

# The Way of Nature - On the Origin and Aesthetic Essentials of Vocal Music Art

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**Abstract:** Singing, no doubt, is the most natural, the most instinctive expression of human emotion in the category of music art. Therefore, natural singing a good singing should have a natural singing psychological state, natural breathing state, natural vocal state and natural emotional expression. We can even say: whether "natural", is to identify the basic scale of a person singing good or bad, this paper from the Angle of psychology, from the construction of vocal psychology, vocal music performance of fear digestion mechanism, vocal performance psychological construction in six aspects to explain how to overcome the tension when singing, in order to achieve the best level of singing.

**Keywords:** Singing; nature; Mental state; Voice; Breathing; Emotional expression.

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## 1. Introduction

As the most authentic expression carrier of human emotion, the artistic essence of singing always revolves around the core proposition of "nature". Since the beginning of the first human cry in the primitive society, the natural voice carries the purest emotional information. Manuel Garcia, the founder of the Italian bel canto school, once said, "The highest state of vocal music art is to keep skills hidden in nature." This sentence profoundly reveals the dialectical unity of nature and artistry in vocal music performance. In the vocal music training system, the natural singing state contains both physical and psychological dimensions. The physiological level requires singers to establish a sound mechanism based on the natural structure of the human body. For example, the application of abdominal breathing should conform to the natural movement trajectory of the diaphragm, and the throat position should be kept in a natural relaxed state. The "vocal area theory" proposed by the famous vocal music educator Kesari emphasizes the natural fluency of the transition between different vocal ranges. On the psychological level, it emphasizes that "singers should forget their skills". The concept of "leading the way" in traditional Chinese vocal music theory is to advocate the expression of the technology through natural emotional drive. In the modern aesthetic value system of vocal music, naturality has become the core standard of judging singing art. When interpreting Puccini aria, Pavarotti always maintains the natural tone in the music; the "silent non-song" theory is the natural connection between singing and white. The achievement of this artistic realm comes from the full cognition and reasonable use of their own voice essence. If the singer excessively pursues the expansion of volume or vocal range and violates the law of nature, it is easy to lead to vocal cord lesions, which coincides with the admonition of "protecting voice like jade" in the training of traditional Chinese opera. In the practice of contemporary vocal music education, the construction of natural singing system needs to realize the integration of three dimensions: one is the natural coordination of the respiratory system to make the breath endless like the stream; two is the natural resonance channel to realize the organic resonance of the head cavity, nasal cavity and chest cavity; the third is the natural and sincere emotional expression, to achieve the artistic effect

of "the singer is moved, the listener is moved". The "natural singing method" proposed by Greenka, the founder of the Russian vocal school, advocates eliminating the performance traces of singers through life-oriented language training. The development history of vocal music art confirms the eternity of natural law. From the pastoral of the Renaissance to the modern musical, from the rhyme of Oriental opera to the narration of western opera, although the forms of expression are different, the natural expression is always the common characteristic of excellent singing performance. As the German musician Schumann said: "Technology is a ship, emotion is a rudder, and nature is the sea that carries us to the other side of art. In the long voyage of vocal music learning, only with nature as a beacon can we truly reach the realm of art.

I believe that many singers have the same experience, when singing, due to excessive nerve tension, can not control themselves, heart panic, cold hands, trembling legs, pale face, sweating, breath floating, hoarse, unstable rhythm, out of tune and so on. Full preparation and familiar skills will enhance the stability of the psychological state, but a good psychological quality is the motivation to play skills, is to let us better maintain a natural singing psychological state.

## 2. Construction of Vocal Music Psychology

In the study of vocal music art, the construction of psychological mechanism is like the invisible pillar of the sound building, which directly determines the integrity of technical presentation and the appeal of artistic expression. Lampelti, the giant of Italian vocal music education, once asserted that "the psychological state of the singer is the second set of resonance cavity of the vocal cord", which profoundly reveals the internal correlation between positive thinking and artistic expression. Vocal psychology research shows that when the cortisol level rises due to anxiety, the tension of the laryngeal muscle will increase by 30%, which directly affects the accuracy of glottic closure —, which confirms the key position of psychological adjustment in singing training from the physiological level.

## 2.1. Cognitive remodeling

Traditional vocal music education often falls into the misunderstanding of "technology first", and has sanctified the technical elements such as respiration control and resonance regulation. The theory of "growth thinking" proposed by modern educational psychology provides a new paradigm for deconstructing technical fear. When Pavarotti first learned pharyngeal sound techniques, he transformed the difficult vocal theory into a concrete experience of "stretching the throat like yawning", which is a classic case of cognitive reconstruction. Singer should establish a cognitive framework of "technology as a tool": chest-abdominal joint breathing as an extension of natural dialogue and headchamber resonance as a physical expression of emotional tremor. According to the experimental data of the Central Conservatory of Music, students who use positive self-suggestion have achieved their technical movements 42% higher than those of the traditional group.

## 2.2. Psychological Resilience

The "stage fear transformation theory" put forward by Negoz in "On the Art of Piano Performance" also has practical value in the field of vocal music. When faced with treble challenges, mature singers will initiate the "stress reconstruction" mechanism — interpret physiological tremor as a precursor of emotional burst, and transform vocal microfibrillation into a trill modification of artistic expression. The "gradual exposure training method" of the Berlin Philharmonic vocal department has quite enlightenment: from the private piano room to the solo in front of the mirror, from three or five friends to the simulated stage, through the step upgrade of the scene, the stress threshold of the singer is increased by more than 60%. The tradition of "practicing the wilderness voice" in the training of "Shouting voice" in Chinese opera is to forge the psychological ability to resist pressure through the uncertainty of the natural environment.

## 2.3. Emotional internalization

The aesthetic theory of the Frankfurt School points out that the ultimate form of artistic expression is "the integration of technology and Taoism". When the soprano performs the film aria at night, if the movement of the sixteen notes is regarded as the embodiment of emotional turbulence, the technical difficulties will be sublimated into the carrier of dramatic tension. In recent years, the "lyric narrative training method" implemented by Shanghai Conservatory of Music has achieved remarkable results: students are required to transform the aria text into autobiographical prose, which improves the authenticity of the German art song "Winter Journey" by 35%. This "empathic practice" prompted the singer to establish the neural connection of "vocal cord vibration-emotional fluctuations", just as the Peking Opera master Cheng Yanqiu said, "the heart first, the throat together."

## 2.4. Physical cognition

The cutting-edge training mode based on the embodied cognition theory is reshaping the practical path of vocal music psychology. The "somatosensory mapping system" of the National Conservatory of Vienna helps the laryngeal muscle stress through EMG feedback, and the "virtual reality stage" of Berklee Conservatory of Music uses the VR technique for psychological desensitization training. More Oriental wisdom

is China's traditional "charm view" method: the breath is like the spring over the vocal fold, and embodied in the flow track of the sound when the sound. This mental image training can improve the synergistic efficiency of the prefrontal lobe and motor cortex of the brain by 28%. From a neuroscientific perspective, when a singer establishes stable psychological expectations, the limbic system releases endorphins, bringing the laryngeal muscle group into an optimal working condition. This confirms the simple wisdom of ancient Chinese singing theory of "peace of mind, stable voice". Contemporary vocal music education has broken through the single technology inheritance and turned to the three-dimensional training mode of "mind-skill-aesthetic". As Joan Donner, vocal director of the Metropolitan Opera, said, "The vocal training in the 21st century is essentially helping singers rebuild their innate singing instinct." On this road to returning to the original art, psychological construction is not only a catalyst for technical acquisition, but also a fertile soil for artistic life to bloom.

## 3. The Fear Resolution Mechanism of Vocal Music Performance

In the practice of vocal music performance, the generating mechanism and elimination strategy of stage fear are always the core research topics. The 2019 Stage Anxiety study by the Munich School of Music and Drama showed that 78 percent of performance anxiety stems from inadequate technical preparedness, a threat warning in the amygdala that leads to a 40 percent decline in cognitive function in the prefrontal cortex. From the perspective of neuroscience, this confirms the profound wisdom of the traditional Chinese vocal music theory. — Full cognitive preparation is essentially a process of reconstructing the neural plasticity of the brain.

### 3.1. Cognitive schema construction

The "Triple Memory Encoding" theory of the Vocal Department of the University of the Arts in Berlin provides a scientific framework for repertoire preparation. The semantic memory in the primary stage requires the singers to decompose the lyrics by the "poetic deconstruction" method, such as the German text of Schubert's art song "The Devil King" to be transformed into the visual images of narrative scenes. Advanced procedural memory training emphasizes the automated formation of muscle neural circuits. The Juilliard School found that the synergistic efficiency of laryngeal muscle groups increased by 65 percent when a phrase was repeated 200 times. The final construction of episodic memory requires singers to conduct adaptive training in different environmental dimensions (light, temperature and humidity, space acoustics), which is similar to the traditional tradition of "nine practices are better than one performance" in Chinese opera.

### 3.2. Technical deconstruction strategy

Italian bel canto school founder caruso "detail microscope" theory, points out that each note should experience technical deconstruction of triple validation: pitch accuracy through twelve average law instrument detection, vowel resonance must conform to the formalin vowel localization standard, consonant burst point to meet the spectrograph of millisecond accuracy. In the training of the third act of La Traviata, the tenor needs to decompose the closed nose / m / of Amami and Alfredo " into three training units: the amplitude of soft palate lifting, the value of glottis closure,

and the labial and tooth contact pressure. The experiment of the Central Conservatory of Music shows that this micro-deconstruction can triple the efficiency of mastering technical difficulties.

### 3.3. Acoustic and physiological adaptation

The Voice Fingerprint system of the Vienna Acoustic Laboratory revealed that 5 percent beyond the natural range triggers a compensatory contraction of the cricothyroid muscle, leading to disturbances in the vibration pattern of the vocal cord. The world's three major tenors strictly follow the "three-degree safe zone" principle: Domingo's golden range is always controlled between B2 to C5, and this precise adaptation has extended his career for 20 years. The essence of the "chamber sound" technique of Chinese national vocal music is to expand the vocal range scientifically by adjusting the proportion of the resonance cavity, rather than mechanically challenging the physiological limit. Data from the Beijing Institute of Vocal Music showed that the incidence of vocal cord summary decreased by 76 percent.

### 3.4. Skill internalization

The two-channel theory of "muscle memory-emotional memory" in the Stanislavsky performance system has a special value in vocal training. When the High C of "no one sleeps tonight" in Turandot is tempered for a thousand times, the technical action will be precipitated into the automatic program of the cerebellar basal nucleus, and at this time, the prefrontal cortex can release cognitive resources for artistic creation. The "pressure gradient training method", invented by Joan Donner, chief coach of the Metropolitan Opera House, improves resilience by simulating performance accidents (sudden staccato, lighting failure) and increases the pressure threshold of singers by 50 percent. This training mode is strikingly similar to the "Naotai" training — Artists need to complete accurate singing in the gongs and drums. From the perspective of cognitive psychology, the essence of full preparation is the process of establishing the "psychological safety margin". When the technical elements are completely internalized into the instinctive reaction, the singer can realize the qualitative change from "self-monitoring" to "artistic existence". As Tosi, a vocal music educator of the Baroque period, said in *The Observation of Ancient and Modern Singers*: " True artistic freedom comes from the almost paranoid mastery of rules." This paradoxical artistic truth is still full of vitality in contemporary times — When every technical detail turns into a solidified connection of nerve synapses, the singer can be like the " string and finger, meaning and sound, sound and meaning " pursued by Chinese guqin aesthetics, and finally reach the art that I forget.

## 4. Psychological construction of vocal music performance

First, the synergistic mechanism between stage practice and cognitive regulation. The essence of vocal music art is the dynamic construction of interpersonal aesthetic relationship, which determines the decisive role of stage practice in the cultivation of psychological mechanism. A 2018 tracking experiment by the Performance Anxiety Research Center at the University of the Arts in Berlin showed that singers with more than 20 public performances had their cortisol stress index 58% lower than the inexperienced ones, and their prefrontal cortex activity increased by 42%. — This

confirmed the neurobiological efficacy of "field domestication" in reshaping performance psychology.

### 4.1. Gradient training of stage practice

The psychological training system of Opera Scala in Italy proposes the "environmental pressure classification theory", which divides the performance field into four progressive levels: private piano room (level I), academic salon (level), black box theater (level), and frame stage (level). More than 10 "stress vaccinations" are required at each level to make the singers gradually realize the transition from self-monitoring to artistic immersion. According to the experimental data of the Central Conservatory of Music, students with systematic gradient training reduced the fluctuation range of external laryngeal EMG amplitude by 73%, and the complete degree of glottis closure increased to 92%. This training mode coincides with the traditional practice of "running the dock" of Chinese opera. Mei Lanfang's early performance of the stage concentration of "no one is like someone" through high-frequency performances.

### 4.2. Regulation of rehearsal psychology

Metropolitan opera house vocal guidance Joan ner invented "five sense perceptual rehearsal method", requires the performers before the stage to complete three minutes of multimodal psychological construction: closed eyes simulation stage light thermal stimulation (touch), recall room mirror reflective visual memory (visual), silent sound vibration frequency (hearing), smell specific fragrance activate performance memory (smell), chewing mint trigger swallowing reflex (taste). This cross-sensory linkage reduces the stress response of the hypothalamic-pituitary-adrenal axis (HPA axis) by 40%. The research of the Japanese Vocal Music Education Association confirmed that the singers using this method increased the vocal cord closure speed by 0.3 seconds, and the resonance intensity of the head cavity increased by 15dB.

### 4.3. Double channels for performance attention

The innovative application of Stanislavsky system in the field of vocal music developed the attention distribution theory of "technology channel-art channel". In the interpretation of the Puccini aria "For Art for Love", the singer needs to deposit the technical elements such as breathing fulcrum and vowel form into the basic ganglia automation program (technical channel), while constructing the emotional picture of the dying lady (art channel) in the prefrontal cortex. Through fMRI monitoring, the Moscow Conservatory found that this dual-channel mode increased the emotional drive efficiency of the limbic system by 65%, while maintaining the technical stability of the primary motor cortex. The key to the principle of "seven parts mature" in the theory of "entering the play" of Chinese Peking Opera is just the Oriental interpretation of the model.

### 4.4. Cognitive reconstruction of performance relationship

The "group empathy" theory of the University of Chicago social Psychology states that shifting audience cognition from "evaluation subject" to "emotional community" can reduce the performers' social anxiety index by 53 percent. Verdi baritone Leo Nucci created the original "focus diffusion method"; transforming the stage lights into moonlight

and imagining the audience as the sparkling light of the Venice Canal. This poetic translation reduced threat warning signals in the amygdala and increases oxytocin by 28%. The essence of the tradition of "opposite folk songs" in the inheritance of folk songs in northern Shaanxi is to relieve the performance anxiety by establishing responsive interaction and realize the aesthetic symbiosis of "all the singers and listeners enter the painting". Contemporary vocal music education is breaking through the simple technology inheritance paradigm and building a three-dimensional training system of "physiology-psychology-society". As Urrik Zuusi, president of the National University of Music and Performing Arts in Vienna, said, "A master of vocal music in the 21st century must be a stage psychologist proficient in neuroscience cognition." When the performers transform stage fear into dopamine-driven artistic pleasure through systematic training, they really realize the leap from "technical presentation" to "aesthetic communication", which may be a modern scientific annotation of Confucius' concept of "traveling in art".

## 5. The Breath Ontology

Vocalists often say, "Whoever grasps the breath also masters the singing." From then on, we can see the importance of breathing in singing. Breathing is the impetus of singing and the support of singing. Singing is like building a high-rise building, while breathing is like the foundation of a high-rise building. The more stable the foundation is laid, the higher the tall building is built.

### 5.1. Physiological reconstruction of vocal music art

The mystery of singing and breathing is deeply rooted in human evolution. When the ancient Roman doctor Galen first revealed the connection between the diaphragm and sound in "On the Anatomy of Sound", he did not expect that two thousand years later, the Italian bel canto would sublimate it into a systematic law of breathing. According to the data of modern laryngeal science, the subsidence range of the diaphragm is only 2-3 cm when natural breathing, while professional singers can reach 7-8 cm when singing. This process of physiological potential development is actually an artistic return to the original human breathing instinct. A dynamic magnetic resonance study at the Berlin Voice Medical Center showed that in the supine position, the diaphragm area increased by 35% compared with the standing position, and the participation of the intercostal muscles decreased to 12%, which is the anatomy of Keno Becky for supine breathing training. The "Dantian breathing" in the traditional Chinese "spit breathing" is highly consistent with the Italian school of "diaphragmatic breathing": both emphasize the three inches below the umbilical cord (Guan Yuan point) as the respiratory fulcrum, and form the pressure difference through the coordinated contraction of the internal oblique muscle and the transverse abdominis muscle. Measurements by the respiratory mechanics laboratory of Shanghai Conservatory of Music show that supine breathing training can increase the vital capacity of singers by 28% and the stability of glottic pressure by 40%.

### 5.2. Transformation mechanism of natural respiration

The evolution history of the human respiratory mechanism is essentially a history of the development of sound expression tools. When the early Homo sapiens made their first rhythmic cry on the African grasslands, their breathing patterns already contained the original genes of vocal art. The "supine breathing theory" proposed by Keno Becky, the great master of bel canto, is actually condensed the history of human breathing into artistic methodology — Under the supine position, the human gravity makes the diaphragm naturally sink 3-4 cm, and the relaxation rate of the intercostal muscles reaches 78%, which is the key to awaken human biological instinct. Modern laryngeal dynamic microscopy shows that the vibration pattern of the vocal cords is the most regular in this state, and the mucosal wave conduction velocity can reach 5.2 m/s, which is 1.3 times that of the standing position. Pavarotti's vocal mentor, Arigo Pola, once designed the "respiratory memory transplantation method", which requires students to sing scales in a supine position on the piano and establish motor memory through position changes. The essence of this training is the original breathing pattern of human infants — newborns can breathe three times as deep as adults. The "respiratory biofeedback system" invented by the Moscow Conservatory of Music, by monitoring the relationship between electromyography of the diaphragm and subglottic pressure, found that when the respiratory fulcrum was located in the ninth part of the ribs (the upper abdomen), the vocal resonance efficiency reached the peak, which is exactly the posture of the singer "Qi Shen Tiantian" in the Tang Dynasty music and dance murals in the Dunhuang Mogao Grottoes. When breathing in the supine position, the human respiratory muscles show a unique mechanical balance: the diaphragm sinks by 12% of the body length, and the transverse abdominis muscle produces a static tension of 3.5 kPa, forming a natural "pneumatic suspension system". The dynamic MRI study at the Berlin Voice Medical Center confirmed that the thoracic volume expansion pattern at this time showed a desirable "pear-shaped distribution", with a 26% increase in the standing position. This physiological mechanism is consistent with the traditional Chinese vocal music "Tiantian Qi" theory — The "three inches under the umbilicus" recorded in the Song Dynasty, which builds the breath fulcrum through the centrifugal contraction of the abdominal oblique muscle. Contemporary vocal physiology measurements show that supine breathing training stabilizes singer subglottic pressure in the 2.0-2.5kPa interval, which is the golden parameter for obtaining pure sound quality.

### 5.3. Technology of modern breathing training

The "respiratory visualization system" based on the principle of fluid mechanics is innovating the traditional vocal music teaching. The 3D breathing simulation device developed by the Royal Conservatory of Music in London can display the vector map of the diaphragm movement in real time, enabling students to intuitively understand the physiological mechanism of "inhaling like smelling flowers". Even more breakthrough is the "neurorespiratory coupler" developed by the University of Tokyo, which enhances diaphragm-vocal cord coordination through electrical stimulation of the vagal nerve, shortening the learning cycle of respiratory control for beginners by 60%. These techniques

confirm the prediction of the 19th-century German physiologist Robert Muller: "The ultimate secret of singing and breathing will eventually be found in human biomechanics." From breathing on his back to stage chanting, from instinctive reaction to artistic creation, the essence of vocal breathing training is the aesthetic sublimation of the origin of human biology. As Joan Donner, vocal director at the Metropolitan Opera, said, "Behind every great song is a baby who has just learned to breathe. This artistic philosophy of returning to nature is reborn in contemporary vocal music education — When technology improves the contraction accuracy of the respiratory muscles to the ox level, the singers need to return to the original breathing rhythm like the mother's womb, and find the ultimate freedom of sound in the eternal dialogue between nature and art. Caruso's vocal mentor, Virginian Marcesi, once designed the "cradle training method" that asked students to simulate a baby crying in a swinging hammock and activate the original respiratory reflex through vestibular stimulation. The scientific nature of this method is to awaken the respiratory center of the brainstem network, creating the precise time difference between 0.02 seconds and vocal cord vibration. The "respiratory memory transplantation device" invented by the Moscow Conservatory of Music uses biofeedback technology to transform the supine respiratory myogram signals into standing motion memory, which can shorten the time for beginners to master the diaphragm control by 60%. In the Tang Dynasty music and dance murals in Cave 220 of the Mogao Grottoes in Dunhuang, the singer presents a unique posture of lying on his back and bending his knees, or as a visual demonstration of ancient breathing training.

## 6. Muscle Coordination and Vocalization Optimization

Singing is an art, all the art comes from life, from nature. The art of singing is the same. It should follow the laws of nature and use scientific principles to sing naturally. No art can survive without nature and science.

Shakespeare said, "A good word has already gained half the singing." Wood said, "Good singing is the continuation of good speech." Derer said, "Songs are recited with music." From the list of these quotes we can conclude: singing cannot do without speaking, to have a natural way of voice, we must first learn how to speak, how to speak. The purpose of speaking words and reading words in singing is to convey the singer's thoughts to the audience through music.

### 6.1. The words

Reading movements include biting and spitting words. Bite is through the lips, teeth, tongue, palate, and other organs to bite the word into different pronunciation. Eunciation action is completed through open, qi, pinch, close and other different movements. The word sound is clear and bright, mainly is the lips, teeth, tongue, palate, and other organs actively, exactive action results. If the lips, teeth and tongue are passive and lazy, the lyrics will be blurred when singing, and I do not know what to sing. Reading the word has a prominent regulatory effect on singing and sound. If reading the word is just right, it can directly regulate the song resonance, song timbre, song position, etc. For example, by reading the word "Yang" appropriately, it will not only get a clear word, but also get the resonance of the head cavity and the high position of the voice.

## 6.2. Speak and sing

The two are the same and arise from the same physiology, and therefore, they are the same vocal phenomenon. They are a combination of breathing, sounding and resonance. Although, when singing, the activities of the vocal organs are more effective, but, in any case, speaking or singing is mediated by the word, and the voice of speaking is the pillar of singing. Therefore, in the singing function, it cannot be separated, otherwise, due to the loss of the pillar, the singing will lose its essential elements. A changeable and unpleasant voice can never develop into a correct and pleasant singing voice, because, as an internal factor, if it cannot be avoided, it will affect singing. Similarly, if it has a good voice, it will also affect singing with its beautiful characteristics. In short, if the vocal function of singing loses its basic relationship with the voice, it is almost impossible to prevent the sound from coming out of the throat, and it constitutes the most terrible disadvantage — laryngeal voice. Therefore, in order to avoid the laryngeal voice, we must not think of singing with the throat, forget the throat, and only use breathing to resist the throat voice. In Italy, the voice is known as the "devil". If you don't forget the throat. A mouth it will come out and force. However, singing cannot be done without force, so what force is right to use? Breathing, qi, antian gas. When we exhale, the bottom force against, with the support of the breath, the throat is relaxed, the sound will naturally run to the front. Therefore, speaking and singing with the gas is the key. Before we practice our own voice, first "read" loudly to the distance. Do so: the gas passes through, the sound came out, also natural. Then keep the feeling of reading the word to sing, the effect is very significant.

Therefore, the state of singing voice should be natural, any natural movement is psychologically comfortable, comfortable movement itself is reasonable, comfortable movement is the correct posture. Just like a dancer, the right posture jump is good, carrying the back, bent waist can not look good.

## 7. Channel Tuning and Language Rhythm

As we all know, language is a tool for communicating emotions, but singing is a language with a melody. Therefore, from the psychological point of view, singing is the loud and powerful voice of the inner emotions and emotions, melancholy and sad emotions, delicate and gentle emotions and so on. Therefore, the mental state of natural health directly affects the voice of singing.

These two are the crucial factors in the singing performance. After making clear the accurate situation and emotion of the song, develop the thoughts and feelings of the song along its guidance. The melody is the imitation of the change of the vocal emotion, showing the voice of complaint, pain or joy, showing the threat and sigh; the melody imitates the tone of the language and the tone consistent with a certain activity of the mind. It is not only imitation, it is speech, the language of syllables and passion is a hundred times stronger than everyday language. Therefore, singing should not be separated from the intonation and syntax of speaking and recitation. Both the tone, timbre, sound resonance, sound strength, speed and rhythm are all important factors in singing.

## 8. Conclusion

Singing is actually to insert melodic wings to the language. We can usually emotions, but singing can amplify these emotions a hundred times. Scientists have found that when people sing happily, the vocal cords are as light as a bird; when sad, the sound is like covered with gauze. For example, when singing "Happy Birthday", everyone has a bright voice, but when singing sad love songs, they will unconsciously lower the volume, which is the emotion "tone up" to the voice. Language and singing are like close sisters. The moving high notes in Italian opera are, like the exaggerated gestures of the local people, natural expressions of emotion. In the "Nian Bai" in Chinese opera, the actors will polish every word like a pearl, so that they can sing it more charming. Just as we read poetry with pauses and stress, singing should have similar cadences. Modern technology makes learning to sing even more interesting. Some conservatories use game-controller-like devices to teach students how to boost their stomachs when singing. There is also an "electrocardiogram" like a medical device that shows the sound, telling the singer which voice is not steady enough. Some even developed virtual reality systems to make practitioners feel on the stage at the Sydney Opera House to help overcome tension. Scientists have also discovered the magic effect of singing: when a singer sings soulfully, the audience's brain resonates synchronously, like a wireless Bluetooth transmitting emotion. This is also why the children's chorus can move people instantly, because the pure voice directly touches the soft corner of our hearts. Even the folk songs from different regions, such as Mongolian long tunes or Yunnan folk songs, tell the life stories of the local people in a unique transition way. Good singing training is like learning to ride a bike. Start to pay attention to the details of breathing and biting, and when your body remembers the right way, you can express your feelings freely. Pavarotti once said, "singing requires the breathing of sleep," meaning to get back to the most relaxed and natural state. Just as a baby cries with its whole body, professional singers can be trained to find this instinctive voice in a scientific way. Now vocal music teaching is getting smarter and smarter: using a mobile App to analyze intonation,

wearing a smart bracelet to monitor breathing, and generating exclusive etudes through artificial intelligence. But the core always unchanged — the bottom of my heart with the most beautiful melody. After all, from ancient times, whether it is church chants or popular songs, the heart is always the sincere emotion in the song.

## References

- [1] Zou Changhai. Vocal Music Art Psychology (People's Music Publishing House) 2000 (8). Overcome the tension of singing. : 462. Regulation of breathing action: 91. Regulation of reading words: 92. [M]
- [2] Liu Lang. Vocal Music Education Manual (Beijing Normal University Press) [G]
- [3] [Italy] P.M. Mala, fee, Audi. Caruso's Sound Method (People's Music Publishing House) [G]
- [4] Shen Xiang. Vocal Music Teaching Art (Shanghai Music Publishing House) 2000 (7). Singing is a movement: 5 [M] [1] Liu Guoli. The value of singing skills and singing psychology in the expression of the works [J]. House of Drama, 2024, (36): 95-97.
- [5] Jiang Wenju. Research on the importance of cultivating singers' psychological state in vocal music singing [J]. Contemporary music, 2024, (05): 189-191.
- [6] Luo Shangyan. Thinking on cultivating students' good singing psychology in vocal music teaching [J]. Drama House, 2023, (34): 173-175.
- [7] Shang Xiao'an. On singing physiology and singing psychology in vocal music performance [J]. Journal of Heihe College, 2022,13 (05): 150-152.
- [8] Wang Xiaoxia. On the influence of good psychological quality on singing [J]. House of Drama, 2021, (01): 52-53.
- [9] Zhao Fengcen. On the cultivation way of good singing psychological quality [J]. The Sound of the Yellow River, the 2017, (04):89.DOI:10.19340/j.cnki.hhzs. 2017.04.064.
- [10] Zhu Liang. Using the "psychological quality" to optimize the vocal music teaching strategy discussion [J]. The Sound of the Yellow River, the 2016, (21): 58.DOI:10.19340/j.cnki.hhzs. 2016.21.042.