

Vocal Pedagogy:

*How the application of breath and body management techniques
improves the sound of singers.*

By Lorraine Hétu Manifold

I. Introduction

I have sung in choirs for more than ten years and have studied voice for four and a half years. During this time, I have studied with several voice teachers. Each one of them focussed on different aspects of singing and had their own specific approach. One of my teachers was especially focussed on producing the nasal buzz, to the detriment of all else. When, after a year of studying with him, I heard his other students, I noticed that they all sang with imperceptibly open mouths, that they pushed the sound into the mask, had strikingly visible tension throughout their body and produced a very clamped nasal sound that was almost painful to listen to.

During my year studying with this teacher, I began, little by little, to conduct my own research about singing in order to answer questions I was beginning to ask myself: how does one breathe? How does the breath affect the sound? How can we make sure certain muscles are not tense? I began my explorations by reading sections of Richard Miller's book *The Structure of Singing*. Thanks to the acquisition of this new scientific knowledge, I was able to realise that my voice teacher had never taught me how to breath correctly nor did he ever inform me that certain muscles need to be relaxed (jaw, neck, tongue, etc.). Not only was I using the belly breathing technique and holding my muscles in place with the intent of keeping in as much air as possible, I also had tension in my neck, jaw and tongue. The consequences were far-reaching: I could not reach high notes with a free sound, I could not sing long phrases without quickly running out of breath and I usually held onto each sung note in such a way that no vibrato was allowed to emerge. The end result was a tone with little quality.

At that public student recital, I concluded my voice teacher was not a good teacher and left him. Meanwhile, my focus has been on unlearning what he taught me and finding a way to breath correctly and to produce a free, tensionless, sound. I am now studying with a voice teacher whom I respect very much

and who, in less than 3 months, was been able to teach me how to breath thereby allowing me to produce a sound that is floating and free. Together our focus is to ensure that I produce rich tones. In order to achieve this, we focus on eliminating any undue tension while singing¹, whether in my jaw, shoulders, neck or throat.

In the last few months, I have begun teaching voice lessons to beginners. During our lessons, I concentrate on ensuring that they learn to sing without unjustified tension. My interest therefore in conducting this research is to analyse the theory to reinforce my practical knowledge.

My research will focus on finding out how to produce a free sound so as not to impede tonal quality. In order to do so, I will begin with a quick survey of the theoretical aspects of Vocal Pedagogy and will examine what phonation is. I will discuss what types of breathing are required in singing and why it is so important to decrease all unnecessary tensions in the body. Lastly, I will consider issues related to musculature with an overview of three schools of thought: Alexander Technique, Body Mapping and Jaques-Dalcroze Eurhythmics. My aim is to prove that singers who use correct breath and body management will achieve a free and better sound.

II. Principles of Vocal Pedagogy

As in all other fields, there are many vocal pedagogy schools. Indeed, there definitely is no “standardized system.”² Even among the most prominent singers, differences of opinion abound.³

In addition to which vocal pedagogical approach, scientific as well as aesthetic aspects must be taken into consideration. Science and the art of singing are not only compatible, as Ralph Appelman

¹ This is not referring to a natural tension that exists when we try to postpone the return of the diaphragm muscle to its original position.

² Appelman, D. Ralph. *The Science of Vocal Pedagogy*. Bloomington: Indiana UP, 1974, p. 3.

³ See the marvellous and instructing book by Jerome Himes: *Great Singers on Great Singing*, New York: Limelight Editions, 1982.

suggests⁴ but even more importantly, one cannot exist without the other. To teach the art of singing basing one's pedagogy approaches on aesthetic alone would produce a limited singer who might not be able to accomplish the more difficult aspects of singing (singing high notes pianissimo for example). While a very scientific approach to vocal training could be detrimental to the beauty of sound produced by the student from lack of expression and emotion.

Within scientific areas, there are already dissensions on vocal pedagogy issues; not everyone agrees with highly acclaimed Richard Miller's theories, for example. Therefore, diversity in aesthetic issues abound even more. Vocal students and teachers must somehow find their own way in this maze of theories and approaches. Many teachers perhaps follow unquestioningly in the footsteps of their own teachers. While replicating one's respected teacher's approach might be valuable to a certain extent, I believe that every vocal student and teacher must conduct their own research and combine their own skills and knowledge to create their new and enriched melting pot. It is with this aim in mind that I will combine many approaches to find a self-made combination toward teaching vocal students how to produce good free sound.

III. Phonation/Tone Quality

What is phonation? Phonation is sound, or tone, or timbre, and is particular to each singer, based on physiological factors such as "body structure", "vocal fold size and configuration" and "supra-glottal characteristics".⁵ It is not easy to talk about tone and "even less satisfactory" words to describe tone *quality*.⁶ Words such as "sweet, abrasive, bright, dark" relate to aesthetic interpretations. While the colour of each singer's timbre can vary depending on a variety of factors (larynx, soft palate, brighter or darker resonance, articulation), my focus here will be on the *freeness* of sound, irrespective of individual

⁴ Appleman, p. 3.

⁵ Doscher, *Function Unity of the Singing Voice*, p. 125.

⁶ Doscher, *idem*, p. 128.

aesthetic tastes in terms of colouring. In this regard, we can assume that, generally-speaking, tone is directly related to “varying airflow and vibratory patterns.”⁷

For a free airflow, the soft and hard palates, as well as the tongue must be relaxed. The higher the notes, the more and more relaxed those parts must be. A tense sound would, for example, be a sound where the tongue were being pulled and held back – which will constrict the airflow from flowing up the pharynx into the oral and nasal cavities – or when singing higher and higher in notes, a singer does not lift the soft palate (as in the relaxed yawn), thus producing a tense sound caused by tense muscular tissue. Instead the tongue must be in a relaxed position, resting against the front bottom teeth and the soft palate must be raised while the mouth is open as wide as possible, yet still relaxed (excessive and unnatural opening the mouth will not help to create a smooth sound).

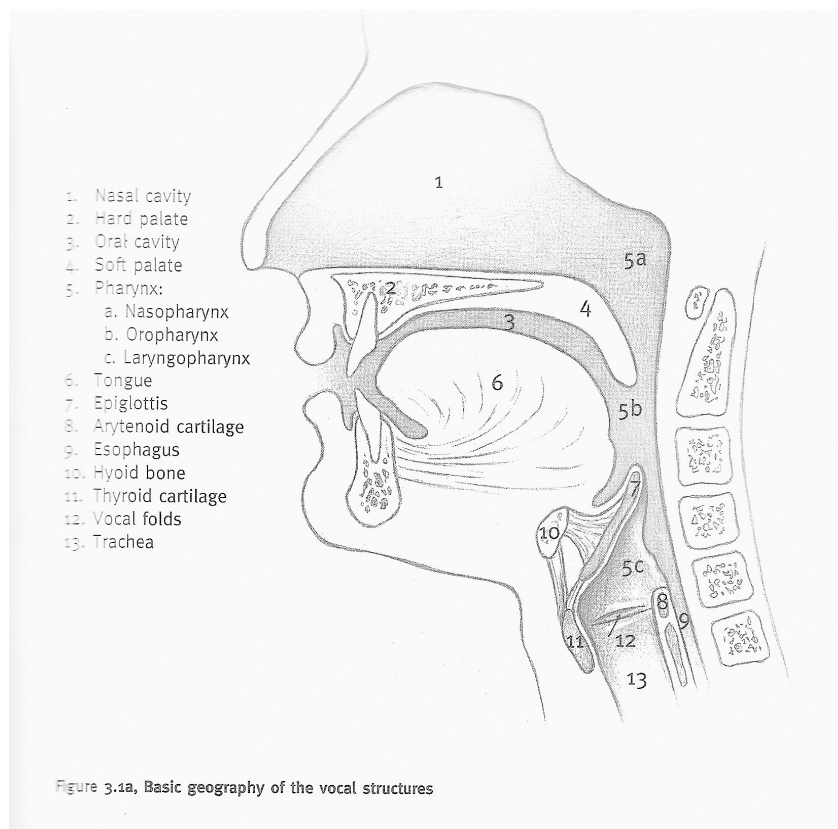


Table 1

⁷ Doscher, *Function Unity of the Singing Voice*, p. 127.

IV. Breath Management

The technique of breathing is the foundation upon which singing is established. I have established two types of breath for our purposes here: natural and energetic. Natural breathing is the type we use in our everyday life, sitting, standing and walking. It is also the basis for singing, but singing requires additional work in order to sustain long phrases and to produce high notes.

a. Natural Breathing

Regarding the ‘technique’ of breathing itself, according to Scott McCoy, DMA, there are four types of breathing: clavicular (or upper chest breathing), thoracic (or intercostal breathing), abdominal (or bellows breathing) and the *appoggio*, which means “to lean” and is a combination of the best traits of both thoracic and abdominal. McKinney adds one more type, that of back breathing⁸. In addition he warns against breathing faults such as “hypofunctional breathing” which is caused by not enough physical action and often found in beginning singers; “hyperfunctional breathing” resulting from too much physical activity, which can occur during performances out of fear of running out of air, “hypofunctional breath support” which demands too little of the breath mechanism, and lastly “hyperfunctional breath support” which creates too much tension and produces a sound that is not free⁹.

These theories are in agreement with the Italian school of Bel Canto which uses the *appoggio* technique to breath. Stark believes *appoggio* refers to two aspects, the first being “the muscular antagonism between the inspiratory and expiratory breathing muscles during singing, and the second ‘holding back’ the breath “by means of glottal resistance, and by the intentional lowering of the larynx against the upward-bearing pressure of the breath”. This holding back feels like one is constantly

⁸ McKinney, *The Diagnosis and Correction of Vocal Faults*, p. 58.

⁹ McKinney, pp. 60-64.

breathing in. In fact, while singing, we can even feel that we are constantly breathing in, as through a straw and that the air is constantly flowing.

The Alexander Technique teaches us to learn how to return to the “natural breath” as many people are unaware of their breathing technique. Some of my students even let their belly come in while inhaling, and would let it out during the exhalation phase! In order to return to this natural form of breathing, F.M. Alexander believed that if “we learn to stop doing the wrong thing, the right thing will do itself.”¹⁰ But how does one learn this natural way of breathing, as the first step towards learning how to sing, since so many breathing types have been described? In my research, I found that most theories agree with the following description of the breathing technique required for singing:

INHALATION SEQUENCE

1. **Ribs** swing up and out.
2. **Diaphragm** descends from its highly domed to less domed position.
3. **Abdominal & pelvic viscera** are moved outward and downward by the powerful, descending diaphragm.
4. **Pelvic floor** is pushed downward by pressure of the displaced viscera.

EXHALATION SEQUENCE

1. **Ribs** swing down and in.
2. **Diaphragm** ascends back to its highly domed position.
3. **Abdominal & pelvic viscera** flow inward and upward as the diaphragm ascends and the cylinder of abdominal musculature springs back inward as pressure from viscera is gradually reduced.
4. **Pelvic floor** likewise springs back to neutral position.

Table 2

¹⁰ Quoted in Jane Heirich *Voice and the Alexander Technique*. Berkeley, CA: Mornum Time Press, 2003, p. 33.

According to Buchanan, the above Table shows that “balanced breathing is a wave-like motion from top to bottom on inhalation and exhalation! Once you have accurately located the structures of breathing (trachea, lungs, ribs, diaphragm, abdominal walls, and pelvic floor), seek clarity about the way they function to produce tension-free breathing that is sequential and coordinated, and feels like a single movement top to bottom.”¹¹ In my own experience, this flow can also be felt from bottom to top.

b. “Energetic Breathing” for Singing

While good breathing is the basis for all good singing, it is certainly not sufficient and not the end product. Breathing in fact furnishes energy, be it for tone, phonation, resonance, and articulation¹². Learning to breath naturally may be efficient for everyday breathing, but it is hard to believe that for a singer, who is an athlete in many ways, can develop an efficient way of singing by breathing ‘naturally’. The difference is similar to walking and running. While walking is a natural effortless process, one must, in order to run, develop muscles the average walking person does not use. Similarly, it seems logical that more muscles need to be trained and strengthened in the professional singer, just as one would for any other athletic activity.

Many teachers talk about “breath support”. This word is misleading because “support” in everyday language means “to carry the weight of, esp. from below” and “to maintain in position so as to keep from falling”¹³. With this concept in mind, many vocal students, myself included, began “supporting” the breath by “holding” it. Vocal specialists Richard Miller, Richard Alderson, James McKinney all speak about *breath support*¹⁴ or *breath control*.

¹¹ Table and quotes taken from Heather Buchanan, *One the Voice: An Introduction to Body Mapping: Enhancing Musical Performance Through Somatic Pedagogy*. Choral Journal vol 45 no.7, p. 100.

¹² Richard Alderson, *Complete Handbook on Voice Training*. West Nyack, NY: Park Publishing Co, 1979, p. 28

¹³ Webster’s II New Riverside University Dictionary. 1984.

¹⁴ See Richard Miller *The Structure of Singing*, pp. 20-39; Richard Alderson *Complete Handbook of Voice Training*, and James McKinney *The Diagnosis & Correction of Vocal Faults*.

Yet according to James McKinney, there is a difference between *support* and *control*: in *The Diagnosis and Correction of Vocal Faults*, McKinney notes that these two breathing functions are “independent, yet related”. Breath support, he says, is best described as the “dynamic relationship” between the inspiration and expiration muscles which “set up a balanced tension” between both muscle groups. Breath control, he notes however, is another form of “dynamic relationship” this time between the breath and the vocal chords, in other words, how efficiently the singer uses the air. To reach a correct amount of balance, McKinney informs us that the singer will feel “as if he is staying in a breathing-in posture, even though air gradually is moving out of his body”¹⁵. Thus, a muscular antagonism exists that must never be ‘held’ in place – this ‘holding’ is easily done by students who desire to hold what they are doing once their teacher exclaims “that’s it, breath like that!” Yet a balance must be learned between relaxing certain muscles while keeping others energetic. Miller talks about how the shoulders must be relaxed but insists that the sternum must never slump.¹⁶ Some call this the ‘noble posture’, or one actors would use in the theatre, as they also need to project their voice, and therefore cannot allow their sternum to slump.

From my personal experience, both in learning how to sing and from teaching beginners, I prefer using the term “energetic breathing”. Energy implies “vigour in performance” “vitality in expression” and “capacity for action or accomplishment”.¹⁷ Thus breathing with energy encompasses the feeling of breath management in such a way as to include both the muscle antagonism as well as the consciousness of using the maximum amount of air capacity to sing. The term even adds the component of expression as well, without including a notion of tension. I believe the concept of “energetic breathing” is well adapted to explain to beginners not to let go of the energy especially for example, in singing pianissimo passages when it is so easy to think of decreasing energy levels instead. The term of “energetic breathing” can also

¹⁵ James McKinney, *The Diagnosis & Correction of Vocal Faults*, pp. 53, 54 & 55

¹⁶ Richard Miller. *The Structure of Singing.*, p. 24.

¹⁷ Webster’s II New Riverside University Dictionary.

help singers to produce a better tone as a certain level of energy needs to be maintained for the sound to be 'alive' and possess a better sound. In relation to this concept, William E. Jones has stated that singing is "actually the transmutation of energy into tone."¹⁸ But how does one add energy into singing? Energy needs the body. Energy needs muscles. Which brings us to the second major component of my topic: the body.

V. The Body: Self-Awareness and Movement Management

Singer, vocalist and musicologist James Stark, in his book *Bel Canto*, states that singing is "a form of physical work, of vocal athleticism, and this work requires conscious muscular effort. What is important is to know which muscles must be engaged, and in what manner." "Natural or intuitive impulses", Stark continues, "must be abandoned in favour of learned vocal behaviour. The idea that singing is like conversational speech is one of those mind barriers that must be overcome."¹⁹ Thus, the concept is corroborated: just as walking is not running, speaking is not singing.

During the learning process – which is as necessary as the training of an athlete – vocal students must also be taught which muscles must *not* be engaged: the jaw, tongue, neck, and arms; even the legs must not be stiff or tense. Douglas Stanley, founder of the Douglas Stanley (singing) Method²⁰ confirms this idea: "There is an area which should be relatively relaxed and which should, under no circumstances, function during phonation, i.e., the chest, shoulders, neck and jaw"²¹. To this list, I also add the legs, as locking the legs (i.e., too much tension) can have repercussions and create tension in upper areas of the

¹⁸ Quoted in John Burgin, *Teaching Singing*, Metuchen, N.J.: The Scarecrow Press, 1973, p. 13.

¹⁹ James Stark "Breaking Through the Mind Barriers: Challenges to Singing". *Voice Prints*, Mar-Apr 2006, p. 4.

²⁰ Douglas Stanley ruined his voice from incorrect training and regained it thanks to the application of scientific research.

²¹ Stanley, quoted in Burgin, *idem*, p. 24.

body. Thus, muscular self-awareness is key in the study of voice: knowing how to breath, which muscles to involve in breathing as well as which muscles must not be involved.²²

Another aspect that creates tension is fear. Mental fear of high notes, for example, holds such power that I can hinder phonation to such an extent that the note itself, once sung, can be sharp, flat, squeaky, breathy, tense, small, or cause any other undesirable trait. James Cook states that our “vocal apparatus is surrounded by nerves which spontaneously reflect your most intimate thoughts”²³. Therefore, I suggest to my students to replace their fear by thoughts of musical expression in order to produce a better sound. In the process, the tension disappears. Here again, we learn that self-awareness is key to the art of singing.

Nonetheless, self-awareness needs to be learned. Indeed, singers who sing ‘naturally’ without any self-awareness, any scientific knowledge, any breath management or muscle management, often end up with tones that can easily be breathy as they tend to sing from the throat, without using any musculature whatsoever. They might be singing effortlessly, yet their sound will not be full. With their ‘technique’ (or lack thereof) they will never be able to reach high notes without producing squeaky or strained tones.

Instead of this ‘natural’ singing, Stark advises us to focus rather on the idea of “the call” which he links to the concept of yelling as it will give us the mental imagery of “voice projection” which requires a different physical activity than mere everyday speech. Thus, yelling/singing would be the counterpart to talking as running is to walking, because yelling requires that additional energy and musculature. Stark describes how delighted he was to hear Renée Fleming in a television interview describe her own singing as “controlled yelling.”²⁴ This controlled yelling, Stark explains, requires, among a host of other things,

²² I remember a student at my teacher’s recital who sang with so much tension in his neck and shoulders, one could not imagine how my teacher did not stop that instantly. It was even obvious to a lay-person as I was at the time.

²³ James Cook, quoted in Burgin, *idem*, p. 24.

²⁴ Stark, *Breaking Through the Mind Barriers*, p. 4

“elevated breath pressures”.²⁵ To create the elevated breath pressures, one in turn needs to know how to breath correctly and to know which muscles must be used.

Body awareness is a crucial topic for all musicians. Even a pianist needs to be aware of his body to improve his technique. He must avoid tension in his back and shoulders and can even learn to improve his playing by increasing his awareness of muscular and skeleton functions. In learning how to sing however, one cannot just approach a exterior physical instrument and put one’s fingers on it and begin to play. The singer *is* the instrument. This requires an even greater dedication to learning about one’s instrument. As many body awareness schools exist, I have chosen to focus here on the three I consider most beneficial for my discussion: I will provide an overview of the Alexander Technique, Body Mapping and Dalcroze Eurhythmics.

a. The Alexander Technique

Many musicians are aware of the Alexander Technique as a means to improving body movement. In fact, this technique is not about the release of tension (as Alexander found that many of his students then tended to collapse) but it is a means toward finding how to use one’s muscles efficiently²⁶. According to Heather Buchanan, being aware of one’s body is “a key element in the information governing mind-body connections for musicians.”²⁷

But, how to improve what one thinks is already natural? Jane Heirich cautions us because “what we feel is *right* may just be what is familiar.” In other words, our kinaesthetic senses can deceive us “for we may not be familiar with what is best for our voices and for our whole bodies.”²⁸ Vocal students and teachers will need to follow some Alexander training in order to re-educate their “sensory awareness” for

²⁵ Such as “strong glottal resistance to the breath, low airflow rates, and a steady, low larynx”. See Stark, *Breaking Through*, p. 4

²⁶ Jane Heirich, *Voice and the Alexander Technique*, Berkeley, CA: Mornum Time Press, 2005, p. 7.

²⁷ Heather Buchanan, p. 100

²⁸ Heirich, p. 29.

they may need to “change from habitual patterns of overwork (or possibly under-work) to a better balance of effort.”²⁹

Thus, the natural breathing technique which is necessary as the basis for singing can be learned with the help of the Alexander Technique because Alexander lessons help the student “restore the springy action of rib cage muscles”. It also “restores vitality of the powerful diaphragm because it can manoeuvre without undue restriction.” The Alexander Technique helps vocal students learn a better breathing system because it helps them improve the functioning of all “components of the system” that are “intimately connected to the head-neck-spine organization”³⁰, which, in turn, will improve the sound of the vocal student or professional.

b. Body Mapping

An “offspring” of the Alexander Technique is called Body Mapping³¹, which, according to Heather Buchanan, is a “valuable pedagogical tool that can be used as an adjunct to musical instruction in individual studio, classroom, or ensemble settings”³². The focus of body mapping is on the spine and to realign it because the skeleton, especially the spine, is the basis of all movement. Thus, singers can regain the “spine's natural gathering and lengthening movement by avoiding conditions that inhibit freedom of movement,” in other words, when we tense up the muscles in our neck, when we shorten ourselves (or collapse)³³, or even when we straightening our spine. Natural breathing, according to the Body Mapping theory, requires us to gather and lengthen the movement of the spine³⁴. This will create freedom of

²⁹ Ibid.

³⁰ Heircih, *Voice and the Alexander Technique*, p. 78.

³¹ Similar to that of Eutonia developed by Gerda Alexander (not to be confused with Frederick Alexander, found of the Alexander Technique).

³² Buchanan, p. 100.

³³ Note how the idea of collapsing is even negative in everyday posture. Not only in breathing for singing.

³⁴ Buchanan, p. 99-100.

movement that is also necessary to improve the freedom of the sound, and therefore fuller and richer tones.

c. Jaques-Dalcroze Eurhythmics

Jaques-Dalcroze introduced the notion of Eurhythmics (from the Greek roots *eu* and *rythmos* that mean “good flow” or “good movement”³⁵) which focuses on the inner feeling of the body as and being the musical instrument per se and the source of musical expression. In Eurhythmics this inner body awareness is called kinaesthetic (from the Greek *kinema*: “motion,” and *ethesia*: “sensing”), is considered to be the 6th sense – in addition to touch, smell, taste, sight or hearing³⁶ – and is very important to feel what is going on inside, be it for singers, pianists or musicians of any instrument. Musicians need to feel which muscles are being used, which ones are unnecessarily tense and how to use movement to improve their musicality.

For muscle usage in music, the concept of time-space-energy is very important. For example, when Eurhythmics students first learn about intervals, they learn that it is the *distance* from one note to another. Walker explains that “space is suggested” in using the concept of *distance*. While “music notation does have a spatial element, this ‘space’ is an abstraction of the two pitches of an interval”. Thus,

In a Eurhythmics class, students move a hand through the air from one point to the next as an embodied representation of the movement from one pitch in an interval to the next pitch. When students are first learning about intervals, scales, and melody, movement of the hand allows them to *feel* the difference in size *between* one interval and another. This physical motion incorporates all the concrete aspects of an interval: the beginning and ending notes, the distance between them, and the character of the motion.³⁷

³⁵ Mead, Virginia Hoge. “More Than Mere Movement: Dalcroze Eurhythmics”. *Music Educators Journal* 82, vol 4, 1996, p. 38.

³⁶ The example given to illustrate this aspect tells us to close our eyes and to move a finger. In this process, we feel something without employing any of the five senses, which therefore proves we do possess this other sense.

³⁷ Walker, 2007, p. 70-71.

This concept is very useful for all types of musicians. Singers can especially benefit from this notion to avoid ‘hopping’ from one note to the next. Rather, they must sing through to the next note while and must therefore use the breath to do so. Singing is in fact, according to my voice teacher³⁸, “riding the air” from one note to the next. Thus, there is the movement of the breath, and there is energy which flows without interruption. By using the hand to show that movement from one note to the next, be it pianissimo, forte, be it a sad or happy passage, using the hand to express those dynamics and emotions help singers to express them in their vocal performance. Dalcroze sums up this notion of singing on the breath when he notes that the “technique of respiration does not consist merely in overcoming breathlessness... It assures the preparation, cessation, and continuation of gestures, the shading of sensations, sentiments, and heartfelt emotions, the phrasing and scansion³⁹ of successive actions”.⁴⁰

If a singer concentrates on the expression of his muscles, on the expression of the music, he will gain in quality of sound. Voice teachers often tell their students to do this, to focus on expressing the emotions in the text, to think of an imagery that will express a certain emotion. We have seen noted above how “vocal apparatus is surrounded by nerves which spontaneously reflect your most intimate thoughts”⁴¹. Which again ties our ideas into one common whole, that the muscles of our body help us to become a better musician.

³⁸ My current teacher is Kathleen Van de Graaff.

³⁹ Definition: the analysis of verse to show its meter. Webster’s II New Riverside University Dictionary.

⁴⁰ Dalcroze, quoted in Bachman 1991, p. 154

⁴¹ Quoted in John Burgin, *Teaching Singing*, Metuchen, N.J.: The Scarecrow Press, 1973, p. 24.

VI. Conclusion

There are many vocal pedagogy schools and even more approaches to vocal study. The science of the voice has continued to evolve, from the time of the Greeks. Plato believed that music and gymnastics were the “basis of an ideal education”. Dalcroze teacher Margaret Naumberg comments that our “so-called classical education has wandered far afield from the original Greek conception of education, as the synthetic training of mind and body, and has completely intellectualized it.”⁴² This could partially explain why it seems so difficult for adult voice students to begin listening to their kinaesthetic sense. Perhaps it is a skill that we left aside many centuries ago.

Naumberg agrees that this mental “training has become the bulwark of our education” while “physical and artistic training are regarded as incidentals”. For those who view the notion of physical and artistic training as being two sides of the same coin, I believe their musicality is enhanced, for one cannot sing with one’s mental capacities alone. In order to improve their quality of sound, singers must be aware of the best ways to breath, must have knowledge about their inner muscles, use their kinaesthetic sense and deploy the necessary muscles to contribute to musical expression.⁴³ As I have endeavoured to prove in my present research, when all these aspects are combined, when the singer learns to develop and perfect all these aspects, when he goes through the physical training (as an athlete would), any singer’s expressiveness will increase in quality. And with the increase of expression, the quality of sound will also increase.

“Plato might have had our modern passive concertgoer in mind when in the "Republic" he points out that music taken passively may undermine the fiber of a man, while music used actively for self-expression strengthens a man spiritually.”⁴⁴ Let us therefore retrain our bodies, train ourselves

⁴² Margaret Naumberg, 1914. <http://www.musikinesis.com/1914%20Article.htm>

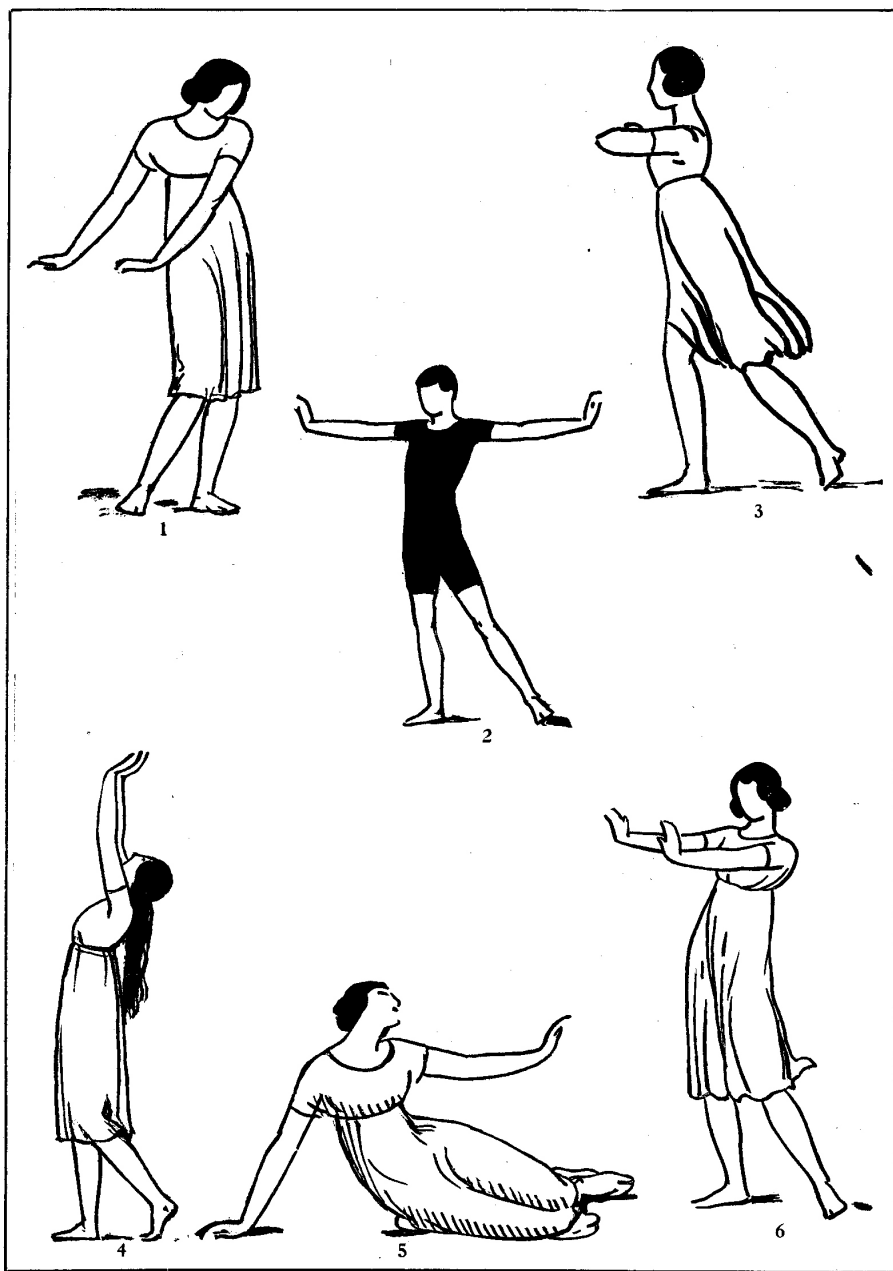
⁴³ Naumberg, Ibid.

⁴⁴ Naumberg, Ibid.

musically, learn about our bodies, how to breath, how to feel the music in our muscles and how to use our body in the expression of one of the highest forms of art: the human voice.

VII. Appendix

An expressive image of the body as a musical instrument, taken from Margaret Naumberg's online article at <http://www.musikinesis.com/1914%20Article.htm>.



BY PERMISSION OF MISS IDA LENGGENHAGEN

THE PHYSICAL EXPRESSION OF MUSIC

See note on opposite page

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