

UKRAINIAN MUSICAL CULTURE WITHIN DIGITIZATION SYSTEM AS A MEANS OF ITS PRESERVATION

CULTURA MUZICALĂ UCRAINEANĂ ÎN CADRUL SISTEMULUI DE DIGITALIZARE CA MIJLOC DE CONSERVARE

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The article studies assets belonging to the Ukrainian and European cultural heritage possessing significant cultural and historical value; to ensure their preservation, digitization methods have been applied. The relevance of the research topic aligns with the current global strategy of preserving historical and cultural heritage and providing access to information by digitizing analogue materials. Efforts to preserve national cultural heritage are also supported by UNESCO [1].

In Ukraine, as in other countries, since the beginning of the 21st century, there have been significant changes in the practices and current goals of organizations responsible for preserving historical and cultural heritage. Several factors have both facilitated and necessitated this development. The key ones include the advancement of information technologies, more extensive use of scientific achievements, and awareness that cultural assets are vulnerable to destruction in the course of wars, as well as due to natural or technological disasters.

One of the most important current tasks for libraries, archives, sound archives, and museums is the preservation of documentary cultural materials, which constitute a significant portion of the country's historical and cultural heritage and contribute to fostering a sense of national identity, dignity, and patriotism.

Keywords: digitization, sound recording, musical manuscripts, rare materials, digital formats, musical cultural heritage

Articolul studiază bunuri aparținând patrimoniului cultural ucrainean și european, care posedă o valoare culturală și istorică semnificativă; pentru a asigura conservarea acestora, au fost aplicate metode de digitizare. Relevanța subiectului de cercetare se aliniază cu strategia globală actuală de păstrare a patrimoniului istoric și cultural și de furnizare a accesului la informație prin digitizarea materialelor analogice. Eforturile de conservare a patrimoniului cultural național sunt sprijinite, de asemenea, de UNESCO [1].

În Ucraina, ca și în alte țări, de la începutul secolului XXI-lea au avut loc schimbări semnificative în practicile și obiectivele actuale ale organizațiilor responsabile de conservarea patrimoniului istoric și cultural. Mai mulți factori au facilitat și, totodată, au impus această evoluție. Principalii includ avansul tehnologiilor informaționale, utilizarea mai extinsă a realizărilor științifice și conștientizarea faptului că bunurile culturale sunt vulnerabile la distrugere în timpul războaielor, precum și din cauza dezastrurilor naturale sau tehnologice.

Una dintre cele mai importante sarcini actuale pentru biblioteci, arhive, arhive sonore și muzee este conservarea materialelor culturale documentare, care constituie o parte semnificativă a patrimoniului istoric și cultural al țării și contribuie la cultivarea unui sentiment de identitate națională, demnitate și patriotism.

Cuvinte-cheie: digitizare, înregistrări sonore, manuscrise muzicale, materiale rare, formate digitale, patrimoniu cultural muzical

Introduction

Being Ukraine's national asset, an immense cultural heritage is preserved in specialized state institutions – libraries, museums, archives, and organizations of various levels, depending on the value of the material. Among the wide range of cultural heritage of various art forms, the present study focuses specifically on musical art.

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Musical assets of national heritage usually come in several forms: written materials (scores and books, both manuscript and printed) and sound recordings on early audio media. These recordings are particularly vulnerable to various forms of sound distortion, which may lead to the loss of the historical value of the recorded material.

Presently, several types of historical sound recordings can be distinguished: shellac gramophone records with a rotation speed of 78 RPM; vinyl records (45 RPM); and professional wide-format magnetic tape recordings produced in studio conditions on specialized equipment (0,44 inch). Modern sound recording technology offers new possibilities, particularly through analogue-to-digital conversion, which enables the transfer of recordings made using obsolete technologies into digital formats. While such conversion is technically feasible, it remains a complex and costly process. For this reason, expert assessment plays a crucial role in determining the feasibility and priority of undertaking such work.

History

Repositories for sound recordings, manufactured or obtained through both state-funded and private organizations, have existed since the 20th century. However, such storage systems were far from ideal, as records required careful handling and maintenance. Additionally, the duplication of discs created significant challenges.

At present, under martial law in Ukraine, the problem of preserving historical and cultural heritage is particularly urgent. The current level of scientific development enables, through digitization, the full recording of the informational state of an object at a given moment in digital form, thereby significantly increasing the likelihood of its preservation and protection from potential threats posed by adverse factors.

The history of preserving audio information begins with early mechanical devices and extends to modern digital systems. A major breakthrough in the history of sound recording is associated with Emile Berliner's invention of the gramophone in 1887, alongside the introduction of phonogram recording technology, as well as effective disc pressing methods, which enabled the mass production and commercial distribution of audio recordings [2].

European Values

At the end of the 20th century, specialists from the Department of Music Collections at the Vernadsky National Library of Ukraine participated in the digitization of the 'Bach Archive'. Being unloaded in crates directly into the corridor of the conservatoire, this archive had been taken as a war trophy to Kyiv by Soviet soldiers in 1945.

According to eyewitness accounts, access to the archive's contents remained open for a considerable time, until an (unknown) authority decided to relocate the materials to a more secure and appropriate storage location. As a result, unique manuscripts of certain works by Johann Sebastian Bach, along with those of his contemporaries, were transferred to the Central Archive-Museum of Literature and Arts of Ukraine.

As the 21st century approached, awareness of the archive's unique significance remained limited –fragile, antique, unusually textured paper, illegible musical notation written in keys unfamiliar to modern musicians, and the general impracticability of text interpretation saved the collection from looting, as these seemingly mere relics attracted little attention. The author of the article was tasked with examining the archive and providing an expert assessment. Even a preliminary review revealed that it was likely authentic and of considerable historical and cultural value. It was subsequently discovered that historians and musicians from America and Europe had been long searching for the archive.

A close reexamination of the materials that had remained in the archive for over thirty years revealed that they constitute a unique collection of manuscript and printed works by Western European

composers of the sixteenth to the nineteenth centuries. These include scores, reductions for keyboard (clavier), and individual parts of choral and chamber instrumental music by members of the Bach family and Graun, as well as by Handel, Hasse, Telemann, Pergolesi, Mozart, Gluck, Haydn, Rameau, Vivaldi, Beethoven, Mendelssohn, and many other world-renowned composers and music artists.

Alongside Western European composers, the collection also represents the Slavic musical world, including works by Maksym Berezovsky, the Czech composer František Benda, and a first edition of the folk collection 'A Collection of Russian Folk Songs' (1790). Following careful selection, notated versions of seven Ukrainian folk songs were re-recorded through the process of digitization. Approximately eighty per cent of the collection consists of original manuscripts, while the remainder comprises limited-edition lithographic prints or authorized copies.

Before the Second World War, the collection belonged to the Sing-Akademie zu Berlin (founded in 1791), one of the most prestigious elite musical institutions in the Prussian capital. Ukrainian and German experts carried out a comprehensive identification of the collection's documents; based on existing signatures, catalogue marks, and stamps on both manuscripts and printed editions, its ownership was established beyond doubt. The results of this examination were discussed at two working meetings held in Kyiv in 2001.

Archival documentation on the handling of the collection makes it possible to trace its movement during and after the Second World War. According to a transport list dated 31 August 1943, the collection, together with other cultural valuables from Berlin, was evacuated to the castle of Ullersdorf in Silesia (now in Poland, near Wrocław). According to testimony from Georg Schumann then director of the Sing-Akademie zu Berlin, the collection was still located there in March 1945. Subsequent events involved further exchanges, ultimately resulting in the relocation of the collection to Kyiv. Surviving documents shed light on the remarkable later history of this rare collection.

Previously unknown aspects of the archive's transfer from Poland to Kyiv are partially revealed in press materials, including the article 'Trophies of War' (Spoils of War International Newsletter, no. 7, August 2000, pp. 23–35) – an electronic version of the document is available on the website of the Ukrainian Research Institute at Harvard University. The content of this article is largely based on the author's fundamental monographic study, 'Trophies of War and Empire: The Archival Heritage of Ukraine, the Second World War, and Restitution Policy', prepared with the participation and support of the State Committee on Archives of Ukraine and the State Service for the Control of the Transfer of Cultural Property across the State Border of Ukraine [3].

It was also established that A. M. Lufer, who at that time was a Director of the Kyiv Conservatory, was involved in the earlier expert examination of the collection's documents. Abram Mykhailovych Lufer (12 (25) August 1905, Kyiv – 13 July 1948, Kyiv) was a pianist and pedagogue, and Honored Artist of the Ukrainian SSR (1945). He graduated from the Kyiv Conservatory (1916–1919; piano class of S. Korotkevych and H. Beklemishev) and the Lysenko Kyiv Music Institute (1923–1927; class of H. Beklemishev). He made his debut as a pianist in 1929 and served as a soloist of the Kyiv Philharmonic from 1930 to 1946. He performed successfully in many cities across Ukraine, as well as in Moscow, Leningrad, and abroad, including Warsaw, Kraków, and Danzig. He was laureate of All-Ukrainian and international competitions and served as Rector of the Kyiv Conservatory from 1934 to 1941 and subsequently from 1944 to 1948 [4].

On 2 November 1945, the archive of the Sing-Akademie zu Berlin was officially transferred by the Committee for Arts Affairs under the Council of People's Commissars of the Ukrainian SSR to the Kyiv State Conservatory. It remained there until 27 July 1973, after which it was transferred to the Central State Archive-Museum of Literature and Art of the Ukrainian SSR. A legitimate question may arise for the modern, informed musician: why did such valuable materials fail to attract the attention of professionals during the twenty-eight-year period they were housed in a leading musical institution? Moreover, the archive was available for public use.

Following the transfer of the archive in 1973 to the Central Archive-Museum, a further twenty-seven years passed until 2000, during which interest in the collection was shown by only one musician – the conductor Ihor Blazhkov, who began to use the materials in his artistic projects. The history of the ‘Bach Archive’ thus raises a broader question: why, over a total of fifty-five years of its presence in Kyiv – the capital of Ukraine and a presumed cultural centre – did this exceptionally valuable body of musical material not receive the scholarly and artistic attention it deserved?

An analysis of the historical context in Ukraine and the Soviet Union broadly suggests possible explanations. The author of the present article, who was professionally active during the historical period under discussion and who has experienced both national and international educational systems, concludes that the system of musical education was subject to significant limitations. In particular, the historical scope of study was restricted: the history of musical culture from Antiquity to the Classical period was largely excluded, and attention was only given to the works of Johann Sebastian Bach. There were also gaps in the teaching of music theory, especially its aspects concerning older systems of musical notation that differ from those standardized in the nineteenth century onwards. This prevented musicians from engaging with early sheet music and appreciating its historical and artistic value.

The revival of early music, which began in Europe in the nineteenth century, reached the Soviet Union only in the 1970s and Ukraine not earlier than the 1990s. Another decisive and deeply oppressive factor was political – the Stalinist period. Persecution of the intelligentsia, scientists, and people of culture, both before and after the war, likely contributed to a general sense of detachment towards cultural treasures that had appeared in Ukraine’s cultural landscape under such extraordinary circumstances.

Why, then, was the issue resolved in 2001? Once again, political considerations appear to have played a role. At that time, the country’s international reputation had been tainted by internal events, and relations with Europe had deteriorated. However, Ukraine’s declaration of intention to return the cultural treasures of global significance to Germany contributed to a rapid reopening of dialogue with European partners [5].

Later, the archive identification was performed by German scholars specializing in Bach studies. At the highest state level, an agreement was reached to return the archive to its historical homeland, while Ukraine retained its digitized version, jointly processed by German and Ukrainian specialists and made accessible to interested audiences. Part of the collection directly related to Ukrainian culture has remained in Ukraine and is fully accessible to the public.

Expertise and Digitization

With the development of digital technologies in Ukraine, the range of digitized materials has expanded significantly. Considerable interest has been attracted to the collection of musical scores from the Razumovsky Library, which contains sheet music, manuscripts, and rare editions that were published only once in the 19th century and never reissued, all of which represent substantial cultural value. Many performing musicians have expressed interest in this collection, and the works that constitute a significant part of it have begun to be performed in concerts and incorporated into educational programmes. Besides, music theorists and historians have also demonstrated interest, and the library of sheet music has become the subject of academic research.

In 2024, specialists of the Department of Music Collections of the Vernadsky National Library of Ukraine participated in the preparation of proposals for a project on the digitization of printed materials and manuscripts from various departments of the library, aimed at creating preservation copies of the collections [6].

It was approved by a joint group of German enterprises and organizations, including the Ukraine Art Aid Centre (UAAC), funded by the Federal Foreign Office in Berlin in cooperation with the German–Ukrainian Society (DUG) and SCHLIEN & Friends GmbH; the Répertoire International des Sources Musicales (RISM); the Saxon State and University Library Dresden (SLUB Dresden); the

Gesellschaft für Musikforschung (GfM); Heidelberg University; and the Berlin State Library – Prussian Cultural Heritage Foundation [7].

The German side assumed responsibility for funding the equipment required for the digitization of copies from the shellac disc collections. The project for digitizing and restoring the audio recordings from this collection was implemented in 2025 in cooperation with the Institute for Information Recording of the National Academy of Sciences of Ukraine and the Department of Music Collections of the Vernadsky National Library of Ukraine.

The gramophone records stored in the Department of Music Collections of the Vernadsky National Library of Ukraine number approximately 2,300 items dating from 1902 to the 1950s. They constitute part of the historical and cultural heritage of the country and serve as a direct source of information for the study of musical tastes, particularly among the citizens of Kyiv, during the period corresponding to the production and early collection of these recordings. The collection includes recordings made without microphones using the acoustic method, as well as those from a later period produced using electro-mechanical recording techniques with microphones. From this collection of gramophone records, 500 shellac discs were selected for digitization. Collectable records from the early period of sound recording, like early printed materials (incunabula, palaeo types), are regarded by librarians, archivists, and museum professionals as rare and valuable artifacts, simply by virtue of the period in which they were produced. The value of rare and unique printed paper editions depends on many factors, one of the most important being the number of surviving copies. The rarity and uniqueness of sound recordings, however, depend not only on the number of surviving carriers but also on the preservation of the recordings themselves. The restoration of cultural heritage artifacts is of both scientific and cultural importance, as it ensures the preservation of rare musical and performance heritage for future generations. Digitized materials will not only become accessible to a wide range of researchers and art enthusiasts, but they will also enable the meaningful integration of significant audio documents into the academic domain, facilitating in-depth study of the history of sound recording, musical performance, and culture. Having studied the results of empirical observations conducted by custodians of shellac gramophone records at the Vernadsky National Library of Ukraine over the past 100 years, it has been confirmed that each subsequent playback of these records contributes to their deterioration, given the fragility of the material from which they are made. This conclusion is supported by precise measurements of the physical parameters of the information carriers with various sound-measuring equipment, as well as the properties of the reconstructed audio produced with a wide range of technical equipment. Having considered these research findings, both scholars and practitioners in this field have concluded that the digitization of rare cultural assets, both audio and manuscripts, and the creation of preservation copies make it possible to optimize and improve access to musical heritage, while ensuring its safeguarding in the event of damage to or loss of the original materials [8].

Planned digitization efforts concerning manuscript sources of Ukrainian musical culture aim to ensure their preservation. These include classical works by foundational composers such as M. Diletsky, A. Vedel, M. Lysenko, S. Hulak-Artemovsky, K. Stetsenko, V. Kosenko, V. Barvinsky, A. Kos-Anatolsky, L. Revutsky, B. Lyatoshynsky, S. Bortkiewicz, H. Maiboroda, M. Skoryk, and other outstanding composers of earlier epochs. A significant part of Ukraine's musical heritage also comprises sound recordings of distinguished performers and ensembles, led by renowned artistic directors such as the choral capella 'Dumka' under H. Veryovka and P. Muravskyi. Among celebrated solo performers were pianists such as F. Blumenfeld, H. Beklemishev, V. Horowitz, O. Kryshtalskyi, and M. Kryshtalnytska; violinists E. Buchynska, O. Derkach; cellists S. Zarembo, L. Krasnoshchok, and V. Chervov as well as singers such as Z. Haidai, D. Hnatiuk, and Y. Myroshnychenko, among many others whose contributions to musical art deserve lasting commemoration.

With the development of recording technologies, the possibilities for expanding the digitized musical archive continue to grow. Technicians and researchers in state cultural institutions should be gi-

ven credit for acting as custodians of cultural heritage and striving to preserve Ukraine's artistic legacy.

According to library, museum, and archive research specialists, under present conditions, when Ukraine is subjected to ongoing attacks and hostilities resulting in significant destruction, causing significant destruction and threatening cultural resources, digitized materials are being duplicated and stored in secure facilities outside Ukraine. In this regard, the support of friendly countries willing to assist Ukraine is of particular importance.

Despite the difficult times Ukraine is currently experiencing, work continues actively in all the essential spheres of public life, including science, education, and culture.

Conclusion

The present study has examined issues related to the preservation of cultural heritage, with particular emphasis on musical culture in Ukraine. It has outlined the history of sound recording from the twentieth century onwards, the technical methods employed, and the limited durability of earlier recording media and the development of more reliable technologies for long-term preservation.

Special attention has been given to the history of the arrival and presence in Ukraine of cultural musical artifacts of European significance. It was highlighted that the lack of preparedness, due to political conditions and educational limitations, prevented specialists from adequately interpreting the materials and fully appreciating their true value.

At the same time, advances in both technology and scholarly expertise have led to notable progress in the digitization of existing materials and in ensuring their preservation, despite the heightened risks associated with the current wartime conditions in Ukraine. Cultural assets, including manuscripts, rare printed editions, and sound recordings of outstanding musicians, have undergone a complex digitization process so that in the event of loss, they can be retrieved from the materials preserved in the Vernadsky National Library of Ukraine. An inventory of information on sound recordings was compiled as metadata, enabling free online access to digital materials, as well as their integration into international musical resources.

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