The Elements of Bowing and Common Types of Bowing Techniques in Violin for Beginners

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Abstract

The violin has a beautiful sound with a very rich singing effect, but the playing technique is very complex, in playing the violin, the left hand is responsible for the string pressing, vibrato, handle change and other techniques, the right hand is responsible for holding the bow and bowing, but both hands are equally important, and you can't have one without the other. The sound of the violin is mainly produced by the vibration of the right hand holding the bow and rubbing it against the strings. This action of rubbing the bow against the strings is called "bowing", and the sound is determined by the vibration of the strings, that is to say, it is determined by the technique of bowing. Therefore, the right hand is the key to the sound of the violin. This article presented the elements of bowing in violin for beginner level.

Keywords: The Elements of Bowing; Common Types of Bowing Techniques; Violin for Beginners

Introduction

The pressure of the bowing should be adjusted according to the strength of the bowing and the bowing technique required, using a high pressure for strong forces, such as harmonics, and a low pressure for light forces, such as spiccato. But in any case, do not use too much pressure to lose the stability and elasticity of holding the bow. If the player tries to play loud by using the strength of the fingers alone, instead of using the muscles of the right arm, the fingers will grip the bow stick very tightly, and all the strength will be wasted on the tightly gripped bow stick. If you do not have the correct amount of power, or if you do not transfer the power through the bow stick, the articulation will not be very good, and you will produce a very unpleasant and harsh sound (Gerle, 2012).

The thumb plays many roles in bowing: it acts as the fulcrum of a lever, supporting the index and little fingers in increasing or decreasing the pressure on the bow stick; it also equalizes the pressure on the ring and middle fingers; the thumb also helps the index and little fingers to act as a rudder, i.e., it acts as the fulcrum of a lever, adjusting the direction of the bowing when changing bows and moving it closer to or away from the picking horse. Note that the index and little fingers work together, but they move in opposite directions, with one pushing out and the other pulling in.

The fundamental principle of bowing is the natural functioning of the right arm, hand and fingers. The entire right arm technique is based on a "spring system". The elasticity of the arm, hand and fingers should be as natural as the elasticity of the push, foot and toes when we walk (Galamian,2012).

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In order to produce an even tone, the bow and string contact point must be stable, i.e., the bow must be parallel to the bridge and at right angles to the string, and the bowing rail must be in the same plane as the string, without swinging the arm up and down or it will hit the string next to it and create a messy sound.

A stable, even sound is bow to string to use different pressures, when playing at the root of the bow, do not press the bow no matter how strong the playing is, and the power of the bowing should be reduced until the bow hair can move well above the middle of the bow, the power of the bowing has to be increased at the tip of the bow. pressure, which requires constant adjustment of the bow pressure by the finger joints and arm muscles.Also, the bow should move at an even rate, not fast or slow.In bowing practice, there is also the problem of uneven bow speed. From the point of view of physics, the lower bow is affected by its own weight and gravity, so it is easy to bow too fast; the upper bow is affected by friction, so the bow speed is not easy to control. Uneven bow speed will affect the stability of articulation. The best way to train long tones is to use a metronome. Play four beats per bow at 60 settings per minute. Once this speed is even, you can practice with six or eight beats per bow or with slower settings (Liang, 2019).

When we play a down bow from the root, it is the upper arm that initiates the motion. Since the bow must run at right angles to the string, only the upper arm can make the bow run in this direction; the use of the forearm itself can only move the bow closer to the bridge or away from it; the right hand itself can only produce lateral movements; the wrist can only be adapted to the movements of the hand or the forearm. The fingers themselves can only move a very small distance. Continuing parallel to the bridge and moving toward the middle of the bow, the upper arm still controls the bowing, but the forearm gradually joins in (because the upper arm is no longer able to keep the bow parallel to the horse). Around the middle of the bow, depending on the length of the player's arm, the bowing is dominated by the forearm, and it goes all the way to the tip of the bow. When playing the upper bow, the movement is reversed, but the principle is the same: at the tip of the bow, the forearm starts bowing, and at the middle of the bow, the upper arm leads the bowing to the root of the bow (Gerle, 2012).

From the above, it can be concluded that the upper arm controls the lower half of the bow's bowing, while the forearm controls the upper half of the bow's bowing. because the root of the bow is heavier, less hair should be used at the root than at the tip, and the hairs should be flattened out gradually past the middle of the bow to almost all of the hairs at the tip of the bow (Galamian, 2012).

Elements of bowing and common types of bowing techniques for beginners

The standard for bowing is firstly to ensure that you play with a healthy sound when bowing, and secondly that the sound is clean and penetrating. In the question of violin articulation, both the right and left hands have some influence on articulation, the left hand mainly determines the intonation, while the right hand bowing style determines the quality of articulation. Overall, in order to produce a good sound, the right and left hands are indispensable in mastering the techniques, and under the premise of good intonation of the left hand, the right hand bowing technique becomes particularly important, which directly determines to a certain extent the articulation of the sound.

The basic bowing is based on the elastic movement of the bow, fingers, arm and wrist, and the straight line movement of the bow. In addition, there are three important factors related to good or bad articulation: the pressure of the bow, the contact point of the bow and the string, and the speed of the bow's movement.

The pressure of the bow

There is a direct correlation between bow pressure and volume: at the same bow speed and contact point, a high bow pressure results in a high volume, while a low bow pressure results in a low volume. Bow pressure has thus become the most direct means of expressing the intensity of music. There is also a close relationship between bow pressure and sound quality, with a stronger sound when bow pressure is high, and a softer sound when bow pressure is low. When the bow pressure is applied to the strings, attention should be paid to the capacity of the strings; if the pressure exceeds the capacity of the strings, the sound quality will be corrupted and the sound will be "broken"; on the other hand, if the pressure placed on the strings is too small, the friction of the bow hairs will not be able to produce enough friction, and the sound will be weak.

According to the weight distribution of the bow construction, the weight of the bow root position is the heaviest, and the further to the bow tip, the lighter the weight is, when an even sound of even size is needed, the pressure exerted by the right hand on the bow must be uneven, and if you want to play an even sound from the bow root to the bow tip, or from the bow tip to the bow root, it is necessary to regulate the sound by using the weights of the arm and the hand, and in the case of the bow root, as the bow itself is heavier and the friction on the strings is larger At the bow root, because the bow itself is heavier and has more friction on the strings, it is necessary to reduce the weight of the hand and arm to control the volume; the closer the bow section is to the bow tip, the lighter the bow becomes, the less friction on the strings, and the sound becomes smaller, so it is necessary to utilize the weight of the hand and arm to compensate for the volume less than that part of the bow root by applying more pressure by pressing down on the bow bar with the index finger in order to achieve the effect of an even tone.

In the process of bowing with the right hand, it is necessary to be reasonable to master the strength, not to use brute force, and to make the pressure elastic. When the pressure given by the right hand is too great, on the contrary, it will be noisy and break the sound, and then it is necessary to utilize the lifting of the pinky finger to alleviate the pressure. On the contrary, insufficient pressure from the bow will result in a weak and hoarse sound. This is when the index finger has to increase the pressure.

In addition to all this, the correct pressure must be placed on the correct point of articulation. Strings near the bridge have high tension and need relatively more pressure; the point of articulation near the Fingerboard has weaker tension and can't take much pressure. In addition, since the thickness of the four strings is not the same, the pressure that each string can withstand is not the same. To make the thickest G string get full vibration, a little more pressure is needed, and the thinnest E string is the opposite, so the bowing should be adjusted according to the strings being played in time to adjust the pressure of the instrument.

Another point is the physics of gravity. It is easier to utilize gravity when an object moves downward. When playing a down bow, gravity plays a big role at the moment and tends to increase the speed and volume of the bow, which needs to be controlled; but when playing an up bow in the opposite direction of gravity, more power and faster bow speed are needed in order to play the up bow and the down bow evenly with the same length of the bow section being used (Bronstein, 1981).

Carl Flesch, in his book "Problems of articulation in violin playing", has also argued that there is a close relationship between the pressure of the bow and the tightness of the bow hair, and that the degree of tightness of the bow hair is a matter of individual playing habits. If you play with a taut bow, you have to put the side of the bow hair evenly on the string, otherwise the pressure of the bow stick will not be easy to control, and if you play with a loose bow hair, you have to play with the bow upright, otherwise the bow stick will touch the string (Flesch, 1961).

When playing some double note melodies, if the melodic voice needs to be more prominent, the bow pressure on the two strings is not necessarily equally distributed, and it is necessary to apply more pressure on the string where the melody is located, or to reduce the pressure on the string where the relatively less important note is located.

If the melody is in the bass voice, due to the range, you should be more careful not to let the high notes overshadow the bass melody. When playing purely octave passages, if you want a thicker tone, put more pressure on the bass strings, and think of the upper octaves as a means of strengthening the volume and thickening the sound; if you want a bright sound, you can bias the power toward the treble strings; if you want to play a relatively soft mood, you should inhibit the power of the treble strings, so as not to make the sound too sharp. If you want to emphasize the bowing pressure on both strings when playing double tones, you can make slight adjustments to the bowing plane while keeping both strings sounding at the same time, so that the bowing plane is slightly biased toward the string on which you want to apply more bowing pressure. Changing the bow plane can be done by adjusting the height of the right elbow (similar to the action of changing strings).

Bow and string contact point

The contact point is where the bow hair rubs back and forth on the strings to produce the best sound. The contact point changes according to the different needs of the tone, so this part is also called the palette of the violin. It is within this very limited range that the player achieves the most colorful variations in tone. The point of articulation is usually on the strings between the end of the fingerboard and the bridge, the center of this distance is the easiest to articulate, and many teachers recommend that beginners learn bowing at this contact point.

When bowing, the bow hair should be parallel to the bridge and usually form a right angle of 90° with the string, and the place where the bow hair and the string touch each other is called the contact point. The contact point is very important in bowing and music performance. If you want to play strong and deep music, you can find the contact point near the bridge; if you want to play gentle and quiet music, you may want to find the contact point near the fingerboard. If you want to get a balanced tone, i.e. a tone between "soft" and "loud", play in the middle of the bridge and the fingerboard (Flesch, 1960).

Figure 2-7: The point of contact is in the middle.
Source:https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202202&filename=1022480193.nh

In playing, the contact point is not set in stone, but has to be adjusted according to the needs of various playing effects. We use the contact point close to the bridge when we are playing music that is strong and emotionally charged (See figure 2-8)

Figure 2-8: contact point close to bridge
Source:https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202202&filename=1022480193.nh

When playing weaker volume, such as some quiet and soothing music, the contact point should be close to the fingerboard position (See figure 2-9)

Figure 2-9: Contact point near the fingerboard
Source:https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202202&filename=1022480193.nh

But there are many more aspects to consider as you learn. For example, when you hold a high fret with your left hand, the contact point needs to be more toward the bridge, and each string has a different contact point: the thinner the string, the closer the contact point needs to be to the bridge, and the thicker the string, the farther the contact point needs to be from the bridge. The thicker the string, the farther the contact point should be from the bridge. When playing long tones or playing multiple tones with one bow at a slower bow speed, playing closer to the bridge will result in better sound quality. Because the tension of the string is higher near the bridge, it needs more pressure for articulation, and the bow speed should not be too fast; on the contrary, the closer to the fingerboard, the less pressure the string can withstand, and it needs to be played faster in order to make the string vibrate fully (Zhou, 2022).

Of course, the so-called "good contact point" under discussion refers to the production of a good sound in the general sense of the word, i.e., a sound that is thick and full, with the strings vibrating fully. However, in some cases where a special effect is desired, e.g. an ethereal effect, the bow should be played even above the fingerboard.

The choice of contact point also shows the player's personality. Every player has his own unique preference, but all of them have their unique expressive power. Violinist Fritz Kreisler is very fond of playing close to the fingerboard and close to the bridge, he plays the bow taut, bowing amplitude is not large, change the bow frequently, which makes his performance has a charming singing flavor; musician Sarasate is known for his elegant and pure sound, but he does not like to play close to the bridge. The musician Sarasate is known for his elegant and pure sound, but he does not like to play close to the bridge. Lev Arabon in

his book "Eminent violinists of the past and present" used the words of Leopold Semenovich to comment on Sarasate. Lev Arabon, in his book "Eminent Violinists of the Past and Present", used the words of Leopold Semenovich to comment on the fact that Sarasatee played without any effort or tension, and that there were no traces of the bow's movement on the strings. Carl Flesch comments that Sarasatee's bow is exactly in the center of the point between the bridge and the fingerboard, and sometimes close to the bridge (Zhan, 2008).

The speed of the bow movement

The speed of bow movement is the speed at which the bow is drawn laterally across the string. The bowing speed is generally proportional to the bow pressure if the contact point is constant: when the bow pressure is high, the bow should be played fast, otherwise the string will not be able to withstand the vertical pressure of the bow and "break" the sound; if the bowing speed is fast, the friction of the bow hairs on the string will not be enough if there is not enough pressure, which will result in a weak sound. On the other hand, if the bowing pressure is light, the bow should be played slowly so as to create enough friction with the strings. When bowing close to the saddle, the bowing speed needs to be relatively slow, or else you will get a "sharp" sound; when bowing next to the Fingerboard, the bowing speed needs to be relatively fast, or else you will easily get a "raspy" sound with poor sound quality. The bow speed next to the Fingerboard needs to be relatively fast, otherwise the sound quality will be poor and "raspy".

In terms of the effect of the speed of bow movement, slower bowing speeds are less loud, and faster bowing speeds are relatively louder. Changes in strength are often accomplished by speeding up or slowing down the bow speed. When using the full bow for crescendo notes, it is important to distribute the bow segments so as to leave enough bow segments for the following notes to speed up the bow, and to play the preceding notes with shorter bow segments in order to create a crescendo effect; when playing dim segments, it is also necessary to gradually slow down the bow speed accordingly. Where there is a sudden change in power signatures, the bow speed should be adjusted immediately. For example, when playing accented notes, the bowing speed and pressure should be suddenly increased.

The speed and strength of the bow portray the colors of the music. The use of fast bowing can be used to brilliant effect in pieces of intense intensity and expressive grandeur. For example, in the Brahms Concerto in D major, the rhythmic and propulsive chords of the first four bars contain a determined mood, and the détaché 16th notes of the last four bars require very fast bow speeds, with half-bow or even longer bow segments, and with contacts as close to the bridge as possible, while ensuring a quality tone. this continues the fullness of the tone and the grandeur of the first four bars, with a mountain of power and momentum. This continues the full sound and volume of the first four bars, and gives it a mountainous momentum.

Score: Brahms Concerto in D major, bars 248-255

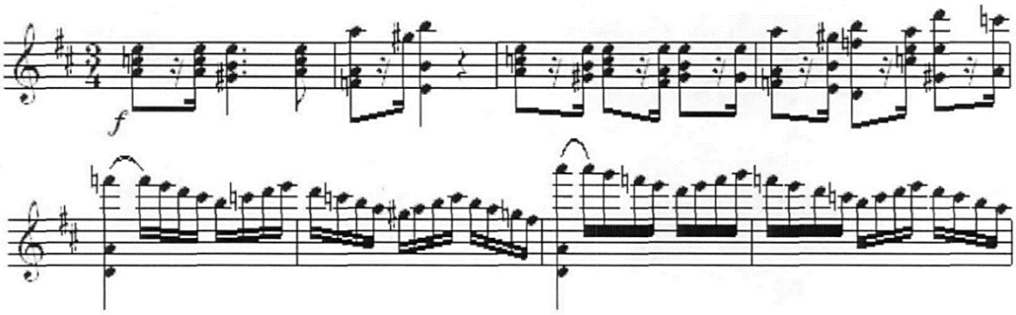

Figure 2-10: Brahms Concerto in D major, bars 248-255
Source:Baidu Photos

Slow bowing is more elegant and quieter when playing soft, lyrical pieces. “Violinist Prof. Ding ZhiNuo once recounted an example of her conducting an orchestra in a rehearsal of Bach's Chaconne: during a weak passage, the orchestra was unable to lighten the volume to achieve the quiet mood required by the piece. Even though everyone was bowing with very light pressure and with the contact point close to the fingerboard, the result was still unsatisfactory. The solution was to change the short line in the legato bow stroke to a long line. This way everyone must play more notes in the legato, the bow speed is slowed down, the volume is lightened, and the quieter mood of the piece immediately comes through” (Zhan, 2008, p.12).

However, in general, there is no absolutely correct and stereotypical mode of bowing technique in music. Every violinist chooses the bowing technique that suits him/her best, but their performances are all very wonderful and full of persuasive power. The violinist Han Li believes that bowing techniques can create the content, character and momentum of the music, and that the most expressive bowing techniques should be chosen according to the understanding and treatment of the music as well as one's own technical ability (Han, 1981).

Conclusion

These are the principles and methods for beginners to learn the principles and methods of bowing skills, these principles and methods are very important, it is decisive for us to continue to learn the violin in the future whether or not, after all, the bowing is every beginner must first master the skills, if the beginner ignores these parts, then he will be very difficult to improve their own level of playing in the future, hard to hear the rough and harsh tones will even Many beginners will not be able to keep learning.

In addition, playing the violin requires the cooperation of both hands, but the cooperation between the right and left hands needs to be trained in steps, no matter whether you have learned the basics of the right hand first or the basics of the left hand first, in the end, you need the cooperation of both hands. It is a gradual and long learning process. Almost always, many violin musicians introduce the practice method by explaining the right hand technique separately from the left hand technique, and only explain the cooperation of both hands at the end. The purpose is that the violin needs to be trained scientifically and systematically.

If in the absence of proper bowing if coupled with the left hand pressing the strings, both hands work together undoubtedly increases the burden of beginners to learn bowing, the right hand bowing method once the wrong will cause the whole body tension will also affect the left hand play, it will make the left side of the body of the shoulder joints, muscles, elbows,

hands, fingers at the same time tense, and the work of the left hand will be seriously affected. On the other hand, a wrong hand shape of the left hand and tension in the strings will have the same effect on the right hand. While ensuring that each finger has the strength to lift and fall independently and agilely by the root of the finger, it is also important to ensure that each note reaches its pitch position accurately, and to make the notes move in a clear and coherent manner. Therefore, the key to a good violin performance in the future is to have the right hand posture and to have a natural and relaxed coordination between the two hands.

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