

Can Music Libraries Withstand the Diversity of Music Resources?

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Figure 1: Diversity of Asian Music Notation

ABSTRACT

This position paper argues for a balanced approach that combines specialization and versatility in digital library systems and tools. By building a network of music resources that embraces diverse musical cultures, including non-Western traditions, we can ensure the long-term sustainability and accessibility of music resources that reflect the true diversity of musical culture, bridging cultural gaps and facilitating new discoveries for music researchers and librarians.

KEYWORDS

digital music libraries, specialization, versatility, accessibility, non-Western music, cultural connections

1 INTRODUCTION

As the proliferation of digitized music materials continues at a rapid pace, the significance of digital music libraries in the future is poised to grow even further. However, when confronted with the necessity of managing a larger and more diverse collection of music-related materials, can current digital music libraries maintain their quality? This position paper delves into the specialization and adaptability of library systems, addressing potential challenges that digital music libraries may encounter in the future.

2 AUDIENCE AND USERS, DISCIPLINES AND SUBJECTS

Sheet music is one of the core documents among the resources provided by the digital music library and has many users. Nevertheless, the majority of users accessing current digital music libraries primarily seek Western musical notation. Users seeking scores from non-Western cultures, such as those shown in Figure 1, the bunka-fu (文化譜) used for the shamisen in Japanese traditional music, the traditional Korean notation known as “jeongganbo (정간보),” or

the jianzhipu (減字譜) employed for the Chinese koto (gǔqín), rarely access digital music libraries.

Many of the systems supporting current digital music libraries implicitly cater only to demands for “Western” music, so they may not adequately reflect the inherent diversity of music cultures. Even though each users have different needs, it becomes a serious problem when non-Western music resources cannot be accommodated by the library’s infrastructure. Japanese traditional music materials, for instance, some of them have been significantly influenced by Western music, with some documents utilizing staff notation or tablature. Some materials also aspire to express Japanese traditional music using staff notation. A system dedicated to Western and non-Western music separately would make it difficult to recognize the cultural connections and influences between these musical resources.

While classifying music based on notation methods may be feasible, there should be cultural exchanges and influences that transcend notation methods among the musical resources. By facilitating the addressing of such musical resources on a common platform to the greatest extent possible, the potential for new discoveries and insights may be realized. Besides, the use of general-purpose systems and tools can also be used to protect ethnic or non-Western traditional music resources that have a limited number of users. It is difficult to develop specialized tools for a small number of users, and even if it were possible, it would be impractical to continue to incur maintenance costs. By aiming for systems and tools that are as generic as possible, it would be possible to include the entire music community as users while also preserving a minor music culture.

3 MEANS OF ACCESS AND ACCESSIBILITY

A versatile system that comprehensively handles materials from different cultures could consolidate music-related materials in one location, offering users a one-stop service for searching for music

materials. This would undoubtedly be a more convenient option for many music researchers and enthusiasts.

Nonetheless, the extensive collection of resources, irrespective of region, history, or genre, may not always be convenient. Consider, for example, the current situation of Japanese music-related materials. Many scanned images pertaining to Japanese traditional music available on the internet are treated as part of Japanese classical manuscripts. In other words, digital libraries specializing in Japanese classical literature adopt a strategy of employing a versatile system for searching and browsing all historical Japanese documents across various fields¹.

Such a versatile search and browsing system manages all materials, regardless of physical form, descriptive content, or attributes. Users interested in historical Japanese materials can readily delve into a vast pool of materials through one service. However, how will users seeking Japanese "music" materials be directed to the comprehensive search system for Japanese classical documents? Researchers searching for Japanese traditional music scores would not expect to find them within a "mass of old documents" comprising classical literature, historical texts, letters, administrative documents, legal document and so on. Will users actively explore this "mass of old documents" to locate music resources? If users cannot access the materials they need, it is as if they do not exist. It is essential to ensure that digital materials are not only accessible but also easily findable by users.

4 NATURE AND PURPOSE OF THE SUSTAINABLE TOOL OR RESOURCE

The resources and tools provided by digital libraries can be considered a form of public knowledge commons[1]. In the sustainable maintenance and management of shared digital intellectual resources, it is crucial to maintain a sufficient user base while managing them appropriately. To attract more users, it is necessary to collect a broader range of materials and meet the needs of a more diverse user base. Therefore, the advantage of library services and systems being versatile cannot be underestimated. With the ability to accommodate a variety of materials, it can address the needs of users with diverse requirements.

Conversely, excessive specialization can make continuous operation difficult. In Japan, there have been studies aimed at creating machine-readable representations of traditional scores for the shakuhachi, resulting in several specialized formats and processing systems[6–11]. As for projects targeting Japanese instruments other than the shakuhachi, there are studies that have explored machine processing of scores for the shamisen[4, 5] and the koto[2, 3].

If these projects had been successful, a digital music library for Japanese music might have become a reality by now. In reality, however, these achievements failed to attract a sufficient number of users for sustainable maintenance. While there were issues with the system's defects and usability, the fundamental challenge was the

¹The National Institute of Japanese Literature's Union Catalogue Database of Japanese Texts (<https://kokusho.nijl.ac.jp>) is a representative digital library of Japanese manuscripts and prints before the Edo period, partly including Japanese books after the Meiji period and Chinese Books. You can also find materials related to traditional Japanese music in the National Archives of Japan's Digital Archive (<https://www.digital.archives.go.jp/index.html>) and the National Diet Library Digital Collections (<https://dl.ndl.go.jp>).

extremely small community of users who needed materials related to Japanese traditional music compared to staff notation.

On the other hand, if the system is too versatile, it may impose additional search costs on users. Furthermore, meeting the specialized needs of users with versatile systems or tools can be challenging. As mentioned earlier, a versatile system that comprehensively handles Japanese classical manuscripts may not adequately organize metadata descriptions specific to Japanese music or the musical structure. Inadequate metadata is a major factor in reducing the findability and accessibility of digital resources, which can raise serious questions about the sustainability of the digital library.

5 FUTURE DIRECTIONS

Therefore, systems and tools need to position themselves appropriately between specialization and versatility. To meet the needs of specialists, it is necessary to develop systems or tools dedicated to specific domains. However, excessive specialization may obscure the connections and relationships between adjacent materials, potentially isolating them. It is necessary to seek out systems and tools that are specialized enough to meet the needs of users who approach digital music libraries with a wide variety of musical interests, while at the same time being versatile enough not to divide the music culture as much as possible.

This is a very challenging task, but one good thing is that the domain of non-Western music does not yet have as robust an established digital infrastructure as Western music. For non-Western music-related materials, which are still insufficiently organized, there remains the possibility of considering the development of systems and tools that are both versatile and specialized in order to build a network of music resources that encompass the entire musical culture. By collaborating with researchers and librarians in the field of music to build a network embracing music resources around the world, it would be possible to preserve digital music resources that reflect the inherent diversity of musical culture in a sustainable and accessible manner.

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