the Malay Archipelago (the so-called Dutch East Indies) in the 17th century, consolidating their hold until Indonesian independence in 1945. The United Kingdom colonized Burma, Malaysia and Singapore, which it controlled until the 20th century. French Indochina was established from 1862, bringing together Cochinchina, Annam and Tonkin (now parts of Vietnam); Cambodia and Laos, all of which became independent between 1953 and 1954. Portugal finally relinquished control of East Timor in 1975, which was then invaded by Indonesia nine days later. It was only after a United Nations-backed referendum that the country achieved definitive independence in 2002. Thus, the region, long divided between colonial empires, gradually became independent over the course of the 20th century, often after protracted struggles.

After decolonization, certain territories with high natural resource potential became the focus of predation from other Southeast Asian countries. This led to the political division of some of Southeast Asia's islands. Borneo is now divided in three: Malaysia controls the north with the states of Sabah and Sarawak, Indonesia administers most of the south under the name of Kalimantan, and the small sultanate of Brunei is an independent state. In the far east, the island of New Guinea is divided into two countries: Indonesia annexed the west of the island in 1963 (now called Papua), while the eastern half of New Guinea has been a state in its own right since 1975, when it officially separated from Australia, which had administered it since 1920 under a mandate from the League of Nations, then from the UN after the Second World War.

On Pratinada's map[19] (Figure 1), the geographical distribution of recordings reveals a significant concentration from insular Southeast Asia; with Indonesia, Papua-New Guinea, the Philippines and East Timor collectively accounting for 4,720 sound items, more than half of the total archive. This large quantity may be explained by many studies of the region and by the central role of the Ethnomusicological Department of the Musée de l'Homme in archiving sound recordings. Vietnam accounts for the second-largest concentration of recordings (1,925 sound items), reflecting intensive ethnographic fieldwork conducted in the post-independence period after 1954. Notable ethnographers and missionaries during Vietnam's post-colonial transition, including the team of Georges Condominas, Geneviève de Chambure and Marius Boutary (from 1958), Anne de Hauteclocque (from 1961) and Jacques Dournes (from 1963), documented oral traditions that would later face crisis and decline due to prolonged conflict. Myanmar, Cambodia, Thailand, and Malaysia are underrepresented, reflecting a lack of sound collections from those countries in Europe.

19 https://pratinada.net/search

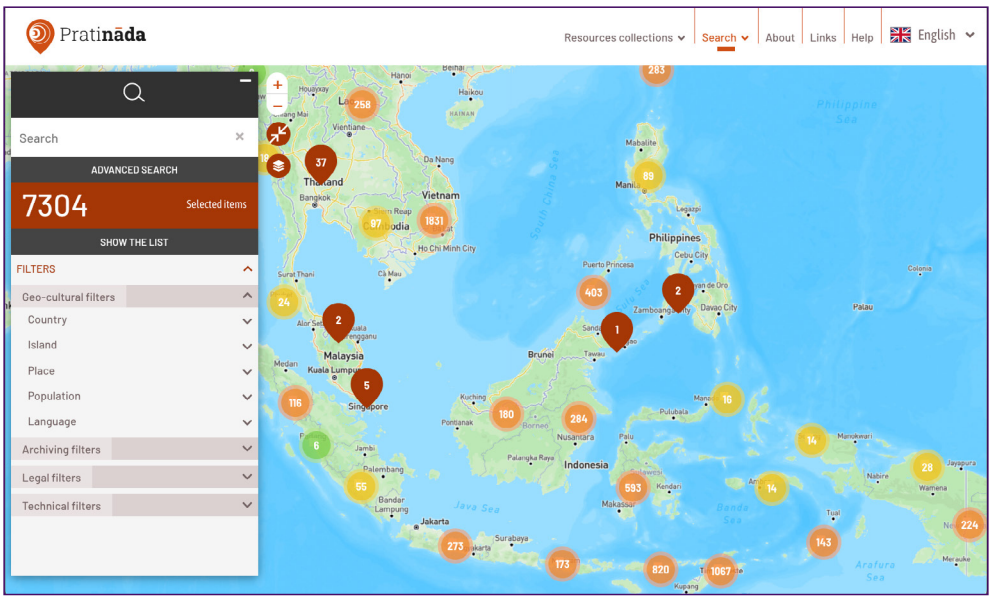


Figure 1. Map with geo-cultural (country, island, place, population, language) and other filters.

Database Structure

The database, built from three European archives, has a basic 3-level internal structure of archive/collection/item. Each collection contains items (recordings) from the same collecting context. One way of browsing recordings is via the 'resources collections' tab[20] in the main menu bar, where users can access the three main archives of Jaap Kunst, Musée de l'Homme and BBC. Access to 'all collections'[21] is also available from the resources collections tab. The collection titles are presented in chronological order and grouped by country.

Individual collectors are also accessible through this menu.[22] One collector may be responsible for several collections (for example, by depositing field recordings from different research areas). Each item contains a link to the basic description of the collection, the collector, and the code numbers of the original holding institution for traceability.

Currently in 2025, the database contains 72 collections, systematically named according to country, region, date and collector (Figure 2). The collection sheet provides a general description of the form of the collection, such as fieldwork or concert performance, accompanied by photos. A brief summary gives historical context and situates the collection. After the collection title, the total number of items is indicated in brackets.[23] All the descriptions of collections and are available in English, and sometimes have been translated into English, French, and Indonesian.[24]

20 https://pratinada.net/collections
21 https://pratinada.net/collection
22 https://pratinada.net/collectors
23 As an example: 'Vietnam: Centre, Highland, Hauteclocque, 1961' (83 items).
24 E.g., Dutch collector Johannes Anceaux (1920–1988): see https://pratinada.net/item/1679, or French collector Louis Berthe (1927–1968): https://pratinada.net/item/1676.

Figure 2. Collection view: Jaap Kunst's collection from Papua.

Sound Access Functionalities: Map, Text Research, Filters

Pratinada offers a range of features that support exploration through both textual and geographical interfaces. A key priority from the outset was developing a responsive web application, recognizing that most users in Asia access the internet with mobile devices. Consequently, two distinct interfaces have been developed: one tailored specifically for mobile phones (Figure 3) and another designed for desktop users (Figure 4).[25]

25 For optimal adaptation to user needs, the Pratinada user interface was designed using the Agile method for software development which includes improvements through a collaborative effort and a cross-functional team : https://en.wikipedia.org/wiki/Agile_software_development.

Figure 3. Pratinada mobile interface (left).
Figure 4. Pratinada desktop interface (right).

The audio recordings can be accessed by way of several geographical and cultural parameters. Ordinary consultation of the catalogue is possible via the Resources Collections menu, but the most direct and intuitive way to listen to recordings is to browse the map or to use text search and filters.

Geographical access

Each sound file's recording location is geolocated on a map (Figure 5). Users may search for locations in Southeast Asia and also in Europe (76 recordings of Southeast Asian music were made in France or the United Kingdom during exhibitions or broadcasts). A flag on the map indicates the number of recordings collected in a given location. Users may choose from three kinds of maps: an Open Street Map, with place names written in local alphabets or characters; a map with all place names in the Latin alphabet; or a satellite view.

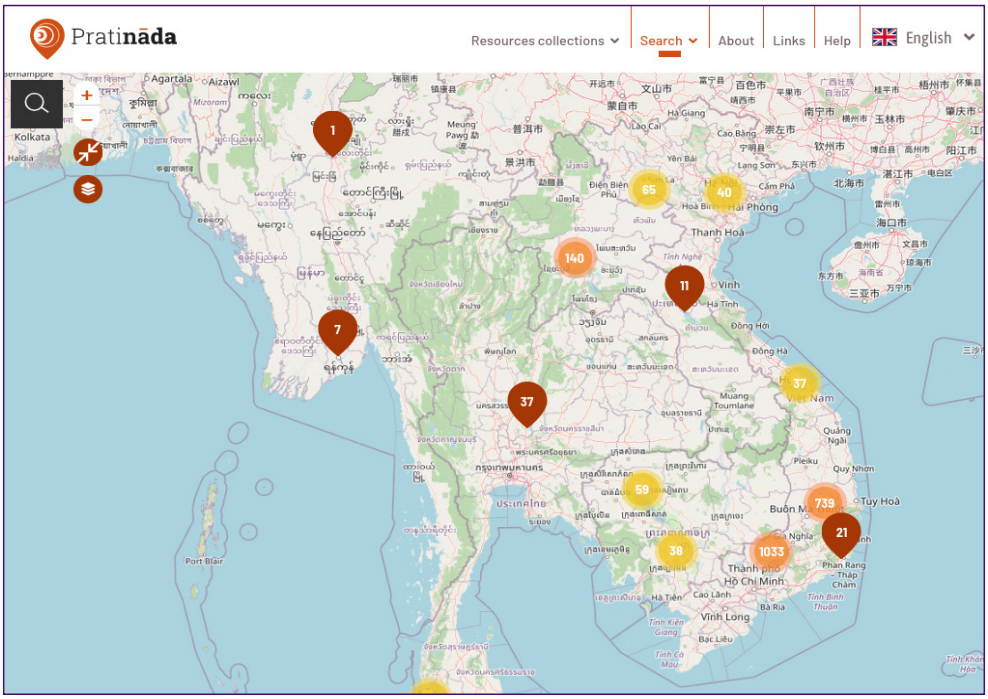


Figure 5. Open Street Map view of Pratinada map.

Search Filters

Full-text search and advanced search with Boolean operators are also possible. Specific filters were designed to refine searches with 17 different parameters,[26] which are divided into four groups. The platform's filters are a distinctive strength for enhancing data findability, developed on the basis of a thorough assessment of user needs. A video tutorial has been produced to explain how to use the interface and is available online on the Pratinada 'links' page.[27]

The first group of filters is based on relevant 'geo-cultural' features (Figure 1). Sound items can be searched by country, island, place, population group and language. Pratinada provides access to music, spoken voices and soundscape from 14 countries. The 'country' filter selects items according to nation, displaying the number of sound items available for each one. The majority of sound files originate from Indonesia (2,634 items) and Vietnam (1,923 items). Using the 'island' filter, users can explore recordings from 38 different Southeast Asian islands. In some cases, determining the appropriate level of granularity islands and island groups, especially smaller ones, proved challenging. Because of the sizable number of recordings made on individual islands of Indonesia's Tanimbar archipelago, a decision was made to name the island group itself along with the names of individual islands to improve navigation. Another advantage of displaying islands separately from countries is that users can choose geographic rather than political borders. For example, the islands of Timor and Borneo are divided among multiple nations (Indonesia/Timor-Leste and Indonesia/Malaysia/Brunei, respectively).

26 https://pratinada.net/search
27 https://sharedocs.huma-num.fr/wl/?id=s8ic1MI1risZZOSnO323hFJZ9zWqV3O8

Users can search the entire island of Timor or the entire island of Borneo, without having to select a country.

The 'place' filter allows users to access sound recordings based on their specific recording locations. As of 2025, 436 place names are displayed on the map, including cities, villages, regions, districts, and even sites along rivers or river basins with no formal names. In many cases, existing metadata lacked detail; in others, place names had changed over time or were difficult to trace due to issues with transliteration.[28] Not all villages were included on Google Maps or Open Street Map, political events sometimes caused places where sounds were recorded to literally disappear,[29] and vernacular names at times differed from those used by geographers. While the geolocated place name is indicated in the field 'place', all location information available in the source metadata is included in the field 'recording place'. For example, a recording collected in Kalimantan, Indonesia[30] is geolocated as 'Kenyah Umaq Taw - Tanjung Manis' and the description 'Kalimantan Timur, Long Segar sur la rivière Telen' is found in 'recording place'. The project team also had to choose which location to include when recordings were made outside of their original cultural context. The decision was made to prioritize cultural origin over recording site. For example, a Vietnamese singing performance recorded at the 1900 Universal Exhibition in Paris was not mapped to Paris, but to the singers' place of origin in Vietnam.

The 'population' filter provides access to 152 ethno-linguistic groups. The selection process raised difficult questions, particularly about naming conventions. Should historical, often colonial-era names be used; or current, self-identified terms? Should only the main language groups be considered or subgroups as well? Subgroups often have distinct local names and speakers may have their own music. Ultimately, the current names of populations were chosen rather than their colonial-era labels, making it easier for contemporary users to search for and identify groups.

The 'language' filter contains a list of 122 languages. Some of these have not yet been described by linguists and for others, their very naming is still open to discussion (for example: Dadu'a or Du'a for the name of subgroup language in Atauro Island, East Timor). As some languages collected have not been inventoried in common linguistic thesauri, two linguists specializing in this geographic area compiled their own list for Pratinada. Many Austronesian languages are ordered in groups and subgroups. In some cases, the subgroup was named (e.g. Sikka language group, Tana 'Ai dialect). But most of the time, only the large groups and not the subgroups were retained. For example, the Toraja Mamasa subgroup has been merged into the Toraja group. Similarly, the Tanjung Bunga subgroup has been merged into the Lamaholot language group. Local names of the populations and their languages were respected as much as possible. However, language is currently less precisely identified in the original databases than population names.

In a second group, 'archiving filters', users can search for files according to usual archiving parameters: the collection, collector, recording date, recording context, or the category of content. Users can browse all items grouped under a single 'collection', which

28 When possible, collectors who had knowledge of their deceased colleagues' fieldwork were interviewed to help identify recording locations.

29 For example, the Vietnam War destroyed all traces of the village of Sar Luk, where Georges Condominas conducted most of his fieldwork. See also Paul Levy's 'Les Mnong Gar du Centre Viêt-Nam et Georges Condominas', p. 82 (https://www.persee.fr/doc/hom_0439-4216_1969_num_9_1_367023).

30 Udoq dance: https://pratinada.net/item/24982.

primarily represents fieldwork recordings, but may also include published records or radio broadcasts such as *BBC: London Calling Asia*. When a collector worked in a single location, all their recordings from that place are grouped together as one collection unit. In the CNRS - Musée de l'Homme Sound Archive web platform, the Nicole Revel Corpus contains seven sound collections, each corresponding to a field expedition on Palawan Island in the Philippines.[31] In Pratinada, however, all of these recordings have been grouped into one collection.[32] If a collector recorded in different places and at different times, several collections are listed.[33]

Currently, the database features 52 collectors, with recordings dating from 1900 to 2023. The 'collector' filter allows users to select all recordings collected by a specific person (or organization), regardless of location or date. For instance, the renowned Filipino composer and ethnomusicologist Jose Maceda recorded in the Philippines and Indonesia between 1955 and 1977. His four collections available in Pratinada are grouped together under his collector sheet.[34]

The filter 'recording date' is divided from 1900 to 2030 in ten-year increments. The 1960–1970 decade is the richest, with 2,131 items. The user can select several years in the same decade but cannot choose more than one decade at a time (Figure 6). Therefore, recordings can be explored by decade or by selecting specific years to see the historical evolution of collections during the colonial era. 'Advanced search' allows search over wider date ranges.

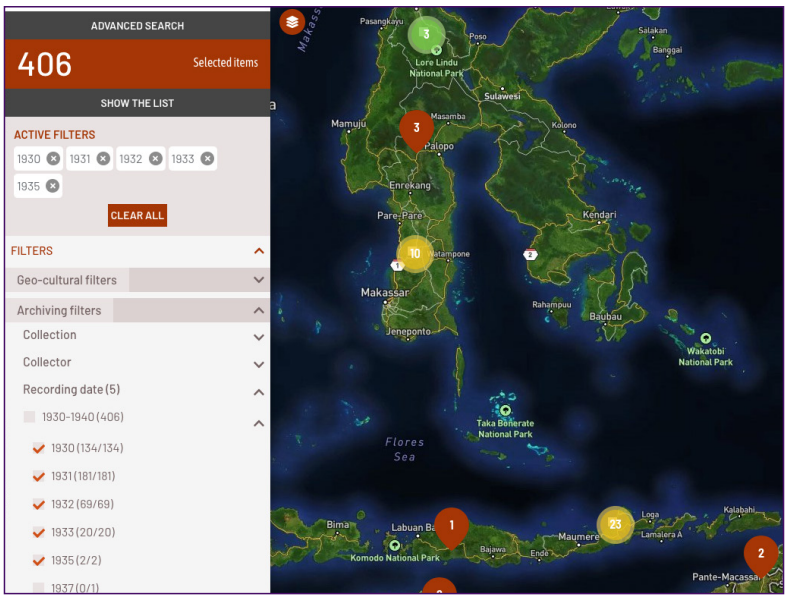


Figure 6. Recording date selection in the filter and the results on the map.

31 Nicole Revel Corpus: https://archives.crem-cnrs.fr/archives/corpus/CNRSMH_Revel_001/.
32 'Philippines, Palawan population, N. Revel, Ch. Macdonald, 1970–1999': https://pratinada.net/item/20428.
33 This is the case for Jaap Kunst's recordings, which have been divided according to location.
34 https://pratinada.net/item/1671

'Recording context' allows the filtering of content according to the collecting situation, whether it is a field recording, interview, performance, published recording, radio program, exhibition, social media content or studio recording. As stated above, most of the recordings are field recordings (6,728 items).

Sound databases may be used by many sorts of users, including musicologists, ethnomusicologists, composers, teachers, or filmmakers, who might look for generic content such as the sound of a drum, a spoken voice, or a soundscape. However, granular metadata for medium of performance or genre is not present in the hosting institutions' databases. Two parameters ('instrument' and 'category') requiring further development will be displayed at a later date.

In a third group of 'legal filters', parameters are linked to the legal status and ownership of these archives, with the aim of maximizing transparency for indigenous societies' rights. Users may choose recordings from a specific provider: the holding institution that stores the physical object, the accessing institution which manages the archive, or those who manage copyright and licensing issues. The purpose of these filters is to clearly identify each legal responsibility, which may lie with one institution or be shared among several.

A fourth group, 'technical filters', helps to inform users about the sound quality and usability of each recording. Items can also be filtered based on the presence or absence of sound files, as some media remain offline due to a lack of digitization or pending legal authorization. Most of the archived items were originally recorded on magnetic tape (4,600 items from France) and were professionally digitized over the past two decades (Simonnot, 2020, pp. 3-5). Published recordings, including 78 rpm discs, LPs and CDs, are also available in Pratinada (185 items). BBC recordings, mainly 78 rpm discs, were digitized by the British Library according to their own technical criteria. The earliest recordings in the Pratinada database were made on wax cylinders: 652 items recorded between 1900 and 1933. Despite their poor sound quality, this format continued to be used for field recordings by the French collectors until 1936, primarily because it required no electricity.[35] The Jaap Kunst cylinders (1929-1933) were digitized by the Berliner Phonogramm Archiv[36] in the early 2000s but have been largely inaccessible until now.[37]

Display of Results

Users can browse the results of their filtering either on an interactive map or as a list and can switch between the two views at any time. The list view allows users to sort search results according to parameters including title, recording date, location, and population name. This sorting function is particularly useful when a search yields a large number of results, as it enables users to quickly locate the most relevant items. Overall, the ability to toggle between map and list views, combined with customizable sorting, makes the filtering and browsing experience more tailored and efficient.

These filters demonstrate Pratinada's potential and highlight its key advantages over commercial platforms and social networks that rely on basic keyword searches. Many users prioritize relevant, precise results and prefer not to be steered by algorithms de-

35 Musée de l'Homme's last field collection recorded on cylinder: 'Mission Algérie – Aurès 1936': https://archives.crem-cnrs.fr/archives/corpus/CNRSMH_Cylindres_003/.
36 https://www.sammlungen.hu-berlin.de/sammlungen/phonogramm-archiv/
37 https://jaapkunst.org/about/

signed to capture attention for commercial purposes. Of course, the quality of the results generated by user queries depends on the quality of the metadata.

Sound Visualization

The Pratinada interface embeds the audio players from different content providers' interfaces alongside each item's metadata. As a result, the site presents several distinct audio players, each with its own playback controls, waveform display, and navigation features. The platform offers two different interaction paths to an audio player: from the map view, clicking on a location loads a list of titles, selecting one item then loads its basic metadata and an audio player (Figure 7); alternately, users can browse the results list from a simple search, scroll through the list and click on an item, thus displaying its metadata and audio player. From either path, the user can also expand the item to view its full metadata and embedded sound player.

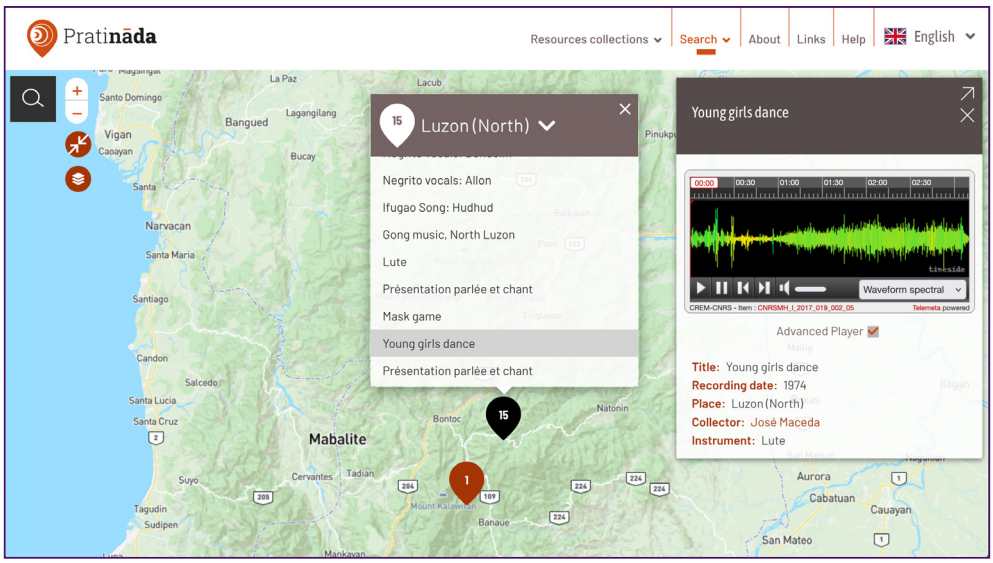


Figure 7. Basic metadata, geolocation and audio player for a J. Maceda recording in Luzon, Philippines.

The 'advanced player', which shows a visualized wave form, can be toggled on or off for any item with an available sound file. Today in Pratinada, most items utilize the player from the CNRS - Musée de l'Homme Sound Archives web platform,[38] which can include temporal markers. Experimentation with sound visualization tools in online databases, such as waveform and spectral displays, has proven helpful for sound archivists. The CNRS player has also encouraged greater engagement from other stakeholders who add time-coded annotations.

38 CNRS - Musée de l'Homme Sound Archives: https://archives.crem-cnrs.fr/. CREM is part of the Laboratoire d'ethnologie et sociologie comparative (LESC), Nanterre University.

Multilingualism

The interface's front end is translated into nine languages, seven of which are Southeast Asian: Indonesian, Thai, Lao, Khmer, Viet, Tetun and Filipino, in addition to English and French (Figure 8). The main tabs and control buttons have also been translated, as has the home page text.

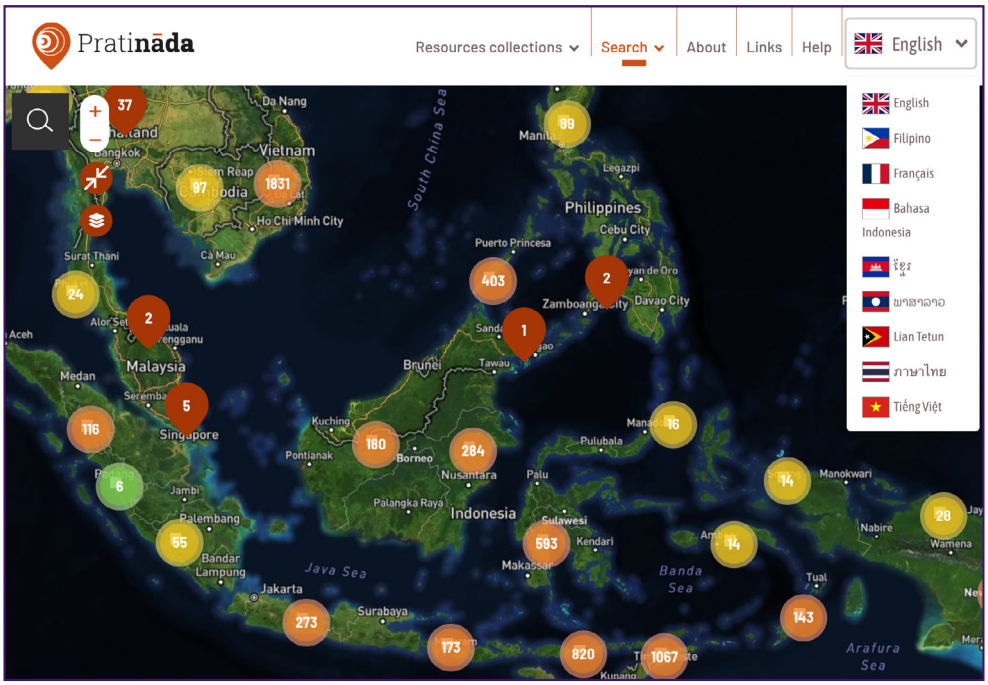


Figure 8. Interface with choice between 9 languages.

In selecting the Southeast Asia national languages to be included on the site, the needs of users from more recently established countries were considered. Pratinada contains 796 sound files from East Timor; thus Tetun, a language that was elevated to the status of an official language early in the 21st century, was included for the East Timor collections (Figure 9).

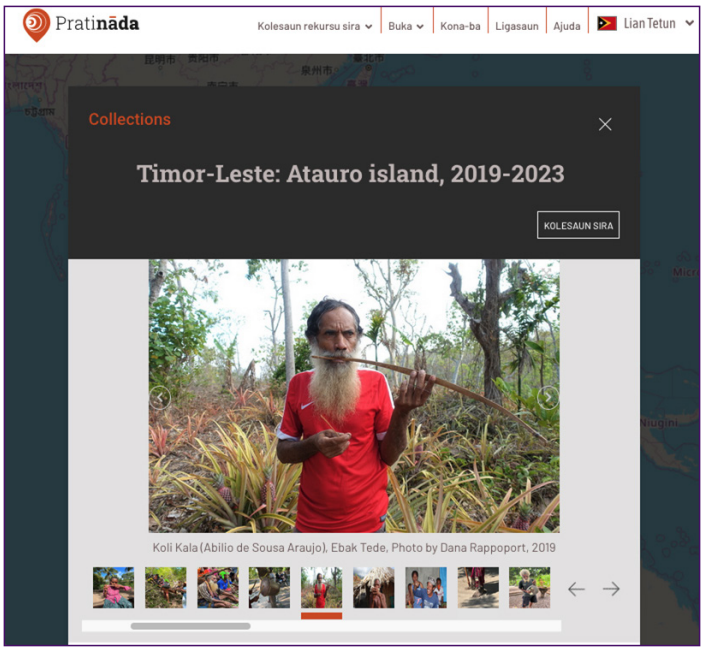


Figure 9. Timor-Leste Atauro Island collection, shown in Tetun language.

While some metadata (primarily titles) have been translated into the site's official languages,[39] this is not yet the case for most of the database. Translations were possible thanks to the work of ethnomusicologists involved in musical revitalization efforts who maintain local contacts to assist with descriptions.[40] In the future, full translations for more collections are planned.

Help and Legal and Ethical Usage Pages

The Help page[41] provides advice on search and site functionality and also defines the metadata fields used on the website. The Pratinada team's experience managing ethnological databases with input from many different contributors has shown the importance of providing explicit definitions of fields. Clear metadata definitions will also streamline future database migrations and facilitate the reuse of information in other contexts.

Details about data management, intellectual property and data usage are given in the Legal and ethical usage page,[42] which also alerts users that metadata may contain errors due to lack of information collected or changes in terminology or spelling over the last century. Descriptions are constantly evolving, thanks to contributions and corrections from researchers, local societies and partners in Southeast Asia, and to the ongo-

39 The items in some collections (e.g. Kalimantan, Flores, Sulawesi) are translated into Indonesian. Some, including those from Timor-Leste, Atauro, are given both in local languages and Tetun.
40 Pratinada's translators include Pierre Prouteau (Thai), Sèng Aloune Keovanthin (Lao), Michel Antelme (Khmer), Ignatius Aditya and Citra Aryandari (Indonesian), Y-Lin Lê (Vietnamese), Romeu Silva (Tetun), Philip Yampolsky (English), Dana Rappoport (French), Verne de la Peña, Elizabeth Enriquez, Roan May Opiso, Sol Maris Trinidad and Jose Mirabueno (Filipino).
41 https://pratinada.net/help
42 https://pratinada.net/legal

ing process of translating metadata into Southeast Asian languages. Translations into English or local languages may also contain errors.

Origin of the Pratinada Website

The Pratinada database is the culmination of a long development process and each of its component collections has its own unique story. The Jaap Kunst wax cylinder collection, physically located in Berlin, is managed by the University of Amsterdam, but the cylinders were not available online. In contrast, CNRS operates under open data policies (CNRS, 2020, pp. 6–8) and its curators have made web access to its sound archives a priority. The University of Amsterdam entrusted the CNRS team with the task of creating a common web sound database because of its previous experience with the Musée de l'Homme sound archives web platform, which runs on Telemeta software[43] (Simonnot, 2017, pp. 3–7). Telemeta was created in 2011 for the Musée de l'Homme, one of the world's richest collections of sound archives.

Since 1928, the Phonothèque of the Ethnographic Museum in Paris (which became the Département d'ethnologie musicale of Musée de l'Homme in 1937 and then the Centre de Recherche en Ethnomusicologie in 2009) has hosted a large number of sound collections deposited by French and foreign collectors. From the outset, the department housed a sound library with a large collection of 78 rpm records, augmented by cylinders from the 1900 Universal Exposition and from early field expeditions. As sound recording techniques evolved from magnetic tapes to digital files, an ever-growing amount of material collected in the field has been added to the collection, along with commercial LPs and CDs containing field recordings from researchers (Rouget, 2004, pp. 513–523; Gérard, 2014, pp. 192–215).

For decades, French and foreign ethnographers have carried out long-term research with communities in the Southeast Asian archipelago. Many researchers have donated their sound archives to be preserved at the French Musée de l'Homme, among them José Maceda, Christian Pelras, Rosario de Santos, Georges Condominas, Nicole Revel, Paul Wirtz and the group of French ethnographers known collectively as L'Equipe Timor (which included Louis Berthe, Claudine Friedberg, Brigitte Clamagirand and Henri and Maria-Olímpia Lameiras-Campagnolo). Between 1957 and 1970, L'Equipe Timor conducted monthslong fieldwork among the Buna', Ema, and Fataluku ethno-linguistic groups in Timor. Even though no one on this team was a musicologist, they recorded music as one of the important activities of the people they were studying. At that time, societies had not yet been changed by the arrival of electricity and the dissemination of amplified recordings. These ethnographers witnessed breathtaking artistic vitality that is preserved in their recordings.

The sound archives of the CNRS - Musée de l'Homme were not open to the public for many years, but only to researchers. Moreover, there was no plan to digitize the collections, which consisted of around 5,000 reel-to-reel tapes containing tens of thousands of audio tracks. Finally in 2000, a two-stage work plan was instituted. The first stage (2000–2009) was to digitize collections in urgent need due to the fragility of their carriers. Tapes were assigned metadata based on the paper descriptions in the archive. During the second stage (2009–2021) an online database was created, and metadata was integrated item by item, while the French National Library continued to digitize less fragile recordings.

43 Telemeta musicology media asset management system: https://github.com/Parisson/Telemeta; https://parisson.github.io/Telemeta//.

Convincing collectors to allow access to their archives, initially only dedicated to scientific research, was challenging. Some were reluctant due to the sensitivity of the content of spoken or sung words, while others hesitated because parts of the collections lacked proper metadata and were not ready for public release. Documenting the context of the collections in detail and extracting tracks for each piece of music was a time-consuming and painstaking process. Managing thousands of sound items and their associated documentation required an asset management system that linked each digital file to its metadata. To devise a new tool, first data needed to be migrated from obsolete proprietary database software.[44] The CNRS - Musée de l'Homme web platform was launched in 2011, the culmination of a long-term effort[45] to fund and develop a user-friendly interface dedicated to audiovisual data of traditional music and suitable for various types of users and contributors, as well as archivists.[46]

As of 2025, the CNRS - Musée de l'Homme sound archives platform[47] contains 57,600 sound items, including 33,400 with open access. This database contains field recordings and published recordings from around the world, as well as their accompanying documentation. Access rights are managed according to profiles of users and contributors, who can add audio files and metadata themselves with a user account. Similarly, the ability for contributors to annotate sound with temporal markers (Figure 10) has also brought greater precision to the description of often complex content, attracting researchers in data sciences and Artificial Intelligence (Simonnot, 2020, pp. 26–28).

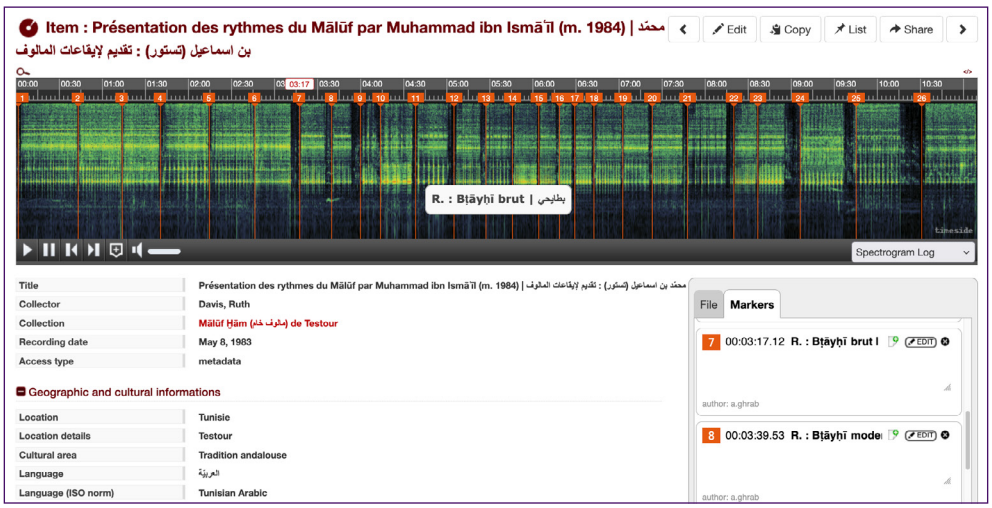


Figure 10. The CNRS - Musée de l'Homme Sound archives platform with annotated markers (orange numbers) for Tunisian Ma'luf music.

44 At the time, all the metadata had been entered in 4D Software, a proprietary format. Rosalia Martinez, director of CREM, advocated for a solution to the problem of retrieving and preserving the archive's metadata.

45 Led by the Centre de Recherche en Ethnomusicologie with Joséphine Simonnot, Aude Julien Da Cruz Lima, Guillaume Pellerin (Parisson startup).

46 Archiving platforms from this institution have mainly been designed for archivists, not for researchers or musicians.

47 https://archives.crem-cnrs.fr/

Since 2011, the CNRS - Musée de l'Homme platform has proactively addressed the expectations of users from formerly colonized countries. Within the framework of Open Science in France, it has initiated a gradual restitution of its sound archives and attracts over 30,000 visitors annually, 70% of whom are from abroad (Simonnot, 2020, p. 97). Ongoing curation of the archives, the hosting of foreign students and dissemination of scientific papers have led to the establishment of contacts from other countries. This enhanced visibility has facilitated the repatriation of numerous collections by sending sound files to originating communities, exemplified by the return of archival content to Burkina Faso (Simonnot & Koudougou, 2019, pp. 4–5).

However, usage was constrained by using French as the primary language for description, despite the platform being localized into seven international languages including Arabic. As of 2025, metadata is still only available in French, limiting accessibility for international societies and researchers who may struggle to understand it. Although the site presents language barriers, users still manage to make meaningful use of it by identifying and listening to recordings relevant to their communities. For example, Marsel Lembang, a Toraja singer from Indonesia, found the D. Rappoport collection through an internet search. He used her archived recordings made in the 1990s to learn sung texts and revitalize Toraja rituals in 2015 (Rappoport, 2024).

Pratinada Methodology

Pratinada represents a new stage in the mission to preserve and share audio cultural heritage. Most of its sound data have been extracted from the CNRS - Musée de l'Homme sound archives web platform. To improve access to sound items, existing descriptions were enriched by the addition of geolocation and metadata in new languages. Like the Musée de l'Homme platform, Pratinada employs a multilingual interface, which includes several Southeast Asian languages. Access to the sound files depends on the functionality of the original databases, whereas the metadata are site-specific.

Joséphine Simonnot, who worked on the Europeana Sounds project from 2014–2017,[48] managed the process of aggregating metadata from each provider and the development of a common metadata model for Pratinada. This metadata model was created in partnership with Southeast Asian curators to follow the FAIR (findable, accessible, interoperable and reusable) principles,[49] and to be suitable for all providers' data. Cultural, geographical and linguistic criteria were emphasized. Schema.org's types and properties were utilized,[50] and several metadata templates were created in an Omeka S[51] platform based on types including CreativeWorks, AudioObject, Person, Place, Organization and Collection. It is advantageous to utilize existing metadata schemas rather than creating new ones, and schema.org has additional benefits of greater expressivity and specificity than the Dublin Core metadata terms. Therefore, a clear and unambiguous distinction exists between concepts like 'accountable person', 'author' and 'performer'; and between 'country of origin' and 'location created'. Ambiguity in field names can be a source of confusion and error for contributions made by specialists who are rarely themselves archivists.

Another important phase in the work was to classify information into the appropriate descriptive fields. Collectors often compile various information into only one field to

48 https://pro.europeana.eu/organisation/europeana-sounds
49 https://en.wikipedia.org/wiki/FAIR_data
50 https://schema.org/
51 https://omeka.org/s/

save working time. Information parsing was essential to enabling filtering tools for the site. This substantial operation occupied the project team for two years.

Cultural and Ethical Issues in Pratinada

One of the project's goals was to decolonize European music archives by making them accessible to the public while balancing the concerns of the holding institutions. From a broader perspective, the aim was to share music archives recorded by Europeans in Southeast Asia during and after Colonialism. Most of the recordings in Pratinada were made after the respective countries became independent. After decolonization, Western collectors, ethnographers and ethnomusicologists came to Southeast Asia to record music that was rapidly vanishing.

Another aim was to advocate for a duty of restitution. During database development, legal and ethical issues were discussed with Southeast Asian partners who were part of a network established during the project.[52] One result was a joint declaration on the decolonization of sound archives (DecoSEAS, 2024, p. 1). This text calls for, among other things, improvement of access to sound archives and diversification of dialogue about curation.

Pratinada's network has discussed many cultural and ethical issues in the development of this project. Who owns these recordings: the individuals recorded, their descendants, their community, their ethnic group, the local government, the provincial government, the national government? What rights are held by the researchers who collected them, or the institutions that preserve them? How can copyright and dissemination rights be managed fairly? Who should have access to these archives? How should the communities of origin have a say in the use of these recordings? Did the recorded individuals give informed consent? Was the collection context ethical, or was there an unequal power relationship? The network continues to contemplate these issues and to seek just policies that further the project's mission.

Data Protection

Pratinada's recordings, which are stored in public institutions in France, the Netherlands, and the United Kingdom, are managed by collectors, musicologists and/or archivists. Many of these recordings were created during the British, French and Dutch colonial periods and some of them are in the public domain. Content on the Pratinada website is also safeguarded by intellectual property laws.

In 2011, the European Union Directive (European Parliament and Council, 2011, article 1) extended the protections from 50 to 70 years for rightsholders including performers and collectors. As a result, the rightsholder's consent must be given for broadcast within 70 years of a work's initial performance or recording date. Recordings made before 1963 are in the public domain, according to European law. Pratinada also considers ethical issues, and access restrictions may be placed on recordings of sacred music or where private personal information is shared. Online access is based on the agreement of performers, researchers and depositors, and on the laws in force concerning performers' rights. Even though many recordings are technically in the public domain, project participants support the right of indigenous people to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions (DOCIP, 2025, Article 31:1).

52 The list of the partners can be consulted at: https://www.decoseas.org/people/.

According to the spirit of the Berne Convention, moral rights, such as the right to object to distortion prejudicial to honour or reputation, are generally interpreted to include performers and recordings, including in digital/online contexts (WIPO, 1979, Article 6bis). Copying and commercial reuse of content on Pratinada are prohibited unless permitted by rightsholders or the institution. In all cases, users are invited to contact the archival institution managing the content for any reuse requests, as the holding institution manages contacts with the rightsholders and collectors who produced the data.

In the context of research data, the content providers are responsible for data licensing and Pratinada data adheres to their choices for included collections. Creative Commons licenses are widely used when an agreement exists between the holding institution, the collectors and the performers. However, in many cases, anthropological research collections lack contact information for rightsholders, or the original rightsholders may have died, making it difficult to apply Creative Commons licenses. To facilitate the fair reuse of cultural data, standardized rights statements from RightsStatements.org are provided in the 'license' field. Twelve different options for materials that are more or less restrictive about data reuse are available. These statements are both human- and machine-readable (Rightsstatements.org, n.d.).

CREM has chosen to adopt rights statements that will be applied on a case-by-case basis over the next few years for the CNRS - Musée de l'Homme sound archives. Some collectors have chosen the 'In Copyright–Non-Commercial Use Permitted' statement to avoid improper reuse. RightsStatements.org offers additional options to clarify the use of online digital heritage, for example the 'No Copyright–Other Known Legal Restriction' statement,[53] which implies that the user must obtain permission from the responsible organization because although the recording is not restricted by copyright and/or related rights, other laws are known to impose restrictions on its usage.

In the United Kingdom, British partner SOAS obtained a specific agreement in 2023 from the BBC for this project which states that the data are under BBC copyright. Therefore, permission is necessary for any other use than consultation in Pratinada. Despite their recording dates (1932–1961), the recordings held by the BBC are not in the public domain.

For each item from the University of Amsterdam's Jaap Kunst collection, a copyright notice is provided.[54] Because the recordings were made between 1925 and 1933, they are in the public domain, but their use is subject to Indonesian laws including the constitutional recognition of Indigenous peoples' rights, legislation protecting Indigenous and customary law communities, and national cultural heritage laws aligned with the UNESCO World Heritage Convention. Thus, the rights statement 'No Copyright–Other Known Legal Restriction' was applied to communicate the need to respect the heritage of traditional societies.

In the absence of any commercial exploitation, the legal risks of granting open access are minimal for project archiving institutions, because there is no threat of financial loss for the rightsholders. Moreover, the public can only access compressed MP3 versions; uncompressed archival files are never made available, which helps limit the risk of com-

53 https://rightsstatements.org/page/NoC-OKLR/1.0/?language=en
54 An example of legal restrictions mentioned in the 'copyright notice' field: https://pratinada.net/item/543.

mercial misuse. If need be, users can request a high-resolution file from the rightsholder for a record or film production. Furthermore, a right of withdrawal of the sound files from free online access can be exercised by the performers recorded or their descendants by making a request for suspension of streaming to the institution providing access.

Finally, newly created metadata are under the responsibility of the project partners involved in putting them online. Consequently, available content is under the shared responsibility of the collectors, the archive holder and the project partners, including the Southeast Asian partner organizations involved. The field 'SEA annotation' (short for Southeast Asia annotation) is included in the metadata model to denote descriptions added by Southeast Asian contributors, and free comments may be added by a wider array of contributors.

Towards the Decolonization of Southeast Asian Sound Archives

Since UNESCO established a committee in 1978 to address the restitution of cultural property, cultural heritage decolonization has become an international political issue (UNESCO, Intergovernmental Committee for Promoting the Return of Cultural Property to its Countries of Origin or its Restitution in case of Illicit Appropriation, 1978). For Pratinada, the decolonization of archives depends above all on making data accessible: technically, by ensuring it can be discovered, viewed, and reused without technical barriers; and linguistically, by providing descriptions and interfaces in languages understood by the communities concerned. Secondly, the presentation and design of the web platform seek to take user needs into account. To this end, Southeast Asian partners were consulted through numerous meetings and workshops, including discussions about specific website features. Step by step, the interface functionalities were validated collaboratively: these included the website logo, the search index, the criteria for sound description and the name of the website. The name 'Pratinada' was chosen by vote from among seven Southeast Asian words meaning 'echo'. The Sanskrit word prevailed, a fitting choice given Sanskrit's historical influence throughout the Indonesian archipelago.

To ensure this audio heritage remains accessible, it is essential to raise its profile across Southeast Asia and collaboratively enhance any incomplete descriptions.[55] Encouraging active local involvement is key to this effort. Another aggregation operation is in progress with MyArchives (Malaysian Audio-Visual Archives), a project developed by the International Council for Traditions of Music and Dance's National Committee of Malaysia, based at Sunway University in Kuala Lumpur.

Deeper engagement with local stakeholders is also needed to gather meaningful feedback. At a workshop at the University of Jakarta in July 2024, Indonesian researchers testified to the importance of this data for their own research. Another event was organized in September 2024 in Kupang, Indonesia by the University of Amsterdam with the Institute for Resource Governance and Social Change to digitally repatriate the Jaap Kunst collections.[56] Additional social events may be held to encourage people to reuse historic cultural heritage, revitalize oral practices and stimulate artistic creation.

55 As an example, during the DeCoSEAS project, a board was created during a 2024 workshop in Denpasar to manage the database collectively by adding documentation and to encourage contributors to import new collections, in particular from Asia.

56 https://www.decoseas.org/events/digital-reptriation-of-jaap-kunst-collection-to-east-nusa-tenggara-archive-and-library-service/

Sustainability

The sustainability of the Pratinada platform relies on the long-term maintenance of its technical infrastructure, the active participation of its user community, and continuous development of its content. In the years ahead, a dedicated technical team at the French CNRS research center will support the platform's technical maintenance, ensure that the website is updated, that the server remains operational and data security is maintained.

The Pratinada website is more likely to persist if new users host and describe their data there. Additionally, maintaining database consistency with the collectively developed level of description needs to be upheld by future contributors. Importantly, the large volume of new metadata created since 2022 is easily exportable from the Omeka database and can be secured without incurring additional costs, a feature that is not available in some content management systems. Long-term preservation of audio files is managed by the holding institutions and this content will exist in the future regardless of Pratinada. However, as previously mentioned, the enhanced metadata created by users exists only within Pratinada, potentially creating an information gap in the holding institutions' databases. A future project could be initiated to update the original metadata in collaboration with curatorial institutions. Description is much more detailed and granular than what is available on platforms like YouTube, and the sovereignty of the originating archives is ensured. Maintenance and development costs, amounting to a few thousand Euros annually, are handled by partner institutions, such as university or museum libraries.

Conclusion

The Pratinada platform represents a significant breakthrough in cultural heritage preservation, making Southeast Asian sound archives held in European institutions accessible to international audiences. European funding has enabled the dissemination of these recordings under open data policies and FAIR principles, resulting in a predominantly open access collection. However, preserving this intangible heritage for future generations presents ongoing challenges. The sustainability of this comprehensive work requires attention at multiple levels—technical infrastructure, institutional support, and most critically, meaningful engagement with the local communities to whom this heritage belongs. The Pratinada team has identified further development tasks to strengthen the platform's capabilities. Translating all metadata into relevant local languages would significantly improve accessibility for Southeast Asian communities. Additionally, developing a multicultural thesaurus to manage diverse terminologies for instruments, sounds, and genres would create a more inclusive and comprehensive resource. The platform's future depends on securing continued technical maintenance, institutional backing, and community involvement. Southeast Asia's growing urban populations represent a crucial audience for these preserved sounds. By providing accessible digital access, Pratinada can facilitate artistic creation, educational applications, and historical research. The platform thus serves as more than an archive—it becomes an active tool for cultural transmission, helping to sustain endangered traditions that face erosion from rapid globalization.

Aknowledgements

We would like to thank Philip Yampolsky for his invaluable help with an earlier version of this paper.

References

CNRS (2020). *CNRS Research Data Plan*. Paris: Centre national de la recherche scientifique. Available at: https://www.science-ouverte.cnrs.fr/wp-content/uploads/2021/04/Cnrs_Research-Data-Plan_mars21.pdf [Accessed: 2 August 2025].

DeCoSeas (2024). *Joint Declaration – Decolonizing Southeast Asian Sound Archives*. Available at: https://www.decoseas.org/manifesto/ [Accessed 2 August 2025].

DOCIP (Indigenous Peoples' Centre for Documentation, Research and Information) (n.d.). *Culture and Education*. Available at: https://www.docip.org/en/rights-and-freedoms/culture-and-education [Accessed: 2 August 2025].

European Parliament and Council (2011) *Directive 2011/77/EU of 27 September 2011 amending Directive 2006/116/EC on the Term of Protection of Copyright and Certain Related Rights. Official Journal of the European Union*, L 265, 11 October, pp. 1–5. Available at: https://eur-lex.europa.eu/eli/dir/2011/77/oj [Accessed: 2 August 2025].

Gérard, B. (2012). 'Gilbert Rouget and the Ogooué-Congo Mission (1946). Institution and Epistemology in the History of Ethnomusicology in France', *Gradhiva* 16. Available at: https://journals.openedition.org/gradhiva/2538 [Accessed 2 August 2025].

Rappoport, D. (2024). *Entretien avec Pa' Marsel Lembang, Apprenti Chanteur Originaire de Toraja (Sulawesi, Indonésie)*. Available at: https://nakala.fr/10.34847/nkl.d2c53o23 [Accessed 27 July 2025].

RightsStatements.org (n.d.) *RightsStatements.org – Rights Statements (version 1.0)*. Available at: https://rightsstatements.org/page/1.0/?language=en [Accessed: 2 August 2025].

Rouget, G. (2004). 'Le Département d'Ethnomusicologie du Musée de l'Homme', *L'Homme* 171–172. Available at: https://journals.openedition.org/lhomme/24998 [Accessed 2 August 2025].

Simonnot, J. (2017). 'The CNRS - Musée de l'Homme Sound Archives from 1900 to the Present: A Long Way Between Heritage, Knowledge and Technologies', in Ziegler S., Akesson I. and Lecheitner G. (eds.), *Historical Sources of Ethnomusicology in Contemporary Debate*. Newcastle: Cambridge Scholars Publishing, pp. 103–116. Available at: https://shs.hal.science/hal-02638852v1 [Accessed 2 August 2025].

Simonnot, J. (2020). 'Partager les Archives Sonores du Musée de l'Homme sur le Web avec la Plateforme Telemeta', *Bulletin de l'AFAS*, 46. Available at: http://journals.openedition.org/afas/4056 [Accessed 1 August 2025].

Simonnot, J., Koudougou, J.-P. (2019). 'La Restitution des Œuvres Culturelles Immatérielles: l'Exemple des Archives Sonores du Burkina Faso Conservées au Musée de l'Homme', *Patrimoines Africains: Réussir Ensemble Notre Nouvelle Coopération Culturelle*. Institut de France, 4 July. Available at: https://shs.hal.science/halshs-02879952v1 [Accessed 1 August 2025].

UNESCO, Intergovernmental Committee for Promoting the Return of Cultural Property to its Countries of Origin or its Restitution in case of Illicit Appropriation (1978). *Resolution Adopted at the First Session of the Intergovernmental Committee*, Paris, 4–7 December. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000114032 [Accessed: 2 August 2025].

WIPO (1979). *Berne Convention for the Protection of Literary and Artistic Works (Paris Act of 24 July 1971, as amended on 28 September 1979)*. Geneva: World Intellectual Property Organization. Available at: https://www.wipo.int/wipolex/en/text/283698 [Accessed: 2 August 2025].

UNCOVERING ASPECTS OF AZERBAIJANI TRADITIONAL MUSIC WITHIN EARLY CAUCASIAN MUSIC DISCOGRAPHY

Sanubar Baghirova,[1] *Associate Professor, Azerbaijan National Academy of Sciences, Baku, Azerbaijan*

DOI: 10.35320/ij.173

Abstract

This article focuses on the early discography of Azerbaijani traditional music, covering the period from the early 1900s to the 1920s. It examines the history of the first audio recordings within the broader cultural processes and socio-cultural realities of Azerbaijan during that time. The study also extends to the discography of Caucasian music from the early 20th century, as numerous examples of Azerbaijani music, particularly *mughams*, songs, and dance melodies were recorded by Armenian and Georgian musicians.

Notably, in the early 20th century, the term "Caucasian music" entered the lexicon of many authors and publishers, uniting the music of Armenians, Georgians and Azerbaijanis into a single, artistically cohesive phenomenon. This term had a valid basis, considering the close professional collaboration among urban Caucasian musicians and socio-political context of this period. On the other hand, music authored by Azerbaijanis was present in the repertoires of all urban Caucasian musicians, which is evidenced by the catalogues of early 20th century from the Sport-Record, Pathé, and Extraphone labels.

Analysis of their contents, particularly that of Extraphone's 1915 record catalogue, shows that these catalogues are of far greater historical significance than previously recognized, because they serve as valuable documentation of the history of Caucasian music in the early 20th century.

Keywords: Azerbaijani traditional music, discography, mugham, record catalogues, Caucasian music, South Caucasus

Introduction

The topic of preserving the audiovisual heritage of traditional music is relevant for the Azerbaijani music culture. It was included in the agenda of the 6th International Symposium "Space of Mugham," held in Baku in June 2023 (Tan, 2023). This marked the first comprehensive discussion of the issues of the collection and preservation of *mugham*[2] audiovisual heritage in Azerbaijan. Although public interest in this heritage began to manifest itself back in the 1990s, it is only since the 2000s that consistent efforts toward the restoration and digitization of early audio recordings of Azerbaijani music have emerged. This work is primarily carried out at the State Sound Recording

1 Dr. Sanubar Baghirova, a Merited Art Worker of Azerbaijan and member and national liaison officer of ICTMD, is the author of three successful UNESCO nominations on Azerbaijani mugham, on the art of Azerbaijani ashiqs, and on Azerbaijani tar; the books *Azerbaijani Mugham* (2007) and *Azerbaijani Music and Musicians* (2011), more than 70 scholarly articles, and the documentary film *The Ancient Arts of Mugham and Ashiq in the 21st Century* (2013). From 2008–2017 she recorded and released 29 CDs on Azerbaijani traditional music, including such important editions as *Azerbaijan: Anthology of Ashiq* (2008) and *Traditional Music of Azerbaijan* (2011–2013).

2 *Mugham* is the name of an ancient genre of Azerbaijani traditional music. It represents the classical repertoire of vocal and instrumental Azerbaijani music, usually performed by professional musicians on professional musical instruments.

Archives, but individual Azerbaijani musicians, composers and musicologists are also actively involved in this regard.[3]

The current attention to the issues of protecting audiovisual heritage is due to several reasons, including the vulnerability of information, part of which is still stored on technologically obsolete media. However, it is clear that behind these concerns lie deeper causes, making this issue particularly relevant today, when the accessibility of information contributes to the blurring of the boundaries of national cultures and gives extraordinary speed to the processes of diffusion of national and supranational cultural traditions. Without a doubt, these processes are most destructive to musical heritage preserved primarily through oral transmission. One example is Azerbaijani mugham, an art of musical improvisation within certain defined parameters, which ensures a significant element of spontaneity in every performance (Baghirova, 2016, pp. 17–24). The diversity of the modern soundscape influences the musical perception of mugham performers by inadvertently introducing into their musical consciousness other, uncharacteristic musical lexical phrases, musical intonations, rhythms and instrumental timbres, which are then reflected in the music they improvise. These new characteristics are more evident in the mugham music of the last two decades than ever before, although, of course, some of them could be observed earlier, albeit not in such an aggressive form (Baghirova, 2007, pp. 6–7).

There is a certain logic in the fact that today, at a point where mugham music is perceptibly distant from its former established traditions, there is an equally pronounced interest among contemporary Azerbaijani audiences in early specimens of this music, primarily in the musical heritage of the first half of the 20th century and, particularly, in audio recordings from the 1900s through the early 1940s.[4] In the consciousness of the modern Azerbaijani listener, it is this part of the heritage of Azerbaijani traditional music that constitutes its historical layer in the sense that it represents something very distant in time and not currently in active musical circulation. The audiovisual heritage of traditional music of the second half of the 20th century is not yet perceived by Azerbaijanis as a relic of their musical culture since it is heard quite often on television and radio and remains familiar. Moreover, there is still a generation of Azerbaijani listeners whose memory preserves live musical events, impressions, various stories, and the names and faces of musicians of their time, thus retaining not only the music but also the musical atmosphere of that time.

In this article, the focus will be specifically on early audio recordings of Azerbaijani music made from the early 1900s to the 1920s, a period that was perhaps the most vibrant time in the modern history of Azerbaijani music. In the musical life of this era, which was turbulent and rich in significant events and changes, the history of the first audio recordings of Azerbaijani music constitutes only a brief episode. However, this history is so closely interwoven with the overall cultural process in Azerbaijan that it must be considered in the context of the cultural and social realities of that time.

3 For more information, refer to the work of musicologist, Professor of the Baku Music Academy Tariel Mamedov and the renowned Azerbaijani composer Javanshir Guliyev, who have collected and restored hundreds of samples of music recorded in the early 20th century. One of the most significant and socially meaningful projects they undertook, commissioned by the Heydar Aliyev Foundation, was the *Karabakh Khanende* series of discs in 2007. These discs became the subject of keen interest and study by contemporary Azerbaijani mugham performers.

4 In the 1940s, Azerbaijani radio stations began to broadcast recorded music in addition to live programmes. A few of these recordings have been preserved in the archives of the Azerbaijan State Radio Company; however, the quality of their sound leaves much to be desired.

At the Threshold of the 20th Century: The First Audio Recordings of Azerbaijani Music

The history of audio recording of traditional music in Azerbaijan spans just over a century, during which it has experienced both peaks and declines in activity. Today, analyzing the overall dynamics of this process, one can notice that the periods of the greatest activity coincided with times when national cultural traditions were under pressure for various reasons. This was the case at the beginning of the 20th century, then during the 1920s and 1930s, as well as in the 1990s and 2000s. In this article, the focus will be on the history of audio recording of Azerbaijani music at the threshold of the last century.

This was a time of drastic change in the economy, culture and social life of Azerbaijanis. To be precise, these changes began in the last third of the 19th century, but their results became evident in the early 20th century when the industrial development of oil in Baku, a construction boom, expansion of trade and growth in service sectors, supply and transportation services transformed the region into a vast labor market. People of various nationalities, religions and professions flocked there. The wide immigration of Russians, Ukrainians, Germans, Poles, Belarusians, Czechs, Greeks, Swedes and other Europeans to Azerbaijan, among other factors, altered the traditional ethnic and religious composition of the population of this region and its cultural life. In the early 20th century, European cultural and musical presence in Azerbaijan became so prevalent that two distinct types of culture—European and national—emerged in the country's musical life. Consequently, a situation of cultural bilingualism arose (Baghirova, 2002, 2017a). Any form of suppression of national identity, whether through cultural or ideological confrontation or overly rapid processes of modernization in society, ultimately results in the strengthening of national sentiments (Baghirova, 2017b). As stated by the Russian author Popov, "with the weakening of the positions of national identifiers, the necessity of their preservation is increasingly realized by bearers of national self-awareness" (Popov, 2013, p. 80). For Azerbaijanis, mugham has always been and remains one of the strongest national identifiers. It is not surprising that the weakening of its position in culture, whether unintentional (in the early 20th century) or forced and ideologized (in the 1930s), each time provoked resistance in Azerbaijani society. The author believes that the vibrant flourishing of Azerbaijani music, particularly mugham art, in the early 20th century can be to some extent attributed to the subconscious desire to affirm cultural autonomy.

From the late 19th century and particularly during the early 20th century, Azerbaijani music witnessed the emergence of a brilliant array of musicians—*khanende*[5] and *sazende* (instrumentalists) who toured cities across the South Caucasus, Central Asia and Iran. In the early 20th century, public concerts and theatrical performances of mugham and other traditional music genres gained popularity in Azerbaijan for the first time. This included first concert performances by traditional musicians, called "Oriental concerts",[6] as well as their participation in national opera performances, the musical material of which was mainly composed of mugham melodies (Figure 1).

5 In Azerbaijan, the term *khanende* refers to professional singers performing the classical repertoire of Azerbaijani traditional music, including mugham. This term is also common in Iran, where it is used to describe singers who perform dastgahs.

6 The first "Oriental concert" took place in 1897 in Shusha, Karabakh region (Dilbazova, 1985, p. 19).


Городъ Эриванъ

Программа

на 23 Іюня 1911 года

ВЪ САДУ ДЖАНШОЛАДОВА

ПОСЛѢДНІЙ КОНЦЕРТЪ

ДЖАББАРА

Шарина и Алиса

БАГДАТБЕКОВА

въ 5-ти отдѣленіяхъ

I отд.

Яроспори и Османлу

II отд.

ШУРЪ съ фигурами

III отд.

МАХУРЪ съ фигурами

IV отд.

БАЯТИ ИСФАХАНЪ

съ Армянск. еркомъ

V отд.

КАБУЛИ

съ фигурами

Антрепренеръ Багдадбековъ.

Figure 1. Poster with program of Jabbar Garyaghdi oqlu's concert in Yerevan on June 23, 1911 (Shushinski, 1985, p. 266).

Such opera performances, called "mugham operas",[7] were warmly received by urban audiences both in Azerbaijan and throughout the South Caucasus. Tickets for these performances sold out so quickly that audience members from other cities in the South Caucasus who wished to attend had to order tickets by telegraph long before a performance (Shushinski, 1985, p. 250; also Dilbazova, 1985, p. 77). The popularity of mugham and other genres of traditional music among the Azerbaijani audience of that time also undoubtedly contributed to the commercial success of the first gramophone records featuring recordings of Azerbaijani traditional music.

The history of audio recordings of Azerbaijani traditional music dates to 1902,[8] when the British company Gramophone sent American recording engineer William Darby to Baku and Tbilisi to record Caucasian music (Ward, 2017). The Gramophone Company, as well as the Polish company Sport-Record,[9] and the French Pathé, were pioneers of audio recording of Azerbaijani music (Efendiyev, n.d.). Over time, these companies established representative offices in Riga, Warsaw, St. Petersburg, Kyiv, Tbilisi and Baku, and in all these branches, Azerbaijani musicians were extensively recorded. In addition, Extraphone and several Gramophone subsidiaries (Gramophone Concert Record,

7 The first such "mugham opera" was staged on the Azerbaijani stage in 1908; its author was the 23-year-old aspiring composer Uzeyir Hajibeyli (1885–1948), who hailed from the impoverished Azerbaijani nobles of Karabakh. Hajibeyli, the author of the first Azerbaijani operas, musical comedies and many chamber vocal and instrumental works, headed a new type of Azerbaijani composition school in the 1930s—the school of written tradition. The creative credo of this school was to create musical compositions based on the synthesis of the national musical language and European musical forms (Baghirova, 2011); also (*Azerbaijan musiqisinin tarikhi*, 2017, pp. 152–161).

8 Some sources claim that the history of sound recording in Azerbaijan started in 1901, from the opening of the Russian Imperial Music Society's local branch in Baku (Efendiyev, n.d., p. 68; Mammedov, n.d).

9 Sport-Record was a small company that existed from 1908 to 1914 in Warsaw and had a branch in Tiflis (now Tbilisi) (Russian Records, n.d.).

Gramophone Monarch-Record, and Amour Gramophone Record [Pishushchiy amur] also released records featuring Azerbaijani music. The largest number of these records was produced from 1902–1916 (Shushinski, 1985, pp. 36–41). Regarding the Gramophone Company in the Southern Caucasus, British researcher William Prentice writes that its "motives for recording in the region were purely commercial. In recording such a vast catalogue of indigenous music, their first thoughts were of the increased sale of gramophones it would encourage" (Prentice, 2000).

It is hardly possible to regard the early audio recordings of Azerbaijani music as the initial stage in the preservation of its traditional heritage unless one evaluates them from the perspective of their current significance for Azerbaijani culture. For their time, they were merely successful business projects, constituting one segment of the entertainment industry that was flourishing in Azerbaijan. It is worth noting that the early 20th century in Azerbaijan, the era of the first oil boom in Baku among other things, was also a time of vast and rapid wealth accumulation and consequently, the emergence and rapid integration of the entertainment industry in the country. The records released in the first decades of the 20th century perfectly served this purpose, as evidenced by their repertoire. These records featured not only mughams and *tesnifs*,[10] but also popular urban songs of the time, marches, and melodies from the operas and operettas of Uzeyir Hajibeyli, which were widely sung throughout the Caucasus, and sometimes even humorous songs for male audiences.

The commercial success of the first records is also evidenced by the fact that from 1902 to 1916, various European companies and their Russian affiliates released several hundred records featuring Azerbaijani traditional music performed by not only Azerbaijani, but also Georgian and Armenian musicians (Shushinkski, 1985, pp. 36–41).[11] Among the Azerbaijani singers and musicians who were recorded for these records, the most prolific were the famous Karabakh singers and musicians known throughout the Caucasus, including such prominent figures as Jabbar Garyaghdi oglu, Meshadi Mammad Farzaliyev, Islam Abdullayev, Gasym Abdullayev, Muhammad Kechachi oglu Khalilov, Seyid Shushinski, Majid Behbudov, and *tar*[12] players Bala Melikov, and Gurban Pirimov. However, singers and instrumentalists from Baku, Shamakhy, Sheki, Gandja and other major cultural centers of pre-Soviet Azerbaijan were no less renowned during this period. For example, Azerbaijani archives contain numerous recordings of the outstanding singer Alasgar Abdullayev, a native of Sheki, Baku singer Davud Safiyarov, who studied under the renowned Mirza Muhammad Hasan (1851–1917), tar player Shirin Akhundov, a native of Salyan, and other musicians from Northern Azerbaijan.

In collections of early audio recordings of Azerbaijani music, there are the records that today represent genuine rarities. These include four recordings of the khanende Mirza

10 A *tesnif* is a small song genre that occupies an important place in the mugham repertoire. It is normally performed before or after mugham melody and sounds in the same mode with it.

11 Many recordings of Azerbaijani music performed by Armenian performers released by Pathé and Monarch Records are available at: https://www.russian-records.com/search.php?search_keywords=%D1%E5%EC%E5%ED%EE%E2%E8%F7&l=russian ; https://www.russian-records.com/categories.php?cat_id=1003&l=russian

12 The *tar* is a long-necked instrument in the lute family. It is used in Iran, Azerbaijan, Armenia, Georgia and in the Central Asia. The 11-string Azerbaijani tar developed by Sadigjan in 1870s is considered the national instrument of Azerbaijan, and was inscribed on the UNESCO Representative List of Intangible Cultural Heritage of Humanity in 2012.

Güller khanym,[13] which are preserved in the State Sound Recording Archives (Figure 2) on Monarch Record and Extraphone.

Figure 2. Monarch Record 98559, "Mugham Bayaty Kurd" performed by Mirza Güller (vocals), accompanied by Bala Melikov (tar) and Ruben Qarakhanov (kemancha). Azerbaijan State Sound Recording Archive.

Information about Güller khanym is sparse and mostly approximate. She was likely born in the late 1870s in a rural area near the city of Shamakhy[14] and reportedly by the age of 15 or 16, she began to amaze everyone with her singing. Her parents were unhappy with her fame as a singer and forbade her from singing because, for an Azerbaijani girl of that time, this activity was considered inappropriate. So, disguised in her brother's clothes, she ran away from home to Shamakhy. She became the first female singer in the history of Azerbaijani music who dared to perform publicly to a mixed gender audience. However, until the last day of her life, fearing public condemnation, the singer hid her gender, wore men's clothing and presented herself under the male name Mirza Güller (Mammedov, 1981, pp. 81–88; *Ensiklopedia of Azerbaijanskoqo Mughama*, 2012, p. 162).[15] She managed to do this thanks to a peculiarity of the national musical taste of Azerbaijanis, who preferred high voices in men and warm mezzo-soprano or alto voices in women. Judging by her surviving recordings, Mirza Güller khanym possessed a voice of dense timbre and a wide range, which sounded equally good in the low alto register and high notes. Since the most famous and beloved singers of the Azerbaijani public had high voices, listeners could easily mistake her singing for male vocals. Her passionate, energetically powerful singing still leaves a strong emotional impression even now, despite all the imperfections of the century-old gramophone recordings.

13 The word *khanym* means "lady" and is usually added to a woman's name as a sign of respect to her.
14 Shamakhy is one of the oldest centers of Azerbaijani culture, and from the 8th to the 12th century, it was the capital of the Shirvanshah state.
15 The life story of Mirza Güller served as the plot for the novel *The Tragedy of One Voice* (1997) by the renowned Azerbaijani writer Aziza Jafarzade (1921–2003).

Also, among the sound recordings held in the State Sound Recordings Archives, the 15 single-sided records of the famous Baku singer Seyid Mirbabayev (1867–1953) hold significant value (Figure 3).

Figure 3. Khanende Seyid Mirbabayev. Photo from '"EL" magazine, public domain, via Wikimedia Commons.

The artistic career of Seyid Mirbabayev ended abruptly. Once, after a particularly successful performance at a wedding,[16] a wealthy man, the owner of large oil-bearing land plots in the outskirts of Baku, gifted the singer a small, unexplored piece of his land. Unexpectedly, oil was discovered on the land, which quickly made Seyid Mirbabayev a very wealthy man. Having become a member of the club of Baku millionaires, he abandoned singing and did everything to erase the memory of himself as a musician who once sang at the weddings of wealthy people. For this purpose, he bought up his records everywhere and smashed them. After the establishment of Soviet power in Azerbaijan in 1920, his oil plot was nationalized and he emigrated to Paris. In 1929, he went bankrupt and ended his days in poverty (Kenan, 2017).[17]

Some records of Azerbaijani melodies in choral arrangements from the companies Sport-Record and Pathé are quite unusual. Usually, Azerbaijani songs and tesnifs are performed by a soloist accompanied by an instrumental group. However, on these records, tesnifs and popular urban songs of that time, such as "Tello", "Gülə-gülə", "Eşqin atəşi" and "Mən bir türkəm", are performed by Jabbar Garyaghdioglu, Muhammad Kechachi oglu Khalilov, Meshadi Mamed Farzaliev and Davud Safiyarov singing in unison.

Problems in the Study of the Early Discography of Azerbaijani Music

The early discography of Azerbaijani traditional music poses significant challenges to researchers. Inaccuracies on printed labels are common, with misspellings of song titles or the performers' names. Attributions are at times entirely missing, and for identified performers, there may be a complete lack of biographical information in reference sources. However, the main difficulty lies in the task of identifying samples of specifi-

16 Performances by singers and musicians at weddings have been, and, to some extent, remain a traditional form of their communication with the Azerbaijani audience.

17 The life story of Seyid Mirbabayev also served as the libretto for the 1978 opera Xanəndənin taleyi *(The Fate of the Khanende)* by Azerbaijani composer Jahanqir Jahanqirov (1921–1992).

cally Azerbaijani music, a significant part of which at the turn of the 20th century constituted the general repertoire of urban music in the South Caucasus.

As a rule, on records sold in the cities of the South Caucasus, information about the music recorded on them and its performers was written in two languages: Russian and the national language (Azerbaijani, Armenian or Georgian). However, the transliterations, especially of names from the national language into Russian, were done poorly, and sometimes sounded like nonsense. Occasionally, the titles of melodies sound so bizarre in Russian transliteration that even a connoisseur of Azerbaijani music cannot immediately realize that, for example, the word "Лухларва" in Russian (phonetically, "Lukh larva") may correspond to the title of mugham "Ruh-ul-arvah" performed by Meshadi Qafar (Gramophone Concert Record, 6-12912), or "Карга нишан" (phonetically, "Karqa Nishan") to the title of the tesnif "Qarğamışam" performed by Jabbar Qaryaqdy oqlu (Sport-Record, 1912, 50074). Unfortunately, such inaccuracies were reproduced in modern catalogues of collections of early Azerbaijani music, including the catalogue of the National Library of France, as well as the Gramophone Company Discography. For example, the mugham melody "Azerbaijan" performed by Aslan Safarov is listed as "Azir Bezhan" (Figure 4) (*Gramophone Company Discography*, n.d.).

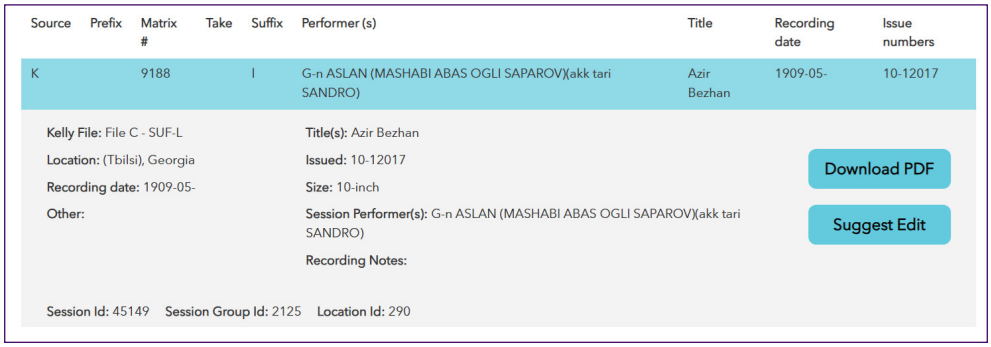


Figure 4. Screenshot from Gramophone Company Discography showing the title "Azir Bezhan" (*Gramophone Company Discography*, n.d.).

At the beginning of the 20th century, as mentioned above, melodies from the first so-called "mugham operas" and musical comedies were very popular with the public and musicians. They were part of the regular repertoire of many musicians of that time and, therefore, are quite often found in early collections of Azerbaijani music recordings. On records, information about these melodies is most often limited to their incipits, for example, "Durun gedək evimizə", "Söylə bir görək", or "Kəbin xoru". The composer of all three of these melodies is Uzeyir Hajibeyli, but no recordings from that time appear with his name credited.

There are many cases when the names of the members of the instrumental ensemble accompanying the singer were either not credited, or, at best, only their given names were provided, for example, as on the record of Mirza Güller khanym (Figure 1), where it is simply noted that Bala and Ruben are accompanying. For the audience of that time, these names were enough to identify the musicians, but today's readers may not know

that they were famous Karabakh musicians—tar player Bala Melikov and *kemancha*[18] player Ruben Garakhanov.

One of the challenges in studying early discography is the lack of information about the musicians of that period, compounded by their absence from written sources and historical accounts of music in Azerbaijan and the South Caucasus. Thus, in collections of early audio recordings, there are records of Azerbaijani musicians about whom there is currently no information, such as singers Meshadi Hilal Zeynalov, Aslan Safarov and Abdulgadir Jabbarov. In various archives, including the phonograph archives of the British Library and the National Library of France, a total of 38 audio recordings of Meshadi Hilal Zeynalov and 16 records of Aslan Safarov have been preserved (Kazimli and Ibrahimov, 2023, pp. 10–16, 28–30). If foreign companies considered it financially profitable to record these musicians, then it means they were quite highly rated at the time, not only by Azerbaijani listeners, but also by the urban public throughout the South Caucasus, since these records were eagerly purchased there.

The difficulty in identifying musicians stems largely from the lack of written sources on early 20th-century musical practice, compounded by the oral transmission not only of the music itself, but also of its performance traditions, the identities of musicians, authorship, the origins of melodies, and other key details. This information was widely discussed among musicians and audiences of the time and was mainly disseminated in the form of oral testimonies, remarks, or stories, with only a small part being reflected in the few written sources available today in scientific circulation in the Azerbaijani language. Naturally, such oral information could only be preserved in the memory of one or two generations, but it rarely survived into the third or fourth—and when it did, it was often fragmentary. Perhaps the most challenging aspect of studying early recorded Azerbaijani music, especially for non-native archivists, is their attribution and national identification. Until the 1930s, Azerbaijani music and musicians were presented under different terms and ethnonyms. In catalogs of recording companies, as well as in posters for concerts and performances of that time, they were most often identified as Caucasian, Tatar, or Muslim artists; and Azerbaijani music was identified as Tatar or Persian-Tatar (Figure 5). Sometimes in the same catalog, they could be presented as Caucasian musicians performing the “Persian-Tatar repertoire” in the “Muslim” language. The audience of that time implicitly understood that such terms referred to Azerbaijani music and musicians.

18 The *kemancha*, one of the oldest string bowed instruments used in Azerbaijan and Iran, was inscribed on the UNESCO Representative List of Intangible Cultural Heritage of Humanity in 2017.

Figure 5. Extraphone catalog, title in Russian: "Singing in Tatar", Azerbaijani title in Arabic script: "Singing in Muslim". Azerbaijan State Museum of Musical Culture. (Ekstrafon, 1915, p. 31).

Such a confusion of terms and exo-ethnonyms is not the fault of the recording companies of that time. These terms originated after the occupation of Northern Azerbaijan by Tsarist Russia in 1813 when in the Russian and Caucasian Russian-speaking press, and even in official documents, Azerbaijanis began to be referred to either as Tatars or as Transcaucasian Muslims. Before the Russian colonization, Azerbaijanis used to designate themselves as "Türks" and their language as "türki". In the scientific literature of the 19th and early 20th centuries, the ethnonym "Azerbaijani Turks" was commonly used in the works of Russian and European scholars. For example, the Finnish scholar Ivar Lassy uses this ethnonym in his dissertation "The Muharram Mysteries Among the Azerbeijan Turks of Caucasia" and gives clear explanations concerning the terms Azerbaijan Turks and Tatars: "Both in literature as well as in practice, great confusion prevails as to the name proper of the people inhabiting this country. Usually, they pass for Persian... However, no intelligent native of Apsheron[19] would make use of such misleading designation of his nationality. He calls himself Türki, in contrast to the Osmanli of the Turkish Empire, or, when he attempts a greater exactitude, he uses the name Azerbeijan Türki, or briefly Azerbeijan... I shall, in the following, often speak of this people as the Tartars, as they are also commonly called in Caucasia. I may add, however, that they themselves indignantly refuse to be designated thus, and reserve that name for the Tartar of Kazan" (Lassy 1916, pp. 4–5).[20]

After 1918 (the year of the declaration of the first independent Azerbaijan Democratic Republic), the ethnonym "Azerbaijani Turks" began to enter the lexicon of Azerbaijani

19 Baku is located on the Apsheron Peninsula, along the southwestern shore of the Caspian Sea.
20 Sir John Malcolm also makes an interesting observation about the artificiality of the names Tartary and Tartars in his book *The History of Persia from the Most Early Period to the Present Time:* "I have in this place and others used the European names Tartary and Tartars. These terms are unknown to the natives of the East. Tartary was formerly called Turan, and is now called Turkistan" (Malcolm, 1815, p. 24).

press and official documents. However, the terms "Tatars" and "Tatar language" in relation to Azerbaijanis and their language continued to be used for some time. For example, in the documents of the musical-ethnographic expeditions of Leningrad scientists to Armenia and Georgia in 1927–1929, as noted by Alla Bayramova, "the words 'Azerbaijan' and 'Azerbaijani' as attributes of music do not appear in the expedition inventory", and "some songs are registered in the expedition documentation as 'local Tatar song'" (Bayramova, 2023, p. 4). The ethnonym "Azerbaijanis" as an official name began to be widely used in 1936, in the documents of the Soviet Union.[21]

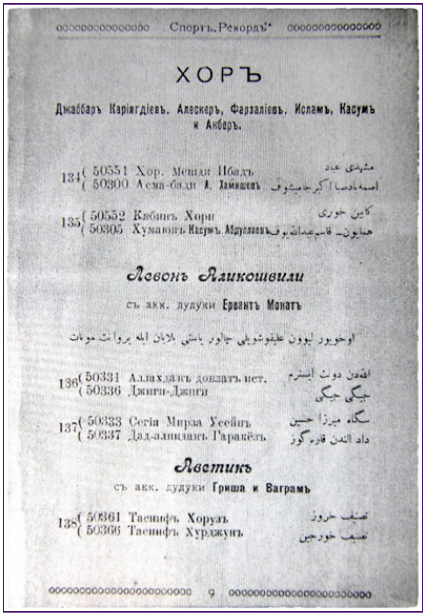
Another problem in studying the early discography of Azerbaijani music is that the national affiliation as a description of the melodies recorded on these records was never indicated, either on the records themselves or in the catalogues of the recording companies. While vocal music can generally be identified by the language in which it is performed, this method is not an option for instrumental music. The only indicators of national affiliation as a description of the melodies are their titles, as well as the language in which they are presented in the catalogues. Alla Bayramova considers titles "a means of identifying the origin of music" and believes that the existence of folklore samples with Azerbaijani titles is "incontestable proof of their Azerbaijani origin" (Bayramova 2023, p. 2).

As a rule, Armenian and Georgian musicians of the time recorded Azerbaijani melodies on records with their original Azerbaijani names. Many of these melodies spread throughout the Caucasus, such as the old Azerbaijani dance melodies "Uzun dərə" and "Tərəkəmə". The first of these two titles translates as "long valley" and is a toponym for an area in Karabakh near the city of Aghdam, and the second is the title of one of the sub-ethnic groups of the Azerbaijani people. The overwhelming majority of dance melodies in the repertoire of Caucasian musicians had titles the meaning of which can only be explained in the Azerbaijani language. For example, the title of the dance melody "Qazağy" refers to the province of Gazakh (Qazağ) in the northwest of the Republic of Azerbaijan. The title "Laylay" is translated from Azerbaijani as a lullaby. Many dance melodies have Azerbaijani female names or names of flowers, plants, or birds, such as "Lalə" (meaning tulip, also a female name), "Qızıl gül" (rose), "Heyva gülü" (quince flower), and "Turajy" (partridge).

Another indicator that aids in the identification of the national origin of certain melodies is the language in which they are presented on the records. As a rule, the titles of Azerbaijani melodies are indicated in Azerbaijani with Arabic script,[22] while Armenian and Georgian titles are written in their own alphabets. Two pages from the Sport-Record record catalogue illustrate this (Figures 6 and 7). On the first of these pages, the titles of Azerbaijani melodies recorded in the performance of Levon Alikoshvili are given in the Azerbaijani language. On a different page of the same catalogue, his name appears again, this time performing a Georgian repertoire, and all the titles of the melodies performed by him are indicated in the Georgian alphabet.

21 It must be acknowledged that the ethnonym "Azerbaijanis" did remove some uncertainty regarding their national identification, but the true purpose of its introduction remained the same: the desire to avoid using the ethnonym "Türks" in relation to the largest ethnic group in the Caucasus. The reason was that on both sides of the border of Tsarist Russia, later the Soviet state, with Iran and Türkiye, large masses of ethnic Turks lived. The Russian, and later Soviet administrations, saw them as a threat to their statehood and made every effort to dampen and blur the ethnic self-awareness of their local Turkic population, which continued until Northern Azerbaijan gained political independence in 1991.

22 Arabic script was in use in Azerbaijan until 1929.



„Спортъ.Рекордъ“

ХОРЪ

Джаббаръ Каріягдіевъ. Алескеръ, Фарзаліевъ. Исламъ, Касумъ и Акберъ.

134 (50551 Хор. Мешди Ибадъ — مشهدی عباد
(50300 Асма-бади А. Хамишевъ — اسمه بادصبا اکبر حاجیوف

135 (50552 Кябинъ Хори — کابین خوری
(50305 Хумаюнъ Касумъ Абдуллаевъ — همایون- قاسم عبداللهیوف

Левонъ Аликошвили

съ акк. дудуки Ервантъ Монатъ

اوخویور لیوون علیقوشویلی چالور باشی بالابان ایله یروانت مونات

136 (50331 Аллахданъ довлатъ ист. — اللهدن دولت ایسترم
(50336 Джиги-Джиги — جیکی جیکی

137 (50333 Сегія Мирза Усейнъ — سگاه میرزا حسین
(50337 Дад-алнидань Гаракёзъ — داد الدن قاره گوز

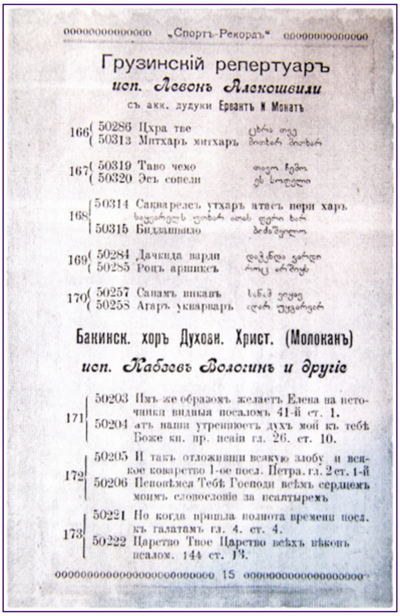
Аветикъ

съ акк. дудуки Гриша и Ваграмъ

138 (50361 Тасифъ Хорузъ — تصنیف خروز
(50366 Тасифъ Хурджунъ — تصنیف خورجین

9

Figure 6. A page from the Sport-Record catalogue with inscription in Azerbaijani language by Arabic script: “Levon Alikoshvili sings, Ervant Munat plays the balaban”.



„Спортъ-Рекордъ“

Грузинскій репертуаръ

исп. Левонъ Алекошвили

съ акк. дудуки Ервантъ и Монатъ

166 (50286 Цхра тве
(50313 Митхаръ митхаръ

167 (50319 Таво чемо
(50320 Эсъ сопели

168 (50314 Сакварелсъ утхаръ атасъ пери харъ
(50315 Бидзашвило

169 (50284 Дачкида варди
(50285 Роцъ аршикс

170 (50257 Санамъ викавъ
(50258 Агаръ укварваръ

Бакинск. хоръ Духовн. Христ. (Молоканъ)

исп. Кабзевъ Вологинъ и другіе

171 (50203 Имъ-же образомъ желаетъ Елена на источники водныя посаломъ 41-й ст. 1.
(50204 Отъ нощи утреннюетъ духъ мой къ тебѣ Боже кн. пр. исаія гл. 26. ст. 10.

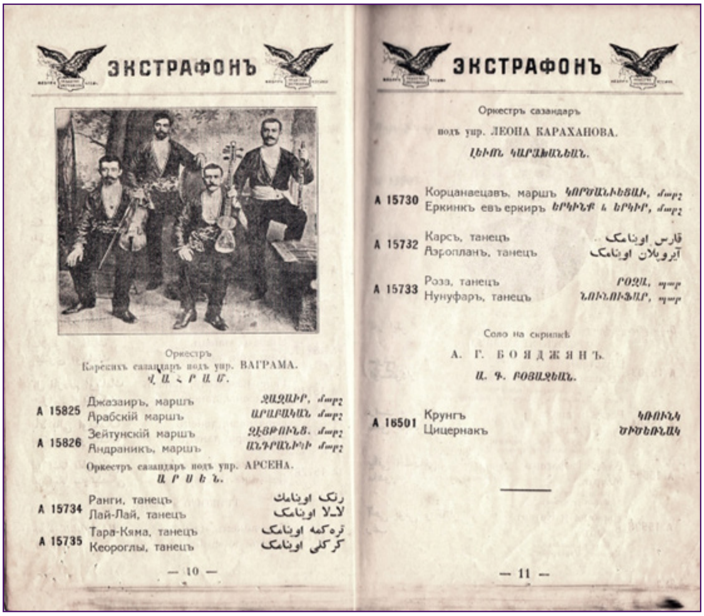
172 (50205 И такъ отложивши всякую злобу и всякое коварство 1-ое посл. Петра. гл. 2 ст. 1-й
(50206 Исповѣмся Тебѣ Господи всѣмъ сердцемъ моимъ словословіе за псалтыремъ

173 (50221 Но когда пришла полнота времени посл. къ галатамъ гл. 4. ст. 4.
(50222 Царство Твое Царство всѣхъ вѣковъ псалом. 144 ст. 13.

15

Figure 7. A page from the Sport-Record catalogue with inscription in Russian: “Levon Alikoshvili. Georgian repertoire”.

Another example of this can be seen in the photo from the 1915 catalogue of the Extraphone company (Ekstrafon, 1915). Here, the titles of Armenian melodies are written in Armenian, and the titles of Azerbaijani melodies are written in Azerbaijani (Figure 8).



ЭКСТРАФОНЪ

Оркестръ
Карскихъ сазандаръ подъ упр. ВАГРАМА.
Վ Ա Հ Ր Ա Մ.

A 15825 Джазаиръ, маршъ — ՋԱԶԱԻՐ, մարշ
Арабскій маршъ — ԱՐԱԲԱԿԱՆ մարշ

A 15826 Зейтунскій маршъ — ԶԷՅԹՈՒՆՑ. մարշ
Андраникъ, маршъ — ԱՆԴՐԱՆԻԿԻ մարշ

Оркестръ сазандаръ подъ упр. АРСЕНА.
Ա Ր Ս Է Ն.

A 15734 Ранги, танецъ — رنک اوینامك
Лай-Лай, танецъ — لای‌لای اوینامک

A 15735 Тара-Кяма, танецъ — تره‌کمه اوینامک
Кеороглы, танецъ — کرگلی اوینامک

— 10 —

ЭКСТРАФОНЪ

Оркестръ сазандаръ
подъ упр. ЛЕОНА КАРАХАНОВА.
ԼԵՒՈՆ ԿԱՐԱԽԱՆԵԱՆ.

A 15730 Корцанаецавъ, маршъ — ԿՈՐԾԱՆՒԵՑԱՒ, մարշ
Еркинкъ евъ еркиръ — ԵՐԿԻՆՔ և ԵՐԿԻՐ, մարշ

A 15732 Карсъ, танецъ — قارس اوینامک
Аэропланъ, танецъ — آیروپلان اوینامک

A 15733 Роза, танецъ — ՌՕԶԱ, պար
Нунуфаръ, танецъ — ՆՈՒՆՈՒՖԱՐ, պար

Соло на скрипкѣ
А. Г. БОЯДЖЯНЪ.
Ա. Գ. ԲՕՅԱՃԵԱՆ.

A 16501 Крунгъ — ԿՌՈՒՆԿ
Цицернакъ — ԾԻԾԵՌՆԱԿ

— 11 —

Figure 8. 1915 Extraphone catalogue, a list of records and a group photo of sazandars from Qars, pp. 10–11.

This peculiar principle of national identification was quite often applied in the catalogues of Caucasian music records released by Russian branches of gramophone companies; it allowed for better navigation of the musical material that was then commonly called “Caucasian music”, especially Caucasian instrumental music.

Azerbaijani Traditional Music in the Urban Soundscape of the South Caucasus

The urban musical culture of the South Caucasus in the second half of the 19th century and the first third of the 20th century represented a unique symbiosis of the musical traditions of its peoples, in which Azerbaijani music played a unifying role. There is historical evidence and statements that show the role of Azerbaijani music in the urban musical practice of the South Caucasus (or Transcaucasia, as it used to be called then). One of them belongs to Sasha (Alexander) Oganezashvili (1889–1932), an outstanding kemancha player (half Georgian, half Armenian by origin) who lived in Baku from 1905 to 1927 and performed in ensembles with the most famous Azerbaijani singers and tar players. In 1927 he left for Yerevan where for the last three years of his lifetime he headed the Yerevan Conservatory. From 1926 to 1930, he had a regular column in the magazine *Dan yıldızı* [Morning Star], published in Tiflis in the Azerbaijani language. In a 1929 article in this magazine he wrote: “Azerbaijani melodies have been heard by all the peoples of Transcaucasia since ancient times. All Transcaucasian musicians, regardless of their nationality and language, played and memorized both these melodies themselves and their poetic texts, and the Azerbaijani language was considered the common language of musicians” (Oganezashvili, 1927, p. 32).

Many statements that directly or indirectly testify to the wide popularity of Azerbaijani music and musicians among the audience in Tiflis and Iravan (now Tbilisi and Yerevan) can also be found in earlier written sources, for example, in the collection *Caucasian Music* by Vasily Korganov (1865–1934), a Russian musicologist of Armenian origin. His comments and statements about Azerbaijani music and individual Azerbaijani musicians, scattered throughout the collection, inadvertently reflect their real place in the musical life of the South Caucasus (Korganov, 1908). In his article "Thoughts on Eastern Music," he writes that "Every *bicho*[23] and *kinto*[24] is able to appreciate the entire repertoire of the best Tiflis sazandar, Abdul-Bagi" (Korganov, 1908, p. 5). Here Korganov is referring to the Azerbaijani khanende Abdulbaghi Zulalov (1841–1927), who lived in Tiflis from 1875 to 1905 and was widely popular with the Tbilisi public of all social strata, from Georgian princesses to small traders at the bazaar.

The British researcher William Prentice, in his previously mentioned article, touches upon the issue of the repertoire of Armenian, Georgian and Azerbaijani musicians, cautiously noting that "Armenian and Georgian musicians were willing and able to play Armenian, Georgian, or Azeri music. Azeri musicians, on the other hand, such as the incredible singer Jabbar Kariagdiev, apparently concentrated on Azeri music" (Prentice, 2000). In reality, Azerbaijani singers often performed songs in Armenian or Georgian when performing for Armenian or Georgian audiences, and sometimes even recorded such songs on records.[25] It is known that the great Azerbaijani khanende Mirza Sattar and previously mentioned Abdulbaghi Zulalov often sang songs in these languages when performing at Armenian or Georgian weddings. People want to listen to music they love and understand at their weddings, and the fact that Azerbaijani singers sang Azerbaijani mughams and songs at weddings in Armenian and Georgian homes speaks for itself. Quite a lot of information on this topic can be found in the well-known book *Azerbaijan khalq musiqichileri* [Azerbaijani Folk Musicians] by Firidun Shushinski. For example, Shushinski reports that Jabbar Qaryaqdy oqlu, at his concert in Yerevan in 1911, sang in Armenian the Azerbaijani songs "Mənə nə oldu" [What Happened to Me], "Gülə-gülə" [Laughing], as well as the Armenian songs "Mayrik jan" [Dear Mother], "Sary akhchik" [Mountain Girl] and "Khabaremyes" [I Am Aware] (Shushinski, pp. 143–144).

There are many examples of Azerbaijani singers performing the songs of their Georgian and Armenian neighbours. However, Prentice is nevertheless right in noting that Azerbaijani musicians, wherever they performed, predominantly played Azerbaijani music, as its repertoire appealed to the tastes of the broad urban audiences of the South Caucasus, across all social and ethnic groups. The popularity of Azerbaijani music in the Caucasus was explained not only by its artistic qualities, but also by the cultural and historical conditions of that time—in particular, the ethnic diversity typical of urban populations in the Caucasus, the predominance of the Azerbaijani ethnic element within them, and the role of the Azerbaijani language as a *lingua franca* throughout the entire Caucasus. August von Haxthausen wrote that "the Armenians never poetize in their own, but in the Tatar language, which is the ordinary medium of intercourse and

23 The Georgian word *bicho* (boy, lad) is an affectionate term of address for young males.
24 The Georgian word *kinto* referred to the traders of small shops in the bazaars of old Tiflis or to people without specific occupations.
25 Among the records kept in the Azerbaijan State Sound Recording Archive are recordings of the Georgian song "Kvekhanaze" and the Azerbaijani song "Lachin" [Falcon] in Georgian performed by khanende Alasgar Abdullayev, as well as the widely popular Armenian song "Krunk" [Crane] performed by Jabbar Qaryaqdy oqlu.

conversation among all the nations south of the Caucasus, like the French language in Europe" (Haxthausen, 1854, p. 348).[26]

Of course, both the presence of Azerbaijanis in all the cities of the South Caucasus, as well as the leading role of the Azerbaijani language in the region, explain the popularity of Azerbaijani music among Caucasian urban musicians. In fact, Azerbaijani mughams, songs and dance melodies made up the bulk of their repertoire, which they performed at weddings, at private or charitable musical gatherings, at public concerts, and were also recorded on records.[27] It is clearly evidenced by the catalogues of records of Caucasian musicians of the early 20th century. Accordingly, the study of the early discography of Azerbaijani traditional music cannot be limited to the records of Azerbaijani musicians; it should also extend to the discography of Caucasian music of the early 20th century.

Azerbaijani Music in Early Caucasian Discography

The author possesses several early 20th century record company catalogues from Sport-Record, Pathé, Gramophone, Extraphone, and others. Extraphone's will be examined in more detail here, since it presents Caucasian music and musicians more widely and diversely than other catalogues. *The List of Records of Caucasian Recordings* (Ekstrafon, 1915) was published in Baku, and it includes four separate catalogues: "Caucasian instrumental music" (47 records), "Singing in the Armenian language" (31 records), "Singing in the Georgian language" (26 records), "Singing in the Tatar language" (139 records).

The catalogue "Caucasian instrumental music" exclusively features recordings of Armenian and Georgian musicians performing in *duduk* trios[28] (15 records) and so-called "*sazandar* ensembles",[29] two types of traditional Caucasian musical ensembles. The catalogue also includes several solo recordings on the tar, kemancha and violin. Together with these solos, the section "Caucasian sazandars" includes 32 records.

The duduk trio is one of the oldest and most popular types of Caucasian folklore ensembles and includes two woodwind instruments (two duduks or two *zurnas*,[30] one of which plays the solo and the other provides a drone and one percussion instrument, the *naghara*[31]). In Azerbaijan, the duduk is known as a *balaban*, and this type of instrumental ensemble is called *balabançılar dəstəsi* or *zurnaçılar dəstəsi* and is most in demand in rural areas and small towns in regions such as Shirvan, Sheki and Salyan. Entire schools of outstanding performers on the balaban and zurna with their traditions and repertoire developed there. At the end of the 19th century and the first half of the 20th century, the school of Shirvan performers on folk wind instruments was headed by the musician and folk composer Ali Kerimov (1874–1962), and along with his students and followers

26 See also Sanubar Baghirova, "'The One Who Knows the Value of Words': The Aşiq of Azerbaijan," *Yearbook for Traditional Music*, 47 (2015), pp. 116–140. DOI: https://doi.org/10.5921/yeartradmusi.47.2015.0116.

27 Such widespread distribution of Azerbaijani music throughout the South Caucasus gradually erased its national identity in people's minds and turned it into the common property of the Caucasus, which, in fact, is still the case today. This entire repertoire is still performed throughout the South Caucasus today, and generations of people who have been familiar with these melodies for more than two centuries naturally consider them their own original national musical heritage.

28 The word *duduk* comes from the Turkic word *tütək*. The name *duduk* or *duduki* is used mainly in Georgia and Armenia, while in Azerbaijan this instrument is known as *balaban*. The duduk or balaban is a double reed wind instrument and since the mid-19th century it has also been a part of mugham ensembles.

29 The word *sazandar* or *sazandari* is a Georgianized form of the Persian word *sazəndə* for the performers on string musical instruments.

30 *Zurna* is a woodwind double-reed musical instrument used to play folk music, most often outdoors.

31 *Naghara* is a traditional kettle-shaped drum.

enjoyed great fame (Kerimova, 2020). Considering that the main buyers of records were city dwellers, the companies that recorded and released records of Caucasian musicians most likely invited performers who were well known to the urban audience to make recordings. Perhaps for this reason, the catalogue does not contain a single record of prominent Azerbaijani balaban and zurna players of that time.

Music for wind instruments in the catalogue is represented by records of the Georgian trio Zubiev, Mikhako and Vano,[32] the Armenian trio consisting of Setrak, Karapet, and Akop; and another Armenian trio consisting of the musicians Setrak, Tatevos, and Akop. Of the 30 melodies recorded in their performance, 14 are mughams and 16 are dance melodies, 9 of which are old Azerbaijani folk dances. Table 1 lists details compiled from this catalog for reference.

№	Performer	Record no.	Title	
			Mugham	Dance/song
1	Zubiyev, Mikhako, Vano (duduki)	Б 15827	“Rahab”; “Hijaz”	
2	Zubiyev, Mikhako, Vano (duduki)	Б 15828	“Chahargah”; “Bayaty Kürd”	
3	Zubiyev, Mikhako, Vano (duduki)	Б 15829	“Rast”; “Kürd Shahnaz”	
4	Zubiyev, Mikhako, Vano (zurna)	Б 15830		“Səhəri”;[33] “Aravot luso”[34]
5	Zubiyev, Mikhako, Vano (zurna)	Б 15831		“Bağdadur”; “Sakorzilo”[35]
6	Setrak, Tatevos, Akop (duduki)	A 15823		“Kars”; “Fason”[36]
7	Setrak, Tatevos, Akop (zurna)	A 15824	“Yetim Segah”	“Sabahi”[37]
8	Setrak, Karapet, Akop (duduki)	A 15801	“Bayaty Shiraz”; “Shoor”	
9	Setrak, Karapet, Akop (duduki)	A 15802	“Mirza Husein Segah”; “Afshary”	
10	Setrak, Karapet, Akop (duduki)	A 15804	“Qatar”	“Karqanov’s lezqinka”[38]
11	Setrak, Karapet, Akop (duduki)	A 15806		“Maqazin”; “Meshadi Ibad”[39]
12	Setrak, Karapet, Akop (duduki)	A 15809		“Duy-duy”; “Qəshənqi”
13	Setrak, Karapet, Akop (duduki)	A 15811		“Qazağy”; “Təzə irani”
14	Setrak, Karapet, Akop (zurna)	A 15813	“Shahnaz”	“Bağdagüli”
15	Setrak, Karapet, Akop (zurna)	A 15815	“Mukhalif”	“Ortachala”[40]

Table 1. List of melodies from the repertory of duduk and zurna, compiled from catalogue “Caucasian instrumental music” (Ekstraphon, 1915).

32 Their full names are Data Zubiashvili, Mikhako and Vano Shakhkulashvili.
33 “Səhəri” (in Azerbaijani: “Morning”) is a melody performed the morning after a wedding; it is also very popular in Georgia.
34 “Aravot luso” is an Armenian dance melody.
35 “Sakorzilo” is a Georgian title related to wedding melodies.
36 The dance melody “Fason” is also known in Azerbaijan under the title “Alyshdym-yandym” [I am on fire] (Bəhmənli, 2021, p. 38).
37 *Sabahi* (in Azerbaijani *sabah*) means “tomorrow morning”.
38 *Lezqinka* is an Azerbaijani word *ləzqi-hənqi*. It is a Caucasian male dance genre. “Karqanov” probably refers to the last name of this dance melody’s author or its best known performer.
39 “Meshadi Ibad” is the name of the main character of the Hajibeyli’s operetta *If Not This One, Then That One*. This is the dance from this operetta.
40 *Ortachala* is the name of one of the districts of old Tiflis; *orta chala* in Azerbaijani means “hole in the middle”.

The repertoire of these records is notable not only for the general predominance of Azerbaijani melodies but also for the prominent place that mugham music occupies, which is quite unusual. The duduk (balaban) and zurna traditionally belong to the class of folk musical instruments, the repertoire of which mainly includes folk dance music. The fact that in early 20th century records of Armenian and Georgian musicians, Azerbaijani mughams were performed on the duduk and even on the zurna, with its piercing sound more suited to open-air performances, attests to their wide popularity across the Caucasus during that period. In essence, it was precisely the popularity of mugham music, initially vocal and vocal-instrumental,[41] that gave rise to a new form of the genre: instrumental mugham, which at the beginning of the 20th century was most widespread among Armenian and Georgian musicians. From the posters of the "Oriental concerts" it can be seen that instrumental mughams were also performed by Azerbaijani instrumentalists. For example, from the poster of a concert in Tiflis (Tbilisi) in 1918 (Figure 9) it follows that the concert program included four instrumental solos: two on the tar, one on the *chianuri*,[42] and one on the kemancha. The performers on the tar were a certain N. Ibrahimov and a famous tar player Mirza Faraj Rzayev, on chianuri Ruben Qarakhanov and on kemancha Qulu Aliyev. However, at the beginning of the 20th century, instrumental performance of mughams was more characteristic of the Armenian and Georgian traditions.

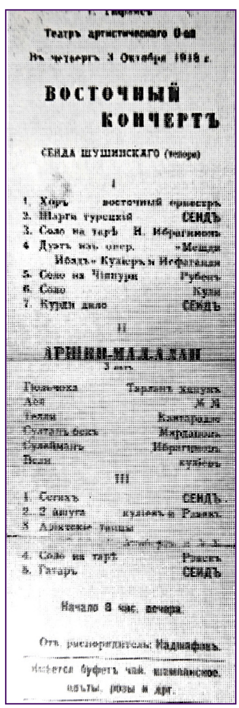


Figure 9. Poster of "Oriental concert", Tiflis, 1918 (Shushinski, 1985, p. 345).

41 Vocal mughams are performed without any instrumental accompaniment and are included in the repertoire of cult singers, while vocal-instrumental mughams performed by khanende represent the realm of Azerbaijani secular music.

42 *Chianuri*, a traditional string bowed musical instrument, is a Georgian variety of kemancha.

In the catalogue "Caucasian instrumental music", many recordings listed are of sazandars, and they are also highlighted in a separate list entitled "Caucasian sazandars".

The sazandar ensemble (*sazəndə dəstəsi*) was an enormously popular and influential part of Caucasian urban music of the second half of the 19th century and the first third of the 20th century. It is interesting to note the testimony of the Georgian poet and musician Prince Machabeli (1814–1873), who mentions that with the spread of sazandar music, the women's song accompanied by harp, a once-popular genre in Georgian urban musical life, disappeared. Professor Dmitri Arakishvili in his work *Kartuli Musika* [Georgian Music] quotes from Machabeli's article in the journal Tsiskari for 1864: "After the [18]50s... women's songs were supplanted by the songs of the sazandars and completely disappeared" (Arakishvili 1925, p. 7).

The sazandar ensemble was formed only in the middle of the 19th century, when the tar, a former palace musical instrument, began to become more and more widespread in urban musical life and became part of the instrumental ensemble, taking a leading role in it.[43] Sazandar ensembles usually consisted of two string instruments (tar and kemancha) and one or two percussion instruments (naghara and/or *qosha-naghara*[44]). In the musical practice of Azerbaijan, this ensemble necessarily included a singer (khanende), who played the main role in it, which is why the sazandar ensemble in Azerbaijan is called *khanəndə dəstəsi*, that is, a group of musicians headed by khanende.[45] Accordingly, the main place in the repertoire of Azerbaijani sazandar ensembles consisted of mughams and tesnifs, though less frequently of urban songs and dance melodies. At the same time, dance melodies could be performed in the form of dance songs with folk lyrics.

In the Armenian and Georgian sazandar ensembles, the singers were most often Azerbaijani khanendes. This is explained by the fact that mughams are sung to verses created in the poetic meters of *aruz*, a system of versification, which is not used in poetry in the Armenian and Georgian languages. Therefore, Armenian and Georgian singers either did not sing mughams or sang them in the Azerbaijani language, such as the khanende of Armenian origin, Davud Safiyarov and Asri Ovanes,[46] the Georgian singer Levon Alikoshvili,[47] and the Armenian musician and khanende from Tiflis Bagrat Bagramov.[48] In cases when Armenian and Georgian sazandars performed without the participation of a khanende, they performed mughams in an instrumental version, and also quite actively included dance melodies in their repertoire.

43 Based on a number of sources and written evidence, it can be stated that until the mid-19th century, the tar was not included in the composition of urban instrumental ensembles.

44 *Qosha-naghara* (lit. double drums) is a traditional percussion instrument, two connected small drums played with two wooden sticks.

45 In the ensemble of sazandars, the khanende also plays the role of a percussionist, accompanying on the *qaval* (framed drum) during the performance of tesnifs and *rənqs* (melodies with a regular metric). The ability to play the qaval was considered mandatory for Azerbaijani khanendes; and today, students of the mugham singing program at the conservatory must attend a qaval classes as a compulsory subject.

46 In the "List of Records of Caucasian Recordings" of the Extraphone company, in the "Singing in the Tatar Language" catalogue, there are 19 records by Asri Ovanes, which contain exclusively Azerbaijani mugham repertoire.

47 The Sport-Record company catalogue contains 2 records by Levon Alikoshvili (No. 136-50331, 50336; No. 137 -50333, 50337), where he performs the Azerbaijani repertoire, including such a popular Azerbaijani mugham as Mirza-Huseyn Segah.

48 The Azerbaijan State Archive of Sound Recordings contains Bagrat's records, where he performs the mughams Shoor, Bayaty Kürd (60-4-12426 No. 398), Choban bayaty, (60-4-12423, No. 400), Shushtar (60-2-12537, No. 401) in the purest Azerbaijani language.

Six groups of Armenian musicians are mentioned in the "Caucasian sazandars" list, one of which was from Kars, Türkiye; while the other five groups represent the Azerbaijani performing school. These Armenian musicians—Arsen Yaramyshev (tar), Arshak Sogomonov (tar), Grigor Bala oglu (tar), Karapet Martirosov (kemancha), Sevi Avanesov (kemancha) and Levon Qarakhanov (kemancha)—were born and lived in Caucasian Azerbaijan, performed in ensembles with Azerbaijani musicians, learned the canons of performing mughams from them and mastered the repertoire of Azerbaijani music. Therefore, it is not surprising that in the "Caucasian sazandars" section, as in the entire "Caucasian instrumental music" catalogue, the overwhelming majority of the repertoire consisted of Azerbaijani music. Of the 64 melodies recorded by the Armenian sazandars, 12 are Armenian titles, one is a Turkish urban song ("Üsküdar") and one melody, judging by its Persian title ("Eshqu-pənjoh") is possibly Persian. Some records are listed twice in the catalogue, so they were subtracted from the total number of records shown below in Table 2.

№	Performer	Record no.	Title	
			Mugham	Dance melody
1	Duet Arsen Yaramishev (tar), Karapet Martirosov (kemancha)	A 15501	Kabuli"; "Mirza Husein Segah"	
2	Duet Arsen Yaramishev, Karapet Martirosov	A 15503	"Shushtar"	"Üsküdar"
3	Duet Arsen Yaramishev, Karapet Martirosov	A 15504	"Rast-Araq"[49]	"Eshqi-pənjoh"[50]
4	Side 1: Arsen Yaramishev (tar) Side 2: Arshak Soqomonov (tar)	A 15505	"Bayaty Isfahan"; "Mahoor"	
5	Side 1: Arsen Yaramishev (tar) Side 2: Karapet Martirosov (kemancha)	A 15506	"Hajiyuni" and "Qatar"; "Rahab"	
6	Side 1: Arsen Yaramishev (tar) Side 2: Karapet Martirosov (kemancha)	A 15507	"Mahoor Hindi"; "Chahargah"	
7	Side 1: Arsen Yaramishev (tar) Side 2: Karapet Martirosov (kemancha)	A 15508	"Shikeste-Fars" "Shushtar"	
8	No name indicated	A 15509	"Chahargah-Mukhalif; "Hasar"[51]	
9	Side 1: Qriqor (tar)[52] Side 2: Sevi (kemancha)[53]	A 15517	"Shushtar"; "Bayaty Shiraz"	
10	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15701		"Innaby"; "Bəribakh"
11	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15703		"Shushanik"; [unreadable title in Azerbaijani]
12	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15704		"Vağzaly";[54] "Lalə"
13	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15705		"Jiki-jiki"; "Rose"

49 The title "Rast-Araq" indicates that the musicians perform the part "Araq" from mugham "Rast".
50 The title "Eshqi-pənjoh" sounds as a Persian one. This melody is not identified.
51 "Mukhalif" and "Hasar" are parts of mugham Chahargah.
52 Bala oglu Qriqor, a noted Azerbaijani tar player of Armenian origin.
53 Sevi Avanesov, an Azerbaijani performer of Armenian origin.
54 "Vagzali" is an ancient Azerbaijani slow dance melody, which is performed during the rite of seeing off the bride from her father's house to the groom's one. Its older name was "Gəlin atlandı" (The bride was put on a horse).

№	Performer	Record no.	Title	
			Mugham	Dance melody
14	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15708		"Rağı";[55] "Laylay"
15	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15710		"Uzun dərə"; [unreadable title in Azerbaijani]
16	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15711		"Tərəkəmə"; "Turaji"
17	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15713		"Express"; "Bədəli"
18	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15715		"Ashkhabady"; "Soltany"
19	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15716		"Alyosha";[56] "Mirzəyi"[57]
20	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15717		"Shalakho"; "Kintauri"
21	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15719		"Gül nazənim"; "Jeyranym"
22	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15720		"Bala bali"; "Bəkhtəvəri"
23	Arshak Soqomonov (tar), Karapet Martirosov (kemancha)	A 15728		"Tiflis Lezqinka"; "Shusha Lezqinka"
24	Sazandar orchestra conducted by Levon Qarakhanov	A 15730		Two Armenian melodies
25	Sazandar orchestra conducted by Levon Qarakhanov	A 15732		"Kars"; "Aeroplan"[58]
26	Sazandar orchestra conducted by Levon Qarakhanov	A 15733		"Rose"; "Nunufar" (Armenian dances)
27	Sazandar orchestra conducted by Arsen Yaramishev	A 15734		"Rənq";[59] "Laylay"
28	Sazandar orchestra conducted by Arsen Yaramishev	A 15735		"Tərəkəmə"; "Koroqlu"[60]
29	Qriqor (tar), Sevi (kemancha)	A 15736		"Al linem"; "Orom" (Armenian dances)
30	Sazandars from Kars	A 15825		Jazayir march; Arabic march
31	Sazandars from Kars	A 15826		Zeytoon march; Andranik march
32	Boyadjian (violin)	A 18501		"Krunk"; "Tzitzernak" (Armenian songs)

Table 2. List of Azerbaijani melodies in the repertory of Caucasian sazandars, compiled from Caucasian sazandars (Ekstraphon, 1915).

A few titles are unreadable or cannot be identified, while the rest appear to be Azerbaijani. Most of the Azerbaijani dances recorded by the sazandar ensembles, as well as by the duduk trios, remain in the active repertory of Azerbaijani musicians today.[61]

55 This title is not identified.
56 The dance melody "Alyosha" could not be identified.
57 "Mirzəyi" is a traditional Azerbaijani wedding dance melody.
58 The Azerbaijani dance melody "Aeroplan" (Airplane) could not be identified.
59 "Rənq" is an instrumental piece, but next to the title is written 'dance'.
60 Koroqlu is normally an ashiq melody, presented here as a dance.
61 The author recorded a number of these Azerbaijani dance melodies for the CD *Rhythms of Azerbaijani Dances* (Baghirova 2013).

Some of these melodies, for example, "Shalakho", "Kintauri"[62] and "Lezginka",[63] occupy an equally strong place in Azerbaijani, as well as in Georgian or Armenian music.

As explained above, in the catalogue of "Caucasian instrumental music" records, "Caucasian" music is presented exclusively as performed by Georgian and Armenian musicians; however, only a small part of the repertoire performed by them originated from Georgian or Armenian authors. In the other two lists in the Extraphone catalogue—"Singing in Armenian" (31 records), "Singing in Georgian" (26 records)—the percentage of Armenian and Georgian melodies is naturally much higher. However, even here, Azerbaijani music also finds its place in the repertoire. For example, in the catalogue "Singing in Armenian", seven melodies ("Tello", "Khurjun", "Divani", Mukhambazi,[64] "Tarlan", "Araz" and "Koroqly") are Azerbaijani urban and *ashiq*[65] songs. In the catalogue "Singing in Georgian", out of 52 melodies, 14 are Azerbaijani mughams and two are Azerbaijani songs. Interestingly, this catalogue includes three records by Georgian Princess Olga Bagrationi-Davidova, who performed the mughams "Mahoor", "Bayaty-Qajar", "Shushtar" and "Shikəstə", plus two Georgian songs. In the catalogue "Singing in the Tatar language" (114 double-sided records)[66] unlike the two previous catalogues, the entire repertoire consists of Azerbaijani melodies, but the recordings feature performances by both Azerbaijani and non-Azerbaijani khanendes and instrumentalists accompanying the singers.

An analysis of the content of Extraphone's 1915 record catalogue reveals how closely the urban musical traditions of Georgians, Azerbaijanis, and Armenians were intertwined during that period. It was common practice for Caucasian urban musicians to perform together and play each other's music. However, Azerbaijani music dominated their repertoire and was perceived as a shared heritage, as something that belonged to all of them.

Conclusion

The period from the 1900s to the 1920s constituted the earliest stage in the history of audio recordings of Azerbaijani music. The first decades of the 20th century, the time of the oil boom and economic growth in Azerbaijan, were also the time of the flourishing of Azerbaijani musical culture and its wide dissemination throughout the South Caucasus.

Azerbaijani mughams, tesnifs, popular urban songs, dance melodies, and melodies from the first national operas and operettas defined the urban musical landscape of the South Caucasus of that time: they constituted a significant part of the repertoire of Caucasian urban musicians, which is confirmed in catalogues of Caucasian recordings. A large quantity of Azerbaijani music, especially instrumental music, was recorded by Armenian and Georgian performers, including sazandars, duduk and zurna players,

62 The title "Kintouri" is pronounced in Azerbaijani as *kintovari*, which means "in the style of kinto". In old Tbilisi *kinto* were lower class traders, entertainers or often marginalized people known as cunning and crafty folk.
63 "Lezqinka" is an Azerbaijani title "Ləzqihənqi".
64 *Mukhambazi* is the Georgianized pronunciation of "mukhammas", a form of Azerbaijani ashiq poetry.
65 *Ashiqs* are folk poets, storytellers, composers and music performers. The syncretic art of ashiqs is one of the oldest and most important forms of Azerbaijani cultural expression. In 2009 it was inscribed on the UNESCO Representative List of Intangible Cultural Heritage of Humanity. In the catalogue "Singing in Armenian" three songs—"Divani", "Mukhambazi" and "Koroqly"—are Azerbaijani ashiq melodies.
66 The catalogue "Singing in the Tatar language" actually contains 149 records, but only 114 of them contain recordings of Azerbaijani music, while the remaining records contain various stories told in the Azerbaijani language, as well as three one-sided records with a recording of readings from the Quran.

which substantiates the inclusion of early Caucasian discography in the research material on this topic.

As it can be concluded from analyzed sources, the widespread use of Azerbaijani music in the urban musical life of the South Caucasus gradually blurred its national boundaries in the minds of the Caucasian public and its musicians, turning it into a kind of common source of so-called "Caucasian music". In this regard, record catalogues of the early 20th century acquire greater significance than was originally ascribed to them: from simple lists of gramophone records, they turn into historical documents, more or less allowing the identification of Azerbaijani, Armenian and Georgian contributions in it.

Acknowledgments
The author would like to thank Mrs. Khalida Farajullayeva, the Director of the Azerbaijan State Sound Recording Archive; Dr. Alla Bayramova, the Director of the Azerbaijan State Museum of Musical Culture; Mrs. Sevinj Aliyeva at the Museum of Musical Culture, and Dr. Abdullah Akat, Professor of Ethnomusicology at Istanbul University for their kind assistance. Special thanks to Jennifer Vaughn for her generous contribution during the editing process.

References

Arakishvili, D. (1925). *Kartuli Musika* [Georgian Music]. Kutaisi: Adgilobrivi Meurneobis Stamba.

Azerbaijan musiqisinin tarikhi [History of Azerbaijani Music] (2017). Vol. 2. Baku: Azerbaijan National Academy of Sciences, Institute of Architecture and Art.

Baghirova, S. (2002). "Etudi o Qadjibekove" [Etudes of Hajibeyov], *Muzikalnaya Akademia* [Musical Academy], 1(678), pp. 203–206. Available at: https://mus.academy/articles/etyudy-o-gadzhibekove [Accessed: 18 July 2025].

Baghirova, S. (2007). "Azerbaijani Mugham between Tradition and Innovation", *Conference on Music in the World of Islam*. Assillah, Morocco, 8–13 August 2007. Available at: https://www.academia.edu/64957414/Azerbaijani_mugham_between_tradition_and_innovation [Accessed: 18 July 2025].

Baghirova, S. (2011). "Uzeyir Qadjibekov i Kara Karayev: vek novoy Azerbaydjanskoy muziki" [Uzeyir Hajibeyov and Kara Karayev: A Century of New Azerbaijani Music], in *Azerbaijanskaya muzika i muzikanti* [Azerbaijani Music and Musicians]. Baku: TekNur, pp. 92–97.

Baghirova, S. (2013). *Rhythms of Azerbaijani Dances. Traditional Music of Azerbaijan* [CD]. Torino: Felmay Records.

Baghirova, S. (2016). "Mugham as the Art of Music Performance and Music Making", in Elsner, J., Jähnichen, G. and Guray, C. (eds.) *Maqam Traditions between Theory and Contemporary Music Making*. Istanbul: PAN Publishing, pp. 17–25.

Baghirova, S. (2017a). "Traditzionnoye muzikalnoye iskusstvo Azerbaijana v zerkale obshestvennix idey XX veka" [Traditional Musical Art of Azerbaijan in the Mirror of Social Ideas of the 20th Century] in *Muzika narodov mira* [Music of the World Nations]. Volume 2. Moscow: Scientific Publishing Center "Moscow Conservatory", pp. 167–186.

Baghirova, S. (2017b). "Natzionalnaya ideya i identichnost v azerbaijanskoy muzike" [National Idea and Identity in Azerbaijani Music] in *Musical Traditions in the Globalizing World*. Baku: Azerbaijan National Conservatory, pp. 88–94. Available at: http://konservatoriya.az/konfrans/2017.pdf [Accessed: 18 July 2025].

Bəhmənli, R. (2021). *Azerbaijan qadim reqs havalary* [Old Azerbaijani Dance Melodies]. Baku: Sharq-Qarb.

Bayramova, A. (2023). “Azerbaijani Mugham in the Pushkin House”, *Asian-European Music Research Journal*, 12, pp. 1–6. Available at: https://www.logos-verlag.de/PDFS/aemr.12-1.pdf [Accessed: 18 July 2025].

Dilbazova, M. (1985). *Iz muzykalnoqo proshloqo Baku. Vtoraya polovina XIX – nachalo XX veka* [From the Musical Past of Baku. The Second Half of the 19th – Beginning of the 20th Century]. Baku: Ishiq.

Efendiyev, V. (1980). “Iz istorii razvitiya zvukozapisi v Azerbaijane” [From the History of Sound Recording Development in Azerbaijan], *Melodiya 4*, pp. 68–71. Available at: https://russian-records.com/data/media/581/Melodiya_4580.68-71.pdf [Accessed: 18 July 2025].

Ensiklopedia of Azerbaijanskoqo Mughama [Encyclopedia of Azerbaijani Mugham] (2012). Baku: Scientific Center “Azerbaijani National Encyclopedia”.

Ekstrafon. *Spisok plastinok kavkazskoy zapisi* [Extraphone. List of Records of Caucasian recordings]. (1915). Baku. Azerbaijan State Museum of Musical Culture, DK-14897/473, inv.-18237.

Gramophone Company Discography (n.d.), “His Master’s Voice matrix 9188. Azir Bezhan” / G-n ASLAN (MASHABI ABAS OGLI SAPAROV) (akk tari SANDRO)”. Available at: https://gramophonecompanydiscography.com/advanced_search_results?artist=&artistAlt=&title=Azir+Bezhan&titleAlt=&prefix=&suffix=&matrixNumber=&issueNumber=&recordingDate=&location=&filename=&other=&notes=&maxResults=1000 [Accessed: 19 July 2025].

Haxthausen, A. (1854). *Transcaucasia: Sketches of the Nations and Races between the Black Sea and the Caspian*. Translated by John Edward Taylor. London: Chapman and Hall. Available at: https://babel.hathitrust.org/cgi/pt?id=mdp.39076002699903&seq=9 [Accessed: 29 July 2025].

Kazimli, G. and Ibrahimov, T. (2023). “*Khanende Meshadi Gafar Garyaghdi*”. Baku: “Azerbaijan”.

Kerimova, T. (2020). “Narodniye pevtzi i muzikanti: Ali Kerimov” [Folk Singers and Musicians: Ali Kerimov], *Konservatoriya* 4(49), pp. 75–101. Available at http://konservatoriya.az/wp-content/uploads/2021/04/Konservatoriya_2020-4_75-101.pdf [Accessed: 18 July 2025].

Kenan, Aslan (2017). “Dünyada səsim qaldı... Böyük xanəndə Seyid Mirbabayevin 150 illiyinə. [My Voice Remained in the World... To the 150th Anniversary of the Great Khanende Seyid Mirbabayev], 525 Newspaper, 8 September. Available at: https://525.az/?name=xeber&news_id=86159 [Accessed: 24 July 2025].

Korganov, V. (1908). *Kavkazskaia Muzyka* [Caucasian music]. Tiflis: M. Martirosyants’s printing house. Available at: http://elib.shpl.ru/ru/nodes/23770-korganov-v-d-kavkazskaya-muzyka-sbornik-statey-tiflis-1908 [Accessed 10 August 2025].

Lassy, I. (1916). *The Muharram Mysteries Among the Azerbeijan Turks of Caucasia: An Academical dissertation*. Helsingfors: [s.n.]. Available at: http://web2.anl.az:81/read/page.php?bibid=vtls000483903 [Accessed: 21 July 2025].

Malcolm, J. (1815). The History of Persia, from the Most Early Period to the Present Time. Vol. I. London: J. Murray & Longman. Available at: https://archive.org/details/b2932953x_0001/page/n3/mode/2up [Accessed: 18 July 2025].

Mammedov, T. (n.d.) “Sound Records’ History in Azerbaijan”, *Discography of Azerbaijan*. Available at http://diskografiya.musigi-dunya.az/eng/history.asp [Accessed: 16 July 2025].

Mammedov, V. (1981). *Muğam. Söz. İfaçı* [Mugham. Word. Performer]. Baku: Ishiq.

Oganezashvili, A. (1927) “Azerbaijan xalq musiqisinin veziyyeti” [State of Azerbaijani Folk Music], *Dan yildizi* [Morning star], no. 3, p. 32.

Popov, A. (2013). “Multikulturalizm i natsionalnaya identichnost v kontekste sovremennosti” [Multiculturalism and National Identity in the Context of Modernity], *Proceedings of the Saint Petersburg State University of Culture and Arts*, 199, pp. 73–84.

Prentice, W. (2000). “The Gramophone Goes East”, *Musiqi Dunyasi* [World of Music], 2(3). Available at: http://musigi-dunya.az/Magazine3/articles/05/05.html [Accessed: 18 July 2025].

Russian Records (n.d.). “Sport-Record”. Available at: https://www.russian-records.com/categories.php?cat_id=1466 [Accessed: 24 July 2025].

Shushinski, F. (1985). *Azerbaijan khalq musiqichileri* [Azerbaijani Folk Musicians]. Baku: Yazychy.

Sport-Record (n.d.). *Aziatskaya zapis izvestnikh kavkazskikh pevtzov* [List of Asian Recordings of Renowned Caucasian Singers]. [s.l.]: [s.n.]. Azerbaijan State Museum of Musical Culture. DK-15538, inv.-18232.

Tan, S. (2023). “6th International Scientific Symposium ‘Space of Mugham’”. *Sənətşünaslıq üzrə elmi jurnal* 60(3), p. 76. Available at: http://konservatoriya.az/lib/Konservatoriya.2023-3.pdf [Accessed: 18 July 2025].

Ward, J. (2017). “Tbilisi, 1902”, *Excavated Shellac* (blog). Available at: https://excavatedshellac.com/2017/10/07/tbilisi-1902/ [Accessed: 24 July 2025].

The IASA Journal is constantly looking for material to publish. Please submit articles, research output, or reviews you consider of interest to IASA.

Abstracts (maximum 250 words each) may be in French, German, Spanish, or English. Images can be sent as digital images in JPG, PDF, PNG, or TIFF formats.

Information for authors

1. Articles must be submitted here to be considered for publication. You will be informed of IASA's intention to review the article by the Journal editors.
2. Submission files must be .doc, .docx or .txt files with minimal formatting. Do not use all caps; set text aligned left (not justified); use 12-point Times New Roman font throughout; do not use customized text styles for section headers; do not include page numbers.
3. Illustrations (photographs, diagrams, tables, maps, etc) may be submitted as low resolution files placed in the file at appropriate points. All illustrations should include captions with all necessary credits and acknowledgments at the time of submission. If the article is accepted for publication, high resolution copies will be required and should be sent separately.
4. Use in-text citations that adhere to the Harvard Referencing System (quick review here: http://www.citethisforme.com/harvard-referencing. For notes containing textual commentary that do not involve references, use footnotes, not endnotes.
5. The IASA Journal only accepts original research (i.e., not previously published, not being considered for publication elsewhere, and not containing text recycling including translated text from a prior publication).
6. IASA conference presentations may be developed into more detailed accounts and/or arguments for publication in the journal.
7. Abstracts (maximum 250 words each) must be included with each submission and may be in French, German, Spanish, or English. Please include 3-5 keywords on the main topics of your submission following the abstract.

Join the IASA Listserv!

Visit https://www.iasa-web.org/mailing-lists to read about the IASA Listservs and to sign up.

IASA's Sustaining Members

IASA Sustaining Members are institutions, organisations, corporations, business enterprises, associations or individuals contributing an additional amount to their annual Membership dues.

Cube-Tec International
Jörg Houpert
Anne-Conway-Straße 1
D-28359 Bremen
Germany
Tel. +49 421 20144 0
e-mail: j.houpert@cube-tec.com
www.cube-tec.com

AV Preservation by reto.ch
chemin du Suchet 5
1024 Ecublens
Switzerland
Tel. +41 21 691 6511
email: info@reto.ch
https://reto.ch

NOA Audio Solutions
Jean Christophe Kummer
VertriebsgesmbH
Johannagasse 42
A-1050 Vienna
Austria
Tel. +43 1 545 2700
e-mail: c.kummer@noa-audio.com
https://www.noa-archive.com/

DC1 gmbh Media & Object Digitisation
Carl Bertelsmann Strasse 161F
33335 Gütersloh
Germany
https://www.dc1-online.de/

IASA Journal

- Journal of the International Association of Sound and Audiovisual Archives (IASA)
- Journal de l'Association Internationale d'Archives Sonores et Audiovisuelles (IASA)
- Zeitschrift der Internationalen Vereinigung der Schall- und audiovisuellen Archive (IASA)
- El Journal de Asociación Internacional de Archivos Sonoros y Audiovisuales (IASA)

The IASA Journal is an Open Access journal published online. Authors and readers are encouraged to become IASA members. Applications for membership of IASA should be submitted to the Vice President for Membership by filling out the online form at: https://www.iasa-web.org/application-form. Recent issues of the IASA Journal are available at http://journal.iasa-web.org/pubs/issue/archive. Older digitized copies of the IASA Journal from 1971 are on the IASA Journal website: https://www.iasa-web.org/iasa-journal.

The Executive Board of IASA

Editor:

Jennifer Vaughn
Digital News Archive
Radio Free Europe/Radio Liberty
Prague, Czech Republic
e-mail: editor@iasa-web.org

Web Manager:

Bright Joshua
Chief Conservator
National Records & Archives of Malawi
Zomba, Malawi
e-mail: webmanager@iasa-web.org

http://www.iasa-web.org
http://journal.iasa-web.org/

Layout by Mary Elizabeth Black. Hamburg, Germany.
https://www.mizblack.com/

ISSN: 1021-562X
DOI: https://doi.org/10.35320/ij.i55