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BREATH RATIO IN PERCUSSION INSTRUMENTS

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Abstract

This article discusses how musicians who plays on the woodwind and brass instruments of control breathing and influence of its performance. The goal of breath control is able to breathe and control breathing. This control can be achieved with the conscious using of individual organs, structures and muscle groups of the body. Each tool stage requires a different amount of air and pressure. Unlike the unconscious breathing people do in everyday life, such pressure can be achieved through controlled breathing. Breath control is a joint product of consciousness and body. This willpower strengthens the bond between person and instrument.

Keywords: *Woodwinds, brass instruments, breathing, breathing control, diaphragm, psychomotor skills*

In addition to the vital functions of breathing in everyday life, the control of the breathing of musicians playing wooden and brass instruments have different effects on the functionality of breathing. The sound quality of the instrument directly depends on the breathing technique and breathing of the performer. If unconscious breathing leads to contraction and premature fatigue of the body, this negatively affects its tone and intonation.

Breath control plays a key role for all musicians playing on the woodwind and brass instruments. This is inextricably linked with all aspects of music creation, from physical self-awareness and freedom of moving to the forming of a musical phrase, from the forming of individual consciousness in the process of learning to the naturalness of performance. Although it is a natural process, it is formed during life under the influence of emotional, mental, physical, spiritual and environmental factors, and it is a very complex system (Gaunt Helena. 2004, 313).

In a study led by Jane L. Vaughan Middlesworth, she talks about the effects of conscious breath control on daily life. According to Middlesworth, ordinary people in daily life unconsciously breathe deeper and slower, and people who plays drip instruments much more than ordinary people (Middlesworth Jane L. Van.1978).

Compared to those muscle groups commonly used for breathing in daily life, musicians differ in the muscle groups used when performing woodwind and brass instruments. The purpose of breath control is to balance the tone and strength of the sound by satisfying the different amount of air and pressure required for each height of the instrument. This control aims to breathe, hold your breath lon-

ger than in everyday life. It therefore requires the conscious use of muscles and muscle groups are active in breathing.

In their studies, D. V. Stauffer, A. Tuker and A. Buchuis emphasize that musicians playing on the musical instruments are much larger. In a study of 63 male musicians playing on the musical instruments, Stauffer found that when age and height were taken into account, the number of musicians playing on the musical instruments were 8.7% more than ordinary people (Middlesworth Jane L. Van. 1978, 8).

Each stringed instrument requires a different air pressure. This pressure and quantity are proportional to the overall structure of the device plays an important role in the formation of each sound shell and the determination of nuance values. The oboe and bassoon need medium air pressure and little airflow, and the tube needs higher air pressure and less airflow than the flute and other instruments. However, if sounds in the upper octaves of most vascular instruments require high air pressure, then sounds in the lower octaves of the clarinet require greater air pressure than sounds in the upper octaves (Bouhuys Arend. 1968, 266).

This amount and pressure also plays an important role in creating different sound shades and resonances depending on the place of the instrument in the solo and orchestral orchestra.

Breathing control directly depends on the state of the body and the tension of the body. Standing exercises, which for various reasons were not taken into account in the initial stages of training, can have a negative impact on breathing control and reduce the quality of work.

In a study by Thurman, he notes that the most important factor affecting the respiratory system and causing these changes is the correct position (Thurman L. ve PRYOR A. ET AL. 2000, 331). Wills and Cooper, who have conducted various studies on the subject, talking about the effects of childhood habits on breathing (Wills Geoff ve Cooper Cary L., 1988, 198).

The level of skill of the performer in wooden and brass instruments is proportional to his musical knowledge and skill, as well as his tonality, flexibility in sound, intonation and articulation.

Therefore, in addition to a good breathing technique, a properly selected oral shape, balanced pressure and a well-tuned instrument are needed. If there is not enough air, especially for sounds in the upper octaves of a musical instrument, the pressure in the lips increases and the muscles of the spongy muscles are crushed. It depends on the ratio of air, air pressure, lips and oral cavity required to create pitch on copper musical instruments. With enough air in the device, the pressure in the lips is low, and with insufficient – excessive pressure in the lips, crushing the muscles of the lips and even deformation of the teeth.

Wood and brass instruments have certain physical and psychological factors that interfere with breath control. Hyperventilation is a problem caused by excessively high oxygen content of obtained during performance, especially for interpreting long musical phrases. Hypoventilation – is a decrease in the amount of incoming and emitted air. If you do not breathe for a long time during work, the amount of carbon dioxide in the blood increases, and a person may feel tired. Deep breathing during long musical phrases or reducing the body's need for oxygen can harm natural breathing.

Such problems can be solved by analyzing musical expressions. The Walsalvian maneuver is a problem of musicians playing on the brass musical instruments. The upward movement of the tongue when breathing closes the oral cavity, creates reverse pressure behind on the coin, and the performer cannot control the sound. This problem can be solved by allowing the body to breathe for a while in a comfortable state, but if this happens often, the problem may require physiological and psychological evaluation.

Arnold Jacobs (Arnold Jacobs) in his study notes that some teachers who accepted the idea of controlling breathing and using the diaphragmatic muscles to improve the tone of tools, apply this method today. Jacobs argues that the diaphragm is a muscle that works voluntarily and that her job is to fill her abdomen with air. Jacobs also noted that this incorrect method strengthens the abdominal muscles and prevents free circulation of air in the body (Scarlett William. 1999, 3).

In wooden vascular instruments, the adjustment of curtain opening is directly related to breathing control. The openness of the

sound curtain plays an important role in the correct intonation and newness of the sound, balancing the amount and pressure of air.

In crowded places, breathing is weak. Therefore, a healthy and clean work environment is of great importance. According to Arnold Jacobs, smoking mainly refers to breathing problems, which in his opinion are less than in ordinary people (Scarlett William. 1999, 2).

For musicians playing on the woodwind and brass instruments, breath control requires harmonious use of body and consciousness. Therefore, recommendations developed on the basis of psychomotor skills (coordination of the brain and muscles) and studies that forming of the basis of playing string instruments are of great importance:

– Sitting in a comfortable position, easier to breathe;

– If the chest and diaphragm are inhaled together, the maximum amount of air in the body can be achieved. The primary respiratory control point is the diaphragm. When breathing, the upward movement of the shoulders and the tension of the abdomen push the abdominal organs of the diaphragm and prevent deep breathing. Therefore, when breathing, it is necessary to weaken the shoulders and free the abdominal muscles.

– Deep and slow breathing helps to relax the body and soothes the nervous system;

– By providing a natural opening of the throat, air is easily transferred to the tool;

– Balanced air pressure contributes to the natural sound color of the instrument.

– It is necessary to consume nutrients necessary for healthy breathing. However, playing on the instrument during digestion or after drinking carbonated drinks limits the diaphragm and creates a feeling of discomfort.

For musicians playing on the wooden and copper instruments, the beginning of the formation and completion of a musical phrase depends on the artist's ability to understand the work and on the strength of its expression. This expression is directly related to breath control. Respiratory control is a conscious intervention in the respiratory system. It serves as the basis for playing stringed instruments. This requires harmonious use of the body and consciousness, which can be achieved through prolonged work.

The woodwind and brass playing system is entirely based on the air transmitted to the instrument. It is easy to switch air from the body to the tool. Breath control helps to direct the correct amount and pressure of air to the device and plays an important role in creating pitch and determining nuance values. Therefore, breathing is very important for all musicians playing on the wooden and brass instruments.

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