

Gesture as a tool of communication in the teaching of singing

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Abstract

This article investigates the use of gesture as a pedagogic tool in the one-to-one singing lesson. A brief overview of the main approaches of vocal pedagogy exhibits the longstanding dispute between advocates of a purely factual teaching style and defenders of a more imaginative one and shows that imagery and metaphors have long played a role in the teaching of singing. Arguing that gestures are a vital part of human communication and have the capacity to visualize, illustrate and simplify complex matters the author suggests that they might also be used as pedagogic tools in the singing studio. A video recorded observation of a number of Conservatorium level singing lessons, given by five different teachers, was carried out in order to clarify if gestures were used in the communication of singing related concepts, if these concepts could be identified and if the gestures could be categorized according to their pedagogic intent? An analysis of the obtained video footage found that gestures were a vital tool for communicating singing related concepts and that the observed gestures could be categorized according to the concepts they communicated into *Physiological*, *Sensation-related* and *Musical Gestures*.

Key words: Gesture, movement, teaching of singing, communication of voice related concepts

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Teaching Singing

Efficient communication is unarguably a key aspect of all teaching, as a teacher's knowledge, skill and wisdom are only of help if they can be successfully put across to the student. The nature of its subject makes the teaching of singing, and vocal tone production in particular, singularly challenging: the vocal instrument relies on a delicate mechanism that is substantially internal, not readily seen, and poorly innervated for sensory feedback. Moreover virtually all organs used for singing have multiple and often vital other functions that compete with their singing function and can hardly be consciously controlled.

In order to influence this elusive instrument, which is also closely connected to our psyche

and emotions, the singer has to learn how good singing sounds and feels. The teacher, on the other hand, guided by ears and eyes as well as knowledge and experience, has to be able to express the desired physiological functions, sound concepts and sensations in a way that is meaningful to the student. Imagery and metaphor play a vital part in the teaching of singing because "adequate verbal description for a sensory experience...is nearly impossible through strictly scientific and mathematical terms as certain vocal qualities simply defy quantification" (Bunch, 1995, p. 82). A lack of acoustical adjectives in the English (and many other) languages means also that sound is often described in terms borrowed from the worlds of spatiality ("broad", "narrow", "spread"),

temperature (“warm”), shapes (“round”, “flat”), texture (“hard”, “velvety”) and color (“bright”, “dark”, “white”).

Vocal Pedagogy (a brief excursion)

Publications under the broad heading ‘vocal pedagogy’ cover all conceivable physiological, acoustic and psychological aspects of the singing voice as well as musical, linguistic and expressive considerations. Whilst here are a few basic notions whose validity is widely, the way these issues are portrayed can vary enormously.

Vocal tone is produced through a voice source (the vocal folds set into vibration by an air stream from the lungs) and a resonator (the vocal tract). Consequently, “breath flow-to-larynx functions and vocal tract acoustic influences are crucial to the creation of vocal qualities” (Thurman & Welch, 2000, p. 517) that is the degree of vocal fold closure and the shape of pharynx and mouth are the main determinants of vocal quality. Considerations regarding the quality of vocal sound are closely related to the “somewhat hazy notion of *register*” Although there is no generally accepted description of the term, register means basically “a phonation frequency range in which all tones are perceived as being produced in a similar way and which possess a similar voice timbre” (Sundberg, 1987, p. 49). The views on register vary dramatically amongst voice pedagogues ranging from a “Two Register View” to a “Ten Register View” (Caldwell & Wall, 2001, p. 35) yet it is one of the main shared goals of classical voice training to eliminate any audible register changes in order to achieve a unified tonal quality throughout the singer’s vocal range.

Another core subject, and similarly controversial, is the singer’s *posture*. It “determines the alignment and balance of the body, and good bodily alignment is the beginning of efficient breathing and fundamental to healthy singing” (Bunch, 1995, p. 24); consequently virtually every recent larger publication on voice science or vocal pedagogy (e.g., Bunch 1995; Miller, 1996;

Davis, 1998; Hemsley, 1998; Thurman & Welch, 2000; Callaghan, 2000; Caldwell, 2001; Kayes, 2004; Chapman, 2006; Nair, 2007; Smith, 2007) dedicates a chapter or two to ‘posture’, ‘body alignment’ or ‘postural alignment’ to facilitate better tone production. Descriptions of the ideal posture however vary considerably but methods like Alexander Technique¹, Pilates², Yoga³, Tai Chi⁴, and Feldenkrais⁵, are regularly commended as helpful ways to increase body awareness.

If the basic facts of singing technique constitute the foundation of *what* is to be taught in a singing lesson, it is another question altogether *how* knowledge and skill are best imparted so that they are eventually owned by the student-singer. Recent research into preferred training styles in voice studios (in the US) strongly underlines the notion that knowing *what* to train does not necessarily translate directly to *how* to train it (Helding, 2008) and it has been noted that “learning science has not been applied with any system or rigor to voice training whilst voice science has become an integral part of vocal pedagogy” (Verdolini, 2002, p. 47).

It would be difficult to argue against Bunch’s (1995, p. 102) notion that there are basically four factors that determine vocal quality: (1) the physical structure of the head, neck and vocal tract, (2) the co-ordination of the mechanism for singing, (3) the imagination of the singer and (4) the levels of health and energy”. However, the inclusion of point (3) highlights a palpable controversy between different approaches to

Notes

1. Educational discipline developed by F. Matthias Alexander in the 1890s promoting the: “the good use of the self” through body alignment and awareness.
2. Physical fitness system developed by Joseph Pilates in the early 20th century focusing on strengthening core postural muscles.
3. Traditional physical and mental disciplines originating in India.
4. Traditional Chinese soft martial art technique rooted in philosophy
5. Educational system developed by Moshé Feldenkrais around the middle of the 20th century centred on movement, aiming to expand and refine the use of the self through awareness.

teaching singing, namely between advocates of factual teaching and users of imagery.

The argument arises from the differences in weight assigned to the physiological facts of the singing process versus importance given to factors that lie outside the realm of science. There is plenty of evidence that “for as long as they have been singing, students, performers, and teachers have read, heard, and coined figures of speech and mental images relating to healthy vocal habits ... and the sensations felt in producing a beautiful tone” (Patenaude-Yarnell, 2003, p. 185). And “the whole objective of learning to sing is to improve the connection between the emotional, poetic, and musical impulses, and the body, which responds by producing appropriate sound” (Hemsley, 1998, p. 7) whilst Ware (1968, p. 17) maintains that “since singing involves the mind’s ability to re-imagine and replay pitch, rhythm, tone, word, and emotion, the power of mental imagery in singing cannot be overstated”. The use of visualization through images to help singers develop a beautiful and flexible tone is also advocated by Skoog (2004) and even Titze, voice scientist on the fore front of advances in acoustic analysis recommends the use of “images that contain the right number of physiological buzz-words” (1994, p. 77).

On the other hand there is the equally potent angle that “voice is not an ethereal substance that pours forth from the imagination” (Miller 2003, p. 318) but “a physical instrument and obeys the laws of physiology and the voice is an acoustic instrument and obeys the laws of acoustics” (Kiesgen, 2007 p. 261, quoting Miller). Arguably one of the most influential personalities in the field of vocal pedagogy in the last three decades (Greschner, 2007; Kiesgen, 2007) Miller is adamant that “today’s student wants not flowery imagery but practical assistance” (Miller, 2004, p. 196) and states:

Vague imagery is insufficient for adequate communication. The teacher may well know what a “rounder” sound means to him or her, but the term itself does not tell the student what

“rounder” means nor how to “round” the sound. Asking for more or less space in some particular part of the vocal tract can produce a wide variety of results, most of them not intended. The reluctant student may be perfectly right to resist the pedagogy being presented because it is based on illogical verbiage. Putting the tone “up the back of the throat wall and over into the forehead,” “into the masque,” “down the back of the throat,” “out the chimney on the top of the head,” or “out the funnel at the back of the neck,” “singing on the breath,” and “spinning the tone” are useless admonitions, inasmuch as none of these things can be done. (Miller, 1998, pp. 41-42)

It is important to note that the two approaches are not really exclusive of each other and that the argument is purely about the way in which knowledge is *communicated* to the student. Thorough understanding of the physiological-mechanical processes through which the singing voice is produced might be justifiably deemed indispensable for the teacher, but to find a way of presenting those concepts to students in a way that they can understand is just as necessary (Callaghan, 2000) and herein lies the real challenge for the teacher.

Considering the possibilities of visualization through gesture in the light of the evident connection between music and movement (Jacques-Dalcroze, 1921; Baney, 2002; Crosby, 2008) and recent psycho-linguistic research (McNeil, 2000; Beattie, 2003; Kendon 2004), this study grows from the notion that gesture might be a useful tool for the communication of vocal and musical concepts and asks about role of gestures alongside or in place of verbal metaphors, imagery and scientific explanations in the communication of the sensory experiences that is singing.

Method of Investigation

There are primarily three alternative (or complimentary) methods of data collection in qualitative research: interview, self reporting questionnaire and observation. An investigation

into how gesture might be used in the practice of voice teaching, posed several difficulties: there is plenty of evidence (e.g., Beattie, 2003; Goldin-Meadow, 2003; Kendon, 2004) that, even in a situation of purposeful communication like teaching, people are not always completely aware of, and sometimes even perfectly oblivious to the way their body communicates. An interview is rendered meaningless when the subject matter lies beyond the interviewee's consciousness. It is highly likely that in this case the teachers would have been unsure in what way and when they gestured and find it virtually impossible to accurately describe their movements. Considering that the very nature of gestures makes them curiously resistant to being put into words (Kendon, 2004; McNeill, 2000) this difficulty was particularly pronounced in this case as, prior to this study, there was no system of categorizing or naming singing related gestures. Since it would have been virtually impossible to word questions clearly, unambiguously and in a way that their answers yielded meaningful information neither interview nor self-reporting questionnaire commended themselves as viable research methods for this study.

Considering all possible methods of investigation in the light of the research question, the non-participant observation with video camera (Fraenkel & Wallen, 2006) offered an optimum yield of authentic data as well as the technical possibilities to analyze and utilize this data. Over the course of five days, eighteen university-level singing lessons given by five different singing teachers were observed and filmed; simple digital video editing software made it possible to slow down and replay relevant scenes ad libitum and to distill still pictures of various gestures.

In this type of observation the observer is in the room with the observed but does not participate or interfere with the action in any way. An unavoidable downside of this method was that, by sitting in on the lessons, the researcher

inevitably intruded into an environment which is normally characterized by its intimacy and the inner freedom that comes just from being unobserved. The so called "observer effect" (Denscombe, 2003) resulting in participants consciously or unconsciously altering their behavior during an observation could be seen as a marked disadvantage of this methodology. However, the only way to avoid this effect would have been to assume the role of a 'hidden' observer carrying out the observation with a hidden camera and without the subjects being aware of an observation taking place. This was not an option for obvious ethical and practical reasons. Apart from the 'observer effect', the study might appear limited by its relatively small scale. These negatives are however easily offset by the authenticity and great depth of the data which allowed the author to answer all research questions authoritatively.

The study was carried out to investigate how gesture is used as a tool to communicate pedagogic concepts in the one-to-one singing lesson and whether it was possible to categorize and code those gestures. Although there is a great deal of material about vocal pedagogy on one hand and gesture in a variety of contexts on the other, virtually no research attention has been directed to this particular area. The data obtained through the course of the observation has been analyzed in order to answer the following research questions:

1. Did the teachers use gestures to aid the communication of singing related concepts?
2. Which concepts were being communicated through them?
3. Could the observed gestures be categorized according to their pedagogic intent?

If it was possible to define gestures that are successfully used to convey certain complex vocal and musical concepts, these gestures could be adapted by other teachers as teaching aid. The significance of this study lies in the attempt to identify and describe such gestures.

Gestures in the Singing Studio - an Observational Study

The term gesture is generally defined as “a movement of part of the body to express an idea or meaning or an action performed to convey one’s feelings or intentions” (*Oxford English Dictionary*, 2007). The important point is that they are movements “intended to communicate” (Argyle, 1975/1988, p. 1). Gestures have also been called “physical metaphors” (Wis, 1993, p. 3). For this study, the term is used to depict movements of arms and hands with torso, head and neck as reference points, and with the specific intention of communicating singing-related concepts.

The greater part of the observed lessons dealt with the technique of singing, namely, the mechanisms and concepts of breathing, tone placement, support and phonation. Musical issues like phrasing and articulation were also addressed whilst aspects of expression and performance were given less consideration.

The types of gestures observed in this study have never before been described and appreciated for their pedagogical content. With no pre-existing coding or categorization system the main task was to find criteria that warranted a coherent system of categorization.

Types of Gestures

The first distinction between the observed gestures was rather obvious – they either stood in relation to a *technical* or a *musical* phenomenon. Therefore, gestures which were employed to assist the explanation of a primarily physiological mechanism or an acoustic phenomenon and which occurred during the warm-up and technical phase of the lessons were named *Technical Gestures*.

In contrast to that, gestures which were employed to communicate a primarily musical concept and which occurred in the phase of the lesson that dealt with a song were named *Musical Gestures*.

An analysis of the *Technical Gestures* however revealed an initially puzzling fundamental difference between some gestures whose pedagogic intent seemed rather similar. On one side there were gestures which were clearly representations of real *physiological mechanisms*, that is gestures which mirrored the teachers’ knowledge and perception of what was happening invisibly inside his/her body when singing or preparing to sing. Although the mechanisms in question were necessarily presented in a rather simplified way, the pedagogic intention behind these gestures was clearly to make those very physiological actions known and understandable to the student. These types of gestures have been named *Physiological Gestures*.

On the other hand there were gestures related to acoustic phenomena like vocal timbre and tonal quality which did clearly not represent real physiological mechanisms. Those gestures invariably represented a particular sensation or a thought deemed helpful by the teacher for the production of a particular tone or phrase. The types of gestures in which the hands were used to give a visible form to a thought or sensation have been called *Sensation-Related Gestures*.

Apart from the *Technical Gestures*, there were gestures which communicated primarily *musical concepts*. The types of gestures in which the hands were used to give visible forms to musical phenomena have been called *Musical Gestures*; they are deliberately deployed by the teachers to communicate musical elements like phrasing, emphases and articulation. Music being an inherently immaterial, abstract matter, these gestures have no reference point in the ‘bodily world’ but symbolize pure thought-images.

In the following a number of such gestures are represented, their context in the lesson and the teacher’s intention is made clear. The vowels on which the exercises have been sung are given both in what could be called ‘general phonetics’ as well as in the IPA (International Phonetic

Alphabet) symbol. Quotes of the teachers or other sources are set in quotation marks, whereas terms belonging to the specific language of voice teaching have been set in 'inverted commas'. The pictures showing the described gestures have been deliberately edited to disguise the identity of the observed teachers whilst keeping the gestures clearly visible.

Technical Gestures – Physiological Gestures

Technical Gestures in which the hands are used to mime invisible but concrete physiological mechanisms or actions

Physiological Gesture I: Inhalation and High Palate

Context: In the warm-up phase, the teacher demonstrates a five tone scale downwards on "oo – ee" ([u] – [i]). She makes the above gesture and says "...breathe...open..." before the first onset. Onset follows immediately after gesture 1c. The gesture recurs many times during the lesson.

Picture 1a: Both hands are used to illustrate two activities that should coincide with inhalation for singing and preparation for onset: one is the lifting of the soft palate, accomplished by two groups of muscles which simultaneously "elevate" and "pull horizontally the soft palate" through contraction (Bunch, 1995, p. 89). This action is represented by the right hand arched above the ear. Secondly there is the widening of the space inside the throat accomplished through a lowering of the larynx and a relaxed tongue and

pharynx wall; this is represented by the left hand in front of the throat (with the open thumb not visible from this perspective).

Picture 1b: The soft palate, illustrated through the right hand, has reached its highest position and the descending left hand shows the descent of the diaphragm which facilitates inhalation (Bunch, 1995).

Picture 1c: The right hand is still elevated so as to 'keep the palate in its high position' whilst the left hand moves further down to illustrate the *perceived* ongoing descent of the diaphragm. This is the moment directly preceding the onset of tone.

Comment: The posture of the teacher is very much part of the gesture, head and neck are in alignment with the back; it may be noted that the head is tilted forward-downward to a position which would not be considered ideal for singing. In this context however, it is a deliberate means to further emphasize the stretch of the neck and the sensation of an 'inner and upward space' which is being illustrated by the right hand.

Physiological Gesture II: Diaphragm and Pelvic Floor in Exhalation and Inhalation

Context: The student has just sung the first part of a contemporary song and shows confusion regarding the use of the abdominal muscles whilst singing and breathing. Prompted by the teacher, the student says that she has – by a previous teacher - been told to push the abdominal muscles "out and down". In the





ensuing discussion regarding the role of the diaphragm and pelvic floor in breathing for singing, the teacher shows the above gesture.

Picture 2a: Teacher B maintains that the pelvic floor should be “active in the sense that it should have tension so you slow down the ascent of the diaphragm.” She says that, as the pelvic floor is a “voluntary muscle”, it could and should be employed to “help control the involuntary muscle that is the diaphragm”.

Picture 2b: Teacher B shows the ‘passive’ state of diaphragm and pelvic floor saying: “if you let it be passive it would just pop back up and the diaphragm would go up with it”. There is a notable parallel between the gestures shown in 1c and 2a.

Physiological Gesture III: Tongue Position

Context: In the warm-up phase, the singer is asked

to sing a five-tone scale downwards on “nyeh” ([nje]). The teacher uses the above gesture to illustrate the most favorable tongue position for this exercise.

Picture 3: The teacher demonstrates the exercise and then explains that the tongue must lie broadly in the mouth, curving down just behind the bottom front teeth. She illustrates this with the above gesture in which the left hand represents the bottom teeth and the right hand represents the tongue.

Comment: The objective of the exercise is to enhance the so called ‘twang’, an extremely ‘forward placed’ tone (that is, a tone with a strong sensation of vibration of the facial bones). The “nyeh” ([nje]) is intended to be sung with exaggerated brightness which is helped by a high but broad tongue position. This position enhances pharyngeal space and ensures that the tongue is not retracted. Miming the desired tongue position with the hands helps to make the point very clear.

Physiological Gesture IV: Vocal Folds during Onset

Context: The student is having difficulties with her onset, the voice sounding slightly breathy, tight and unclear. The teacher lets her hum accentuated, detached [m] on a five-tone scale downwards and shows the above gestures as she explains the action of the vocal folds.

Picture 4a: the gesture accompanies the words



“pulsing brings the folds together” referring to the closing of the vocal folds to initiate sound (the ‘onset’ or ‘attack’). Ideally the air “begins to flow gently” followed by “a precise momentary closure of the vocal folds” (Bunch, 1995, p. 70).

Picture 4b: The gesture accompanies the words “simultaneous onset makes an even vibration”, referring to the “vibratory activity” which is “initiated by the breath pushing against the partially adducted (closed) vocal folds” (Bunch, 1995, p. 69).

Comment: The student finds the right [m] sound through the suggestion to ‘think of smelling something delicious’ which would have most likely lifted the soft palate somewhat. The visualization of vocal fold action worked well and made a good point in neither attacking too violently nor leaving the vocal folds open.

Physiological Gesture V: ‘Open Throat’ during Breath Renewal

Context: The same situation as in *Gesture III:* as the student carries on with the exercise the teacher ‘lives through’ each phrase with her, showing the above gesture in between phrases as the student renews breath and has an opportunity to release and re-establish vocal tract muscle activity.

Picture 5: This gesture refers the widening of the throat (pharynx) accomplished through a “yawn”: the “soft palate is high, the uvula elevated, the tongue lies flat, the larynx is lowered and the jaw hangs” (Miller, 1996, p. 58).



Comment: Interestingly the gesture was so brief that it was actually impossible to be consciously seen by the student (or observer), but only became visible when the film was slowed down. Therefore the gesture’s objective cannot have been to demonstrate and/or illustrate the opening of the throat to the student but must have been an integral part of the teacher’s body-language as she intensely lived through what she wanted the student to do and feel whilst singing this exercise.

Technical Gestures – Sensation Related Gestures

Gestures in which the hands are used to give a visible form to a thought or sensation.

Sensation Related Gesture I: Tone Placement and Forward Resonance

Context: in the warm up phase, Teacher A demonstrates a five tone scale downwards on “oo – ee” ([u] – [i]), the same scale for the preparation of which we have seen gestures 1a – 1c. The above gesture is made as the phrase is sung.

Picture 6a: Both hands at cheek bone level with rounded palms represent the elevated soft palate whilst the forward-pointing fingers illustrate the intended forward direction of the tone. ‘Forward direction’ refers to both the sensations felt in the facial bones and the movement of airflow.

Picture 6b: the right hand starts moving forward as the phrase progresses. The teacher





explicitly uses this gesture to emphasize the forward flow of air and direction of the phrase.

Sensation Related Gesture II: Tone Placement and Forward Resonance

Context: In the warm-up phase, the student sings a five tone scale downwards on “mee – ah” ([mi] – [a]). The teacher explains that the thought of the “more focused [i]-vowel” could be a helpful guide when singing the “more open [a]-vowel”. He recommends to “think “ee” ([i]) whilst singing “ah” ([a]) and sings/demonstrates making the above gesture.

Picture 7a: Whilst the teacher talks about the greater focus of the “ee” ([i]) vowel, his hands point to the forehead and bones and cavities in the front part of the skull (around the eyes, forehead and cheek bones) evoking a sensation

of vibration in these parts sometimes referred to as “singing in the mask” (Miller, 1996, p. 57). This gesture could also be seen to be pointing at the “nasal pharynx” which “amplifies nasal consonants” and vowels of a specific ‘twang’ quality (Bunch, 1995. p. 86).

Picture 7b: The fingers open as if to ‘release the sound’; the right hand starts to move forward illustrating the forward direction that the singer is supposed to feel.

Picture 7c: The right hand continues on its way in a forward movement.

Sensation Related Gesture III: Open versus Covered

Context 8a: The teacher explains that the Italian “ah” ([a]) vowel needs to be bright and open making the above gesture as he demonstrates the desired sound.

Picture 8a: the gesture of a raised open hand with palm and fingers pointing upwards depicts an independent, iconic image of ‘openness’.

Context 8b: In the warm-up phase, the student sings an arpeggio on “ee – eh – ah – oh – oo” ([i] – [e] – [a] – [o] – [u] – [o] – [a] – [e] – [i]). The “oo” ([u]) in the transition from “oh” ([o]) to “oo” ([u]) which occurs on the highest note was picked up by the teacher as “too dark” and “lacking in balanced resonance”. He explained that it was “too *cupo*” (covered) and demonstrates the phrase, making the above gesture as he sings the undesirable closed “oo” ([u]) sound.





Picture 8b: The downward pointing gesture which refers here to the conscious darkening of the vowel is an iconic gesture of 'closed-ness'.

Sensation Related Gesture IV: Sensation of Resonance

Context: The singer is asked to sing the five-tone scale described in *Physiological Gestures III and V*. The teacher demonstrates and, with the above gesture, says the students should feel "sensation here".

Picture 9: All ten rounded fingers point towards the cheek bones and hard palate to indicate where the vibration is supposed to be felt.

Comment: Although the fingers do not directly point there, "the nasal pharynx" is most likely included in the sensation of vibration because it "amplifies nasal consonants" and vowels of a specific 'twang' quality as aimed for in this exercise (Bunch, 1995. p. 86).

Musical Gestures

Gestures in which the hands were used to give a visible form to a musical concept or idea.

Musical Gesture I: Legato

Context: The student sings a phrase of an Early Italian aria. The teacher criticizes a tendency to 'drop' parts of the phrase and says "...why don't you just continue like..." finishing the sentence with the above gesture.

Pictures 10a – c: The right hand is half open as if fingers and thumbs were holding or shaping some delicate matter whilst it describes a continuous horizontal movement.

Comment: This gesture is as expressive as it is multi-functional. It captures the idea of an even line which in this context refers to both a musical and a vocal concept: evenness of tone and continuity of vowels relate to the musical concept of *legato*.

Musical Gesture II: Different Kinds of Phrasing

Context: The teacher sings the first phrase of a jazz song demonstrating different kinds of phrasing which are accompanied by particular gestures.

Picture 11a: Short, accentuated off-beat syllables are accompanied by vertical strokes referred to by the teacher as "clips".

Picture 11b: This gesture accompanies the same phrase now sung with a 'classical' legato line, long vowels and no accents.

Picture 11c: This gesture also accompanies the legato phrase.





Musical Gesture III: Conducting

Context: Having worked through a song in great detail, the student now sings the whole song with the teacher guiding her solely through movements of hands, arms and facial expression.

Picture 12a: The ‘shush’ emblem is used to make the singer pause.

Picture 12b: Both hands pulse in the beat giving the shapes of the phrases as the singer sings.

Picture 12c: The pronounced pointing gesture encourages an accent.

Picture 12d: The raised and open arms ‘produce’ a ‘happy’ forte.

Discussion

Collecting data for this study through observation and video recording gave the researcher the opportunity to see firsthand and in great depth if, how and to what effect

gestures were being utilised in the observed lessons. The relatively limited scale of the study on the other hand, meant that the findings can only be generalized to a point. Despite the huge body of material dealing with gesture, the study yielded a lot of information that had as such not been available before and showed that gesture played indeed a crucial role as a pedagogic- and communication-tool in the singing studio.

The first thing that was immediately notable during the observation was that four out of the five observed teachers used surprisingly little ‘random gesticulation’ (or ‘beats’: that is, hand(s) moving along with the rhythmical flow of the speech without carrying any specific meaning (Goldin-Meadow, 2003). Whilst the general inclination to gesticulate and produce ‘beats’ varies from individual to individual, it is here that the ‘observer effect’ is likely to have also played



a role: Beattie (2003) suggests that awareness of being observed tends to result in a certain guardedness and self-consciousness, which again tends to suppress random movements.

On the other hand there were many often quite elaborate and deliberate gestures that clearly stood in relation to what was being communicated. The first research question could therefore be confidently answered in the affirmative: gestures were definitely present in the communication of voice related concepts - albeit to varying degrees amongst the five observed teachers. Some gestures were directly linked to words, others were executed without words but their meaning became clear from the context or through an explanation that the teachers had given previously.

In view of a terminology that can be confusing and contradicting, the researcher needed to find a coding system that was wide enough to integrate different types of gestures (as coded by the psycho-linguists) under a new common denominator and to find a coherent criterion of distinction that was meaningful in the context of the present study. This criterion was found in the pedagogic meaning transported by the gestures. In answer to research question No 2, it was found that a large part of the observed gestures were used to illustrate a technical phenomenon like a physiological process or an acoustic phenomenon. Whilst some of these gestures mimed an actual mechanism, others appeared to visualize a particular thought or sensation. Apart from technical gestures there were others again which were used to illustrate a musical idea.

Having identified the gestures' pedagogical intent thus gave us coherent criteria to categorize the gestures as *Physiological Gestures*, *Sensation-Related Gestures* or *Musical Gestures*. Therefore also research question No 3 could be answered in the affirmative.

One must note however that, although the observed gestures fell relatively clearly into one or the other category, the gestures usually also

included some elements of another category. When looking at *Sensation Related Gesture I* for instance (see Picture 6a) we see that, although its primary purpose and intention was, as was very clear through its context, to illustrate tone placement and forward resonance, the first part of the gesture (both hands held at cheek bone level with rounded downward facing palms, seen above) is actually, according to the above definition, also a physiological gesture - because the hands could also be seen as representing the elevated soft palate.

Similarly one could argue that *Musical Gesture I* (see Pictures 10a, 10b and 10c) includes also a mix of physiological and sensation-related elements as the gesture can also be interpreted as referring to and illustrating even airflow - a technical prerequisite for any legato line.

It is important to note that the above system of categorization leans largely on the pedagogic intention in which a gesture has been employed, which depended on the context in which a particular gesture has occurred in the singing lesson. The fact that most gestures will under close scrutiny show also some elements of other gesture-types reflects the phenomenon that physiological, sensation-related and musical concepts often intertwine in singing.

The fact that gestures featured so prominently in the observed voice lessons, confirms that they are very potent tools in the communication of certain singing related concepts; their capacity to capture the essence of a mechanism or concept vividly and directly seems at times even superior to verbal explanation.

It is however a different question altogether if gestures like the above can be taught, learned and adopted by anyone as a tool of expressing particular voice related concepts. There is a lot of evidence that styles of gesturing are "highly individual and characteristic" to particular persons (Argyle 1988, p. 200). And the observed gestures were, despite some similarities, still largely characteristic to the person who used

them. A separate study could be conducted to show if particular gestures could be learned and adopted as usable teaching tools by aspiring voice teachers.

A comprehensive investigation into the *role of gesture in the teaching of singing* would naturally also include considerations about the effect of gesture and movement as an activity by the singer/student. Thus the present study is only one part in an exciting field of study. However, in view of the quite substantial evidence in favour of specific gesture use yielded by a comparatively small scale study, it appears only a question of time until gestures will become an acknowledged tool in the explanation and communication of certain singing related concepts. If done consciously and deliberately, 'talking with one's hands' should not be despised nor underestimated in a context that depends on intuition, visualization and what could be dubbed a deep *physical* understanding.

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