The Formation and Cultivation of the Inner Hearing of Music

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Abstract. Music is the art of hearing, and inner hearing is the core of music hearing. Inner hearing is formed, developed and perfected gradually with all kinds of musical practical skills, and its implicit operation process is achieved in the cooperative activities of external sound stimulation and internal auditory experience. The cultivation of inner hearing is one of the primary parts of music skill learning. Developing the acoustic perception image and perfecting music auditory representation should be the first principle to cultivate the inner hearing.

Introduction

For a long time, the inner hearing of music has been one of the problems that many scholars have studied and concerned about. The role of inner hearing in the field of music practice such as creation and performance cannot be underestimated. Music is the art of hearing, and inner hearing is the core of musical hearing. Therefore, analyzing and exploring the formation and cultivating of inner hearing are bound to provide some assistance for music education and music hearing training.

The Formation of Inner Hearing of Music

Inner hearing is a form of hearing different from normal hearing. Normal hearing emphasizes the perception and memory of external auditory, while the inner hearing emphasizes the adaptive style of voice and psychology based on it. It is not the pure reproduction of the external auditory in the heart. It has the ability to lead and create at the same time of getting rid of the external auditory shackles. As a special form of musical hearing, inner hearing is a kind of inner image, which is not rely on sound, and can make up inner music image accurately only by memory and thinking.

This ability generates gradually with a variety of musical practice skills. The author believes that, to some extent, this ability can also be called a special skill, which is an auditory skill developed through repeated exercise and practice.

Admittedly, skills and abilities are different, but they have close relationship. On the one hand, the formation of skills is based on certain ability. On the other hand, the skill is the intermediate link between acquisition and ability formation and development. The formation of skills plays an important role in promoting the development of abilities. Specifically, skill is a form of activity or mental activity that accomplishes a task successfully. It is acquired through practice.

Skills can be divided into action skill and mental skill according to its own nature and characteristics. The action skill is realized through muscle movement while mental skills are achieved by internal words in mind such as perception, memory imagine, thinking recognition. It is a mental activity to complete some task successfully. The skill of inner hearing is a kind of mental activity, which belongs to the category of musical mental skills, and is one of the elements running through it.

In the process of inner hearing formation, every practice chance that it obtains is achieved in the practice of playing and singing. Performance and singing are the action skills achieved by the object apparatus and the body organ with the help of muscle movement, bone movement and the nervous system adapted to them. The physiological mechanism of skill is the dynamic stereotype of the nervous system, that is, in the repeated practice, the role of cerebral cortex often receive stimuli to a certain sequence, thus forming a corresponding contact system of temporary.
In the training process of the action skills, not only the external hearing of the exercise main body is formed and perfected gradually, but also inner hearing is developed synchronously in the temporary connection caused by repeated external auditory stimuli. The musical elements appear in a certain order for many times, which not only creates the inner vision for the exercise subject, but also creates an opportunity of hearing feeling between each of the musical elements, even though such a sense of anticipation occurs instantaneously and is unnoticed by people. B. Selejingskaya believes that auditory premonition is a unique form of inner hearing and the basis of any musical activity. Auditory premonitions are usually divided into two categories: unintentional auditory premonition and intentional auditory premonition.

The auditory premonitions that have been practiced many times are unintentional. It is a mechanical process, that is, the next element of music will appear unconsciously when singing or playing the previous musical element.

Repeated practice enables the skill level of the subject to become proficient gradually until it reaches the level of automation. Psychological research shows that the formation of the mental skill performance is: the proficiency of mental activity, the reduction of the consumption of nerve labor and the process of internal speech requiring less effort of the active subjects.

Among them, each link of mental activities is integrated into a whole gradually, and the generalization and simplification of internal speech are the epitome of the proficiency of mental activities. Inner hearing is a complicated mental activity process, which requires the auditory subject to experience a series of psychological processes, such as perception, memory, imagination and thinking of musical elements within short time. With the repeated stimulation of the external auditory sensation, the sequence of this psychological process gets a high degree of generalization, and the inner hearing obtains the rapid and accurate realization while the mental activity is skillful and automatic.

Just like the playing skills of the piano develop with all kinds of exercises, any skill requires the effect of migration, and auditory skills are no exception. With the accumulation of external auditory experience and the improvement of inner expression, inner hearing will not remain on the level of old auditory presentation. It will be applied freely under the control of auditory experience, which shows the essence of skill.

The skills of action and mental skills in music skills are often inseparable. The skill of musical action is the basis of the formation of mental skills, and mental skills are the regulators of action skills. As an element of music’s mental skill, the formation of inner hearing is based on the external hearing caused by the performance and singing, and the whole performance process is performed by the performer’s interaction with the external auditory perception and external auditory feedback. Gary Palin’s theory on the formation stages theory of mental activity believes that, mental activity is the process of transformation from external physical activity to internal mental activity, namely the process of internalization.

It can be said that the formation of inner hearing skills is the process of internalization. It lies in the training of motor skills, which is derived from the accumulation of external auditory experience, and is also an external auditory regulator, adjusting the acoustics that can be directly perceived through external hearing.

The Operation of Musical Inner Hearing

Music inner hearing is a kind of inner presentation, which is the result of the high development of music auditory image. Music auditory image is the psychological structure formed in the collaborative activities of auditory and kinesthesis, which is the operation tool and material that constitute the music image thinking.

In the process of the development and perfection of musical auditory representation, memory as an important psychological phenomenon, is always accompanied by it. Memory and auditory representation complement each other. Memory is the necessary condition for the existence of auditory representation, and auditory representation is the carrier of memory.

The inner hearing has the auditory representation that can reflect the movement of musical
elements optionally, and its entire operation is related to memory closely. The inner hearing is formed unconsciously. When subject receives external auditory stimulation and adjusts external hearing with inner auditory representation, he usually does not realize that memory is happening quietly. In fact, the inner hearing occurs in every moment of music practice, and the memory operation process of inner auditory can reveal the essence of inner auditory skill.

People’s behavior on specific memory tasks is called memory operation. When an individual needs to collect some experience consciously or actively to finish his current task, it is called explicit memory. This memory is reflected in various exercises that the subject does. Taking piano training as an example, the subject must use the cognitive process consciously to complete the training task of the new repertoire. This kind of cognitive processing that needs attention to stimulate and maintain conscious effort is referred to as control processing, and instead, the process which doesn’t need attention to arouse and maintain is called automatic processing.

Internal hearing as a skill, its processing is automatic and is not recognized by people.

Such memory operation is implicit. Implicit memory refers to the experience that people cannot recall, but can prove their aftereffect in action. The definition of operation is the unconscious extraction of previously acquired information in a test without conscious or explicit recall of a particular past experience.

The operation of inner hearing is actually a process of unconscious extraction.

There is no physical form of inner hearing. It cannot be showed unreservedly in front of the audience like action skills. It is an invisible skill, and we can only truly feel its existence after unconscious extraction. The melody in the ear teaching practice is taken as an example. After the external acoustic stimulation disappears, the memory representation of the main body’s efforts to evoke is the result of controlled processing. The memory of melody itself is conscious, but the free use of imagery is undetectable. It can only be judged by the listening level of melody, that is, whether the inner hearing is perfect or not.

There is a considerable amount of knowledge, skills of humans which are implicit and when they work, we can't represent them or extract them at will. Just like our understanding of mental skills, it is carried out in the mind with the aid of internal speech. The object of action is conceptual object, which refers to cognitive activities such as perception, memory, imagination, thinking and so on. The realization of action is carried out through implicit internal verbal movements, and its action elements can be highly compressed, simplified or even omitted.

Although these features further illustrate the recessive of the mental skill, we can still prove its existence by its operational principle. John B. Best thinks that we should regard memory as a reconstruction system driven by internal and external stimuli jointly.

In the process of learning, keeping and reproducing external acoustic stimulation and internal auditory experience, namely the inner surface, can be used to achieve consensus on the new music sound. It can be said that the inner hearing is in such an implicit state, in the progress of explicit memory, to achieve its process of unconscious extraction operation. The inner hearing is not only experienced with the actual acoustic control, confirmation and correction, but also enables itself to be consolidated and improved again.

**The Training Principle of Music’s Inner Hearing**

The inner hearing is the core of music hearing, and the cultivation of inner hearing is the key to music education. From the principle of inner hearing, it can be seen that the skill of inner hearing is the result of the acquired efforts, and its training must be realized by the repeated stimulation of the external auditory evoked by the playing and singing.

In the process of accumulating and enriching the external auditory experience, the acoustic perception image and music auditory image of the auditory subject are also developed and improved. In a sense, inner hearing is an abstract concept, and its existence must be confirmed by musical auditory representation. The musical auditory representation is the operation tool and material that constitutes the musical image thinking, and the image of sound perception is the core motivation.
Perception refers to the reflection of the human brain on the overall attributes of the objective things directly acting on the senses at present. In the process of sound perception, the subject is not engaged in isolated pitch audition because of the participation of perception. Music perception stresses the ability to feel music as a whole, that is, the ability to feel and experience the elements of music. Music has four basic elements: rhythm, melody, harmony and timbre. The inner hearing can use auditory imagery to reflect the movement of musical elements optionally, which is a representation that is not confined to pure pitch and includes a comprehensive reflection of all elements of music. In this case, the auditory subject should not only accurately identify the elements such as pitch and tone, but also have the ability to anticipate various sound effects.

The deeper psychological activity on the basis of musical perception is the imagination of music. Music creation is inseparable from imagination. Music imagination is a comprehensive representation of music elements and emotional experience. Among them, the image of sound perception plays a very important role in imagination; of course, the focus of the image of sound perception is different according to the specialty of music.

In the process of music creation, the reliance on “imagination” aroused by inner hearing is self-evident. As with music creation, music performance professionals also need to take the inner hearing as the guide, only in terms of sound perception image requires different professional orientation. Chinese pianist Zhou Guangren said: “in the process of playing, we should have a sound imagination in our hearts and then pursue the sound to achieve the effect of our own imagination.”

Liu Changfu, China’s erhu performer, said: “The general situation of music’s inner hearing in the erhu performance is that the various playing techniques (phonics, timbre, bow, kneading, etc.), emotion and style are accumulated in your heart in the study of the erhu playing period”. After playing, various skills and feelings are displayed under the guidance and guidance of the inner hearing.

Therefore, the cultivation of inner hearing should be integrated into the music practice bit by bit. The sound perceptual image and music auditory representation are gradually formed, developed and perfected under the condition of long term grinding of inner and external hearing, both of which constitute the essence of the inner hearing together.

Above all, the author believes that the cultivation of inner hearing should be based on the principle of developing sound perceptual image and perfecting musical auditory representation, and should be trained and nurtured synchronously in the cooperative activities of kinesthesia and hearing, such as playing, singing and so on. The practice of playing, singing and other music activities is not only the foundation for the formation and operation of inner hearing, but also the main way of cultivation.

The formation of inner hearing requires long-term cultivation, and the audiovisual training can improve the operating level of inner hearing from multiple angles and in a variety of ways in a relatively short time, such as singing, back singing and back writing, improvisation, filling and following, practicing, reading spectrum and inherent imagination combined, shrinkage spectrum, etc. In short, the inner hearing has strong ability to cultivate. Whether it is in daily playing, singing, or training in specialized audiology training, the inner hearing will be developed in different degrees based on the individual’s musical quality.

References


