

# *On the Bowing and Articulation in Cello Performance*

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**Abstract:** In cello performance, reasonable bow pronunciation is a key performance technology, and the level of application of this technology will directly affect the comprehensive effect of the whole cello performance. Therefore, cello performance must fully realize the importance of strengthening the use of bowing and articulation technology in their daily training performance. They should scientifically combine different types of music works, reasonably use sports pronunciation skills, and pay attention to the coordination of left and right hand on bowing and articulation, so as to improve the performance quality and completion of cello in an all-round way. This paper will further analyze and discuss the bowing and articulation in cello performance.

## **1. Introduction**

Cello, as an indispensable and important middle bass string instrument in modern orchestra, is sought after and loved by many music art lovers. The timbre produced by cello performance is rich and full, which can help performers fully express the deep and complex emotions of music works. However, due to the large size of cello, there will be higher requirements for the players to use the bow skills and strength. If the players can not skillfully use the bow pronunciation skills, it will seriously affect the cello performance. Therefore, cello players must strengthen the study of bow movement pronunciation skills to ensure that they can develop a scientific and standardized bowing and articulation habit and help themselves effectively improve the quality of cello performance.

## **2. The Right Hand Bowing Technique in Cello Performance**

In the practice of cello performance, the performer should correctly understand the sound of the right hand bow, which often determines whether the timbre of cello performance is good or not. Therefore, in the daily cello performance training, players need to strengthen the right hand bowing and articulation skills. The first is the right hand bow movement, whether it's springing bow, legato, detache, ricochet and other bowing and articulation skills need to be the same as the right hand scientifically pulling the bow to make a sound. The different position, direction and depth of the right hand bow pulling will lead to different timbre and quality of cello performance. If cellists want to ensure that the timbre they play has the characteristics of natural fullness, rich and deep, they must scientifically master the correct right hand bowing and articulation. If cello players want to keep the gap between the bow hair and the string, they must use the right index finger to exert appropriate pressure on the bow. If the pressure is too large, the string will not produce vibration effect, and if the pressure is too small, the string will not produce sufficient vibration. In view of

this, cello players should strengthen the control operation of the right index finger exerting pressure on the bow rod in their daily training, and also pay attention to whether the contact point between the right bow and the string is kept in the correct position. [1]

The speed, position and method of the right hand bowing of cello players will affect the timbre of the bowing. In order to ensure that the timbre is pure and beautiful, the players need to find the right contact point between the bow hair and the string. It is worth noting that only when the bow and string keep vertical running state, the string can effectively produce scientific and reasonable regular vibration, and promote the cello to play pure and beautiful sound. If the angle between the bow and the string is more than  $50^\circ$  when the player moves the bow, the string will not be able to produce sufficient vibration or even make any sound. When using cello to perform in practice, the performer should reasonably use the corresponding bow point according to the actual style, emotion and strength of the music works. At the same time, he needs to maintain the appropriate bow speed and standardize the use of bow techniques, so that he can finally obtain the wonderful timbre changes of different levels. [2] For example, when the cello is used to play the classic music *Swan*, the whole music is mainly composed of bows. In the process of bowing, the performer should pay attention to the bowing touch point to maintain in the range of 3 to 6 cm between the fingerboard and the bridge. In this range, the cello bowing can produce the most beautiful timbre.

### **3. In Cello Performance, Changing Bows and Strings and Being Legato Bows and Changing Strings with the Right Hand**

#### **3.1 Changing Bows and Strings with the Right Hand**

The essence of the skill of changing bows and strings with the right hand is to use the arm reasonably to complete the effective control of the bow based on the scientific control of the bow with the right hand fingers. In the process of changing the bow and string of the right hand in cello performance, the performer should ensure that the two work together, and continue to walk after changing the angle of the string. When changing the bow and string with the right hand, there will be a string changing point in the middle of cello playing. For the purity of cello sound when changing the angle, the string changing point is equivalent to a static state. Cello players in daily training, must pay attention to effectively shorten the traces of changing bows and strings in the process of moving bows, and also reduce the traces of changing bows, which is conducive to help their music works to be smooth and complete, in order to ensure the continuity of cello music performance. In the training and learning of string changing technology between strings, the performer should know how to correctly use the bow splitting operation to achieve the goal of continuous string changing of different two strings, so as to make the sound of cello playing complete as if walking upstream on the same string. [3] In the process of changing bows and strings with the right hand, performers should also pay attention to make their bows work fluently and simply without any trace, so as not to affect the smooth and complete expression effect of the music works and present a perfect audio-visual feast for the audience.

#### **3.2 Being Legato Bows and Changing Strings with the Right Hand**

Being legato bows and changing strings with the right hand emphasizes that in the process of string changing, it is necessary to ensure that it seems to be completed on the same string as much as possible. As the bridge of cello is in an arc state, different strings will have different bow angles. Through scientific and standardized use of string changing with bows, players can effectively connect the sounds of different strings. When using the right hand bowstring changing pronunciation skills, the performer should first pay attention to the bow walking at the angle close

to the two strings, which is conducive to more easily and quickly adjusting the bow moving angle change in the process of string changing; then the performer should pay attention to ensure that the bow moving angle is gradually close to the next string while walking the first string, so as to provide reference for the next string changing. Finally, in the process of bowing and string changing, the performer should scientifically use the big arm to optimize and adjust the actual angle of string changing until the sound on the next string is switched. [4] If a performer wants to play all kinds of musical works with cello, he must do the simplest training of switching between two strings. In daily training, he should learn to use his ears to judge and analyze the timbre of different strings, and then use the skill of bowing and string changing to connect the sounds of different strings scientifically and effectively.

#### 4. The Coordination of Left and Right Hands in Cello Playing

In cello performance, the bow movement should pay attention to the cooperation between the left and right hands. The performer should clearly realize that the principle of pressing the string with the left hand first and then pulling the string with the right hand is an important basis for the close cooperation between the left and right hands. In the daily training of left-hand and right-hand cooperation, cello players should first make the right hand follow the left hand. Only when the left hand presses the string, the finger strength is strong enough to ensure that the right hand will make a strong and full sound. Then, the performer should pay attention to the coordination between the speed of the right hand bow and the frequency of the left hand string pressing. He should not move the right hand bow too fast, slow the left hand string pressing, or the speed of the right hand bow can not keep up with the frequency of the left hand string pressing, which will affect the performance effect of cello. [5] When playing fast-paced works, cellists should pay attention to maintaining a relatively stable bow speed of the right hand. When it comes to the stage of continuous pronunciation, cellists should pay attention to the scientific coordination between the action of pressing the left hand string and the action of changing the right hand string to avoid the conflict between them and cause the sudden sound affecting the audience's sense of hearing. When the cello player is performing the transposition of the left hand, he should make the left hand walk in front of the right hand, and if he is going to change the strings, he should make the right hand change the bow and walk in front of the left hand. In cello performance, the fundamental purpose of left-hand and right-hand coordination is to master the techniques of changing strings and handlebars, so as to reduce the practical traces of “changing”, and prevent the interruption caused by melody changing in the process of music performance.

#### 5. Conclusion

In conclusion, bowing and articulation is a very important technique in cello performance learning and training. Every player must attach great importance to learning and mastering the technique. The use of cello bowing and articulation skills emphasizes the contact relationship between the left and right hand bows and strings. The players should reasonably use the corresponding bow handling skills according to the music works style, and pay attention to the coordination and cooperation between the left and right hands, so as to ensure the perfect performance effect of cello and bring a sufficient shocking audio-visual feast for the audience.

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