



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

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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.

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My last editorial proposed a few significant changes to the operation of the IASA Journal. At our Annual Conference in Istanbul, the newly formed Executive Board, the Journal's Editorial Board, and the IASA General Assembly all were informed of and supported these new measures. I am happy to report that immediately after the conference, work commenced to implement some of those proposals. This past year, I have had the pleasure of collaborating with Marija Dumnić Vilotijević, who began serving as Managing Editor in September of 2023. Marija's impressive background in the fields of audiovisual archives and ethnomusicology, her significant editorial experience with academic publications, and her extensive scholarly network will be valuable in the next issue, which is already in production. This past year, however, a main focus of our work has been to enhance the journal's operational framework.

We have been working to streamline the submission process and improve the overall quality of our peer review system. A new review form will make the process more consistent, and clear and specific submission requirements ensure that incoming articles meet baseline requirements so we can more quickly determine whether to initiate peer review. Both are crucial for improving the standards of our publication. We've also made some other small updates to information on the website, ever with an eye towards meeting the criteria for inclusion in the Directory of Open Access Journals.

Migration of the journal's website to a hosted service plan has been another key development. Our new hosting service provided a much-needed software update, and they also provide ongoing technical support and site maintenance. We've had no site outages or problems since the migration was completed in late 2023.

In addition to these operational improvements, we have expanded the size of our Editorial Board from eight to thirteen members. I would like to welcome these new colleagues: Patrick Midtlyng, Perla Olivia Rodríguez Reséndiz, Diana Chester, Christian Poske and Ana Masiello. They bring a wealth of expertise and diverse perspectives to the journal. A larger board enhances our capacity for rigorous peer review and enables us to cover a broader range of topics. We've consulted with the board more frequently this year to seek recommendations for appropriate peer reviewers and proofreaders. The Board will meet again during our upcoming conference, and along with a discussion of this new issue of the journal, we can consider additional projects that can leverage the knowledge and experience of this group.

I am also very pleased to announce the successful completion of a major translation project in collaboration with the Qatar National Library. This initiative involved translating all four of IASA's Technical Committee publications into Arabic, making these critical resources accessible to a broader audience. This project is a significant milestone for IASA, as it promotes global knowledge sharing and supports the preservation and archiving of sound and audiovisual materials across different linguistic and cultural contexts. I extend my heartfelt thanks to Maxim Nasra and his team at the QNL for their longtime dedication to this project, and for their faithfully executed translations and beautifully designed editions, all available for free download on the IASA website at <https://iasa-web.org/iasa-special-and-technical-publications>. And as always, IASA welcomes new proposals for translations of our publications from interested partners. Guidelines can be accessed here: <https://iasa-web.org/guidelines-translating-iasa-publications>.

The three articles presented on the following pages all skillfully uncover previously inaccessible histories resting in historic audio collections. With the topics of AI and Machine Learning dominating many conversations in our field, this issue feels like a subtle reminder

that traditional methods of inquiry are still vital to advancing knowledge about archival audiovisual collections. There are still important collections in major institutions that are difficult to access, cylinder recordings with unknown recording provenance, and colonial pasts still extend their reach into today's institutions and practices. Site visits, historical research, and interviews are still effective tools to delve into these collections and to frame a future that offers more transparent, accessible, and equitable access to information.

In the first article of this issue, Carolyn Birdsall and Erica Harrison examine two major collections of sound recordings captured from Axis powers by the Allied forces at the conclusion of World War II. Their study sheds light on the history of these somewhat hard to access collections, which nonetheless contain historically invaluable sound recordings. While archivists are well-versed in donor agreements and the ethics of accessioning archival content, Birdsall and Harrison's article confronts the challenges to understanding the provenance of materials that are byproducts of geopolitics and global military conflict. This article represents one of the last of many publications that resulted from TRACE, a multi-year project that has significantly contributed to scholarship on radio history during World War II.

Thomas Bårdsen's article, "The Revolution of Duplicated Music: Sonic Markers to Identify Early Phonograph Cylinder Copies in Archive Collections," explores the intricacies of early music production and the techniques used for duplicating phonograph cylinders. His research highlights the significant, yet often concealed, practice of pantographic duplication and implications for archivists in the 21st century. Bårdsen's historical research provides fascinating insights into the business and engineering practices of the early recording era. And by identifying unique sonic markers present in early cylinder recordings, the author provides a concrete methodology to more readily differentiate original recordings from duplicates. The wealth of audio examples provided make reading this article something of a multimedia experience, as well.

Finally, Rebekah Hayes and Grace Koch's work on the True Echoes project delves into the British Library's wax cylinder collections, aiming to both enhance and correct their documentation, and to reconnect digitized historic recordings with their originating communities. The project is particularly focused on recordings made in 1898 during an expedition to the Torres Strait Islands, employing a "multi-perspectivist approach" that integrates historical research and participatory methods with contemporary community members. Direct descendants of people recorded on the cylinders were able to provide information on proper access protocols, and to re-center the participants' roles in a history that until recently prioritized European researchers.

Looking ahead, I am excited about our upcoming conference in Valencia, which promises to be a vibrant gathering of participants from around the globe. I hope to see many of you there, where, for the first time in three years, I will have the luxury of sitting down and listening to the speakers, having finally stepped away from my role as Programme Chair. Thanks to Erwin Verbruggen, who has newly stepped into the role and has put together a wonderful programme, which is now available to view at: <https://2024.iasa-web.org/programme>. If you're presenting at the conference and want to turn your conference paper into a journal article, or if you have an idea for a paper or suggestion for the journal, feel free to approach me or Marija to discuss.

With best regards,  
**Jennifer Vaughn**  
*IASA Editor*

### A LETTER FROM IASA'S PRESIDENT

*Patrick Midtlyng, Library of Congress, USA*

Dear Members of IASA,

As I write my first President's Letter, I find myself reflecting on the concept of service—what it means to me, what has come before, and the work that lies ahead. The legacy of dedication and achievement from past IASA directors sets a high bar, one that the new Executive Board and I are committed to meeting and exceeding.

I extend my sincere gratitude to the previous E.B. for their efforts and support during the post-election transition. Special thanks to President Tre Berney, Past-President Toby Seay, Vice-Presidents Margarida Ullate i Estanyol, Perla Olivia Rodríguez Reséndiz, and Judith Opoku-Boateng, Secretary-General Elisabeth Steinhäuser, Treasurer Yuri Shimoda, Editor Jennifer Vaughn, and Web Manager Richard Ranft. Your contributions have been invaluable.

The newly elected board, consisting of Tre Berney, Bronwyn Officer, Rosie Rowe, Andrew Martin, Pedro Félix, Nadia Lai, Jennifer Vaughn, and Bright Joshua, has already demonstrated an inspiring commitment to our shared mission. Despite the logistical challenges of coordinating meetings when we have an 18-hour difference across time zones, the camaraderie and dedication of this team have been remarkable. I am particularly grateful to Tre and Jennifer for their guidance and continuity during this period of change.

As we look forward, our focus is clear: addressing the pressing issues of sustainability, inclusivity, and expanding IASA's reach. The next three years will pass swiftly, but our ambitions are significant. We aim to modernize our operations and infrastructure, enhance membership engagement, and ensure financial stability. Alongside these operational goals, we remain steadfast in celebrating the hard work and achievements within our community.

This year, we honored Ezekiel Korley with the Carl Fleischhauer Award, Somaya Langley with the Lars Gaustad Award, Pio Pellizzari with the IASA Award of Recognition, and Ketevan Davitashvili with the inaugural Dietrich Schüller Award for Audiovisual Training. These accolades reflect the significant contributions of our members and highlight the vibrant spirit of our community. I'd also like to encourage IASA members to take advantage of the grants and awards we offer, all of which you can read about here: <https://iasa-web.org/awards>. Research Grants in particular have been underutilized: the Executive Board has responded by increasing publicity for this grant and trying to encourage more applicants.

Looking ahead to our 55th annual conference, we invite you to join us in Valencia at the La Nau Cultural Center of the University of Valencia from 23-26 September, 2024. The theme, "Interweaving Disciplines: Connecting Collections and Communities Through Sound & Audiovisual Archives," promises to foster rich dialogue and collaboration. For the first time, we will highlight LGBTQ AV archives and archival work, marking a significant milestone in our history. We are honored to have Elena Oroz, Assistant Professor at Carlos III University of Madrid, Department of Media Studies, as our Keynote Speaker. Special thanks to Vice-president for Conferences Rosie Rowe, Erwin Verbruggen, and our host Jorge García, along with the staff at the L'Institut Valencià de Cultura, for their diligent preparation.

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## PRESIDENT'S LETTER

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I eagerly anticipate connecting with many of you in Valencia, but for those unable to attend in person, please know that my virtual door is always open at [president@iasa-web.org](mailto:president@iasa-web.org).

In closing, I would like to share a few thoughts on the broader context in which we work. The world in 2024 presents numerous challenges to our work—climate change, political division, war, and attacks on basic human rights. In this landscape, the role of associations like IASA is more critical than ever. Our commitment to preserving time-based media and to serve as a medium for international co-operation among audiovisual archives holds profound importance. We are a diverse community united by our dedication to memory preservation. By embracing this mission, we can indeed make a meaningful impact. Together, we will rise to meet these challenges.

Sincerely,  
**Patrick Midtlyng**  
*IASA President*  
*July, 2024*

## EXCAVATING WARTIME SOUND HERITAGE OF GERMANY, ITALY, AND JAPAN: CAPTURED AXIS SOUND RECORDINGS IN THE WASHINGTON, D.C. AREA AND THEIR DOCUMENTATION

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### Abstract

This article treats the presence of captured sound recordings from the former Axis powers (Germany, Italy and Japan) that were seized by United States military forces as part of a mass collection of enemy archival materials at the end of World War II which are held today at major heritage institutions in the Washington, D.C. area. Focusing on the recorded sound collections at the Library of Congress in Washington, and the National Archives at College Park, Maryland, we first consider the limited clues available as to the provenance of the captured collections, which have become increasingly ‘mixed’ in nature, including other historical radio and sound recordings related to World War II. In addition to offering insights into the contents of the collections, we outline the challenges they have faced since they were first accessioned during the mid-1940s, and later managed, preserved and partly catalogued at each institution. We close with a critical evaluation of the current condition of the collections and the potential for improved documentation, contextualization and accessibility of these materials, many of which seem to be unique recordings not available elsewhere.

**Keywords:** radio archives; sound recordings; provenance; World War II; Nazi Germany; United States

### Introduction

As part of the TRACE Project (Tracking Radio Archival Collections in Europe), we have sought to ‘track the traces’ of European radio archival collections as they have been produced, displaced, relocated, and reused from the 1930s to today.<sup>2</sup> During the course of our research we have worked at a number of archives in Germany, the Netherlands, Belgium, Luxembourg, the Czech Republic and the United Kingdom, often tracing the movements of sound recordings produced by Nazi Germany and either captured or abandoned in 1945. In April 2023 we extended our investigations to the United States to review the ‘Captured German Recordings’ held at the Library of Congress (LoC), Washington D.C., and the ‘National Archives Collection of Foreign Records Seized’ (Record Group 242) at the National Archives (NARA), College Park, Maryland.<sup>3</sup> Both of these institutions inherited collections of sound recordings that were captured by American military forces as part of the mass collection of enemy archival material between 1944-1946. The treatment of these collections in the post-war period is illustrative of some of the challenges facing AV heritage institutions, and for researchers

1 Carolyn Birdsall is Associate Professor of Media Studies at the University of Amsterdam, and her most recent book is *Radiophilia* (Bloomsbury, 2023). Erica Harrison is a visiting fellow at the University of Amsterdam, and her monograph *Radio and the Performance of Government: Broadcasting by the Czechoslovaks in Exile in London, 1939-1945* was published by Karolinum/University of Chicago Press in 2023.

2 To learn more about the TRACE project, see <https://trace.humanities.uva.nl/>.

3 The ‘Captured German Recordings’ are held at the Recorded Sound Research Center (RSRC), Library of Congress, though no online information is available on the RSCS website (<https://www.loc.gov/research-centers/recorded-sound/about-this-research-center/>); online information for the ‘National Archives Collection of Foreign Records Seized’ (Record Group 242) can be viewed at: <https://www.archives.gov/research/holocaust/finding-aid/military-rg-242.html>.



seeking to use them.<sup>4</sup> While most of the seized paper documents were returned to West Germany or destroyed by mutual agreement, and much of the captured film stock has been studied, the various efforts made over the years to better document these sound collections have not been entirely resolved.<sup>5</sup>

### 1. Complicated Provenance and Mixed Collections

As our previous research has shown, Nazi German authorities dedicated substantial resources to sound archiving as well as paper documentation. The largest bodies responsible for sound archiving were centered around broadcasting organizations, notably the Zentral Schallarchiv (Central Sound Archive) of the RRG (Reichs-Rundfunkgesellschaft or German National Radio Board) and an abortive spin-off project of the Reichsschallarchiv (National Sound Archive); yet there were also a number of other departments responsible for recording and archiving non-broadcast activities such as political speeches and party events (Dethlefs and Birdsall, 2021; Birdsall and Harrison, 2022). Bodies such as the Reichsautozug ‘Deutschland’ (RAZ), itself part of the NSDAP propaganda office in Munich (Figure 1) made such recordings for Nazi party leader Adolf Hitler’s personal archive and for the NSDAP Hauptarchiv (Nazi party archives) in Munich, and recordings were also used as a source from which speeches could be transcribed for the archival record or for publication.<sup>6</sup> As such, there were multiple sound collections held at different institutions across Germany, meaning that where provenance information was not recorded – as was largely the case with these collections eventually formed in the US – it is no longer possible to tell with accuracy where the recordings originated.

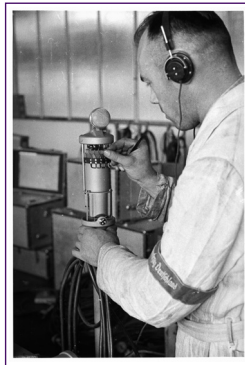


Figure 1. Technician repairing a recording microphone for the Reichsautozug Deutschland (RAZ), Munich, April 1937. Photographer: Heinrich Hoffmann. Photo courtesy of Bayerische Staatsbibliothek München, <https://bildarchiv.bsb-muenchen.de/metaopac/search?id=bildarchiv88073&View=bildarchiv>.

4 For an early overview of some of the material taken and the institutions storing it, see Weinberg, 1952; see also Grimstead, 2022.

5 Files at NARA document the reviewing and indexing of seized files in the 1960s. In consultation with the Bundesarchiv in Koblenz, West Germany, the originals were either returned to Germany or pulped. See, for example, Binder 29 in RG 242 ‘National Archives Collection of Seized Enemy Records, 1941-’, Berlin Document Center (BDC) Administrative Records’ Box 12, NARA, College Park; see also Eckert, 2012. For film history resources, see Serene, 1996.

6 The RAZ was part of the NSDAP propaganda office (Reichspropagandaleitung) in Munich; at the end of World War II, one of its leading officers, Hermann Schäfer, helped to bury over 500 discs and 43 tape recordings in sealed boxes in southern Bavaria which came to the Bundesarchiv in Koblenz in 1961. Most of the files of the NSDAP propaganda office’s Munich branch office are said to have been destroyed prior to the arrival of US troops in Munich in late April 1945. See Epping-Jäger, p. 149; Granier, Henke and Oldenhage, 1977: pp. 355-356, 771-772; Peterson and Smith, pp. 2-3.



Figure 2. Photos of the Nazi party archives (NSDAP Hauptarchiv), located on Barer Strasse 15 in Munich, 1935/1936. Photographer: Heinrich Hoffmann. Photo courtesy of Bayerische Staatsbibliothek München, <https://bildarchiv.bsb-muenchen.de/metaopac/search?id=bildarchiv70985&View=bildarchiv>.

Neither NARA nor the LoC hold provenance information for these collections beyond the US government department from which they were accessioned, and it is possible that the donating departments (e.g., the War Department, in the case of NARA) did not record how the material first came to them. Given the huge amount of archival material that was brought back to the US and the confusion of its collection and packing, it would not be surprising if no records were retained regarding the institution or location from which each collection was taken. Former Hoover Institution curator Agnes Peterson noted that the ‘havoc, disorganization, and collapse of the German civil government scattered collections and destroyed materials’ (Peterson and Smith, 1977: p. 3). However, there are surviving clues which suggest that at least some of these recordings are from the NSDAP Hauptarchiv (Figure 2), which was a key target for document collection following the arrival of US forces in Munich in late April 1945 (Heinz and Peterson, 1964; Auer, 2017).<sup>7</sup> This lack of information on provenance also makes it difficult to distinguish subgroups within collections. In the case of NARA, we know that different groups of records were added at different times (one group in 1947, an additional batch in 1962, see section 3.1 for details) but each is submerged into the whole, with no obvious differentiation. The collection at the LoC has also accumulated additions along the way, although these do tend to remain separated (one advantage of none of these recordings appearing in the online catalogue is that the paper copies of lists remain clearly separate as distinct subgroups). Under the umbrella of ‘Captured German Recordings’ at the LoC are included not only domestic German recordings, but also German monitoring recordings of Allied broadcasts. The collection has become something of a catch-all for wartime broadcasts of any type, some of which are very unlikely to have been captured from Germany, but the lack of provenance information makes this impossible to prove.

7 Some discs in the LoC collection are stamped ‘NSDAP Hauptarchiv’, and NARA holds other documentation from the same archive.

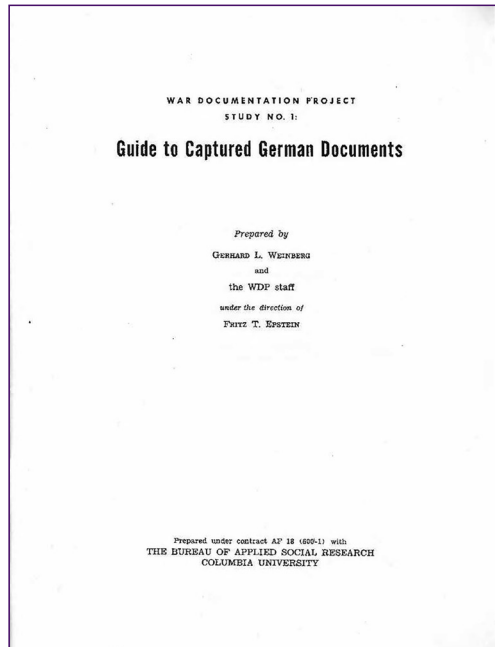


Figure 3. Title page of Gerhard Weinberg's *Guide to Captured German Documents* (1952), created as part of the War Documentation Project (WDP), under contract by the Columbia University Bureau of Applied Social Research. Reproduced with permission from Gerhard Weinberg.

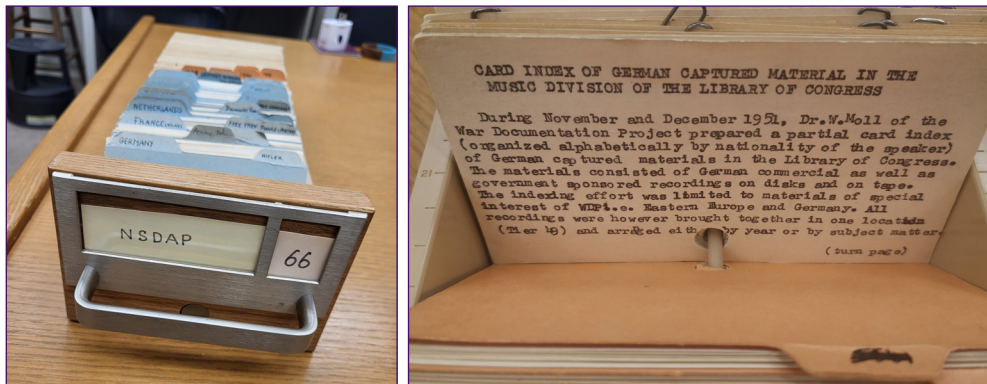


Figure 4. Drawer 66 'NSDAP', Recorded Sound Card Catalog Supplement, LoC Recorded Sound Research Center, created in 1951 by Dr. Wilhelm Moll, War Documentation Project, Columbia University.

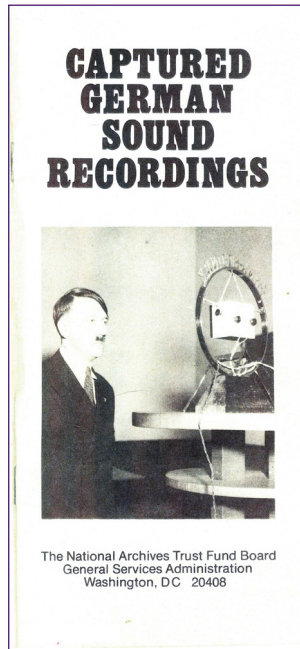


Figure 5. Cover for pamphlet designed to help ‘the public and scholarly community’ with a photo of Adolf Hitler’s first speech as Reich Chancellor on German radio, dated as January 1933. Agnes F. Peterson and Bradley F. Smith, *Captured German Sound Recordings* (Washington: National Archives Trust Fund Board, 1977).

Over the years, various efforts have been made to document sound collections such as these, and make them more accessible to researchers. The first great push was the War Documentation Project, which published its first findings in 1952 to ‘answer a long-standing requirement for the systematic research exploitation of the vast masses of captured documents which came into the hands of the United States Government during and after World War II’ (Weinberg, 1952: pp. iii, 35-38) (Figure 3). As part of this project, Dr. Wilhelm Moll produced a card index of one portion of the collection at the LoC, which was later written up into a draft finding aid (Figure 4).<sup>8</sup> While there are individual paper lists for some of the associated collections of recordings also available as digital scans, none are featured in the LoC’s online catalogue, and a portion of the collection has never been catalogued at all. For the NARA collections, the Hoover Institution reviewed much of it as part of its project on the speeches of Heinrich Himmler, as many are included in the collection. Following this, the same team compiled a pamphlet entitled *Captured German Sound Recordings* (Figure 5), published by NARA, in the hope of guiding other researchers towards this resource (Peterson and Smith, 1977: p. 5; Smith and Peterson, 1974). However, as only three of the approximately one thousand recordings have been digitized, and only these three recordings are visible in the online catalogue, most details of the collection remain inaccessible and access to them is conditional on in-person visits to NARA’s College Park facilities.

8 See drawer 66 ‘NSDAP’, Recorded Sound Card Catalog Supplement, LoC Recorded Sound Research Center, created in 1951 by Dr. Wilhelm Moll, War Documentation Project, Columbia University. See also ‘World War II Finding Aid [draft]’, Captured German Recordings Subject File, LoC Recorded Sound Research Center.

## 2. Content

### 2.1 Content of NARA Holdings

Record Group (RG) 242 contains around one thousand recordings, of which only three are digitized and available online.<sup>9</sup> Other German and Italian recordings in the collection can be identified by consulting lists held in preservation binders at the Moving Image and Sound Preservation Branch, and can then be requested for digitization and listened to. The Italian recordings date from 1925-1941 and include speeches mostly by Benito Mussolini but also Pope Pius XII, Galeazzo Ciano, Rodolfo Graziani, Ermete Zacconi and others (Fascists, military figures, members of the Italian royal family and some cultural figures), and some choral music. The German recordings are largely speeches by leading Nazis (primarily Himmler, with some Hitler, Joseph Goebbels, Albert Speer, etc.), recordings from party events and celebrations, and some music. The collection also includes German monitoring of US and UK broadcasts and English-language code messages. The NARA's collection of World War II War Crimes Records – Records Group 238 (RG 238) additionally contains unidentified RRG radio recordings of speeches and music, and the Nuremberg interrogations of Hermann Göring, Rudolf Hess, and Joachim von Ribbentrop.<sup>10</sup>

### 2.2 Content of LoC Holdings

The card index created in 1951 (see Figure 4 above) describes sound recordings relating to Belgium, Bulgaria, Czechoslovakia, Denmark, Finland, France, Greece, Hungary, India, Ireland, Italy, Japan, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Sweden, Switzerland, Turkey, Vatican City, and Yugoslavia. Some of these recordings, for instance in the case of Czechoslovakia and Poland, are of broadcasts from governments of Nazi-occupied countries in exile in London, and may have been sourced from German radio monitoring recordings.

In the case of German captured recordings, most of the materials were grouped together according to a LoC 'library work order' (LWO) number, for which the first group is the 'NSDAP file' with the number LWO 5495 and the second group LWO 5774.<sup>11</sup> Among the recordings from the period 1933-1945, there are speeches by Nazi leaders Artur Axmann, Herbert Backe, Hitler, Göring, Goebbels, Robert Ley, von Ribbentrop, Baldur von Schirach, Speer and Eberhard Taubert; there are also recordings of French, Belgian and speakers of other nationalities, possibly sourced from BBC and London exile radio. A third group (LWO 6944) includes speeches of party leaders, and German radio propaganda reports pertaining to military victories in Norway, Denmark, Netherlands, Belgium, Luxembourg and France in 1940-1941, including military reports (*Heeresberichten*) and news reports (*Neueste Nachrichten*). Most of these recordings are likely to be original captured radio recordings.

9 For the three recordings, containing addresses by Hitler, Himmler and Mussolini, see the NARA online catalogue listing: <https://catalog.archives.gov/search?availableOnline=true&recordGroupNumber=242&typeOfMaterials=Sound%20Recordings>.

10 See Records Group 238 (National Archives Collection of World War II War Crimes Records), <https://www.archives.gov/research/holocaust/finding-aid/military/rg-238.html>.

11 In the past, the 'library work order' (LWO) referred to a group of recordings that were processed for preservation by means of tape duplication. In the present day, these LWO numbers function as shelf numbers, with all LWOs held at the Library of Congress having the status of preservation copies, and documented in the Library's MAVIS database system.

Other materials are included in later LoC duplication projects, such as ‘German Tape Dupe Project’ (LWO 6548) initiated in 1971, and ‘Deteriorating Discs Duplications Project’ (LWO 4241).<sup>12</sup> The content of the former consists primarily of German-produced English-language international programming intended for Allied soldiers in North Africa (such as a recording of ‘Voice of the Belligerents’, mainly from 1943) in which English-speaking propagandists speak (e.g. William Joyce, known as ‘Lord Haw-Haw’) or the contents of Allied broadcasts from London are quoted by presenters out of context (e.g. statements made by UK politician Megan Lloyd George, NBC correspondents Edward R. Murrow and Morgan Beatty, or Canadian journalist Hamish McGeachy). It also includes a February 1945 speech by Goebbels. It appears likely that this group consists of recordings seized from Germany. The latter, the ‘Deteriorating Discs Duplications Project’ (LWO 4241), appears to hold seven captured recordings from Germany (wartime speeches by Goebbels, Hess, von Ribbentrop and Admiral Lützwow) and one recording of a Mussolini speech from 1940. In this case, it is unclear whether these recordings pertain to originals from Germany and Italy, or are derived from recordings made by Allies while monitoring Axis broadcasts.<sup>13</sup>

For Italy, the LoC card index offers a selection of 25 recordings covering the period February 1941 to September 1943, consisting of speeches by Mussolini as well as politicians such as Ciano, Alessandro Pavolini, Camillo Pellizzi, Pietro Badoglio, Graziani and Dino Grandi, as well as roughly 10 radio programs described as ‘News and comments’ (from Rome). Three items are listed as ‘unidentified’ in terms of content and date. There are several instances of German words used in the metadata, which raises questions about the provenance of the materials as potentially sourced from German collections.

For Japan, the index cards describe a selection of 20 recordings dated between January 1942 and March 1945, primarily originating from ‘Tokio’ (the German spelling of Tokyo), most likely off-air radio recordings created in Germany and seized by the Allies along with the Captured German Recordings. These recordings include speeches delivered in Japanese and German by Japanese diplomats and statesmen such as Hiroshi Oshima (Ambassador to Germany), Shigenori Togo (Foreign Minister), Masayuki Tani, Mamoru Shigemitsu, and Hideki Tojo, and a recording from an opening session of the Japanese parliament. Other materials include an encoded message from Tokyo to Rome (including discussion by Japanese and Italian speakers), a German-Japanese exchange program, and a 1945 recording of German propagandist Erwin Wickert on radio from Tokyo.

### 3. Institutional Stewardship: How the Collections were Preserved

#### 3.1 NARA

The first batch of captured sound recordings were transferred to NARA from the War Department in July 1947 (Accession File, undat.). Some 525 discs of ‘Sound recordings of speeches of Axis leaders and other propaganda material, captured by American Forces in the European Theater of Operations’ were allocated to RG 242 and confirmed to be the first of several batches. Several years after the Nuremberg Trials ended in 1949, two recordings were added to RG 238 and 319 recordings were transferred to RG

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12 For more information about the LoC ‘German Tape dupe project’ (11 August 1971) and how discs and tapes were reformatted to standard 10-inch open-reel preservation tapes (between 1971-1978), see Behl, 2017: p. 3.

13 For German radio recordings dated between 1929 and 1939 it would be possible to cross-check these with archival catalogues created by the German radio board RRG in Berlin: RRG (1936); RRG (1939).



242. A total of 844 items (743 discs and 101 tapes) in RG 242 was reviewed by NARA in 1962, as part of a process of reformatting and systematically organizing the recordings. However, many of the discs were badly scratched or in incomplete sets, and little substantial progress was made at the time (Accession File, undat.; Peterson and Smith 1977: pp. 10-11). In 1971, Peterson and Smith returned to the collection as part of a project to assemble and document the speeches of Himmler and in the process, produced documentation that reorganized the catalogued recordings in RG 242 into three categories (Speeches; Ceremonies; Monitored Broadcasts and Miscellaneous), with a view to making them more accessible to researchers (1977: p. 10). They followed this up by publishing a short pamphlet on the collection summarizing its content and history (Figure 5).

In addition to the German recordings, RG 242 also contained a number of Italian items which posed additional difficulties in terms of their format. While tape recordings could be relatively easily reformatted, the Italian collection was largely held on metal stampers (some positive, some negative) which were not so easily transferred to a new medium (Accession File, undat.). In 1980, NARA approached an external contractor who proposed a detailed preservation plan to clean the oxidizing metal discs, select the best preserved, and compile the best possible version of the full original recordings onto tape. By using bi-pointed radial styli, the negatives could be played without the need to either make a pressing or electroplate a new positive, thereby minimizing risk of damage to the negative master. This proposal was expensive but some within NARA's Recording Services advocated for it, arguing that they had not yet found evidence that these recordings had been preserved elsewhere and 'If there was a doubt, there is none now – this collection is of tremendous historical value' (Accession File, undat.). Although internal documents show that the proposed project was approved in mid-January 1981, this decision was reversed just over a week later when the LoC offered to share equipment and it was determined that much of the work could then be done in-house. However, optimistic predictions that the project could be largely completed within one year were shown to be ill-founded: a September 1983 proposal explained that little progress had been made due to staff shortages and, given that the metal parts were deteriorating further through oxidation, they should be offered back to Italy in exchange for either disc pressings or tape recordings. Despite these plans, NARA today still holds the metal masters for the Italian recordings, a combination of negatives, positives and galvanos (metal stampers), along with a full set of preservation copies on tape (more than one thousand items), and reference copies that are available for listening (Accession File undat.).

### 3.2 Library of Congress

The materials that are today referred to as the 'Captured German Recordings' collection at the LoC are quite diverse in nature. The name of the collection is somewhat of a misnomer as it has become a catch-all for a wide variety of wartime-era recordings in the LoC Recorded Sound Research Center. Some of the materials are pressings from matrix discs captured in Germany, most likely from the NSDAP Hauptarchiv in Munich, rather than the German radio board (RRG); a further large portion of the sound materials appear to be radio monitoring recordings from different countries, as well as Voice of America broadcasts made during wartime and a handful of CBS recordings of Nazi speeches.

Between mid-1945 and 1946, staff members of the LoC had been actively involved in the 'Mission to Europe', coordinated with the US War and State departments, to acquire print publications, many of which became part of the 'German captured documents

collection'.<sup>14</sup> The 1946 Librarian of Congress annual report noted that the European Mission had been attached to the Documents Control Center in Frankfurt, with staff detachments in Berlin, Munich, Stuttgart and Vienna, leading to 17,000 print publications from the German Army and one million publications from Nazi Party sources arriving in Washington DC in its first year up until mid-1946 (Annual Report, 1947: pp. 264-265; Downs, 1949). Particularly in Bavaria, located in the American Zone, those working for the team started to acquire materials far beyond the original brief of the LoC Mission, spanning pamphlets, posters, periodicals, newspapers and newspaper clippings, as well as sound recordings of Nazi speeches (Peiss, 2019: p. 116).<sup>15</sup>

Such sources indicate the involvement of the LoC Mission in the large-scale acquisition, sorting and shipping of seized materials from military, party and other sources. LoC Music Division employee Richard S. Hill, in Germany during 1946 for the European Mission, was given the task to secure 'music books, scores, and recordings of the war-time period', and has been described as being particularly dedicated to this task, later estimating that between 50 and 75 percent of Germany and Austria's wartime-era music publications were acquired during the LoC Mission (Peiss, 2019: 121; Hill, 1946; Epstein, 1981). Even though little detail is offered on the seized sound recordings that were directed to the LoC's Music Division, the Annual Report for 1945/46 indicates that an in-house Recording Laboratory had been set up with both fixed and portable recording equipment to allow for concerts, public events, folklore and also 'important radio broadcasts' to be captured (Annual Report, 1947: p. 213).

Despite this growing sensitivity to the importance of sound recordings and radio materials in the LoC Music Division, later correspondence by Richard S. Hill from the 1950s notes that their 'phonorecords' had 'not yet been brought under control' and remained uncatalogued (Hill, 1956). In late 1951, the captured German recordings in the Music Division were inventoried in a card index prepared by Dr. Moll from Columbia University's War Documentation Project (WDP). In an explanatory note on the first card index of the sound recordings, Moll describes the content of the recordings as 'German commercial as well as government sponsored recordings on disks and on tape', and for which the disc recordings were placed at the LoC in numbered cardboard boxes, yet 'only a small part of the tape recordings were identified'.<sup>16</sup> In terms of content, Moll notes that he organized the materials in the index card box according to the speaker's nationality, and that 'the indexing effort was limited to materials of special interest to WDP, i.e. Eastern Europe and Germany'.<sup>17</sup>

This 'partial' card index is therefore reflective of the particular needs and interests of the researchers working on the War Documentation project, and in 1952, fellow Columbia University employee Gerhard Weinberg published the *Guide to Captured German Documents* (Figure 3), which provided an overview for future researchers of the

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14 For the LoC finding aid for the German Captured Documents Collection, see <http://hdl.loc.gov/loc.mss/eadmss.ms011148>.

15 For the role of the US Office of Military Government for Germany and Bavaria, and use of the former Nazi Party headquarters in Munich for military collecting of confiscated items, see Lauterbach, 2019.

16 See index card (dated 28 March 1952), in drawer 66 'NSDAP', Recorded Sound Card Catalog Supplement, LoC Recorded Sound Research Center.

17 Moll, and other members of the Bureau of Applied Social Research (BASR) at Columbia University, continued to study captured German and Soviet records during the early 1950s, as part of the World War II Records Center based in Alexandria, Virginia. See the BAR Ms Coll/Bureau ASR finding aid, [https://findingaids.library.columbia.edu/ead/nnc-rb/ldpd\\_4078124](https://findingaids.library.columbia.edu/ead/nnc-rb/ldpd_4078124); see also Wolfe (n.d.).



‘vast masses of captured documents’ and noted the ‘large number of captured German recordings and monitored broadcasts, both on disk and tape’ (Weinberg, 1952: pp. iii, 35-39). Nonetheless, Hill’s 1956 correspondence indicates that

[U]nique archive material such as the captured German documents remains completely uncataloged, stored for the most part in the boxes in which they were received from the Department of Defense.... [M]any of the boxes of tapes bear no description of their contents and the records no labels. The compilers of that list [from 1952] took play-back equipment into the stacks and spent several weeks identifying much of these materials for their catalog, and we do not have sufficient staff to detail anyone to repeat this procedure (Hill, 1956).<sup>18</sup>

In later correspondence, Hill offers a further assessment that some of the collection ‘may be unique, and most of it extremely rare’ and he notes that the scarcity of the material is also suggested by ‘the attempts made by various German organizations to obtain the return of these recordings to Germany’ (Hill 1956). While it is unclear if any copies were sent to Germany in the ensuing period, staff from the Bundesarchiv, Koblenz (West Germany) visited Washington in the 1980s to microfilm remaining captured German documents, after which time they also made arrangements for the repatriation of films as well as sound recordings and their associated production components (Engineer’s notes, as cited in Behl, 2017: p. 3).

Overall, it seems it was only with an institutional change – the creation of the Recorded Sound Division in the early 1970s – that the materials moved out of the Music Division and an effort was made to preserve the sound recordings. Between 1971 and 1978 the discs and tapes were copied onto standard 10-inch open-reel preservation tapes by the LoC’s Magnetic Recording Lab in a series of ‘work orders’ (LWO) (Behl, 2017: p. 3). In addition, in 1973 the acting head of the Recorded Sound division Robert Carneal arranged for studio technician Edward R. Tittel to investigate the metal stampers (disc negatives) to ascertain their contents and to assess the possibility of creating vinyl disc pressings. Tittel reported back in November 1973 that they included four speeches by Hitler, one by Goebbels and one by Himmler (Tittel, 1973). LoC records indicate that these discs were pressed in 1974-1975, along with another two sets of 39 single-sided, vinyl 78 rpm discs, which include the matrix number from the metal stamper. As a 2017 memo by former LoC reference librarian Harrison B. Behl (2017: p. 3) indicates,

There is no evidence that anyone at the Library [of Congress] has listened to these discs and verified that they all represent unique material. It seems likely that each disc has a unique matrix number, but it is possible that the range of matrix numbers might also include other recordings... Listening to the recordings themselves will be the only way to conclusively identify the contents.

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18 This correspondence was with a member of the public enquiring about acquiring copies of these recordings for his ‘own personal use’, which he had discovered via a LP release ‘Hitler’s Inferno, in Words, in Music – 1932-1945’ (1953) from the Audio Rarities label, and an NBC Project XX television documentary *The Twisted Cross* (1956), which can be seen today via the Internet Archive: <https://archive.org/details/thetwistedcross>.

Thus, while Tittel was able to cross-reference the matrix numbers on the stampers using lists with matrix numbers sourced from the Bundesarchiv in Koblenz, it is unclear whether he was able to accurately verify the contents of the recordings, leaving some remaining uncertainty about the exact nature of the recordings held today in the LoC on 78 rpm discs and open-reel preservation tapes.<sup>19</sup> Furthermore, the language requirements needed for listening to the materials, not only in German, Italian or Japanese, but also at least another 15 (mainly European) languages, presents a major challenge.

#### 4. Current Situation

As we have sought to show, the captured sound collections from the former Axis powers of Germany, Italy and Japan that are held in Washington, D.C. today are of a diverse and complicated provenance. At the time of their confiscation by Allied forces and transfer to collection centers they were held on various carriers, in multiple languages, comprising various types of content, acquired from an unknown number of institutional sources and deposited to the LoC and NARA at different moments over time. While past catalogues and matrix numbers sometimes helped US-based archivists in identifying recordings, it appears that both identification and the risk of mistaken identity have remained a persistent challenge.

Since the bulk of the recorded sound materials have remained uncatalogued from the 1940s to the present, both access and contextualization remain difficult for those interested in studying the contents of these collections. At NARA, three items from RG 242 are digitized and visible in the online catalogue; tape recordings can be listened to on site at College Park, Maryland, upon consultation of tape lists in the audio preservation binders, and they can also be accessed via digitization reproduction request services. Similarly, the LoC has its tape materials stored at an offsite facility but can arrange for 10 recordings per week to be digitized for users who visit their Recorded Sound Research Center in person. Overall, there has been a particular interest in the past for the German-language recordings, in particular Nazi leaders' speeches, as indicated by the researcher guides produced by Gerhard Weinberg in the early 1950s, the partial LoC card index by Wilhelm Moll, and the various researcher guides created by Agnes Peterson and her colleagues during the 1970s. This particular interest in Nazi leaders' speeches is reflected in the handful of recordings currently visible in online catalogues, such as the three speeches by Mussolini, Hitler and Himmler at NARA mentioned above, or the well-known 'Posen' speeches by Himmler held at the LoC.<sup>20</sup> However, for many of the other materials listed in the partial index card box at the LoC, it is potentially more difficult to discover their existence, particularly in the case of the non-German sound materials noted on Moll's NSDAP index box that pertain, for instance, to radio broadcasts likely created in Germany for Czechoslovak, Danish, Finnish, or Indian radio listeners.

In terms of future steps to better unlock these collections and improve access, we foresee that collaborations with international partners, such as the Bundesarchiv and German Radio Archive (Deutsches Rundfunkarchiv), will be instrumental. As noted with the above-mentioned examples of Italian and Japanese radio programs recorded and archived in Nazi Germany and included in the LoC NSDAP index card box, there is strong reason to believe that these materials are unique and have not been preserved by radio archives in either Italy or Japan. Beyond collaboration between international partners,

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<sup>19</sup> For details in the LoC online catalogue, see <https://lccn.loc.gov/2004653912>.

<sup>20</sup> Ibid.

in tandem with the digitization of the tapes and discs, we agree with LoC reference librarian Harrison Behl's assessment that it is essential to listen to all the captured recordings in order to check the full content and work towards their identification, description and inclusion in online catalogues.

## 5. Conclusion

This article has sought to outline the nature of the captured sound recordings related to the former Axis powers of Germany, Italy and Japan, which were largely seized in 1944-1946 and held today at the United States Library of Congress and the National Archives in the Washington, D.C. area. Drawing on our recent research on the history of radio and sound archives in Europe, in particular the legacy of archives created by the National Socialist regime in Germany, and the impact of German military occupations across Europe during World War II, we have sought here to understand the nature of the recorded sound collections that came to the LoC and NARA as a result of confiscations by US military forces, along with other vast caches of books, print, photographic and film materials. In researching these collections, we have come up against some of the same challenges of incomplete cataloguing, gaps in institutional memory, and ageing recording formats that we have encountered at European radio archives (Birdsall and Harrison, 2022; Harrison, 2024).

As we have shown, accurate provenance information is not available at either NARA or the LoC, although we have reason to believe that some materials were associated with the Nazi party's Munich-based archives, for instance the Reichsautozug 'Deutschland' (RAZ) recordings made for the NSDAP Hauptarchiv and also held at the Munich branch office of the National Propaganda Division (Reichspropagandaleitung). We have demonstrated the difficulties that poor provenance information and institutional documentation have created, as well as the mixed nature of the collections, while also pointing out what is currently known about the various efforts to document these sound collections thus far. We have offered further details on the content of the recordings, with particular attention to materials pertaining to Germany, Italy and Japan; but also pointed to the other types of multilingual and transnational recordings, for instance, those produced as exchange programs between the three Axis countries. We then focused on the stewardship of the collections at NARA and the LoC, with a particular interest in how the collections were managed, preserved, and made accessible from the 1940s to the present. Nonetheless, we also note substantial ongoing barriers to identifying those parts of the collections that have not been catalogued as well as a broader knowledge of the collections to those who would be potentially interested in them. In having outlined potential pathways for improving the accessibility and contextualization of these audio collections (e.g. digitization of recordings, full documentation in digital catalogues, metadata enrichment for multilingual content), we also hope that the present article will increase interest among researchers, archivists and heritage institutions.

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## THE REVOLUTION OF DUPLICATED MUSIC: SONIC MARKERS TO IDENTIFY EARLY PHONOGRAPH CYLINDER COPIES IN ARCHIVE COLLECTIONS

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### Abstract

This article explores the evolution of early commercial music production and the shift from selling original recordings to duplicated copies. It focuses on the introduction of the pantographic duplication technique, which allowed for successful mass production of phonograph cylinders. The pantograph copied cylinders mechanically, using the same blank cylinders as original recordings. This made the two products difficult to distinguish. The music industry kept this process of duplication a secret, selling duplicated copies labelled “original” and “master” quality. Recent research reveals that mechanical duplication through the pantographic method was more extensive than previously acknowledged, with millions of copies produced in a short timeframe. The author commissioned the production of a contemporary pantograph copy of a cylinder recording. Its analysis uncovered characteristic sounds and defects, such as additional mechanical noise, deteriorated signal-to-noise ratio, errors in the time axis, and excess harmonic distortion. These signatures can help differentiate between original recordings and pantographic copies in archive collections. Understanding the implications of early duplication techniques also contributes to a better understanding of the development of the music industry and its recording practices.

**Keywords:** phonograph cylinders; music production history; audio analysis; pantographic duplication

### Introduction

The first product offered for sale of prerecorded music was the engraved phonographic cylinder (UC Santa Barbara Library, 2024). The evolution toward the commercial sale of prerecorded music could seem uncomplicated, given the introduction of Edison’s commercial phonograph in 1888 (Edison, 1888). However, the steps taken to establish a music industry around the invention were complex and interesting. One important step in the development process of music production was the shift from the sale of original recordings to the sale of duplicated copies (Chamoux, 2015, p. 173). This development was a pivotal step to establishing the music record as the entity it is today. The earliest commercial recordings, in addition to being unique versions, had the disadvantage of having a limited number of playbacks before deterioration of the recorded audio. Thus, the sale of original recordings did not hold the same notion of timelessness as that of duplicate recordings. The single original cylinder could only be played back a set number of times and always depended on the location of the single original cylinder. Edison compared the first recordings to audible telegrams, using the descriptive term “phonogram” (Edison, 1888, p. 647). Copies, on the other hand, could be played back simultaneously at different locations and for an increased number of times. For the first time, a geographically dispersed audience for recorded music could connect to a common reference point by buying and listening to the same recording. In 1916, the process

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of music production for mass duplication was even described as one in which the artist would “sing their way into eternity” (Aftenposten, 1916, p. 4).

Large-scale commercial music production is often attributed to the introduction of duplication through molding and casting (Martland, 2012, p. 12). Early techniques were described as slow, clumsy and limited (Martland, 2012, p. 11), and more focused on the production of cylinders for coin-slot machines (Gronow, 1983, p. 54). As early as the 1940s, people expressed a pejorative attitude toward early engraved cylinders compared to later cast copies. The early cylinders were described as low-quality and produced for personal use (Hegermann-Lindencrone, 1943, p. 92). This attitude may have led scholars to focus on the later molded cylinders and duplicated discs rather than on these earlier brown engraved cylinders.

### **One of the best-kept secrets of the music industry**

Contemporary research reveals a more nuanced picture of the cylinder industry. Using existing corporate records from Pathé Frères, Henry Chamoux (2015) found that the company’s volume of production developed earlier than previously acknowledged (Chamoux, 2015, p. 410). Around the turn of the century, it was estimated that only a handful of copies could be made from each recording and that the production of prerecorded discs, cylinders and cylinder blanks was 2.8 million in total (Brooks, 2002, p. 23). Original documents state that Pathé alone produced more than two million prerecorded cylinder copies via mechanical duplication between January 1900 and August 1902 (Chamoux, 2015, p. 220). The escalation in production at Pathé was quite rapid. The mass duplication started with the October 1899 signing of a deal with Luis Casarès, a Spanish designer of cylinder duplication systems (Chamoux, 2015, p. 218). Casarès moved to France to oversee the building of a factory and was to be paid 100,000 francs for the production of two million cylinder copies. The installation of 120 duplication machines started in January 1900. Production was estimated at roughly 50 cylinders a day for each machine, with a 10-15% rate of bad copies. In August 1902, Casarès received a final payment for the production of the cylinders, who then returned home to Spain (Chamoux, 2015, p. 220).

In Norway, a similar escalation in the availability of recorded cylinders was observed during the same period. In 1900, the first advertisement campaigns for locally recorded music appeared in local and national newspapers. Two dominant local producers, Anders Skog and Adolf Østby, began their advertisement campaigns in June 1900 (Skog, 1900; Østby, 1900), offering affordable machines and a list of titles available by mail order throughout the country. The ads frequently mention that their cylinders are original. However, this does not exclude them from the possibility of being copies.

In the United States, court documents from 1898 reveal the record industry knowingly sold duplicates marked as “original” and “master” quality (Wile, 1985, p. 24). By falsely labeling duplicates as originals, the record industry gave the public the impression that most brown commercial cylinders were original recordings. Read and Welch (1976, p. 80) discuss how this secrecy led writers reporting on the period to wrongfully assume that mechanical duplication methods were seldom used. Hegermann-Lindencrone described the duplication technique as one of the best-kept secrets in record production history (Hegermann-Lindencrone, 1945, p. 35). As an example, he mentions Numa Peterson in Sweden, who used a copying technique even before 1900, in which the sound was transferred mechanically by a lever. Numa Peterson kept the originals in sealed boxes and sold copies (Hegermann-Lindencrone, 1943, p. 94). However, Peterson’s ads stated that all cylinders for sale were originals as late as 1903 (Numa Petersons Handels & Fabriks

AB, 1903). It seems both Pathé Frères and other manufacturers went to great lengths to ensure their production of copies remained hidden. The duplication seems to be kept secret even from the recording artists (Cummings, 2013, p.18). When Casarès was building his duplication factory for Pathé, the administrative board emphasized a goal of secrecy. The factory was to be built in Casarès' personal garden, isolated from the rest of the plant and kept secret (Chamoux, 2015, p. 218). Similarly, patents and duplication factories were kept hidden in America, where pantographic mass production started as early as 1891 (Wile, 1985, p. 23). Initially, Edison openly offered duplicated cylinders, but after a brief time, he and his contemporaries actively hid their duplication efforts. In Chicago, a company-run duplication facility even marked the facility entrance door with skull and crossbones (Wile, 1985, p. 19).

One possible reason for this secrecy was to protect the music business from unauthorized copying. If the public learned of the existence copying techniques good enough to be used by the major companies, it could lead to an increase in the production of unauthorized copies. In the early days of the phonograph, unauthorized copying was a substantial problem (Cummings, 2013, p. 13). To restrict the activity, larger companies bought duplication patents (Wile, 1983, p. 22) and made announcements in the beginning of the cylinders as evidence of origin (Wile, 1983, p.21). Another explanation is that the illusion of selling originals provided economic benefits to music production companies (Read & Welch, 1976, p. 81). To the public, duplicates were considered inferior (Brooks, 1978, p. 12; Cummings, 2013, p. 15).

By the turn of the century duplication technology was also widely available in Europe. In the first few issues of the German publication *Phonografische Zeitschrift*, duplication machines are repeatedly advertised for commercial sale (Phonografische Zeitschrift, 1900a). The ads boldly state that the machines can produce copies indistinguishable from the original. The same publication also describes the new mass-produced products in a separate article, claiming these new products are of inferior quality and should be priced and treated as such compared to original cylinders (Phonografische Zeitschrift, 1900b). However, mechanical mass production is described as no worse than production using multiple recorders and multiple takes, which affects the placement of recording horns and puts stress on the performer. To duplicate the best take from a perfectly placed recording horn could result in a product quality just as good as that of an original cylinder from an improperly placed machine recording an exhausted artist, the article argues. The relationship between technical quality and performance during this time could seem odd for the contemporary reader (Cummings, 2013, p. 17). At the time most advertisements focused less on the artistic performance but more on the cylinder's ability to be loud and clear (Cummings, 2013, p. 16).

A revolutionary mechanical copying technique, known as the pantograph duplication method, was described early on in a patent held by Gianni Bettini (1892); however, several similar machines were built around the world at the same time as Bettini's (Read & Welch, 1976, p. 81). Bettini describes two cylinders that are placed on connected mandrels so the original and copy rotate at the same speed (Figure 1). The engraving process resembles that of a pantograph, in which the reading stylus is connected to a writing stylus through a hinged lever. Once the reading stylus is forced in a direction, the writing stylus follows.



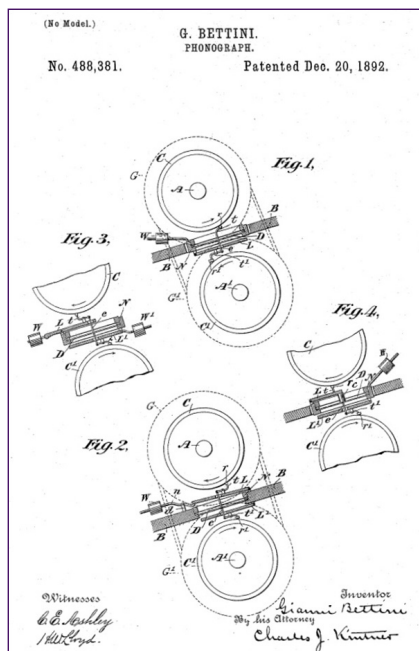


Figure 1. Drawings from patent 488 381 (Bettini, 1892).

### Audio quality in commercial mechanical copies

The quality of the early mechanical copying technique is unclear. Early attempts at mechanical copy techniques used locked horns, with the reproducer facing the recorder's horn. Another technique was to insert rubber tubes between the diaphragm of the reproducer and recorder (Wile, 1985, p. 22). In comparison with these techniques, the pantograph reflects a clear technological advancement. Given the commercial success of the pantograph method and its important role in the early days of mass-produced music recordings, it is worthwhile to examine the characteristics of the technique and how the technique affected the sound quality of recordings. Duplication through pantograph was widespread in the early 20th century; however, the fragility of the cylinders and their subjection to rough treatment has left just a small number of such recordings available for study today. The pantograph copies were made using the same soft material as the originals, whereas cast copies used a harder and more enduring material. Today, a cylinder with a seemingly unique content could possibly be either an original, unique recording or the last remaining copy of a duplicated recording. To scholars of music production history, the difference is significant. The commercial use of duplication technology represents an important step in the development of the record industry. The durability of master recordings was low. A master cylinder could only produce 25-100 copies (Read & Welch, 1976, p.82). To use a variety of settings and placements and produce multiple master recordings of the same performance, artists would often perform before multiple recorders. This way the audio engineer could select the best cylinder for duplication (Morton, 2004, p. 27).

The largest collection of recordings created using the pantograph duplication method is that of Pathé Frères. Pathé Frères used this method for both cylinders and discs on all their acoustic production into the 1920s. Henri Chamoux, an expert on Pathé Frères recordings, noted several sonic markers that can be used to identify pantograph copies,

along with examples that can be verified through the Phonobase database<sup>2</sup> (Chamoux, 2019). Chamoux identifies three broad categories of signature sounds in the Pathé recordings. One category is “machine noise,” one subtype of which is described as sounding “like a galloping horse”. Examples of this type of machine noise can be heard in Pathé catalog numbers 1007<sup>3</sup> and 3384<sup>4</sup>. Another subtype of machine noise is a low-pitched thump resembling a heartbeat, which can be heard in Pathé catalog number 1589<sup>5</sup>. A third subcategory is periodic colored noise, as in Pathé catalog numbers P3113-2<sup>6</sup> and 3387<sup>7</sup>. The most striking variety of machine noise is described as “entry noise,” which consists of extra background noise introduced shortly before the content. The first moments of the recording have a slightly lower level of background noise that is altered just before the content. An example of entry noise can be heard in Pathé catalog P3117<sup>8</sup>. The second group of audible defects Chamoux identifies consists of distortions of the original signal, as can be heard in Pathé catalog number 969<sup>9</sup>. The third group are artifacts caused by misalignment between the grooves of the original and the copy, resulting in missed or locked grooves, as heard in Pathé catalog number 569(22)<sup>10</sup>.

Notably, an original recording may also be prone to these same flaws if, for instance, the original recorder had defects or if it was poorly engineered. For single private recordings, this may be the case; however, it is important to avoid underestimating the craftsmanship of music production in commercial recordings from the acoustic period. Acoustic recording engineers learned from experience how instruments and performers should be best placed and selected the best recording horn and adjustments to fit the production (Morton, 2004, p. 26). Acoustic audio engineers, even at small domestic labels, took great pride in their sonic output. In a 1916 newspaper article describing a recording session for the Scandinavian Pathé agent William Farre, the quality control stage for the master cylinder is described in detail. Immediately after recording, the master cylinder was replayed and analyzed by the producer, engineer, and artists. Small flaws were found in the recording, prompting adjustments and subsequent re-recording and listening cycles until all parties approved of the result (Aftenposten 1916, p. 4). Modern experiments re-enacting acoustic recordings point to the technical skill and finesse of engineers displayed in historic acoustic recordings (Kolkowski, Miller & Blier-Carruthers, 2015). However, not all recordings were done with such care for detail. The alternative mass production technique described by the *Phonografische Zeitschrift* (1900b), in which multiple machines and multiple takes were used, increased the likelihood of large or small defects in the finished product.

### Experimental copy of a test cylinder

To study the distinctions between original recordings and copies of cylinders in more detail, an investigation was undertaken to find a working pantograph and to create pantographic copies to examine. Berlin Phonograph Works and Norman Bruderhofer briefly

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2 [www.phonobase.org](http://www.phonobase.org)

3 [www.phonobase.org/8964.html](http://www.phonobase.org/8964.html)

4 [www.phonobase.org/9062.html](http://www.phonobase.org/9062.html)

5 [www.phonobase.org/2649.html](http://www.phonobase.org/2649.html)

6 [www.phonobase.org/7832.html](http://www.phonobase.org/7832.html)

7 [www.phonobase.org/9067.html](http://www.phonobase.org/9067.html)

8 [www.phonobase.org/7842.html](http://www.phonobase.org/7842.html)

9 [www.phonobase.org/9225.html](http://www.phonobase.org/9225.html)

10 [www.phonobase.org/1609.html](http://www.phonobase.org/1609.html)

had a working Edison Studio pantograph from the late 1890s available<sup>11</sup>. In 2017, the author of this article ordered pantographic duplication of two cylinders for testing purposes (Bårdsen, 2019, p. 130). For original cylinders, two newly produced test cylinders from Poppy Records were selected (Poppy Records, 2024). The test cylinder content consisted of a frequency sweep shifting from 5 kHz to 20 Hz, followed by single frequencies at 400 Hz, 800 Hz, 1,000 Hz, 1,600 Hz, and 3,200 Hz. The test cylinder was a special combination of their model CXPn001 and CXPn003 (Poppy Records, 2024). Unfortunately, higher frequencies were not chosen for the test due to the limitation imposed by the available test cylinders. In future studies, expanding the frequency range to include higher frequencies would undoubtedly provide valuable insights into the characteristics of the recordings in the higher frequency regions. Poppy Records produced the originals using an electric cutter head recording onto high quality wax blanks supplied by Paul Morris Music (Poppy Records, 2024). The same brand of wax blanks was acquired and used for the duplicates. The goal of the experiment was to closely examine the copying process. However, there are some limitations to this study that should be considered. First, the experience, skill, and knowledge available when this technique was in full use no longer exist today. In the early 1900s, dedicated professionals made original recordings with the pantographic process in mind and could fine-tune their duplication machines and handling techniques to produce a better result than is possible today. The age of the machinery is another factor to consider. The machine used for the study was built in Edison's facility in West Orange, New Jersey in 1898 (Bruderhofer, 2020). At this time, Edison had mastered the molding process through the "press" method and used this in tandem with the pantograph (Wile, 1985, p. 20). The molded first-generation copies were cast in a harder material and then used to create pantographic copies on demand. Thus, the machine in use for this study may have been made with the intention of using harder originals than the soft brown direct-cut original used for this study.

Bruderhofer used the machinery to produce the two copies as requested. There were two primary findings from the copying process itself. First, Bruderhofer reported some difficulty synchronizing the two cylinders. If the copy started recording before the cylinders were perfectly in sync, the pitch of the content in the copy would vary until the two were synchronized. Often this is heard as a short sweep from an unnatural high pitch in the first second of the content. To achieve the best copy of the content from the original, Bruderhofer started the recording slightly before the start of the master cylinder to leave a few extra seconds of silence at the beginning of the recording. Bruderhofer reported that doing so made it challenging to copy the content from a full master cylinder onto a copied cylinder. If the content was delayed too much, the ending would be cut short. The duration of the test cylinder was a bit long at 2 minutes and 15 seconds in total. On the first attempt, the content was cut short by a few seconds, but on the second attempt, the complete content was copied over.

## Analysis

In the laboratory at the National Library in Norway, the two cylinders were played back using an Archeophone contemporary cylinder reproducer and analyzed using a Cedar Cambridge digital audio workstation<sup>12</sup>. The special design of the Cedar Cambridge

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11 Norman Bruderhofer is a German technician and specialist on phonograph cylinders and their reproduction. He runs the project Berlin Phonograph Works where he reproduces rare cylinders and provides modern cylinder copies for sale. For more information, visit [www.phonoworks.com](http://www.phonoworks.com).

12 Cedar Cambridge 64 bit v1 1.0.0.9487, <https://www.cedaraudio.com/products/cambridge/cambridge.shtml>.

Spectrum Analyser can display the average amplitude at each frequency over a given time span with a resolution of 0.02 Hz (Cedar Audio, 2024). This gives a clear and simple graph which also makes it possible to visualise both the copy and the original in the same window. In addition, the Cedar Cambridge workstation can display a spectrogram where the vertical axis displays frequency, the horizontal axis represents time, and the amplitude is represented by color. The colors with the lowest wavelengths, like purple and blue, represents the lowest amplitude of the audio signal while the colors with the highest wavelengths, like orange and red, represents the highest. The two methods complement each other. The average amplitude analysis offers a detailed examination of frequency amplitude performance, while the spectrogram provides a broader overview including time.

First, the noise floor<sup>13</sup> was examined. On the copy, the initial run-in groove received a boost when the signal from the reproducer started. The sample in Figure 2 was taken just after the introduction of the reproducer signal and before the program material started, representing the noise floor. The Cedar analysis (Figure 2) indicates a clear increase in the noise floor.

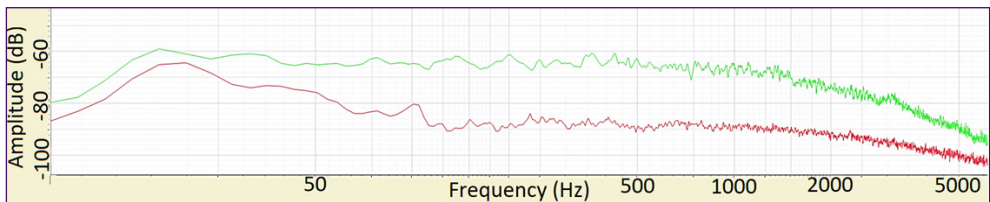


Figure 2. Noise floor original (red) versus copy (green).

The extra noise introduced at the beginning of the cylinder prior to the content material is a telling indication of a pantograph copy. Another finding from the audio analysis is a small but distinct mechanical noise introduced in the copy. In the copy, there is a lead-in groove with a few cycles of noise before the introduction of the reproducer signal. As soon as the reproducer signal starts, there is additional background noise caused by the copy technique. The shift in the noise floor representing the addition of the replay system starts at about 2 seconds into the recording. In examining the noise floor at the start of the recording and shortly past the 2-second mark, the added noise was found to be strongest between 100 and 800 Hz (Figure 3).

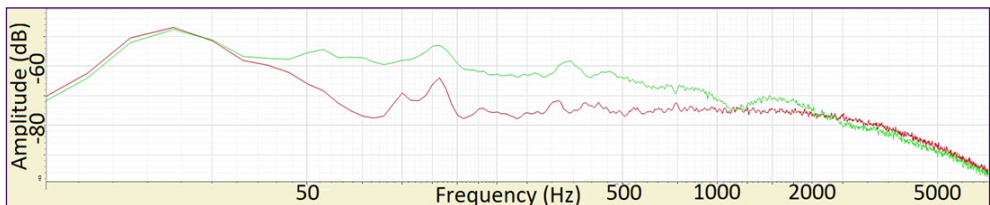


Figure 3. Red noise floor: before introduction of reproducer. Green noise floor: shortly after introduction of reproducer.

13 The term noise floor refers to the level of noise produced by a system itself with no external signal.

The first section of the cylinders contains a frequency sweep shifting from 5 kHz to 20 Hz. A close analysis of this sweep reveals that the copy is imperfect in certain areas of the frequency spectrum. Figure 4 shows the average amplitude of the whole sweep. At 65 seconds this is the longest content analysed in this study by the average amplitude method. Above 4000 Hz and below 200 Hz the copy fails to reproduce the signal adequately. Between these points the copy more closely replicates the original.

Overall, the signal strength is not greatly reduced, but the copy is not linear compared to the original. Signal loss can be noted with certain frequency bands, such as the region around 1500 Hz, while other areas, like the region around 2700 Hz appeared to be amplified.

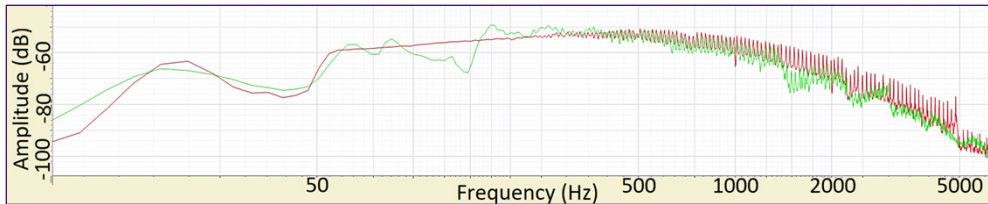


Figure 4. Sweep. Original in red and pantograph copy in green.

This observation is strengthened by examining the next section of the cylinders containing single frequencies. The overall volume of the copy is close to that of the original, but the content's linearity is distorted. The single frequency analysis reveals that the pantographic method has a severe effect on the amount of harmonic distortion present in the copy (Figure 5). Examining spectrograms of both the original cylinder (Figure 6) and the copy (Figure 7), the increase in harmonic distortion caused by the pantograph process is seen throughout the copy. This increase in distortion is a clue that can help determine whether a commercial brown cylinder is an original or a pantograph copy. Conversely, the overall volume or frequency spectrum is less useful as a clue because the copy is as loud as the original and has a similar frequency spectrum.

The unwanted additional noise is directly caused by the pantograph method; thus, the noise could vary in character depending on the success of the pantograph mechanism design but will likely remain consistent in copies made on the same machine. Future researchers could consider using this additional noise as a clue to determine the fabrication history of copies.

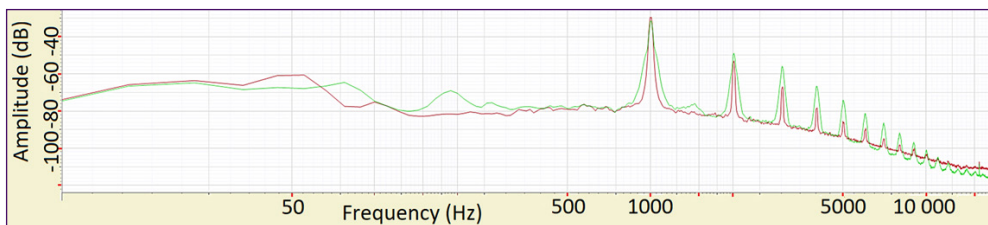


Figure 5. 1,000 Hz single frequency. Original in red and pantograph copy in green.



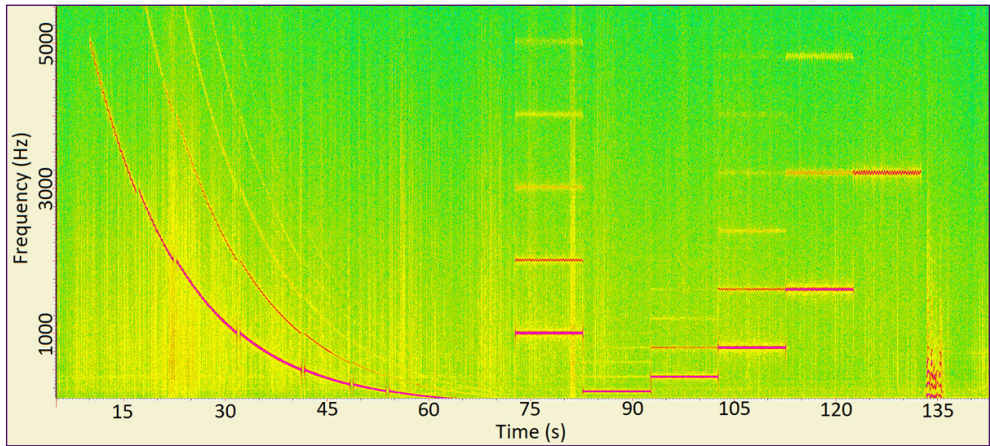


Figure 6. Spectrogram of the original cylinder.

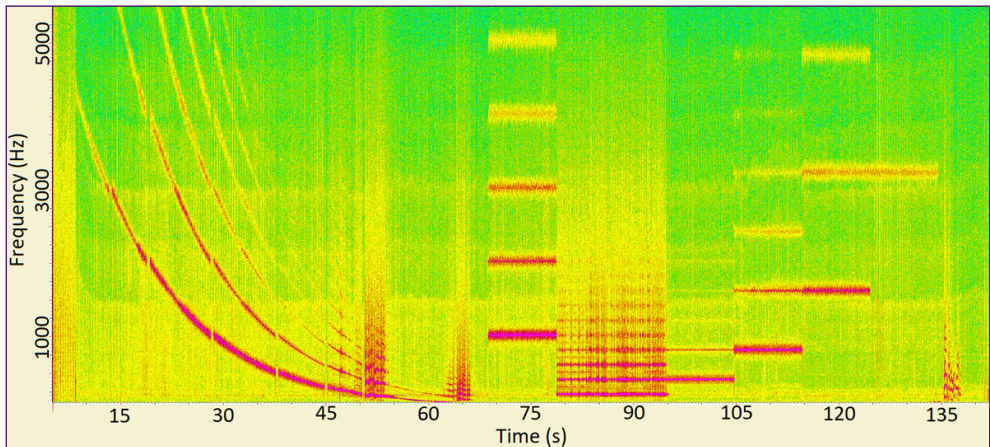


Figure 7. Spectrogram of the pantograph copy.

A close listen to the frequency sweep shifting from 5 kHz to 20 Hz on the copy and original reveals additional distortions occurring in periods of a few seconds. This periodic distortion is also described by Chamoux (2019). The strength of the sweep is constant; thus, it may be that the periodic distortion is either randomly triggered by mechanical flaws or is triggered by specific frequencies.

Evidence of Chamoux’s third category, locked or missing grooves, was also found in the experiment. Both copies have several locked grooves, which makes the content of the copy a few seconds longer than the original. It is worth noting that these locked grooves are not large skips but small repetitions of as little as a single groove cycle. However, the locked grooves are exacerbated by worsened tracking. On the original, the lowest frequencies track perfectly, but on both copies, the lowest frequencies in the sweep become hard to track. The arm requires guidance to complete the playback of the cylinder.

### Cross-reference to commercial engraved cylinders

Focusing on commercial brown phonograph cylinders from the labels Anders Skogs Fonografrullar and Østby Record, several examples contain the sonic markers that indicate a pantograph copy. The characteristic entry noise is found on many recordings, but it varies greatly in distinction. On some recordings, the entry noise is barely noticeable, whereas it is more evident on others. Analysis of Anders Skogs Fonografrullar catalog number 1080<sup>14</sup> reveals that the entry noise has similar characteristics to those found in the experimental cylinder copy (Figure 8).

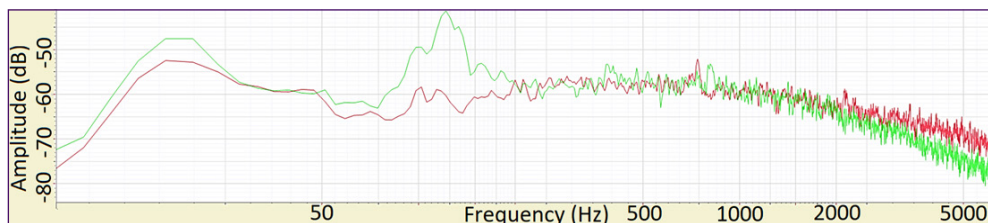


Figure 8. Green: post-introduction of the reproducer, red: pre-introduction of the reproducer. Skogs Fonografrullar 1080.

Examples of locked grooves are also evident. To ensure that the locked groove was present in the copy at hand and not a flaw caused by poor tracking during playback, the stylus was closely monitored during playback. The stylus tracked perfectly on the copy, but the content was clearly skipping, which indicates that the flaw originated with a locked groove during the pantograph copy process. Many of the recordings examined also exhibit the delayed start and cut endings extremely close to the cylinder edge found in the experiment.

Many examples of harmonic distortion are also found in the collection, but these may not be a clear sign of pantograph copying technique. The effect of wear from playback over time is another factor that could contribute to harmonic distortion.

One of the most distinct examples of a potential pantograph copy found in the collection of the National Library of Norway, is Østby Record number 9. Two brown cylinders with the same title were located in a private collection, and one of them could be confirmed to contain identical content to the cylinder at the National Library of Norway.

### Conclusion

This article establishes a formal method for distinguishing original recordings from mechanical copies. In analyzing a known pantographic copy, several sonic signatures were identified:

1. Additional mechanical noise in the copy.
2. A deterioration of the signal-to-noise ratio.
3. Errors in the time axis represented through locked or skipped grooves and a delayed start, contributing to the risk of abrupt endings in the audio content.
4. Excess harmonic distortion introduced through the copy process.

These signs can be used to determine whether a cylinder is an original recording or a mechanical copy made through the pantograph method. It is worth noting that the copy

14 [www.nb.no/items/URN:NBN:no-nb\\_digilyd\\_2021010517008](http://www.nb.no/items/URN:NBN:no-nb_digilyd_2021010517008)

process alone does not weaken the copied cylinders or introduce significant flaws in the audio spectrum; rather, the copied cylinders appear much like the originals. An analysis of a collection of commercial brown cylinders from 1900-1903 from the local labels Anders Skogs Fonografrullar and Østby Records revealed the same sonic markers and led to the finding of two identical copies of one early title. Thus, it is safe to conclude that the pantograph copy process was in use in the region at the time.

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## TRUE ECHOES: RESEARCHING WAX CYLINDERS RECORDED DURING THE 1898 CAMBRIDGE ANTHROPOLOGICAL EXPEDITION TO THE TORRES STRAIT ISLANDS

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### Abstract

This article describes True Echoes, a three-year project initiated by the British Library to research its Oceanic wax cylinder collections and to reconnect digitised sound recordings with their originating communities.<sup>3</sup> These collections, recorded in the late nineteenth and early twentieth centuries, comprise some of the earliest recordings of Pacific cultures and histories and represent the early use of sound recording for European anthropological research in the region. The recordings were made in Papua New Guinea, Vanuatu, Solomon Islands, New Caledonia, and the Torres Strait Islands of Australia. They, along with the British Library’s wider collection of ethnographic cylinders, were added to UNESCO’s Memory of the World Register in 2011 (UNESCO, no date).

This article concentrates on some of the earliest recordings, 102 wax cylinders of the Alfred Cort Haddon 1898 Expedition (Torres Strait and British New Guinea) Cylinder Collection (C80).<sup>4</sup> The collection also contains 39 cylinders recorded in Papua New Guinea, which will not be discussed here. Research methods involved historical research in partnership with Oceanic cultural institutions and participatory research with community members, which provided local knowledge and new information. The “multi-perspectivist approach” employed by the project team was important for gathering a variety of perspectives on the collections and for revealing “the complex processes involved in their production, collection and interpretation” (Herle, 2003, pp. 204-205).

**Keywords:** Torres Strait Islands; historical sound recordings; wax cylinders; participatory research

### Introduction

True Echoes was a digital reconnection project, aiming to increase the visibility and accessibility of historical audio recordings for the communities from which they originated. The research methodology included historical research and participatory research. Historical research was firstly undertaken in partnership with Oceanic cultural institutions and provided the foundation for the participatory research, which focused on collaboration with originating communities. Researchers from each country worked

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2 Grace Koch has been an active member of IASA since 1980, serving on the IASA Board, Nominating Committee, and Chair of various committees. Formerly she worked as an audiovisual archivist at the Australian Institute of Aboriginal and Torres Strait Islander Studies.

3 True Echoes ran from July 2019 to November 2022 and was funded by the Leverhulme Trust and the UK government’s Department for Business, Energy and Industrial Strategy. More information available at <https://www.true-echoes.com/> and <https://www.bl.uk/projects/true-echoes> [Accessed: 4 July 2023].

4 British Library Sound Archive collections have a shelfmark prefixed with ‘C’. The wax cylinder collections researched by the True Echoes project are arranged by recordist or expedition with some collections – such as C80 – having multiple sound recordists.

with local communities to learn more about the cylinder collections and their relevance today, which enabled the project team to gain new understandings of the cylinder recordings and to enhance existing catalogue records through incorporation of local knowledge (Shilton and Srinivasan, 2007, p. 91).

This article highlights two cylinders in particular and how research undertaken by the True Echoes project enabled a greater understanding of their content and contributors: “Story of Amipuru” as told by Waria of Mabuiag (C80/1041) and a funeral song performed by Ulai of Mer (C80/1018).<sup>5</sup>

### Digital reconnection

The World and Traditional Music section of the British Library Sound Archive has been involved in several digital reconnection projects with the aim of improving access to recordings for their originating communities. Improved access increases engagement with collections, particularly for educational purposes and when local cultural institutions already have a strong relationship with originating communities (Clouter, 2018).

Digital reconnection here refers to a two-stage process. Firstly, the British Library deposits a digital copy of a collection in an institution with connections to the originating community. These recordings are used during research to elicit knowledge related to the recordings and their contemporary relevance to communities (Clouter, 2018). Isobel Clouter, True Echoes Principal Investigator, used this framework during a project that provided the Music Museum of Nepal with copies of digitised film footage and sound recordings from the British Library’s Arnold Adriaan Bake Collection (C52) between 2011 and 2017. Following collaborative research between the British Library and the Music Museum of Nepal, the collection documentation was improved based on information provided by the museum, Nepalese and international academics and practitioners, and community members. This project highlighted the importance of collaboration and knowledge exchange between the Library, international cultural institutions and originating communities, and highlighted digital reconnection as a method for increasing accessibility to cultural heritage collections.

For the Torres Strait cylinders, True Echoes worked in partnership with the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS). AIATSIS was founded as the Australian Institute of Aboriginal Studies (AIAS) and became AIATSIS in 1989 following the passing of the Australian Institute of Aboriginal and Torres Strait Islander Studies Act.

The digitised cylinder recordings were provided to AIATSIS as MP3 files, along with the metadata for the cylinders as originally described in the Library’s Sound and Moving Image (SAMI) catalogue.<sup>6</sup> Throughout the historical research process, the metadata and documentation for the collection were improved, and updated versions were provided to AIATSIS.

All digitised cylinder recordings are available for listening at the British Library. Recordings were also made available as part of the Collect Britain project in 2004 following per-

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5 Place names are taken from AIATSIS’ Pathways thesaurus. Available at: <https://thesaurus.aiatsis.gov.au> (Accessed: 3 June 2023). Terms typically include both the contemporary, Indigenous place name and the colonial place name; the former is used throughout this article.

6 <http://sami.bl.uk/> (Accessed: 3 July 2023).

mission from the Council of Elders on Mer and Torres Strait Regional Authority (Topp Fargion, 2004a; 2004b). Since 2008, some recordings have been available to stream on the British Library Sounds website.<sup>7</sup> However, the website does not include the entire Torres Strait Islands collection and individuals without internet access are excluded from accessing the website. To address this, True Echoes worked with project partner PARADISEC (Pacific and Regional Archive for Digital Sources in Endangered Cultures) to explore how a Raspberry Pi microcomputer could be used as a local Wi-Fi network to share a catalogue of wax cylinder recordings with originating communities. An offline version of the True Echoes website was also loaded onto tablets as an Android package file and used by local researchers to share wax cylinder recordings and contextual information with local communities. Further information on PARADISEC's work with the Raspberry Pi to facilitate digital reconnection is available on their website (Thieberger, 2018).



Figure 1. The islands of the Torres Strait identified using the local indigenous titles [reference 00-483]. Map reproduced with the permission of CartoGIS Services, Scholarly Information Services, The Australian National University. Available under CC BY-SA 4.0 licence<sup>8</sup>.

7 <https://sounds.bl.uk/> (Accessed: 3 July 2023).

8 <https://creativecommons.org/licenses/by-sa/4.0/>

### The Cambridge Expedition to the Torres Strait Islands

The 1898 Cambridge Anthropological Expedition to Torres Straits was led by Professor Alfred Cort Haddon, a distinguished natural scientist and ethnologist who was instrumental in establishing anthropology as a discipline at the University of Cambridge. Other expedition members included William Halse Rivers (1864–1922), a physician specialising in experimental psychology and physiology; Charles Seligmann<sup>9</sup> (1873–1940), a pathologist specialising in tropical diseases; Charles S. Myers (1873–1946), a physician who specialised in psychology and music; William McDougall (1871–1938), also a physician; Sidney H. Ray (1858–1939), a linguist, and Anthony Wilkin (1877?–1901), the expedition’s photographer.<sup>10</sup>

Following this expedition, Seligmann and Rivers went on to produce their own anthropological recordings, which can be found in the British Library’s Daniels Ethnographical Expedition to British New Guinea 1904 Cylinder Collection (C62) and W.H.R. Rivers and Arthur M. Hocart 1908, New Georgia group, British Solomon Islands Protectorate Cylinder Collection (C108).

The expedition members met on Waiben (Thursday Island) in April 1898 and arrived on Mer on 6 May. Haddon, Ray, Wilkin and Seligmann left for British New Guinea on 23 May, with all but Seligmann returning to Mer on 20 July. Seligmann did not return to the Torres Strait Islands until 3 October.

Myers and McDougall spent most or all their time on Mer, leaving for Sarawak on 24 August 1898.<sup>11</sup> Haddon, Rivers, Wilkin and Seligmann went to Mabuiag on 3 October with Ray joining them on 19 October. Haddon, Ray and Seligmann visited Saibai and Iama (Yam Island) between 22 October and 15 November but spent only a few days on each of these islands (Philp, 1999, p. 59).

### Motivations for the Expedition

The Torres Strait Islands (see Figure 1) were of particular interest to British researchers of the time due to their location between the “distinctive cultural, geographical and biological zones” of Australia and New Guinea, enabling researchers to develop “European theories in both natural history and ethnology” (Herle and Rouse, 1998, p. 12). Indeed, Haddon had initially trained as a marine zoologist but his first visit to the Torres Strait in 1888 was a “turning point in his life”, reshaping his career and the field of anthropology (National Museum Australia, no date; Quiggin, 1942, p. 81).

Haddon visited Mer, Mabuiag, and Tudu Island (just off Iama), as well as the south coast of British New Guinea (Quiggin, 1942, p. 88). Afterwards, he published anthropological and scientific work (see Haddon, 1890a; 1890b; 1893) and planned an ethnographic monograph. However, Haddon felt “he had only skimmed the surface” and that the 1898 expedition would “verify and supplement the anthropological observations that [he] made in Torres Straits in 1888-89” (Haddon, 1899, p. 413; Quiggin, 1942, p. 88).

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9 Charles Seligmann changed the spelling of his surname to Seligman after 1914 (Myers, 1941). The former spelling is used throughout the present document as it refers to the period before the change of spelling.

10 Anthony Wilkin’s year of birth is not known. Haddon notes that Wilkin was “barely twenty-four years of age” when he died in May 1901 (Haddon, 1901, p. viii).

11 Following the end of the official expedition in November 1898, Haddon, Myers, Ray and McDougall travelled to Sarawak (Haddon, 1935, p. xiii).

Salvage anthropology was also a motivation for the expedition, namely the “self-defined task” to collect and record “traditional cultures [that] were perceived to be declining irreparably” (Geismar, 2014, p. 101). Following Haddon’s 1888 visit, he wrote, “... if I neglected to avail myself of the present opportunity of collecting information on the ethnography of the islanders, it was extremely probable that that knowledge would never be gleaned” (1890b, pp. 297-298).

The western (including Mabuia) and southern Torres Strait Islands groups “were very early exposed to European influence” with Mabuia as the location for “one of the earliest headquarters and stores of a pearlsheller” with a mission opened in 1871 (Laade, 1977, p. 1). In contrast, Mer was chosen as a research location as it was “little touched by colonialism (although many of its residents were Christianised and spoke pidgin English)” and the Meriam people would be more likely to retain their “traditional life-style” (Kuklick, 1998, pp. 161, 170).

### Use of the phonograph

Anthropologist Jesse Walter Fewkes (1850–1930) may have persuaded Haddon to use a phonograph on the 1898 expedition. Fewkes is widely regarded as the first person to make cylinder recordings as part of anthropological research. He wrote to Haddon in March 1890 and described the usefulness of the phonograph to record stories and songs during his research on the Passamaquoddy people in Maine, United States (Clayton, 1996, p. 69).

Use of the phonograph by the Cambridge expedition “may well have been the first British use of the technique” (Ward, 1984, p. 1). The journals and papers of Haddon, Rivers, Seligmann, Myers and Wilkin include references to recording (Clayton, 1996). For example, on 28 July 1898, Myers wrote, “cameras and phonograph apparatus constitute the bulk of our baggage” (1898-1899, p. 92).

Two phonographs were apparently purchased, but records do not agree as to their make. The expedition invoices show that Haddon acquired an Edison Home phonograph and a Bijou Graphophone (John Haddon & Co., 1898). However, the expedition’s outfitter John Haddon & Co. noted on 16 November 1897 that they had forwarded an Edison Home Phonograph to Haddon and that Edison Co. was preparing a second for him.

It is unclear what happened to the second Edison Home phonograph or why one of each phonograph was chosen. However, the Bijou Graphophone was a new and improved phonograph developed by Alexander Graham Bell’s Volta Laboratory.<sup>12</sup> The project team also do not know what happened to the phonographs after the expedition. At least one must have been taken to Borneo; there are a number of recordings from that trip in the British Library’s Borneo cylinder collection (C666).

In addition to the phonographs, the expedition also took a cinematograph, which was used on Mer in September 1898 (Griffiths, 2002, pp. 133-134). The existing footage is held at the British Film Institute Archive (identifier 20149) with copies held by AIATSIS (call number CAMBRIDGE\_001) and the National Film and Sound Archive of Australia (title number 8879) (Long & Laughren, 1993).

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12 Further information on the development of the Graphophone can be found here in Wile, R.R. (1990) ‘The Development of Sound Recording at the Volta Laboratory’, *Association for Recorded Sound Collections Journal*, 21(2), pp. 208-225. Available at: <https://www.arsc-audio.org/journals/v21/v21n2p208-225.pdf> (Accessed: 1 May 2024).



## History of the Torres Strait cylinder collection

The wax cylinder collection resulting from the expedition comprises 102 cylinders, of which 95 have been digitised and catalogued. Seven cylinders do not have recording-level metadata; C80/1015, 1044, 1056, 1057, 1106, and 1494 are broken and have not been digitised, and C80/1066 is a blank cylinder.<sup>13</sup> The Torres Strait cylinders have little accompanying documentation aside from inscriptions on cylinder containers and on small paper inserts, where these have been identified. Some previously documented inserts are no longer available.

The Torres Strait cylinders were part of a collection of approximately 2,100 cylinders known as the Sir James Frazer Collection, named for Sir James Frazer (1854–1941), a Glasgow-born social anthropologist, folklorist, and classical scholar. The collection includes cylinders recorded between 1898 and 1914 in Africa, South Asia, Australia and the Pacific.

Expedition member and keen ethnomusicologist Charles S. Myers may have started to “round up” copies of cylinders but by 1907, Frazer “added sound recordings to the other categories of anthropological data which he amassed” (Ward, 1984, p. 2).<sup>14</sup> The collection was at the University of Cambridge’s Museum of Archaeology and Anthropology (MAA) for a short time before its transfer to the University’s Psychological Laboratory, which was formally opened in 1913 (University of Cambridge, no date). Myers was the first Director of this Laboratory and Lecturer in Experimental Psychology until 1922, and there is evidence that he possessed the Frazer cylinder collection by 1914 (Ward, 1984, p. 11).<sup>15</sup>

The cylinders were re-identified in the 1950s after being found in a boiler room when the Psychological Laboratory was rebuilt (Ward, 1984, p. 11; Durán, 1985). Oliver Zangwill, Professor of Experimental Psychology at Cambridge, arranged for their transfer to the British Institute of Recorded Sound (BIRS).<sup>16</sup> The BIRS was opened in 1955 and “was able to offer more appropriate long-term housing” for audio-visual materials in the United Kingdom (The British Library Board, 2010, p. 3). The cylinders were in an “extremely delicate condition, damaged by heat” (Gathercole, 1978). Many were broken or had deteriorated before they were deposited at the BIRS (Saul, 1975). The date for the transfer is unclear although documentation suggests 1959 (Topp Fargion, 2009).

13 As well as collection-level records, the British Library’s SAMI catalogue includes separate but linked recording and product records. Recording metadata describes the recording, whereas product metadata describes the sound carrier and any accompanying documentation.

14 Ward did not provide a reference, but this could be from the typescript catalogue “Dr J. G. Frazer’s Library”, held at Trinity College, Cambridge. Available at: <https://archives.trin.cam.ac.uk/index.php/catalogue-of-the-library-of-sir-james-frazer> (Accessed: 3 June 2023).

15 Funding for the Psychological Laboratory was primarily raised by Myers, his relatives and his wife’s family (Mollon, J. (2013) ‘Plum-coloured bricks’: *Opening of the Cambridge Psychological Laboratory on this day in 1913*. Available: <https://www.psychol.cam.ac.uk/archived-news/2013/2013-15-05-centenary> (Accessed: 1 May 2024).

16 The British Institute of Recorded Sound (BIRS) was founded in 1955 and became part of the British Library in 1983. It was renamed as the National Sound Archive (NSA) and is now referred to as Sound and Vision at the British Library.

### Re-identification of the cylinders at the British Library

There is no evidence that anyone worked on the cylinders until the late 1970s. Alice Moyle (1908–2005), Ethnomusicology Research Officer at then-named AIAS, had given a talk at the BIRS in November 1971 on recording Aboriginal music in North Australia and had been in contact with BIRS founder Patrick Saul around this time. He referenced the “C.S. Myers Torres Strait recordings” to Moyle and noted that the BIRS was planning to transfer them to tape (Moyle, 1973).

In 1976 and 1977, Moyle asked whether the cylinders had yet been transferred to tape, suggesting that the work could be done in Australia or by Wilfried Zahn at the German Broadcasting Archive in Frankfurt. In 1978, Jane Forge (Director of the Resource Centre, AIAS) expressed interest in the cylinders but ethnomusicologist Lucy Durán noted that the cylinders were still being traced.<sup>17</sup>

Following retirement from AIAS, Moyle spent a month in England from 23 August 1978 during which she spent two weeks at the BIRS to discuss plans for transferring the Torres Strait cylinders to tape (Moyle, 1978).<sup>18</sup> She completed a “preliminary sort” of the Australian cylinders and later wrote about “scaling ladders and investigating the dusty corners” of the BIRS (Moyle, 1986). BIRS Director-designate Anthony King (1978) stated that Moyle located, sorted and listed the Australian cylinders, and that the BIRS would send free tape copies of the material to AIAS.

In 1982/1983, a further twelve cylinders were identified by Alan Ward (then BIRS Archive Administrator). These included the earliest recordings made in London by Sidney Ray. In 1985, Moyle completed audition sheets of the Torres Strait recordings based on dubbings provided by the BIRS. She matched 25 cylinders to Myers’ writings in the Reports of the Cambridge Anthropological Expedition to Torres Straits, specifically volumes IV (1912) and VI (1908) (Moyle, 1985a; 1985b).

### Numbering

The cylinders are categorised according to several systems. Alan Ward assigned C-prefixed collection numbers in 1980 and the cylinders recorded in 1898 were separated according to location. The Torres Strait cylinders were assigned shelfmark C80 and the British New Guinea cylinders were assigned C62 (Topp Fargion, 2020).

Alice Moyle assigned each cylinder an alphanumeric code, prefixed A, B or C, which was written on a small sticker on the cylinder lids (1983, p. 133). Moyle (1984) used “as far as possible, the numbering systems appearing on the cylinders themselves”. The A and B cylinders are stored in “two specially made boxes, twelve compartments to each”, as found by Moyle in 1978 (Moyle, no date, p. 1). Any codes prefixed with “D” were issued after Moyle. These sometimes appear alongside Moyle’s codes, but it is not clear

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17 Durán was appointed to the BIRS in 1975 (Landau, 2011).

18 A digitised note provided by Grace Koch (AIATSIS) shows that Moyle was at the BIRS from 8 to 22 September 1978.



who assigned them. Figure 2 shows the inscription and stickers on the lid for cylinder C80/1041. The “8” sticker corresponds to the reference number C8, which Moyle assigned to this cylinder.



Figure 2. Photograph of the lid of the metal container for cylinder C80/1041. True Echoes, ©2022 British Library Board.

Many individual cylinder boxes have red-ink inscriptions that do not correspond to the order in which recordings were made and were presumed to have been allocated by Frazer and his wife Elizabeth (Lilly); Ward (1985) noted, “the red numbers ... are those applied by Frazer, possibly several years after the collection returned to the UK. Experience with other cylinders marked by Frazer shows that his numbers normally bear no relation whatever to the order in which the material was recorded, and appear to have been applied in a haphazard way.” Preliminary research suggests that they may in fact be attributed to Myers, based on handwriting comparisons, although further research is needed.

A review of the red-ink numbers was conducted in June 2020, comparing the numbering on the Torres Strait cylinders with those on the 1898 and 1904 British New Guinea cylinders. They suggest a single numbering sequence and whoever wrote the labels either did not know the cylinders’ chronology or did not think it was important to reflect the chronology in their numbering. There are many unnumbered Torres Strait cylinders although the reasons for this are unknown.

### Historical research

Historical research on the Torres Strait cylinders began at the British Library in September 2019 with an initial review of existing metadata and an inspection of the cylinders and accompanying documentation. The expedition was well documented: six volumes of the *Reports of the Cambridge Anthropological Expedition to Torres Straits* were published between 1901 and 1935. Arts and Crafts (volume IV, 1912) includes transcriptions, notations and analysis of music (Myers, 1912a) and discussion of songs (Haddon, 1912). Myers also wrote about the music of the Torres Strait Islands in other publications (see Myers, 1899; 1912b; 1914). The available inserts and announcements on the recordings helped to provide titles or descriptions, locations, and speakers’ names. Identified terms were cross-referenced against publications and unpublished documentation related to the 1898 expedition.

For example, cylinder C80/1041 included a paper insert with inscription “Amipurungu umaik / Story told by Waria Mabuiag”, which corresponds to the spoken announcement on the recording: “Amipurungu amaik. Story told by Waria. Mabuiag”. A transcription and translation of “The Story of Amipuru” by Waria was identified in Volume III of the Reports (Ray, 1907, pp. 191, 220). A handwritten manuscript of this story by Waria is held at Cambridge University Library as part of the Haddon Papers (MS. Haddon).<sup>19</sup>

Cylinder C80/1018 included an insert with “Ulai Weii B” inscribed on one side and transcription “wau o weluba o leverlever [Lewerlewera] / o mariba / tamera o gulaba tamera / o wei” on the other (see Figure 3). The inscriptions are contemporary to the expedition with the alphanumeric reference added later. This transcription corresponds to Charles S. Myers’ Malu Song II and was apparently sung to “Air II” published in Myers & Haddon (1908, p. 151). Words, notation and analysis for this song were published by Myers (1912a, pp. 244, 247-48, 266) and musical notation is included in Anthony Wilkin’s field notebook as ‘Song K’ (1898, p. 250).

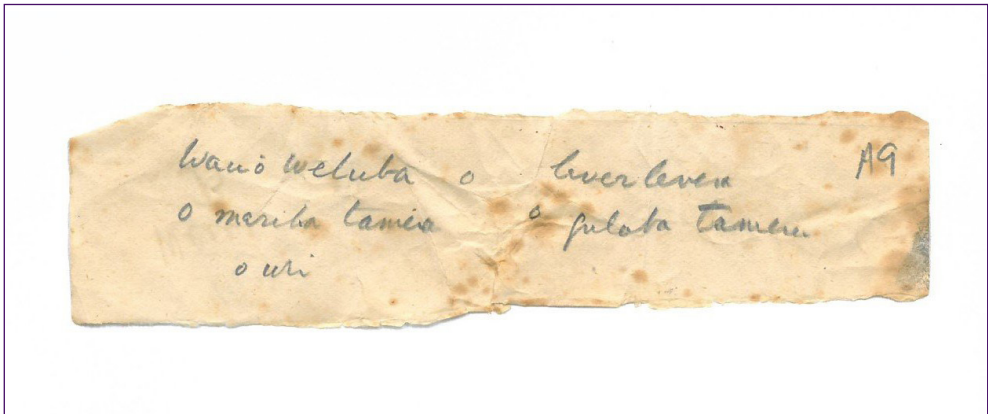


Figure 3. One side of a paper note found with cylinder C80/1018. True Echoes, ©2022 British Library Board.

In March 2020, True Echoes Research Fellows Rebekah Hayes and Vicky Barnecutt visited Cambridge University Library to review the Haddon Papers, including his 1898 journal, field notes and archival materials relating to the expedition. They also include the Charles Myers Papers (MSS.Add.8073-8074), papers of W.H.R. Rivers, and Anthony Wilkin’s 1898 notebook. COVID-19 pandemic restrictions prevented further visits, but successful digitisation requests ensured the project could access, for example, copies of Myers’ 1898 journal at Cambridge University Library and Sidney Ray’s papers at SOAS, University of London. The latter includes copies of Ray’s journal and correspondence from the 1898 expedition (MS 380314). The originals are held in the Michael Somare Library at the University of Papua New Guinea (AL 007).

The British Library Sound Archive holds documentation relating to the management of the Torres Strait cylinders, including their transfer history and information on how the collection has been used over the years at the Library and AIATSIS, including by

<sup>19</sup> A digitised version is available online via Trove, Mabuiag - Torres Strait. Waria’s Manuscript. Available at: <http://nla.gov.au/nla.obj-1263136977> (Accessed: 20 November 2023).

Torres Strait Islanders. AIATSIS provided digitised copies of sections of the Alice Moyle Collection (MS 3501), including Moyle's notes from visits to the BIRS, audition sheets for the recordings, and her own research using the Reports and other publications. This documentation and Moyle's published work (1983, 1985c, 1987) enabled the project to confirm links between many individual recordings and Myers' transcriptions.

### Updating metadata

Following the review of publications and documentation, the project team worked with AIATSIS to address incorrect or incomplete metadata for the collection. Many fields in the existing catalogue records were empty or contained minimal information, particularly language and genre descriptions. True Echoes addressed this by firstly using historical research to enhance metadata for the cylinders, correcting errors and ensuring that recordings were attributed to both the Torres Strait Islander performers and the sound recordists.

Correct attribution enables greater discoverability for Torres Strait Islander communities, who may wish to identify recordings made by specific individuals, including ancestors. The Cambridge Expedition members often named their consultants, which greatly facilitated correct attribution for individual recordings (see Haddon, 1908). In total, 34 performers/participants were identified, including Torres Strait Islanders from Mer, Mabuiag, Saibai and Iama. Performers also include individuals from other countries who were in the region at the time of the expedition.

Historical research conducted on cylinders C80/1018 and C80/1041 brought further information to light about Ulai of Mer and Waria of Mabuiag. Ulai (pictured in Figure 4) lived in Sebeg and had two children at the time of the expedition (Rivers, 1908a, p.70, Table 4C). Haddon noted that Ulai was "the greatest character of the lot" and was "of considerable use to [the expedition members]" (Haddon, 1901, pp. 31, 72). Ulai discussed and collected rain charms and shared a model of a *doiom*, "a stone effigy of a man that is used in the rain-making ceremony", with Haddon (Myers, 1898-1899, p. 74; Haddon, 1901, p. 33).



Figure 4. Portrait of Ulai wearing a cassowary headdress crowned with white pigeon feathers and a hibiscus attached over the forehead. Museum of Archaeology and Anthropology, Cambridge, N.23297.ACH2.

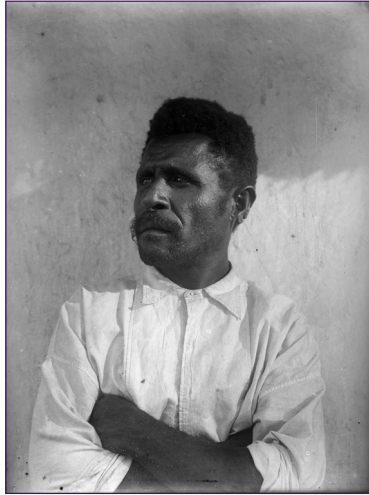


Figure 5. Portrait of Waria, 1898. Museum of Archaeology and Anthropology, Cambridge, N.22990.ACH2.

Waria (of the Dangal, Kodol clan) was the hereditary chief of Mabuia and married to Uruba, with whom he had had six children (Rivers, 1904, Table 1). Waria was also known as Net (pronounced Neth), which was a name given to him by a Samoan friend, or Ned in English (Rivers, 1904, p. 143; Ray, 1907, p. 7). He was a consultant to Haddon and assisted Ray with his study of the language of Mabuia (Haddon, 1901, p. 123). Waria is also possibly the speaker on cylinders C80/1040 and C80/1043, for which there is little information.

Waria worked on a translation of the Gospel of St. Matthew and was “a very accomplished person [...] He was genuinely interested in our work” (Haddon, 1901, p. 123). Haddon further noted, “Our indebtedness to our native helpers is obvious; but to Waria, the chief of Mabuia, we owe much, as, in addition to what he has told us orally, he has sent a large quantity of manuscript, mainly of genealogies and folk-tales, which he has written at his own initiative” (1904, p. 6). Waria also constructed a bamboo platform or *neët* to show the discontinued practice of dugong hunting (Haddon, 1901, pp. 152–53).

Waria’s infant son died while the expedition visited Mabuia, and Waria requested that the group photograph his son so “that he might not forget what he was like”. The group honoured this request (1901, p. 123). By January 1900, Waria was Mamoose of Mabuia (Cowling, 1900).<sup>20</sup> Haddon sent a telescope to Waria as a gift (Cowling, 1901).

The identification of individuals heard on the recordings facilitated AIATSIS’ identification of their descendants, who then contributed to the participatory research of the project, sharing stories about their family members and information about the relevance of recordings for their families and communities today.

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20 The Mamoose was the official government representative of each island.

## Locations and languages

The identification of performers also provided an indication of where cylinders were recorded following cross-referencing of individuals, dates and locations in the Reports and other contemporary accounts. For cylinders C80/1018 and C80/1041, the recording locations were confirmed as Mer and Mabuiaq, respectively. Overall, confirmed recording locations include Mer (Eastern Islands), Mabuiaq (Western Islands), Saibai (Top Western Islands) and Iama (Yam Island, Central Islands), each representing a cluster of islands in the Torres Strait.<sup>21</sup> The recording locations also correspond to different language varieties, including Meriam Mir and Kala Lagaw Ya.

The original metadata for the cylinders lacked accurate information about the languages represented in the cylinder collection. The British Library’s World & Traditional Music section typically uses ISO 639-3 language codes, but older metadata included less specific ISO 639-2 codes, such as *aus* [Australian] or *paa* [Papuan languages], which limit discoverability.<sup>22</sup> Following research on the collection, True Echoes sought to add more specific language codes, such as *ulk* for Meriam Mir.

## Identifying the recordists

Haddon and Myers were the only named contributors for nearly all recordings, with Ray described as the recordist for four recordings made on Saibai Island (C80/1077-1080) and two pre-expedition recordings made in England (C80/1485, 1489). However, Myers’ anthropological work was instead confined to Mer, where he stayed from 10 May to 24 August 1898. On 24 July, Ray heard Myers recording “Murray songs” (Ray, 1898-1899, p. 80) and a few days later on 28 July, Myers recorded a few songs “with great difficulty” (Myers, 1898-1899, p. 104). In fact, Myers wrote that he was indebted to Ray “for phonographic records of the music of Mabuiaq, Yam and Saibai”, revealing that Ray was responsible for more recordings than those made on Saibai (1912a, p. 261).

There are several references to the phonograph and recording in the journals of both Myers and Ray, which further support their involvement in the sound recording process. Furthermore, during his time in the Torres Strait, Ray researched the languages of Mer and Erub, and of Mabuiaq, Tudu, Saibai, and Muralag. His linguistic research is the focus of Volume III of the *Reports* (1907) and it could be the case that Ray used the cylinder recordings as part of this research. For example, Ray worked with Peter (also known as Papi) from Mabuiaq to create a number of recordings, including songs, and named Peter as one of the contributors to Ray’s research on the language of Mabuiaq (Ray, 1898-1899, pp. 89-90; 1907, p. 7). Peter has been identified as a contributor to four existing cylinder recordings, including C80/1069, 1070, 1074 and 1469.

Specifically concerning cylinder C80/1041, Ray mentions his work with Waria in journal entries dated 17, 19 and 20 October 1898, including Waria writing the story of Amipuru on 20 October (1898-1899, pp. 89-90). In contrast, there is no evidence that Haddon was involved in recording sound in the Torres Strait Islands.

21 Community profiles for each of these islands can be found on the website of the Torres Strait Regional Authority. Available at: <https://www.tsra.gov.au/the-torres-strait/community-profiles> (Accessed: 4 July 2023).

22 See the International Organization for Standardization (ISO) guidance for further information on different sets of language codes: <https://www.iso.org/iso-639-language-code> (Accessed: 20 May 2024).

### Content of the cylinder recordings

Analysis, notations and words for the songs recorded by Ray on Mabuiag, Saibai and lama can be found in Myers (1912a, pp. 262–265, 269). Many of the songs recorded by Myers on Mer were categorised into three groups: Malu-Bomai, *keber* and secular songs. The Malu-Bomai (or Malo-Bomai) belief system was the “major religious belief system on Murray Island [Mer] before the London Missionary Society arrived in the Torres Strait in 1871” (Koch, 2013, p. 15). *Keber* songs are associated with the Waier belief system, centred on Waier and Dauar Islands, and are “performed during periods of mourning” (Lawrence, 2004, p. 49).

Haddon was told that the Malu-Bomai ceremonies had not been performed for two decades (Beckett, 1987). Myers also wrote, “[in] securing the records for the phonograph, great care, moreover, was taken to ensure that they were obtained from the older men who were alive in the times when the ceremonies were still being performed” (1912a, p. 239). A Malu-Bomai performance was witnessed by the expedition party on 29 July 1898 at Las, Mer Island, and a dance was performed by Kilarap, Kaige and Gadodo on 6 September and was recorded using the cinematograph (Ray, 1898–1899, pp. 81, 86). Notations for the Malu-Bomai songs are given in Myers & Haddon (1908, pp. 150–152). The songs were numbered by Myers; Songs I–IV A are represented in the cylinder collection.

Song IV was previously unidentified within the collection. A cylinder insert note containing words from this song was identified but erroneously matched to a cylinder from another collection (C86/1010). The note in fact corresponds to C80/446; on the insert note is written ‘Iba abara lewer + zogomer / Enoka’ and C80/446 has ‘Iba abara’ inscribed on the lid. Myers identified ‘Iba Abara’ as a recording from Mer in his correspondence with Erich von Hornbostel; Myers described the recording as ‘[s]acred words softly sung after Funeral Song’ (Myers, 1907).

For the *keber* group, Myers and Haddon provided notations and the words for many of these songs (1908, pp. 152–153; Myers 1912a, p. 268). The cylinder collection includes *keber* songs numbered by Myers as V–VII, X–XIII and XIII A; the recording for song XII has not been identified or is missing. Songs V, VI, VII, X, XI within this group of *keber* songs relate to *zera markai* ceremonies “associated with treatment of (and communication with) the unburied dead” (Wright, van der Kolk and Dauareb community, 2019, p. 121).<sup>23</sup> *Keber* songs of the *zera markai* were witnessed by Myers on 24 May 1898 during celebrations for Queen Victoria’s birthday. Participants included Poi (in the role of *pager*, who “relieved the tension and fear of the people caused by the *keber*”) and Sambo, Dela, Gabi, Boa, Gadodo and Kaiga (Myers, 1898–1899, p. 52; Myers & Haddon, 1908, p. 133).

Included in Myers’ *keber* grouping are songs VIII (C80/1025) and IX (C80/1022), which were connected to the *meket siriam* belief system into which boys were initiated (Rivers, 1908b, p. 175).<sup>24</sup> Women, girls and younger boys were not allowed to be present.

Several secular songs are also represented in the collection, including Songs XIV–XVIII. Notations and words for the songs can be found in Myers (1912a, pp. 246–247, 268). They include *kolap wed* (spinning top songs) identified on cylinders C80/1023, C80/1032 and C80/1107.

<sup>23</sup> Also referred to as *zera markai* or *zera merkai* (Haddon, 1935, p. 119; Philp, 1999).

<sup>24</sup> Further information on the *meket siriam* was recorded by Haddon (1908, pp. 273–74).



There are also songs from other cultures outside of the Torres Strait. These include Samoan (C80/1055, 1488), Rotuman (C680/722, C80/1061) and Japanese songs (C80/1049-1051), as well as songs from Vanuatu and Solomon Islands (C680/1492).

### Identifying sensitive and/or sacred materials

Historical research identified potentially sacred, secret and/or ceremonial materials, including the songs relating to the Malu-Bomai belief system, initiation songs, and keber funeral/death songs. Bomai has remained a sacred name for the people of Mer, and Torres Strait Islanders have previously rejected the inclusion of items associated with “sorcery or death” in an exhibition at MAA (Herle, 2003, p. 199).<sup>25</sup>

Through the participatory research undertaken during the True Echoes project, Torres Strait Islanders shared their knowledge about recordings in the cylinder collection. This knowledge was provided to both the British Library and partner Oceanic institutions to be represented in an appropriate and meaningful way. The enhancement of the Torres Strait cylinders metadata was an iterative process, and a first round of updated metadata was completed following historical research. This version was used by local researchers in the Torres Strait Islands during participatory research and served as the foundation for further amendments based on community knowledge.

### Identification of additional cylinders

Several additional Torres Strait cylinders were identified in other British Library cylinder collections. For example, C80/1469 had previously been catalogued as a British New Guinea cylinder but the accompanying paper note described the performer as Peter of Mabuiag. Three cylinders were identified in collections outside the project’s original remit. These were C80/797 in the Borneo cylinder collection and C80/722 and C80/1008 in the Unidentified Cylinders Collection. C80/471 and C80/479 had been previously catalogued as cylinders recorded by anthropologist Edith Durham; they are duplicates of C80/1482 but were mislabelled as European cylinders. An additional three cylinders may be part of the collection (C680/795, C680/1490 and C680/1496) although lack of documentation and damage to the cylinders prevents confirmation of this.

### Participatory research

Following extensive historical research, Lara McLellan, Assistant Director of International Engagement Strategy and Operations at AIATSIS, and Grace Koch, History Researcher for True Echoes, travelled to the Torres Strait Islands to learn more about the cylinder collections from the descendants of the original performers. McLellan and Koch facilitated connections amongst various departments of AIATSIS, the British Library and Torres Strait organisations and interviewers.

Prior to this field trip, Koch and McLellan circulated documentation related to the project and the cylinder collection with participating Torres Strait Islander organisations including the Torres Strait Regional Authority (TSRA) and Gur A Baradharaw Kod Torres Strait Sea and Land Council (GBK). Meetings were held on Thursday Island with TSRA and GBK staff as well as descendants of people recorded on the cylinders, and Koch and McLellan gave a presentation on the cylinder recordings. Following this, the next steps for engagement were agreed upon.

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25 *Torres Strait Islanders: An Exhibition to Mark the Centenary of the 1898 Cambridge Anthropological Expedition to the Torres Strait*, July 1998 to July 2000.

Valuable advice on protocols was furnished by Vic McGrath from TSRA and Lui Ned David, Chair of GBK. Ned identified Flora Warrior from Mabuiag as a knowledgeable person who could advise on relevant contacts and on the proper way to proceed. Warrior, a descendant of Waria, emphasised that family members should interview other family members and offered to become one of the interviewers. In turn, she pointed Koch and McLellan to Dr. Vinnitta Mosby, an academic and direct descendant of Jimmy Rice (singer on cylinder C80/1037), who agreed to become the interviewer for some of the descendants from Mer.

Dr. Mosby worked with Koch and McLellan and the British Library to shape the permission form for interviewees to sign and to formulate a set of straightforward questions to ask them. Both interviewers agreed to make video recordings of interviews using either a Samsung tablet provided by the British Library or another device of their choosing. All participants agreed that interviews would be conducted in the language chosen by the interviewee, and that recordings of the interviews would be stored both on the island where they were made and at Gab Titui Culture and Arts Centre, Thursday Island. Copies would also be lodged at the British Library and AIATSIS. Access conditions for both the cylinder recordings at the British Library and the newly recorded interviews would be set by the interviewees according to cultural protocols. Where appropriate, excerpts from these interviews were added to the True Echoes website.

### Mabuiag responses

Several of the people who were interviewed gave detailed genealogies showing their connections with their ancestors who were recorded in 1898. All participants stated independently that the recordings were very important to their identity as Torres Strait Islanders and to the continuation of their culture. Flora Warrior quoted her ancestor, Waria, as emphasising the importance of knowing history so that “we keep the fireplace of our ancestors burning”<sup>26</sup> and that Islanders know where they come from. Flora recorded descendants of Gizu, Tom Noboa, Peter Papi, Nomoa and Mariget Sandy as well as Waria.

For the recordings of Waria, Warrior chose to interview four people, including Gordon Waria and Stella Warrior. Both Waria and Warrior are ranking elders of the Pabai clan, and Warrior is a direct descendant of Waria and researcher of his importance in the history of Torres Strait. Warrior requested that Patrick Whop, an important Kala Lagaw Ya elder, also be interviewed because of his detailed knowledge of cultural history and language, even though he traces his descent from Noboa (Nubuwa) and Nomoa.<sup>27</sup> As Whop spoke in the Kalaw Lagaw Ya language, Flora Warrior provided an English translation.

Stella and Flora Warrior emphasised that anyone wanting to know more about specific Torres Strait Islander ancestors should ensure that the proper elder related to that ancestor be contacted directly. In the past, researchers had not always realised how vital this procedure is when undertaking research in the Torres Strait.

### Iama and Tudu response

Lui Ned David, direct ancestor of Maino (friend of Haddon and last Mamoose, or chief, of Yam Island), spoke of how Maino was a man very much ahead of his time. Maino gifted several artefacts to Haddon so that people overseas would know something of

26 Transcription from Flora Warrior 1041.mp4, ca. 7 min. 50 sec. Recorded on 15 March 2022.

27 Patrick Whop gave an interview about Noboa on the same day as the Waria interview.

the richness of Torres Strait culture, and that the governance structure of Torres Strait Islander society was as sophisticated and ordered as that of Europe. In the latter part of his interview, he provided specific information about protocols for access to Torres Strait knowledge and artefacts, distinguishing between items that had been gifted by elders and items that had been taken away.

### Mer responses

Dr. Mosby and Flora Warrior were not interviewed but recorded themselves as they spoke about their ancestors. Dr. Mosby spoke of the place of her ancestor, Jimmy Rice, within the structure of Mer society. Additionally, she chose to interview Reverend Ron Day, a senior descendant of Jimmy Day; and Adimabo Noah, the eldest living descendant of Ulai. Adimabo Noah spoke mostly in the Meriam language, and Dr. Mosby provided an English translation.

Unfortunately, the audio quality of the cylinder recordings of Jimmy Day and Jimmy Rice is very poor due to high levels of background noise. However, both Rev. Ron Day and Dr. Mosby provided very informative background information on their ancestors. Noise reduction work will be applied to those cylinders later.

The recordings of Ulai, who sang or spoke on twenty cylinders (including duplicates) were clearer. Copies of eight of his cylinder recordings were sent to Dr. Mosby, who played five of them (C80/1016, 1018, 1020, 1026, and 1032) to Adimabo Noah, a descendant of Ulai, and he identified some of the songs on C80/1032 as tunes from Mer with Kala Lagaw Ya texts. Some of the songs were frightening to him as he believed they might have been used for sorcery. He was able to sing the song on C80/1020 as it had been performed on Mer during Mabo Day celebrations in 2000.<sup>28</sup>

### Conclusion

This paper has given an insight and summary into the research conducted by the True Echoes project into the wax cylinders recorded by the Cambridge Expedition in 1898. The historical research combined True Echoes' original research findings with previous research conducted by individuals including Alice Moyle.

By identifying the content of the cylinder recordings, the project team identified potential culturally sensitive materials and identified more specific recording locations. The identification of locations is especially important as place corresponds to community and family, key factors in who can access and use Torres Strait Islander cultural heritage. Confirming the recording location of the cylinders also provided important clues about languages spoken by recording participants and their ancestors.

Additionally, confirming the identities of performers on the cylinders helped the research team to locate some of their living descendants, who agreed to be interviewed for this project. Through these interviews, the project obtained further information about the recordings as well as their relevance for communities today. True Echoes also consulted directly with Torres Strait Island communities to determine how to share recordings appropriately and to establish enduring connections.

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28 Mabo Day celebrates the day when the High Court of Australia ruled that Torres Strait Islanders and Aboriginal people had rights to land known as native title. Eddie Mabo, a Meriam man, began research into the legal rights of Torres Strait Islanders and was one of the most active claimants in the series of court cases that resulted in the legal concept of native title.

By the end of the project, the metadata for all cylinders within the scope of True Echoes were updated on the British Library's SAMI catalogue. Research findings, digitised cylinder recordings and clips from the participatory research are also available on the True Echoes website. It is hoped that the website will continue to be a resource for originating communities, including Torres Strait Islanders, and will provide greater accessibility and discoverability to these culturally significant sound recordings.

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