

### The Pitch Accuracy Problem and Training Methods in Erhu Performance

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Abstract: In the study of a musical instrument, intonation is the cornerstone of playing ability and musical expression, and the importance of its training cannot be ignored. As a national bow string instrument with no finger board and taste, erhu is more difficult to control the intonation than other instruments. However. the intonation problem in erhu performance is not only caused by a single factor, not only the subjective factors and training methods of practitioners, but also the reasons for the debugging of the instrument. Therefore, when facing the intonation problem of erhu performance, we need to analyze it dialectically, and try to improve and solve the problem with effective methods as far as possible.

Keywords: Erhu Performance; Training Methods

# 1. Orientation and Musical Instrument Debugging

In the erhu performance, if it is found that the pronunciation is inaccurate, most of the time our reaction is not accurate, and often ignore the various parts of the instrument itself is also one of the factors affecting the intonation."If you want to do a good job, you must first sharpen the instrument". Only by improving the tools can you maximize their performance, so it is crucial to understand and debug the instrument components.

#### 1.1The Shaft

Erhu set pitch is adjusted by twisting the piano shaft, the traditional erhu inside and

outside the shaft is respectively at the top of the shaft in the round hole, but the shaft and shaft contact surface has certain gap, sometimes in the tuning or harp according to the sound will appear shaft sliding, strings loose, give us tuning set, grasp the pitch brought a lot of hidden trouble. In order to solve this problem, we can sprinkle rosin powder on the contact surface of the shaft and the round hole of the rod, so that the friction is not easy to run the shaft. We can also configure "fine tuning" on the string, so that the intonation problem caused by the shaft.

### 1.2A Thousand Jin

It is the part of the fixing and cutting of the erhu string. The difference of the string determines the length of the string will cause the change of the tension. The width and width of the string (the distance from the string to the outside of the column) also affects the establishment of the playing hand shape and the play of the basic technology. So the position and width of a thousand catties should be determined according to the size of the age and the size of the hand, after the position is fixed in the relative time do not move at will, so as not to cause a thousand catties loose and the randomness of the distance, is not conducive to the stable training of intonation.

#### 1.3 The Code

The Intermediary Conductor Between The String and The Skin. The material selection and placement of the piano code play an important role in the sound quality, timbre and volume of the erhu. First of all, the variety of piano code should be selected and changed according to the old and new erhu, the tightness of the skin, the weather and air humidity changes, so as to obtain better sound quality. Secondly, the piano code should be placed in the center of the skin. The offset position will make the skin press uneven, make the vibration of the skin is not sufficient, which will have adverse effects on pronunciation, resonance and intonation. Again, after the erhu inside and outside empty string, according to the pure inside and outside five degrees and overtone found timing, should check whether the inside and outside string is not in the same height, because the string tension imbalance will affect the high pitch, we

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can adjust the depth of the code string groove make inside and outside strings in the same level, in order to obtain the balance of the string tension.

#### 1.4 Chords

The strings of the erhu are now generally metal strings. The thickness, hardness and hardness of the strings have an important influence on the timbre and the strength of the players touching the strings. First of all, the choice of string brand and texture should take into account the tightness of the skin and the material of the wood, such as the hard strings, the tight and soft strings, and the strength of the strings should be compared; after the replacement of the different soft and hard strings, the strength of the strings should be adjusted to reduce the difference in pitch. Secondly, when installing the winding strings, pay attention to keep the internal and external strings at the same level as far as possible, so that the tension tends to be balanced. Thirdly, when the use time of the strings is too long, causing the five degrees intonation of the empty chord and the five intonation between the two strings, the two strings should be replaced together to facilitate the guarantee of intonation and the stability of timbre and sound quality.

#### 1.5 The Bow

Bow is mainly composed of bow rod and bow hair, and bow hair consumables in the erhu parts, new bow on the horsetail surface hair scales, these fine teeth can very good let rosin attached to the bow hair, is beneficial to the string friction, but bow in use after a long time, the tail on the horsetail is gradually smooth, will appear on rosin phenomenon, thus friction reduction, makes the player in the bow need to increase the force of the bow hair, and pronunciation is not ideal. If the pronunciation is not good, the resonance is poor, so it will affect the correct pronunciation, and is not conducive to the stability of intonation. So when the above situation occurs, we should replace the piano bow in time.

# 2. Pitch Accuracy and Actual Performance Operation

When the instrument adjusts to the "best state", the playing intonation is about to be controlled by our subjective operation. Erhu performance



is an art that needs to rely on the combination of hearing, touch, vision and psychological state. So is the case of performance intonation. Only by understanding which operations in the actual performance will bring intonation problems can we effectively solve the problems during practice.

# **2.1 Vague Cognition of the Concept of Intonation**

The concept of pitch position for many players is general, single and interval pitch distance cannot accurately hear, so that when the piano is not able to accurately judge their pitch, and many times will not correct pitch repetition, in the long run to establish accurate pitch concept, will also form the wrong pitch auditory habits.

#### **2.2 The Piano Holding and Press the Finger Method is Correct or Not**

Holding the piano and pressing the finger belong to the left hand technique, and whether the method is correct determines the quality of the left hand technique and skill. First of all, if the piano body is unstable and the column is too left or right, it will increase the burden of the left hand, resulting in tension on the arm and the whole body, and difficulties in changing the handle. Secondly, the Angle between the forearm and between the column and the side of the arm and the body, and between the body and the column also plays a key role in playing and various technologies. Thirdly, the state of the wrist and palm when holding the piano also determines our fingers and intonation. For example, the wrist is excessively convex or concave, and the palm is flat when holding the piano. These situations will cause the deviation of the Angle of the string and affect the stability of the tone. Finally, the state of the finger joint of each finger and the strength of the string also determine the level of the sound. Therefore, holding the piano has an important influence on the quality of the left hand, and attention should be paid to whether the training method is correct.

# 2.3 Repeated Accumulation of Error Exercises

Many piano players pay little attention to whether their practice methods are correct and effective in daily performance training. They believe that basic skills training will improve as



long as it reaches a certain amount of time and quantity. The focus is on the length and types of practice, but they do not know that their practice is constantly accumulating mistakes. Pitch accuracy is related to auditory habits, inaccurate pitch repeated listening, auditory memory is inaccurate sound, similarly, the muscles of the fingers through repeated training, and the fingers with muscle memory will be in the position we think "right". Therefore, extensive practice and fast practice will make us miss the attention to details, and cannot improve the precision of intonation control. Only accurate and slow practice can ensure the effective unity of our "vision, touch and listening".

# 2.4 The Physical and Mental State of the Player

Erhu performance is not a single body movement. Good performance skills and performance state cannot be separated from our active thinking and positive mentality. The physical and mental state has a great impact on the quality and efficiency of our performance. We can not use a negative, blame way to play the piano, to establish a sunshine thinking, relax the body and mind, mobilize the initiative of their brain, before the performance of the inner pronunciation state, interval distance, melody lines prepared, and then through the careful identification of the actual performance of the sound to constantly adjust and improve. Whether it is simple scale practice or complex music performance, we should pay attention to the pursuit of beautiful sound, practice with good physical and mental state, and then step by step to make progress.

#### **3. Training of the Pitch Level**

Among the factors that affect the intonation, the player's own listening ability to distinguish the intonation is also particularly important, which requires us to pay attention to the method of practice in the usual intonation training.

### **3.1 Auditory Training**

The intonation problem of erhu pitch is reflected in the tone of the left hand, the root of which is the ambiguity of the concept of playing pitch and pitch, so that we can not adjust the deviation of the pitch in time. Dimension practice need to start from the

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interval, we can use a fixed pitch instrument to sing practice, through the single, interval, scale of die to develop stable pitch hearing, then practice the erhu also with the piano, electronic instrument or calibrator to proofread pitch, improve their pitch accuracy and acuity, through repeated calibration practice slowly establish the correct pitch concept, then applied to the erhu, will find our pitch perception and the control has the overall rise.

### 3.2 The "Resonant" Training Session

Erhu need by the left hand string and right hand bow wipe string vibration produce different pitch and sound, our fingers stay on the strings and the longer the vibration time, the longer the vibration duration of each sound, we need to use the vibration time to create the biggest resonance, to intonation training. First of all, it is necessary to develop the inner auditory habit of pre-construction and pre-listening pitch. After pulling out a pitch, we should think of the next pitch in advance, so as to ensure that the pitch after the fall finger is stable and accurate enough. Secondly, after pulling out a sound, the finger should not leave the string too quickly. Let the finger stay on the string for a little longer time, and make good use of retention to order the sound to become a lingering tone to produce continuous resonance on the string. The remaining echo can better help us to pre-construct the sound interval, and the remaining fingers can make us better grasp the sound pitch distance. Develop the habit of inner singing, make good use of keeping the fingers, know the sound well, treat every note seriously, and get rid of the habit of "almost" pitch, so as to fundamentally practice the intonation of the erhu well.

### 4. Epilogue

Erhu is difficult to grasp in other instruments, so in the process of learning, intonation should be the lifelong pursuit of every piano player. This technology that cannot be ignored is one of the foundations for our pursuit of better musical expression. Only by improving and controlling our own technology, making technology serve music and expressing our voice with instrumental music, we can achieve "no distractions and piano" when playing.

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