

Comparative Study of the Gayageum and the Koto

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Abstract

There are a variety of East Asian zithers, including Chinese guzheng, Japanese koto, Korean gayageum, Mongolian yatga, etc. sharing striking similarities. This paper makes a comparative study between the gayageum and the koto in terms of their structural characteristics, basic playing techniques, historical significance, origins and tuning methods.

Keywords

Gayageum, origin, koto, playing technique.

1. Introduction

During the Qin Dynasty in China, the zheng was widely popular. Throughout successive dynasties, the zheng experienced further development in China, subsequently influencing the birth and evolution of similar instruments across East Asia. In the early 8th century, the thirteen-string zheng of the Tang Dynasty was introduced to Japan, eventually evolving into traditional Japanese instruments such as the gakusou, chikusou, and zokusou (commonly known as the koto). The gayageum, also known as the Korean zheng, is believed to have been popular in the Gaya confederacy in the southern region of Silla, Korea, during the 6th century, modeled after the Han zheng by the Gaya king. Therefore, the gayageum and the koto are East Asian string instruments that bear significant resemblance to the Chinese guzheng. This paper conducts a detailed study on the origins, structural features, playing techniques, and historical significance and influence of the gayageum. Additionally, it provides a thorough overview of the origins, tuning methods, and performance techniques of the koto. The study reveals the shared lineage of these instruments, highlighting their distinctive natures and characteristics, and uncovering the cultural commonalities in East Asian music. Both the gayageum and the koto are widely used instruments within the musical traditions of their respective countries and ethnic groups. Their inheritance and development have been shaped by various geographical, cultural, social, and political factors in each nation and among each ethnic group.

2. Origin of the Gayageum

The gayageum, also known as the Korean zither, is a traditional Korean plucked instrument with a long history. It is mainly popular in the regions of Jilin Province, Heilongjiang Province, Yanbian Korean Autonomous Prefecture, and the Korean Peninsula. The instrument has a history of 1500 years since the Silla Dynasty in Korea. Legend has it that King Gasil, imitating the Chinese guzheng, created the gayageum, making it akin to a replica of the guzheng. The gayageum is also listed as a provincial-level intangible cultural heritage in Heilongjiang Province and is exhibited in the Mudangjiang Korean Ethnic Museum.

Around the mid-19th century, some Korean people suffered continuous hardships. In order to survive, many of them were forced to migrate to Northeast China. They settled and lived there

for generations, becoming part of the 56 ethnic groups in China. Initially, these migrants took the initiative to clear and develop land for agricultural purposes in Northeast China. As more and more Korean people migrated to Northeast China, the Chinese government not only did not prohibit them from coming to China but also encouraged them. As long as they were willing to come to China and cultivate the land, regardless of where they came from, China chose to accommodate and accept them, making these people Chinese citizens. With such a policy in place, a large number of Korean people migrated to China. Some of these migrants even fought against Japanese in the Second Sino-Japanese War with impressive fearlessness and courageousness. The Korean people are good at singing and dancing, and they like to express their joy through these art forms. The gayageum is one of their favorite instruments.

3. Construction of the Gayageum

The gayageum and the Japanese koto share many similarities with the Chinese guzheng while also exhibiting differences. Without careful scrutiny, the differences between the gayageum and the koto may be overlooked. Both are traditional plucked string instruments. Generally speaking, the gayageum is relatively smaller, with a smaller soundbox and a deeper tone. It features a right-side head and a left-side tail. On the soundboard, each movable bridge supports its according string.

There are two kinds of gayageum; the Pungryu gayageum and Sanjo gayageum. The Pungryu gayageum is also known as the gayageum for court music, a very ancient form of the instrument. The tail section of the Pungryu gayageum resembles a goat horn and lacks a bottom soundbox, resulting in very low volume. Initially, it had 12 or 13 strings. The string number and the wood choice further reduce its volume, producing a deep and muffled tone. The Pungryu gayageum is usually reserved for court music performances during grand festivities, banquets, and other ceremonial occasions.

In contrast, the Sanjo gayageum, also known as the gayageum for folk music, is primarily popular among the masses for playing folk tunes. Thanks to cultural exchanges and advancements in craftsmanship, the gayageum has undergone continuous improvement and development, resulting in variations such as the 21-string and even the 25-string gayageum.

Unlike the guzheng, the gayageum is played in a different seated position. Performers typically sit cross-legged on the floor, placing the head of the gayageum on their right leg and the tail on the ground, directly playing the strings with the fingertips. In contrast, the guzheng is supported by a stand, allowing the performer to sit on a chair while playing, which significantly improves the performer's finger stability and emotional expression, resulting in highly expressive musical performances.

4. Playing Techniques of the Gayageum

The playing techniques of the gayageum share many similarities with the Japanese koto and the Chinese guzheng. The right hand's thumb, index finger, middle finger, and ring finger are all used for playing the three kinds of instruments. However, techniques involving the little finger are relatively more frequent in the gayageum. Techniques for the right hand include plucking, struming, vibrato, arpeggio. The left hand's techniques include vibrato, pressing, sliding, and kneading the strings.

During gayageum performances, there is no need to wear finger picks, and the fingers do not need to be bent. The strings are plucked outward vertically, and at the same time, there is a muting movement after playing each note, resulting in a softer and muted sound. The performance also includes various techniques such as single notes, double notes, and chords.

Gayageum performers could also play simple polyphonic music. Traditionally, the gayageum usually does not modulate or change its mode during performances, unlike the guzheng.

Compared to the guzheng which often employs vigorous and emotionally charged techniques like striking and sweeping the strings to express excitement, the gayageum tends to be more gentle and subdued. Therefore, it is more suitable for playing monophony and accompanying singing, adhering to a more conservative and traditional approach.

With the change of times, the gayageum has evolved to include a heptatonic scale, enriching its musical range and expressive capabilities. This innovation equips gayageum with a modern repertoire and performance style to better meet people's aesthetic needs. Hence, the gayageum has become more dynamic and appealing to contemporary audiences.

5. Historical Significance and Influence of the Gayageum

As the influence of the gayageum continues to expand and its popularity grows, it has gradually gained widespread application and development in the Korean region. Many enthusiasts spare no expense in purchasing high-quality gayageums made of superior materials with excellent tone and quality for collection or performance. The gayageum has also become a staple of court music, being performed at important royal and aristocratic ceremonies. Gradually, the government began to attach importance to the inheritance and development of the gayageum. There are not only college programs dedicated to the gayageum, but also courses to better gayageum performances and cultivate a large number of outstanding Gayageum players.

At this point, the gayageum not only prevailed in court music but also used in folk music. Common folks, literati, and even aspiring intellectuals often enjoy playing the gayageum to express their emotions, whether in times of melancholy or joy. As a result, the gayageum gained widespread popularity and unprecedented prosperity, pushing its development to new heights. Significant advancements were made in crafting techniques, performance skills, and composition, establishing the gayageum as the King of Korean Instruments and solidifying its position as a representative instrument of the Korean community. Subsequently, different schools of gayageum emerged, led by prominent figures such as Kim Chang-jo, An Ki-ok and Choi Ok Sam who made indelible contributions to the development of the gayageum.

6. Origin of the Koto

The Tang Dynasty in China was a period of unprecedented prosperity in various fields such as politics, economy, culture, and diplomacy, making it one of the strongest nations in the world at that time. It was also a time when China had extensive cultural exchanges with neighboring countries, such as Silla, Baekje, Goguryeo, and Japan. These surrounding countries were deeply influenced by the Tang Dynasty politically, economically, and culturally. China's inclusive social atmosphere provided an excellent environment for mutual learning among different countries and ethnic groups.

During Japan's Nara Period, the country dispatched numerous envoys to China to study Chinese culture, with a primary focus on learning about China's ritual and music system and culture, musical techniques, notation systems, and more. As Japan's transportation and shipbuilding industries were not as advanced as in modern times, these envoys risked their lives traveling to China on small boats to acquire knowledge. Consequently, the cultural knowledge they brought back to Japan was considered exceptionally valuable, and Japan highly valued and cherished these hard-won cultural treasures, diligently studying and protecting them. Thus, the thirteen-string Chinese guzheng was brought back to Japan and widely disseminated, initially being used only in courtly settings like in China. The repertoire played was traditional and limited at first, but gradually the masses started to contribute to its development. Japan

developed its own playing styles, instrument-making techniques, and gradually diverged from the developmental trajectory of the Chinese guzheng, forming its unique style. Japanese people began to independently think and appreciate the instrument, ensuring its continued inheritance and development. In summary, the Japanese koto has an inseparable kinship with the Chinese guzheng. Even today, the Shosoin in Nara, Japan, still preserves a large number of precious historical artifacts from the Tang Dynasty, including musical instruments, scores, notation systems, and other valuable documents, all of which serve as important evidence of Japan's absorption and assimilation of Chinese culture.

7. Tuning and Playing Techniques of the Koto

Initially, the koto, much like the gayageum, was used in courtly music, employed during royal celebrations and other noble occasions. It primarily played traditional monophonic melodies or served as an accompanying instrument playing fixed patterns as a backdrop. It has thirteen strings arranged from outer to inner, far to near, who are named by the numbers 1-10 and three Japanese words "to, i, and kin." In terms of mode, it completely adopted the twelve-tone equal temperament brought back from China, with only changes made in nomenclature. Common modes include hira-choshi, kumoi-choshi, hira-joshi, iwato-choshi, ryukyu-choshi, taishikicho, among others.

In terms of playing techniques, the Japanese koto is highly similar to the modern guzheng, with only differences in terminology. While the variety of finger techniques is not as extensive as in the modern guzheng, the right-hand techniques of both instruments include resting, sweeping, hooking, and chopping, as well as various types of double-finger techniques such as big pinch, small pinch and double notes. Left-hand playing techniques of the koto are the same as those of the gayageum and the guzheng, but they are a little simpler with only the basic ones. Left-hand techniques involve pressing the strings to produce different pitches, referred to as pushing and pulling in koto terminology[2]. Pushing is similar to the portamento technique of the guzheng, where the pitch of a note is changed by pressing down the left hand after it is played. This technique is also known as pressing. Pulling is the tremolo technique in the modern guzheng. When the right hand plays a note, the left hand simultaneously presses and vibrates the corresponding string using the fingertips of the index, middle, and ring fingers, creating a soft and melodious sound that is very pleasing to the ear.

Similar to the guzheng, playing the koto requires the use of finger picks. While the finger picks used for the guzheng are called yijia, those used for the Japanese zither are called tsume. Usually made of ivory or plastic, the yijias are generally bound with adhesive tape for wearing during play while tsumes are attached to the fingers using cat skin. Different styles and schools of the koto may have subtle differences in the tsumes they use, but performers can choose the most appropriate ones to showcase different playing styles when performing different pieces[3].

Renowned Japanese composer Minoru Miki is one of the most influential and representative composers of koto music. He made indelible contributions to the development of koto music. Minoru Miki and his wife Keiko Nosaka reformed traditional Japanese koto music thoroughly. They first created the twenty-string koto and then the twenty-one-string koto. Their ongoing innovations not only revolutionized traditional koto music through improvements in materials, craftsmanship, expanded tonal range, and revised scores but also propelled its internationalization. In 2001, he published the *Compilation of Genji Monogatari Creations* and in 2004, the People's Music Publishing House, Beijing, China published his koto scores, *Minoru Miki's Koto Works (Collection of Koto Poems)*, which has been recognized and disseminated by performers worldwide [1]. In *Collection of Koto Poems*, works are arranged according to the four seasons: winter, spring, summer, and autumn. For example, works about spring include *March and Budding*. His works not only depict the vitality of all things in the four seasons but

also express his expectations for the development of the twenty-one-string koto, as if the twenty-one-string koto, like the changing seasons and everything in the world, is perpetually vibrant and full of life. Minoru Miki's works cover a wide range, including symphonies, chamber music, solo works, ensemble works, solo vocal works, and choral works. In many of these musical compositions, the koto has an indispensable role, pushing the koto to the forefront of the world stage and once again confirming the common wisdom of what belongs to the nation, belongs to the world.

8. Conclusion

This paper explores the origin, structural construction, basic playing techniques, and influence of the traditional Korean plucked string instrument, the gayageum. It reveals that the migration of a large number of Korean people from regions like the Korean Peninsula to areas such as Jilin Province, Heilongjiang Province, and Yanbian Korean Autonomous Prefecture in China brought their traditional ethnic instrument into China and allowed it to flourish. In contrast, during the Tang Dynasty, Japan sent numerous envoys to China to study Chinese ritual and music system and culture. Later, due to their unique geographical features, ethnic traits, and cultural distinctions, they adapted the guzheng into the koto, reflecting their own national identity. The paper also summarizes the origin, modes and playing techniques, as well as representative composers and their representatives works of the koto[4].

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