

# CULTUROLOGY

## НЕКОТОРЫЕ ПРОБЛЕМЫ ФОРТЕПИАННОГО ИСПОЛНИТЕЛЬСКОГО ИСКУССТВА И ТЕХНИКИ

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## SOME PIANO PERFORMANCE AND TECHNIQUE DIFFICULTIES

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### АННОТАЦИЯ

В статье рассматриваются проблемы искусства фортепианного исполнительства. Представлены особенности умений и навыков фортепианного исполнительства и их связь с созданием стилистического образа. Описано взаимодействие исполнительской техники пианиста между исполнителем и залом. Процесс освоения техники фортепианного исполнительства представляет собой планомерную многолетнюю работу, в течение которой следует избегать силово-физических воздействий, направленных на развитие мышц кисти. Вводится «формула виртуозности». Техника исполнения важна, но не первична и бессодержательна.

Он должен служить для раскрытия музыкального содержания и особенностей характера и средств взаимодействия. Упражнений и инструментов для освоения идеальной техники много, но они индивидуальны для каждого исполнителя, от положения рук до правильной осанки.

### ABSTRACT

The article considers the problems of the art of piano performance. Features of the abilities and skills of piano performance and their connection with creating a stylistic character are presented. The interaction of the pianist's performance technique between the performer and the audience is described. The process of development of piano performance techniques is a systematic work of years, during which one should avoid force-physical interventions aimed at the development of hand muscles. The "formula of virtuosity" is introduced. Performance technique is important, but not primary and vacuous.

It should serve to reveal musical content and character features and means of interaction. There are many exercises and tools to master the perfect technique, but they are individual for each performer, from hand positions to correct posture.

**Ключевые слова:** техника исполнения, взаимодействие, стилистический характер, сила артикуляции, мышцы рук, систематические упражнения, память пальцев.

**Keywords:** performance technique, interaction, stylistic character, strength of articulation, hand muscles, systematic exercises, finger memory.

Performing a musical composition is a complex process. In order to present the ideas of a composer to the listener, the performer needs certain abilities and skills, through which it becomes possible to use the flexible sound organization (composition) to create an artistic-stylistic character. Among the wide range of skills needed by a pianist, one can single out performance technique, and means of interaction in terms of perception and transmission of the character. The range of technical performance skills has evolved greatly in terms of piano key action mechanism, technical settings (including the addition of a third pedal in the 19th century), and the presentation of musical compositions of different genres. The first mechanical improvement of the piano was the creation of a double escapement mechanism in order to increase the repetition of the same key to 12 per second.

The other mechanical change was an increase in the width of the keys, which increased the octave span by 25 mm. This made it possible to get a louder sound

because of the increased key weight. As a result, it became possible to create two types of instruments: women's (with narrow keys and delicate sound) and men's. Because of these changes, the playing actions didn't focus on hand/fingers but on the arm, introducing the concept of "use of arm weight" by dropping the arm from the shoulders. Proper posture and locomotor skills form the basis of performance technique development. The main components of the musculoskeletal system - bones, joints, and muscles, which differ in their shapes, sizes, and strength - play a key role in improving the latter. Being fed with internal energy, they ensure the movements, which are inhibited with a certain force by the earth's gravity.

Despite the many concepts that relate to the hands, neurobiologists are still conducting various studies on how the impulse of the brain is transmitted to the musculoskeletal system starting from the shoulder and the upper limbs to reach the appropriate fulcrum of movement, ensuring the appropriate sound formation.

It is important to distinguish which performance techniques correspond to which muscle system action criteria. The speed of movements depends on the degree of muscle activity and endurance. The larger muscles of the body and shoulder girdle that move the shoulder or arm are composed of long stretch fibers that contain many blood capillaries. They utilize a larger supply of oxygen to get energy. These muscles ensure the performance of chordal technique or medium-tempo (cantilena) parts of musical compositions.

And the muscles of the forearm and wrist, which have a smaller cross-sectional area and are made up of short stretch fibers, contain relatively few blood capillaries. To replenish the energy reserve, they use less oxygen and ensure fast movement. That is, minor chords techniques are provided by the muscles of the forearm and wrist. Muscular energy is balanced by the force of gravity directed downward through the center of the body. Balance is constantly changing during movements. The use of gravitational force allows a reduction in finger-pressing force. Using the weight of the arms, the system that controls the movements of the shoulder sections with several joints can be called the "arm complex".

This complex is biomechanically a kinetic chain, where during the operation of the interconnected system, energy is transferred through the joints so that the maximum impulse is obtained at the last part of the finger. The upward movement of the "relaxed" arm allows the muscle energy generated by the shoulder muscles to be delivered directly to the fingers to provide the power needed to produce the appropriate volume and "quality" of the vocalization. This interconnected system, combined with the upward force of gravity, can deliver muscle energy to the keys, and the forearm with weakened muscles is in free fall, which increases movement efficiency at the expense of reduced activity of the forearm muscle [6].

Pianists must acquire appropriate motor skills to precisely control the timing of the muscular relaxation phases in the downswing and keystroke, the force needed, and the coordination movements of multiple joints in the hand and arm for accuracy and expressiveness. This requires highly skilled motor action [10]. As has already been mentioned, in order to master the minor chords technique, it is necessary to rely on the activity of the joint-muscular and fibrous tissues from the wrist to the extremities of the fingers. Here the position of the wrist and movements around the imaginary axis are important. The wrist may be horizontal or slightly above the keyboard. Being at the appropriate height, the wrist can move in a circular direction to the right or left, which ensures a smooth and connected form of movement of the fingers (legato).

Depending on the wrist positions, the finger positions may change. When the wrist is above the keyboard, the position of the fingers is with bent joints, the palm of the hand is semicircular. And when the height of the wrist is on the same plane as the keyboard, the position of the fingers is straight. The tendon that provides the fourth toe with movement is connected to the tendons of the third and fifth toes. In the flexed finger

position, when the third and fifth fingers are on the keyboard, the fourth finger cannot be raised without the third or fifth finger being raised. And in the straight position of the fingers, it is possible [3].

The stretch range between the first and fifth fingers is important, and can be expanded with the help of special exercises. The octave technique is necessary for a pianist to perform a virtuoso composition. The range between Babajanyan's and Rachmaninoff's first and fifth fingers on the keyboard was duodecimal (12 degrees). The process of development of performance techniques is a systematic work of years, during which one should avoid force-physical interventions aimed at the development of hand muscles. One of the famous cases in the history of music is R. Schumann's case of arm muscle training. He used to hang weights from his fingers in order to increase the elasticity and length of his fingers. As a result, the hands were permanently damaged. Even without physical intervention, it is possible to get injuries with the symptoms of joint and muscle inflammation, as well as "carpal tunnel" as a result of long and heavy, incorrect training.

For performers who have high technical skills, the technique becomes invisible. The organization of multi-joint hand movements becomes automatic due to practice, gradually turning into long-term "muscle memory". Overcoming technical difficulties enables the performer to present a virtuoso performance without excessive movements, and muscle-joint overstrain, focusing on the figurative and stylistic interpretation of the work. Performance technique cannot be vacuous, for there is no musical composition that is devoid of content and is a mechanical display of technical capabilities. Virtuoso performance is often equated with dazzling with technical brilliance. And the standards of virtuosity are different. The formula for virtuosity can be broadly presented with the following:

1. The performer must have a very clear understanding of the musical genre, its different parts, and its emotional and characteristic features.
2. The faster the form and content are perceived during the performance, the more flawless and purposeful technical means become.
3. The sound reflection (resonance) created through wide technical possibilities should not only be heard but also be perceptible to the extent that the listener can experience those emotions and feelings.

With the above-mentioned abilities, it becomes possible to read and memorize an unfamiliar partitura even without an instrument. It is known that in many cases when the concert trip lasted quite a long time (about 6-8 hours), M. Rastrapovich prepared some pieces of the music of the concert program during the flight of the plane without an instrument.

The process of performing a musical work can be characterized by such a complex chain of brain actions, the main parts of which can be:

1. the complete perception of the artistic character,
2. the initial perception of the sound "mosaic" by inner hearing,
3. transmission of possible impulses of the brain to the motor-joint muscle systems,

4. "conveying" to the listener the wave of sound vibrations resulting from all the actions as a certain artistic image.

During the stage of reading the musical text, the performer develops a complete picture of the musical character with its different aspects (united or diverse). During the training phase, the actions of the articular-muscular motor mechanism are improved, which are slow at first. During systematic training, they become mechanical due to muscle "memory". In other words, the process of transmitting impulses from the brain and performing muscular actions develops, as a result of which technical mastery is formed. But perfect technique is still not enough to ensure virtuosity of performance.

The most technically complex parts of the work (be they passages or other complexities) cannot be overcome if there is no prior sound understanding of the whole or its individual parts. That is, the tonal image is formed in the brain, and then the corresponding impulses are transmitted to the joint-muscular system to overcome the corresponding technical difficulty. So, by solving the problems of movements or piano fingering and then using mechanical exercises, it is not possible to technically overcome the performance of complex passages.

Now let's turn to the problem of how the performer can present the sound "mosaic" to the listener in a certain frame, that is, there are different forms of interaction between the performer and the listener. If the performance is a concert stage (show), then the pianist reliving the musical image and conveying it to the listener can emphasize one or another emotional aspect of the music with appropriate movements. It is believed that it makes the emotional and emotional transmission of the music more impressive, and the listener can experience the image conveyed by the performer. But let's imagine that the performance is not a concert, but academic or competitive. In this type of performance, it is not acceptable to display technical brilliance or external artistry, but rather the opposite. A virtuoso pianist should make the technique as inconspicuous as possible, pushing the nuances of the musical image and sound to the fore. Many famous pianists simply avoided public concert performances. For Chopin, each concert caused a deep psychological trauma.

He believed that most listeners did not show up to enjoy the music, but seemed to wait "hostilely" for the performer's technical glitches to appear. History knows that the talented pianist Glenn Gould (since 1964) did not perform a single concert. His performances have come down to us through recordings. The reason was the same: "fear" of the audience or, according to the performer, the hostility of the audience towards the performer. Interacting with the listener in the form of a recording completely frees the performer from "extra" artistry or the show elements of conveying a musical character through movement. Even now, some teachers artificially train their students when to show emotion and with what kind of movements. It is much more important for the educator to draw students' attention to avoid possible injuries to the hand, spine, or neck during technical exercises [7].

Overcoming technical difficulties enables the performer to present a virtuoso performance without excessive movements, and muscle-joint overstrain, focusing on the figurative and stylistic interpretation of the work. Performance technique cannot be vacuous, for there is no musical composition that is devoid of content and is a mechanical display of technical capabilities. As said by K. N. Igumnov "It is a big mistake to separate the technique from the content of a musical composition" [4, p. 100].

At the end of the 19th century and the beginning of the 20th century, prominent pianists such as V. I. Safonov, T. Leschetizky, A.N. Esipova, I. Hoffmann, F. Busoni, etc., came to the conclusion that the development of performance art is primarily related to attention, will, musical performance, and artistic imagination. Working on musical composition, first of all, one should understand the performance art issues, in connection with which one should think about the technical issues encountered in the composition. Overcoming these difficulties does not require mechanical exercises, but great analytical and mental work. As noted by the famous pianist Artur Schnabel, "recognizing and outlining the difficulties means to master, correct and overcome them" [8, p. 24].

Play Always with the Fingers that is, move your arms as little as possible and hold them and the shoulder muscles quite loosely. The hands should be nearly horizontal, with a slight inclination from the elbows toward keys. Bend the fingers gently and endeavour to touch the keys in their centre and with the tips of the fingers. This will tend toward sureness and give eyes to your fingers, so to speak [5, p. 27-28]. As we have already mentioned, the technical side of performance is in direct contact with the musculoskeletal system (bones, joints and muscles). In the sitting position in front of the piano, the main load is borne by the spine, as a point of support, which ensures the stability of the joint activity of the upper limbs. Therefore, it is very important and useful for the performer to do some physical exercises without the piano. Among such exercises, below are presented some of them that are practical and can minimize potential injuries as well as can develop joint flexibility.

1. Standing lumbar rotations, while the head and legs are still. This exercise helps to minimize the injuries and pains that occur in the lower spine during sitting for long periods of time.

2. Standing torso rotations, when the legs are still and the head rotates with the torso, bending forward and backward, left and right, have the same usefulness.

3. Standing straight, feet shoulder-width apart, hands hanging freely with palms facing in. Bend to the right, reaching the arm as low as possible without leaning forward. Stay in this position for 30 seconds. Exhale and hold your breath while bending over. Exhale when returning to the starting position. Do the same in the opposite direction.

The next group of exercises is aimed at neutralizing injuries and pains in the upper part of the spine, particularly in the neck.

1. In a straight standing position, bow the head forward and back, trying to touch the chin to the chest (keep the torso straight and still).

2. Do head movements to the right and left in the same position. Without raising the shoulders, try to touch the earlobes to the shoulders.

3. In the same position, turn the head to the right and left. The dizziness that occurs after this exercise can be eliminated by raising the shoulders several times and trying to touch the ears.

The next group of exercises provides the flexibility of the spine as well as the shoulder joints, preventing the hunchback.

1. Leaning on the palms, lie on the floor (crocodile pose). Lifting the head and chest, leaning to the right and back, look at the lower limbs. Do the same in the opposite direction.

2. In a straight standing position, put the fingers of the hands on the shoulders. With the elbows of the hands "draw circles" at first small, then gradually increasing them. When drawing large circles, the elbows touch each other [6].

Do all the above exercises at a slow or medium speed, without sudden movements. Breathing should be deep and balanced.

To strengthen minor chords techniques, it is very useful to play connected and slowly, during which the independence of the fingers is encouraged, and only for strengthening, it is necessary to learn a composition where there are minor chords techniques. Or Ganon's exercises in different keys, staccato, legato. The elasticity of the muscles of the hands plays a very important role, which is very individual.

Let's have a look at the pros and cons of technical exercises. It is sometimes said that technique develops during the performance of works of various natures. Regarding exercises, 2 trends can be distinguished.

1. The development of technical tricks through exercises, scales, and etudes separately, independently, and outside of the musical composition.

2. Absence of separate technical work, that is, all difficulties are overcome within the scope of work on the work to be performed.

Back in the Baroque era, composers did not avoid technical exercises. The proof of that is that D. Scarlatti named his works "Exercise", and in the works of Bach, we find "Pedal-Exercitium BWV 598" for organ. One of the greatest composers of the 19th century, F. Liszt's great interest in exercises was expressed in his book "Technical exercises for the piano". He played the exercises himself and assigned his students to do the same. Polish composer F. Chopin also advised his students to play scales. "51 Piano Exercises" by I. Brahms has great importance among the masterpieces of exercises. We can also mention Sh. L. Hannon's "The Virtuoso Pianist" exercise book.

It is necessary to introduce changes in daily exercises. And the most important thing is to remember that without artistic and musical development it is not possible to achieve a complete solution to technical problems. Exercise should not be viewed as mere mechanical work. The pianist's attention should be focused on the sound, rhythm, and melodic line, it is especially important to follow the touch, getting an even, and at the same time different colored sounds during the exercise.

### CONCLUSION

In conclusion, the article presented some difficulties of piano performance art, piano technique, general performance procedure (mental and physical), and some regularities related to interaction forms.

There are many exercises and tools to master the perfect technique, but they are individual to each performer, from hand positions to sitting posture. The "formula of virtuosity" is introduced. Performance technique is important, but not primary and vacuous. It should serve the way of revealing and communicating musical content, and character features.

The process of creating a work is an organized "command" system of complex actions of the brain, where the bone and joint muscle nodes, being controlled by impulses, make it possible to obtain appropriate "sound colorings" through movements. The forms of communication through performance are different and individual. Among them, the form of live interaction between the performer and the listener (concert) and the form of communication through recordings were mentioned.

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