The Expression and Significance of Special Playing Techniques in Jazz Saxophone

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Keywords: Azz Music, Sachs, Special Performance Skills, Performance Ability

Abstract: In order to develop and inherit the special performance methods and techniques of saxophone jazz performance, the collection and classification of special performance techniques, combined with their own practice, the thinking mode and music performance of the special performance techniques of jazz saxophone are recorded, and the objective analysis and discussion are carried out. This paper analyzes its acoustic characteristics and performance, studies its application value and significance, puts forward the characteristics of works requiring special performance techniques, music scene characteristics, and expression of emotion characteristics, and analyzes the rationality of use. Practice has proved that this study has a good reference for the application of special performance techniques.

1. Introduction

Because of the strong subjectivity of jazz saxophone improvisation, there is a certain difficulty in reverse research, resulting in different opinions, difficult to form a system. Each performer pursues individual sounds, neglecting to inherit and develop numerous techniques. It is necessary to study the musical examples of jazz saxophonists of different styles in different periods and summarize them in order to inherit and develop them comprehensively.

According to the review of relevant studies at home and abroad, the development and evolution of jazz music are mainly analyzed in relevant literatures abroad. In How Jazz Thinks, Paul F. Berlina provides a systematic account of the preparation and thinking that goes into jazz improvisation, and in particular an objective analysis of some of the tacit and inherited traditions of jazz performance. [1] In "How to Listen to Jazz", Ted Gioia made a detailed analysis of a series of important jazz evolution and style development of representative musicians, especially the analysis of each musician's musical thinking [2], which broadened the perspective and the number of representative albums and singles in the writing of this paper. John F. Svedder's Listening Guide to Jazz provides an in-depth discussion of the various styles that revolutionized jazz. [3] The outstanding bass master Victor Wootton used a unique perspective to set up a virtual character in "The Rest of Life", elaborating on the importance of cooperation for jazz music and how to understand step by step that cooperation is one of the most important foundations of music [4].

Through a large number of musical examples of jazz saxophone players of different styles in different periods, this paper summarizes the special playing techniques of various foreign schools, and combines the physical function and thinking mode of using these skills in performance with my own. Through reverse reasoning, this paper analyzes the psychological or physiological state of predecessors when using and developing these skills. This paper summarizes the rules of the use of these techniques and their significance to performance, and provides a rational reference for jazz saxophonists to use the relevant techniques.

  DOI: 10.25236/ehmit.2023.068

2. Related concepts of "special performance techniques"

2.1. "Special technique" in jazz saxophone

(1) The definition of conventional skills and "special performance skills"

In addition to the conventional performance techniques, the remaining special performance techniques are recognized and have formed a certain scale of use, or the relatively unpopular performance techniques used by a small range of players. Many special playing techniques are in a sense the refinement and variation of several conventional techniques. For example, when it comes to a slide, there are a number of refines and variants: up slide, down slide, down slide, up slide, down slide, up slide, down slide, up slide, down slide, up slide, up slide, up slide, up slide, down slide button, up slide button, down slide button. These ten kinds of glissando can also be combined with more other conventional skills and special playing techniques to form more special playing techniques. Here, only a single special playing techniques and common combination methods are summarized and analyzed.

(2) The physical advantages of the saxophone's extensive use of various "special playing techniques"

The invention of the saxophone was actually a combination of other instruments, the body of the ophileide and the head of the bass clarinet, which gave the saxophone the volume of a brass instrument and the flexibility of the mouth muscles of a woodwind instrument. The left hand button of the saxophone uses the oboe's Trebert No. 3 button system, and the right hand uses the boehm button system on the recorder or flute, which makes the saxophone's key flexibility very flexible; The saxophone adopts a cone body, which makes the saxophone an open wind instrument of the octave overtone system (an instrument based on the upper overtone series), different from the closed wind instrument of the twelve-degree overtone system used by the clarinet, which makes the basic high and low octave fingering of the saxophone the same, and further enhances the logic and flexibility of the instrument. The American Symphony Orchestra League even issued a formal ban on the saxophone in the 1920s, so when the instrument began to be used by jazz musicians in the 1920s and 1930s, There is no clear definition of what is "correct" to play the saxophone, as it requires perfect intonation, precise timing, and pure and even sound. Therefore, various playing methods have been developed, so that it can use a large number of "special playing techniques".

2.2. Common playing scenes of "special playing techniques"

(1) "Special playing techniques" used by saxophone in ensemble

The "special playing technique" used in the ensemble is more commonly used in the standard jazz big band. Since big bands pay attention to prior arrangement, each member of the jazz big band will have a relatively fixed score. Saxophone in the jazz big band needs to play several roles at the same time, such as playing melody, enhancing harmony, Background, collective Soli, etc. Especially when playing melody and collective solo, the musical surface or in rehearsal, will be required to use very rich expression skills. Due to the large number of people in the big band and the loud sound of the individual wind instruments, if these expressions only use the strength of the individual time, they will be drowned in the collective volume. If you want to obtain the expression with the appropriate volume of the auditory obvious, you need to exaggerate the original expression, and the exaggeration technique is a variation of some conventional techniques. This type of variation generally does not change its original expression effect and pitch tone direction, but uses other auxiliary means to make the sound of the original technique more drastic changes.

Among them, the most representative is the upslide and downslide controlled by keys or mouth. When the sound moves towards the last note of a phrase, the note moves up or down about eight degrees from the standard pitch. This slide is to quickly play the ascending or descending semitones to the specified pitch range. And with its chromatic scale playing fingerings with mouth movements and breath to strengthen the coherence between each semitone. The reason why this glisson cannot use the seamless continuous glisson played by the clarinet at the beginning of the blue Rhapsody is that the jazz big band is a multi-person ensemble, and it is difficult for different instruments and their players to uniformly control the frequency and speed of the seamless continuous glisson,

which easily leads to multiple minor second or even multiple differential notes appearing at the same time. The big glisson with the use of keys, although there is no smooth glisson like trombone playing, it can have a fixed standard and text expression in rehearsal by using the key as the aid of the main mouth breath.

(2) "Special playing techniques" used by saxophone in solo

In addition to the "special playing techniques" used in solo ensemble, there are more highly personalized timbre and sound effects, because most of these techniques are covered with uncontrollable factors in the application process, causing uncontrollable factors in addition to differences in personal performance and hardware differences between Musical Instruments. In particular, there is a big difference between different tone saxophones. It is worth noting that when saxophonists are accompanists, they will switch between the rest points of the main instrument or the lead singer, between the front and back phrases, and between the solos, adding a Fill-In, which is sometimes composed of a short "special playing technique" that is not limited by the main melody in one or two beats.

2.3. The emergence of "special performance techniques"

(1) Imitation of human voice

Jazz was born in the blues, and the early blues were mostly unaccompanied vocals, the earliest accompaniment instrument was usually guitar, and at that time the innovative guitar players would invent various ways to play the Bend in the blues, using glass rods, blades, cow bones and other items to scrape the strings and play. Subsequently, some musicians began to realize that wind instruments can be used to play this kind of music, and when it replaces the status of human voice, it will have a richer timbre and more powerful appeal, and the bent tone in this kind of blues can have a wider use space, whether it is blues music or non-blues music, as long as the bent tone is added, the musical mood will become more vivid. The 12-bar structure of the blues is itself an aberration from the tradition of Western classical music. These widely used bends do not follow the traditional notation, and vary in amplitude and amplitude, boldly shifting between consonance and dissonance.

Vocals and instruments are sometimes very close in timbre. Different instruments replace speech by continuing the melodic and rhythmic patterns characteristic of the language tones of African cultures. For example, the sound principle of the saxophone is the vibration of the single reed, coupled with the cone type open pipe instrument, the lips and throat can directly intervene in the air flow before the saxophone pipe head, which can easily achieve the distortion effect, and has a congenital advantage in the manufacture of human sound color, which is easier to imitate a variety of human voices without the help of other instruments. In jazz performance, instrumentalists and singers interact with each other, and onomatopoeia singing in jazz is believed to originate from the imitation of the timbre of the instrumentalists. Saxophonists are more adept at mimicking blues or jazz singers' timbre modifications, including various vibrato, glissando, and guttural sounds. Especially when the saxophone appears as an accompaniment player, it is usually more necessary to echo the main melody of the singer in the unit of the phrase, this echo in addition to the imitation of the notes, but also to imitate the characteristics of the singer's singing, then it is necessary to use some special playing techniques, such as glissandis, laryngeal sound, pique sound, vibrate sound.

(2) Transplantation and improvement of skills on other instruments

When a big band conductor who lacked a trumpet player asked the saxophone player to use the trumpet part, the problem the saxophone faced at this time, in addition to reading the score and changing the part, was that the emotional technique of the trumpet part in a jazz big band could not be directly replicated on the saxophone, so many experiments had to be done to find the same technique on the saxophone with the same sound effect.

When imitating other single reed instruments, we can directly imitate the personalized skills of the learning object in the record by observing the mouth shape of the flute head when the learning object plays, the activity rule of the lower lip, and the corresponding fingering coordination. Or it can be mimicked directly by sounds like the chords and slides that guitars often use to play blues

music, both of which can be mimicked and transplanted by adjusting the space inside the lips and mouth, as well as the coordination of the fingers when playing glissando. In addition to imitating melodic instruments, it is also possible to learn from rhythm parts and compare the percussion technique used by drums. Through the use of differential intonation skills, overtone skills, with the left and right hand of a number of keys to imitate the drummer when playing double hop on the drum with the left and right hand respectively.

(3) Original skills and skills arising from misunderstandings

The ultimate goal is to create new techniques, but at the beginning must have a sound foundation to create the direction, then will choose some sound foundation and direction that sounds similar to me, and then change on this basis. The way of change includes factors such as their own fingering and mouth shape, as well as Musical Instruments, using different flute heads, whistles, whistles, pickups and effects to modify Musical Instruments, which are representative of a series of modified equipment produced by Oleg company. I appreciate a recording of a musician. In the process of imitation learning, because I can't see how the musician is playing in reality, imitating only by hearing of the ear will lead to the use of different finger-movements and mouth movements, so that the imitation can be barely plausible. When this way of imitation is explored without imitation, new skills and sounds will be produced.

3. Different types of "special playing techniques"

3.1. Lip "special performance technique" acoustic characteristics

Glissando originally refers to an instrument that can distinguish specific pitches, and the specific sound effect is that a note is played without interruption between high and low frequencies. The glisson usually starts at a fixed pitch and slides up or down to change the pitch. The beginning and end may have a fixed target pitch, respectively, or both. According to the different amplitude, speed and duration of sliding, the glisson is divided into various types suitable for different needs. There are three specific ways of producing a saxophone glissando in jazz: mouth-controlled glissando, accusatory glissando, accusatory glissando. The glisson has a wide range of adaptations and is often combined with Growl sounds that do not affect the use of the glisson itself.

(1) Mouth control of all kinds of glissando and slow bending sound

Mouth-controlled glisson does not use fingering changes, but directly fixes the fingering on the target sound, and relies on subtle adjustment of the mouth shape and control of changes in the tightness of the mouth to match the normal fingering. Mouth-controlled glissando is usually within four degrees, Johnny. Johnny Hodges was one of the first masters of mouth-controlled glisson, a technique that gave him a strong personal style. Mouth-controlled glissando is generally divided into mouth-controlled up glissando and mouth-controlled down glissando, and according to the different position of the glissando, it can be divided into mouth-controlled up throwing glissando, mouth-controlled warping glissando, mouth-controlled falling glissando and mouth-controlled falling glissando.

Bend is mostly used in Blue note, when the pitch is used, there is no standard, and it is not related to a reduced pitch, but there is a slight change in pitch, generally played into a flat fifth and a curved third, and the third degree is used as a slide or played between the third degree and the third degree.

Lip-Up refers to an upward glisson in front of the target note to rise to the target pitch, the curve of this glisson and depending on the player, can be played at any time to speed up or slow down or stop, but the overall time value must be within the target note value. The sliding glissando is often used at the end of phrases in musical styles with a strong sense of Groove.

(2) drop glisson and concave bend

Flip refers to the sound effect of first throwing up and then falling down, with a parabolic pitch trajectory, usually achieved by mouth-controlled slide. Smear refers to the sound effect as if it is thrown down first and then lifted up again, the pitch trajectory is opposite parabola, also through the mouth control glide.

(3) Accusing mouth control with glissando and glissando

The African American musicians of non-Creole descent established and developed the school of performance, adding unique glissando and glissando, which gradually became the common skills of some popular musicians. This kind of glissando is a combination of mouth-controlled glissando and accusatory glissando to obtain smooth and large glissando without fault, which is quite difficult. The mouth-controlled glisson is required to seamlessly match normal fingering or alternative fingering. Glissando is the use of glissando to connect two pitches, the amplitude and speed of the glissando and the strength of the glissando are based on the understanding of the player, this connection can be mouth controlled glissando or accusation glissando, or even a combination of use.

(4) Octave chatter

Octave intonation is a large and rapid mouth-controlled up-and-down glissando, but the mouth-controlled glissando has a limited range and needs to be matched with special and unconventional fingling to match the lip trill. The origins of this technique can be traced back to the use and imitation of the brass Shake, in which the brass instrumentalist holds the horn to his lips and shakes a single note in the process of producing a uniform amplitude of repeated up and down glisson, with an acoustic effect similar to that of a wide-interval trills ranging from three degrees to eight degrees.

3.2. Tongue "special playing technique" acoustic features

(1) Double articulation

Double Tongue refers to the continuous, fast and short expression of two different forms of expression, namely the tongue and the air. Tongue speech is the mouth movement of "Tu". The front of the tongue is used to limit the vibration of the tip of the whistle to achieve the mute effect, and then the tongue is quickly withdrawn, and the airflow is instantly entered to form the tongue speech. Exhalation is a "Ku" mouth movement, using the tongue against the roof of the mouth, blocking the passing air, and then quickly retract the tongue, so that the air suddenly into the formation of exhalation sound.

(2) muffled sound

In Half Tongue, the front of the tongue is gently pressed against the whistle to reduce the vibration when playing, which is equivalent to only reaching out when blowing the tongue and not pulling it back. After the whistle is attached with the tongue, the vibration becomes insufficient, the flow of air from the throat into the mouth is also limited, and the volume and controllable force are limited.

(3) The type of lingual sound

slap-tongue There are several different ways of playing the slap-tongue, which can be roughly divided into bass, tap, and plosive. Bass playing, usually used when a precise and rapid bass is required; The flap sound is to maintain a loose and wide air flow into the whistle, but the whistle does not vibrate, and the lower jaw needs to hold more of the whistle than usual, so that the tongue can have as large a contact surface with the whistle as possible; Blasting sound, the central and rear plane of the arch tongue is attached to the whistle, while sucking and shrinking the air pressure in the mouth, forming a vacuum between the whistle and the tongue and the mouth, and then quickly withdrawing the tongue, so that the vacuum is broken and the whistle is loosened, the change in air pressure produces a strong airflow in a short time, making the whistle abnormal violent vibration, and the pitch can be faintly heard.

(4) Soft air sound

Subtone is very commonly used in jazz performance, usually in the lower voice, the tone will become soft and full. The way it is produced is to suppress the upper overtones, the lower jaw is usually positioned closer to the tip of the whistle, and the lower lip is very loosely attached to the whistle and vibrates with the whistle to filter out the higher overtones.

(5) Circular breathing

Cricular breathing: Allowing the saxophone to make continuous sound without being interrupted by breathing in and out. Circular breathing is used as a gimmick in most jazz saxophone performances to impress the audience during the performance, because as an art of time, breathing

is also a necessary aesthetic condition of music, and there are few occasions when the note is played continuously. But there are some saxophonists who can reasonably tastefully use circular breathing for musical aesthetic purposes.

3.3. Fingering "special playing techniques" acoustic features

(1) Alternate fingering

Substitute Fingering (Alternative Fingering), also known as artificial fingering, is a non-standard fingering of wind instruments, which is very common in saxophone performance. When the conventional fingering is difficult to play or cannot be played, alternative fingering can be easily played. Alternative fingering is sometimes used alternately with regular fingering in order to regularly change the timbre of some notes in the melody, consciously making it sound unblocked or blocked. When a long note is played continuously or a vibratory note is played repeatedly and regularly, alternate fingering and regular fingering can be used.

(2) Super treble

Altissimo Note: A technique in which the octaves, twelve, fifteen and higher overtones above the pitch can be played. Through the combination of the mouth and the alternative fingerings, the original alternative fingerings are further extended to obtain the pitch above the normal range of the saxophone.

(3) Compound sound

Multiphonics: A single melodic saxophone can produce multiple equal pitches at the same time, either through specific fingulation or through the use of abnormal mouth movements, by extremely tensing and relaxing the muscles of the mouth, by increasing or decreasing the air pressure inside the mouth, and by lowering the pressure of the jaw against the whistle.

(4) Various types of glissando and appoggiatura

Charge glissando is a saxophone that is interpreted as a fixed pitch instrument, and is produced by finger-playing or mouth control. The expression of charge glissando is more exaggerated than mouth control glissando, and it is often used in jazz big bands or solos where strong emotions are required. Because the initial pitch range of the accented glissando is generally larger and more notes are involved, the accented glissando is more closely related to the anterior appoggiatura and the posterior appoggiatura in improvised jazz dictation notation.

4. The application value of special performance techniques

4.1. Expand the instrument's inherent expressiveness

Realize different colors. In a jazz big band, the saxophone, like other wind instruments, can perform several functions during a performance or a piece, such as playing melody, river forms (short, simple repetitions), enhancing harmony, providing a background to the soloist, interacting with other instruments, and soli.

Break the limits of the instrument. It is easy to use some techniques in development and repetition, such as supertreble, guttural sound, alternative fingering, etc. These techniques change the pitch at the same time, but also change the mood of the music before use.

4.2. The need for sound color representation

Have a personalized sound color. A creative jazz saxophonist with the ability to create a very personal sound and musical language develops an instantly recognizable playing style, and then he will have a large following and begin to imitate it. Unique patterns and riffs or signature riffs are part of the development of a saxophonist's personal sound. In addition to sound quality, the most important thing is the subtle and selective use of various techniques, through the adjustment of fingering, breathing, mouth shape to shape and explore different colors of sound.

Embodies the difference of performance in the ensemble. When imitating another instrument, adding the same sentence pattern can show personalized techniques, especially when imitating the voice of another saxophone. When performing jazz improvisation, you need to listen to what other

teammates are playing, and sometimes you need to play the role of a singer, so that the other side can echo you. At this time, you need some temporary skills to distinguish the main melody from the echo. Players will imitate or echo each other's phrases, and play as similar as possible in a very short time, but at the same time, they need to reflect their own performance characteristics, which requires some special playing techniques.

Independent selection of "special performance techniques". The use of "special playing techniques" in actual performance is always optional, and the performer has a high degree of autonomy in the use of "special playing techniques", that is, the reprocessing of melody and the use of "special playing techniques" in improvisation. In addition to the regular melodies and improvisations, the positions used include the Cadenza of the prelude.

4.3. TA remedy for an unexpected error in performance

Remedy for unexpected vocal range. The initial note range is too high, so when the limit range is reached, in addition to stopping the mold or turning, there is another way that can be defused with special playing techniques to make the mold continue, one is to use the super tenor. A common way of playing a jazz standard is to play each chord continuously. ② Remedy of unexpected rhythm. In jazz, consistency is required, and when accidents occur, some techniques can be used to elevate these accidents to a high artistic level.

As the players become more experienced and skilled, the handling of accidents becomes more and more calm. The audience even assumed that everything in the performance was intentional. An unexpected delay in the beginning of a longer phrase during the performance, when the last part of the phrase is extended, thus entering a harmonic progression that is not part of the phrase. At this time, in addition to shifting the tone, it is also possible to directly cut off the unsuitable fragment behind, and use a glissando class or grace note class technique to connect to the phrase to be used in the next harmony. ③ The remedy of accidental notes. If there is a missound, then the new music must be played based on the missound, and the whole improvisation cannot collapse because of a missound. Some regular special playing techniques are used to make the mispronunciation become the motivation of this technique, and the following performance is smoothly connected, so that the music can maintain coherence and continue.

4.4. Thought buffering and physiological buffering in improvisation

Buffer of thought. In jazz, all saxophonists do not want to play what they have often played, and deliberately try not to play it, eager to constantly play new phrases and create new vocabulary. But when there is no new idea, it is also necessary to play the reserve of spare phrases and phrases, even if the habitual and uninspired use of these words becomes stale by repeated application. But when it comes to the actual performance, everything goes quickly, otherwise the concert stops and the flow of the music is interrupted.

Physiological buffering. The use, timing and frequency of a particular performance technique are also related to the playing time. The saxophonist's facial and jaw muscles, lips, tongue and other muscle groups begin to become flexible and flexible, and they will use various techniques more carefully.

4.5. As a transitional phrase

Connect the stored phonotypes. In the study of jazz saxophone performance, it is often necessary to increase and perfect one's own phraseology reserves by imitating and copying other players' phonological patterns and sentence fragments. For players who are not ready to copy a full solo, small passages and fragments are easier to learn. Generally, a passage is broken into several small passages and finally put together to form the melody of a jazz solo. These techniques often serve as decoration and connection, and are rarely used as independent musical ideas in improvisation.

Adjust your tone timing. Sometimes, improvisation in a chorus is easy to get caught up in a two - or four-bar routine, and the first use will be neat and correct, and it will be boring if repeated too much. This phenomenon greatly enhances the player's ability to cross the syncopation points

between the section and the structure of the piece. One way to enhance this is to combine a technique pattern with other patterns of musical words, which can be used before or after the target pattern, and to extend its original length so that the pattern appears in the most appropriate or desirable position.

The action of the sound conductor. A progressive connection between the last and last note of the previous pattern and the beginning note of the following pattern in a minor second or second degree. And special playing techniques can provide a smooth, seamless connection between larger intervals made up of two pitches. At this time, it is necessary for the performer to use special playing techniques at the junction or end of the two tone patterns to modify the repeated tone, so as to adapt to the rhythm and rhythm of the stress law and chord progression. This is very important in maintaining the fluidity of the playing lines.

5. Conclusion

Domestic jazz saxophone performance in the use of some special performance techniques still stay in the imitation of foreign players, the former research object is mostly the classical saxophone related skills, but many special performance techniques originated from jazz saxophone performance. Through in-depth exploration and analysis of the various and complex special performance techniques of jazz saxophone, this paper draws the following conclusions:

(1) These special playing techniques in jazz are different from traditional classical music in that they are never necessary to play good music, nor are they something to be concerned about at the beginning of learning jazz saxophone.

(2)In the practice of jazz saxophone, on the one hand, it is necessary to conduct an objective and rational analysis of the works that require special playing skills, and on the other hand, it is necessary to reasonably use these unconventional playing skills.

Acknowledgements

The authors greatly appreciate the following sponsors for their support to the study: Soft Science Project of Science and Technology Department of Sichuan Province, “Intelligent NUMERICAL control system based on physical motion control principle” 22RCYJ0005.

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