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## **Art History**

# A REFLECTION ON THE INTONATION IN ERHU PERFORMANCE

## Lian ZHOU<sup>1</sup>

<sup>1</sup>Sichuan Minzu College, Kangding, Sichuan 626001, China

### Abstract

Erhu (Chinese two-stringed violin) is one the most representative ethnic stringed instruments in China, and plays an important role in Chinese folk music. In the practice of Erhu performance, intonation has been troubling many Erhu players. Starting from the existing problems of Erhu intonation, this paper expounds the influence on the intonation from the four aspects of temperament, hand type, change handle and finger distance, and puts forward the corresponding correction methods: on the basis of slow training, standardize the left hand type and strengthen the training of traditional pentatonic scale, so as to improve the performance level of Erhu players.

The purpose of this paper is to hope that the follow-up scholars can get inspiration from it and continue to pay attention to Erhu performance and study it deeply, so that Erhu's teaching and performance will have a better development prospect in the future.

Keywords: Erhu performance, temperament, intonation, countermeasure.

### I. INTRODUCTION

Erhu originated in the Tang Dynasty, dating back thousands of years of development history, its beautiful, soft tone, and rich expressiveness, known as China's most unique ethnic stringed instrument [1]. In the course of Erhu playing, the intonation is the basis for the performer to achieve the perfect performance effect, which is the core of Erhu playing. Since the Erhu has no taste, no fretboard, and various factors of complex and changeable directly affect the control of the Erhu intonation, intonation is the most important of many playing skills [2]. Therefore, intonation is one of the important technical indicators to measure the level of Erhu players.

## **II. THE IMPORTANCE OF THE ERHU INTONATION**

Note that the sound level, refers to the accuracy of the tone system of each sound level, in the first line of the four tone attributes. Intonation is the core and fundamental of music and plays an important role in all forms of musical performance [3]. It can be said that the absence of intonation in music is like the loss of soul and spiritual support, and the beauty of music cannot show its essence.

Pitch is the pitch of a musical instrument when it is played or sung, and can match the pitch of a certain rhythm. The pitch is one of the three basic elements that make up music. As a traditional Chinese bowed string instrument, the Erhu is used to change the effective string length by pressing the string fingers and then to change the pitch [4]. Erhu sound is beautiful and soft, similar to the human voice, and full of singing. Good intonation is not only the prerequisite for a good timbre, but also the most basic and important means of music image, which is the guarantee of the success of music melody [5].

Good intonation can help to shape the image of music, make the audience breathe with the music, feel the beauty of the situation, and form a series of perception, imagination and other aesthetic activities. At the same time, it is necessary to make a virtuous circle in every link of performance, which requires the player must have good intonation. It plays an immeasurable role in improving and optimizing the timbre control, performance skills, individual qualities and so on. Therefore, in the Erhu playing process, intonation is one of the most problems for every Erhu player.

## **III. FACTORS AFFECTING THE INTONATION OF ERHU**

In the course of Erhu performance, various complex and changeable factors directly influence the control of Erhu pitch. In the following, the influence on intonation is discussed from four aspects: temperament, hand shape, handle changing and finger distance.

#### 3.1 The influence of temperament on intonation

To solve the problem of intonation, the Erhu players must understand the rhythm, which is closely related to the problem of intonation. The temperament is divided into three types: the twelve equal temperament, the five equal temperament, and the pure temperament. Western music uses the method of twelve average temperament, which is to divide an octave interval into twelve equal parts according to the equal proportion of frequency. An equal part is a semitone, which is perfectly represented in the piano keys. Every two adjacent keys are semitone relations, and their pitch relations are equal, which is convenient for transposition and off key. Due to the difference in the quality of the temperament used by each instrument, such as a fixed pitch instrument dulcimer, Pipa, piano and so on, they all play with a mean of twelve, and the Erhu can only play with a mean of twelve when they play with these instruments. However, as a Chinese folk stringed instrument, Erhu is commonly used in its performance as a five-degree temperament. Most of the national musical works in our country are made by using the five-dimensional temperament, which is the most widely used in our country. The five-degree phase temperament is based on the distance between the third note and the second note in the double tone column. Therefore, the five-degree phase temperament is mainly suitable for the melody of beautiful music and beautiful musical instruments. The two inner and outer strings are pure five-degree, and it is clear that the Erhu is a single-melodic instrument that is very suitable for the five-degree phase temperament. If the Erhu needs to be played with the orchestra, the orchestra mainly uses the equal temperament in the ensemble. At this time, the Erhu can only tend to be homogeneous, so that it can perfectly integrate with the band and make the sound more harmonious. To sum up, it's obvious that Erhu, a single melody instrument, is mainly used in soloist for the quality of the five tone temperament, while in ensemble for the quality of the twelve tone temperament. Only when the performer has a deep understanding of the relevant knowledge of melody, can he solve the problem of intonation according to different playing methods and styles.

#### 3.2 Effect of hand shape on intonation

Correct hand-type posture is a prerequisite for good intonation. The correct hand type is that the hand is held on the piano pole, the fingers are naturally relaxed, the angle between the piano pole and the hand is gradually reduced according to the string of one, two, three or four fingers, and the exact position of the tiger mouth is also required. The position of the left tiger's mouth directly affects the shape of the hand according to the strings and the accuracy of the pitch. Normally, the distance between the left tiger mouth and the golden line should not be more than one centimeter when playing the first position of erhu. It is especially emphasized that when pressing the four fingers, the wrist should be taken as the axis.



On the premise of relaxing the fingers, the wrist should rotate downward naturally, and the fingers should extend downward to press the strings. At this time, the hand shape will change greatly, and the angle formed is the minimum angle.

After the completion of four finger string pressing, the wrist and finger movements must be restored as soon as possible, so that the hand shape can be restored to the state of one or two finger string pressing. If the hand shape movement is not restored in time, it will have a great impact on the pitch and timbre. This is also the main reason for many players to make noise and inaccuracy in the timbre of the sound. Therefore, the influence of hand shape on intonation is a problem that can not be ignored by every erhu player. The correct hand shape can be competent for all kinds of finger spacing in the works, making the sound more solid and accurate, and making the whole performance more coherent and fluent.

In addition, accurate hand type according to strings is the guarantee of Erhu intonation. When the fingers lift the fingers and press the strings, it is necessary to do a good job in the independent movement of the fingers. The fingers relax naturally, rise and fall quickly and elastically. Generally, the fingers lift the fingers low according to the strings, and the press tone should be solid and powerful, so that the fingers can stand on the strings stably, and try to avoid the sliding of fingers when they press the strings and affect the intonation. The finger should be placed in the middle of the inner and outer strings. If it is too inclined to the inner or outer strings, it is easy to cause the imbalance of the inner and outer strings' pressure and affect the intonation. When erhu is playing, there are a series of problems, such as over exaggeration of finger opening and closing action, non relaxation of finger muscles, over bending of finger joints, non downward palm of hand, etc., which will lead to slow response of fingers, lag of pressing sound, weakness of ache, unbalanced force of pressing string, and difficulty in controlling pitch.

#### 3.3 The effect of changing handle on intonation

The skill of changing the handle of erhu is the process of the big arm driving the small arm, and Hukou moving up and down the piano pole. The skill of changing the handle is particularly important in Erhu performance. At present, due to psychological and physiological factors, most of the erhu learners are lack of self-confidence in the process of changing handlebars, the left tiger mouth is stiff, the finger joints are tense, and the movements are deformed, resulting in inaccurate changing handlebars. The standard handle changing action emphasizes the coordination of tiger mouth, wrist, fingers, big and small arms, elbow joints and other parts. The arms should be naturally drooping, and the arms should not be raised. When changing the handle, the arm and thumb should be relaxed naturally so that the tiger mouth can easily move on the piano pole. When the handle is in place, all links of the left hand must be restored to the state before the handle position, and know the distance between adjacent handles well. After repeated practice, the purpose of changing from conscious to unconscious is realized, which requires the player to have the ability to predict the phoneme in advance, otherwise blind changing will be difficult to ensure the accuracy of the intonation.

#### 3.4 The effect of finger pitch on intonation

Finger pitch refers to the distance between the fingers on the strings, mainly highlighting the interval relationship of various degrees. The main reason why erhu is difficult for other musical instruments is that there is no grade and fingerboard. Each sound played depends on the player's own grasp of the fingerdistance. The fingerdistance of different modes is different. At the same time, the fingerdistance of different positions is infinitely variable. For example, in D major (1-5 strings), the outer chord empty string is Suo, the first finger is La, the second finger is Si, the first finger and the second finger are whole, or G In major (5-2 strings), the empty strings of the outer strings are re, mi and fa. The distance between the first finger and the second finger is a semitone. It is obvious that the deviation of the distance between the two fingers occurs in the same handlebar due to the different modulation. Another example is that in the same string, one finger and four fingers form a four degree interval, and each adjacent finger forms a two degree interval respectively, and each adjacent finger can form a four degree interval and a six degree interval respectively. Therefore, the performer should make full use of hearing, touch and vision, and try to overcome the malpractice caused by different factors, such as the inaccuracy of finger distance, the disorder of mode, the number of the degree of indistinct sound, etc., so that the finger can quickly reflect the finger distance of each interval, and ensure the accuracy of each phoneme when touching the string.

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## IV. THE CORRECTION METHOD OF ERHU INTONATION

In order to master good intonation, Erhu performers must rely on scientific and effective performance methods. All the technical training in music is not achieved overnight. Only by using scientific, reasonable and effective practice methods can they achieve twice the result with half the effort.

#### 4.1 Slow training as a foundation

Slow training is a magic weapon for Erhu intonation practice. It is like a magnifying glass, which can show clearly every sound played. Generally, when playing slow melody, intonation stays in the brain for a long time, with deep memory, and the brain is more agile in grasping the accuracy of sound. On the contrary, when playing fast melody, intonation stays in the brain for a short time, which is deceptive, and the problem of intonation is not obvious. Therefore, only through slow training can we make the pitch stimulate the brain, make the left hand and brain consistent, and make the action and consciousness consistent, and then slowly speed up after the slow training controls the intonation. In practice, some players blindly pursue speed for fast practice, which eventually leads to a series of problems, such as fuzzy intonation, wrong repetition, unclear timbre, stiff muscles, etc. Whether playing music or Etude, the performer must be slow to fast, step by step. Slow training should be run through every link of learning, so as to better control the intonation.

#### 4.2 Specification for left hand type

The standard left hand shape is the necessary condition to guarantee the intonation. Generally, the accurate left hand gesture should be a semi-circular one, also known as the "semi grip" hand type, with the palm facing down, a small gap between the adjacent fingers to relax naturally, and the joints of the fingers to bend naturally. In the training of hand movements, the fixation of hand movements can be strengthened through the practice of five tone scale and seven tone scale. Only by standardizing the hand movements, can the performer ensure the accuracy of intonation and make the whole performance process easy and comfortable.

#### 4.3 Strengthen the training of traditional pentatonic scale

The practice of Erhu scale mainly includes five tone scale, seven tone scale and half tone scale. In Erhu's works, the traditional pentatonic scale is widely used in our country, especially in the music adapted from traditional folk music elements, almost all of which are created by pentatonic scale. The pentatonic scales are duo-re-mi-suo-la. There is no semitone in the pentatonic scale, and the timbre is distinct. When practicing the pentatonic scale, we can strengthen the training of Intonation by constructing the triad in turn on the five scales, and practice in other national modes respectively, which is helpful for the players to grasp the pure quarto and the big triad finger distance accurately in the pentatonic scale training, so as to achieve the goal of good intonation.

## **V. CONCLUSION**

Nowadays, the development of Erhu performance art is gradually moving to a mature stage. Erhu works emerge in an endless stream and performance skills are constantly updated, which has higher standards and requirements for performance skills of performers. The most basic skill in Erhu performance is to grasp the intonation, which can be said to be the life and soul of Erhu performance. The players must pay attention to it and use scientific practice methods to improve their performance skills.

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### AUTHOR

**Zhou Lian** (1986), male, born in Yueyang, Hunan Province, lecturer, master, director of instrumental music teaching and research office. Research direction: Erhu art performance and theoretical research.

# РАЗМЫШЛЕНИЕ О ЗВУЧАНИИ МУЗЫКАЛЬНОГО ИНСТРУМЕНТА ЭРХУ

## Жу Лиан<sup>1</sup>

<sup>1</sup>Колледж Сычуань Минцу, Kangding, Сычуань 626001, Китай

### Аннотация

Эрху (китайская двухструнная скрипка) - один из наиболее репрезентативных этнических струнных инструментов в Китае, играющий важную роль в Китайской народной музыке. В практике исполнения Эрху звучание имеет особое значение для многих играющих людей на Эрху. В данной статье рассматриваются проблемы тонального звучания на Эрху, анализируются факторы, влияющие на звучание инструмента Эрху в настоящее время, и выдвигаются соответствующие решения с целью повышения уровня мастерства игры на Эрху.

Цель данной статьи состоит в том, чтобы последующие ученые смогли получить от неё вдохновение и продолжали уделять внимание углубленному изучению работе на Эрху, чтобы у преподавателей Эрху была лучшая перспектива развития этой профессии в будущем.

Ключевые слова: исполнение Эрху, темперамент, интонация, контрмера.

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