# Constructing the digital database of Chinese ancient music notation at Shanghai Conservatory of Music

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#### **ABSTRACT**

China has a long history of music notation. When did music notation appear in ancient China? In what forms were these notations? In what way can these notations be effectively used in research? This paper tries to focus on three main points to answer these questions: the main types of notation in ancient China and East Asia, the ancient notations we have collected at the Shanghai Conservatory of Music, and how to use the website as the digital notation database in academic research.

#### CCS CONCEPTS

• Computer systems organization → database

### **KEYWORDS**

Music notation, Ancient China/East Asia, Digital resources

#### 1 INTRODUCTION

China is a place where ancient music notations originated and Chinese ancient music notation has greatly influenced on many regions in Asia, especially those in East Asia. When did the music notation appear in ancient China? In what forms were these notations? And how do we use the website as a digital database in academic research? To answer these questions, the paper tries to focus on the following three main points:

- 1. The main types of notation in ancient China and East Asia:
- The ancient notations we have collected at the Shanghai Conservatory of Music
- 3. How to build up our website of notation database

### THE TYPES OF NOTATION IN CHINESE HISTORY

The earliest record of Chinese drum notation is found in the Liji Touhu (Fig 1 《礼记·投壶》) which was edited in Confucius' works in the Han dynasty(200 BC).

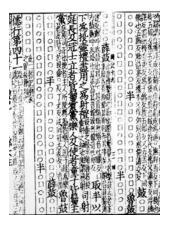


Figure 1: 1 from Liji Touhu

And the earliest qin notation appeared in the 6th century (Fig 2). The notation relates the finger and position for the left hand and the way in which strings are played by the right hand. From these two instructional sentences, we can see a pitch can be played. This type of notation is very complex and was simplified in the Tang dynasty. This revised notation is called Jianzi (減字) notation.



Figure 2: Youlan notation.

At the beginning of the 20th century, the pipa notations were discovered in western China in the Dunhuang Cave, which were in use before the 10th century AD. The original scores are preserved in Paris of National Library in France (BNF).



Figure 2: Dunhuang Pipa Notation preserved in BnF.

### 3 THE ANCIENT NOTATIONS WE HAVE COLLECTED

We have collect more than 80 kinds of notations, among which there are:

<u>Miyamoto Nangu Biwa fu</u> written in 838 (preserved in Japanese Kunaicho); <u>Five strings Biwa fu</u> written in 773 (preserved in Kyouto *Yomei Bunko*). There are many other musical instrument notations besides the pipa/biwa. <u>Hakuga no Fue fu</u> (bamboo flute of <u>Hakuga</u>, edited by <u>Minamoto Hakuga</u> in 966). <u>Jinchi Yoroku</u> (So fu/ Zheng pu, 13 stringed long zither, edited by <u>Fujiwara no moronaga</u> before 1192). <u>Hosyou Fu</u> (mouth organ, edited in 1201). <u>Sinsen syoteki Fu</u> (mouth organ edited in 1303), and many qin and vocal notations in the time of 17-18<sup>th</sup> century.

## 4 HOW WE BUILD THE WEBSITE FOR ANCIENT NOTATION

It is of great significance to collect ancient music notations in China and East Asia and build up a website as a digital database for research worldwide. Currently, we have been building such a website. The first task is to scan the notations we have collected. So far, we have scanned more than 8000 pages. Next step, we are going to provide a brief explanation to each of these notations. Examples are as follows:

- I, Jieshi Tone Youlan
- 1, Notation Name: Jieshi Tone Youlan
- 2, Classification: the notation of gin
- 3, Writer: Qiuming :(? AD.590)
- 4, Writing Time: the reign of Wu Zetian of the Tang dynasty (during the AD684-714)
- 5, Material Quality and Print: handwritten on paper
- 6, Standard: L 423.1cm; W 27.4cm (total 4954 words of Chinese)
- 7, Preserved Place: Tokyo National Museum in Japan
- 8, Explain:

Jieshi Tone -Youlan (TB1393) was a qin (seven strings long zither) notation in 6<sup>th</sup> century. Handwritten in the Tang dynasty, it is the earliest notation in China we have ever discovered. Currently, it is preserved in Tokyo National Museum in Japan. The notation is 423.1cm long and 27.4cm wide, comprised of 10 pieces of paper assembled end to end. On each piece, there are 25 lines, each of which contains 20-25 words. The whole notation includes 242 lines with 4954 Chinese words in total. One roller serves for a scroll. At the beginning of the notation there is preface of Jieshi Tone – Youlan subtitled by its another name Yilan. The music piece, shown in the preface, was transmitted by Qiuming who was a recluse in 6<sup>th</sup> century. The following is a music piece of 222 lines Chinese which narrate the way of playing. At the end of notation is the name list of 59 pieces of music.

Accomplishing the construction of this digitized database of music notations will be greatly helpful to researchers and people who are interested in Chinese and East Asian music notation worldwide by visiting our website in which intend open in the first half year of 2018.