



The Language of Mind and Body in Playing the Nyckelharpa

By Corrado Bungaro

The body is music. In every gesture we make there is a rhythm, a time and a sound whose relationships are coordinated by the brain.

Motor coordination is a human quality which is too often forgotten. Its infinite potential is, in fact, that which enables human beings to make appropriate movements fluidly in order to do everything they want to do, from the most humble and banal activities to the most incredibly complicated ones. Being aware of this quality, caring for it and nurturing it means nourishing the relationship between body and mind: coordination is actually the “meeting” point between gesture and thought, action and concentration. It is also the starting point for quality research.

My body is more than a body, I don't have a body, I am the body.

Emmanuel Mornier

Generally in playing an instrument, the development of precise movement awareness, which involves implementing the principles of coordination, is reflected in the quality of a performance, in the freedom of movement and in the avoidance of muscular-skeleton problems.

In the study and the playing of an atypical instrument such as the nyckelharpa, the relationship with the body is especially important due to the following characteristics:





- The atypical shape of the nyckelharpa, which, although being classed as a bowed string instrument, has a keyboard as well as a bow;
- The specific weight of the instrument (almost 2 kilos);
- The reduced length of the bow;
- The presence of 16 strings (4 melody and 12 sympathetic) with the consequently high tension that the body of the instrument has to withstand;
- The richness of the harmonics produced by the vibration of the 12 sympathetic strings.

Position and posture

The first aspect to consider when taking up the nyckelharpa is the relationship between body and instrument, vital in the understanding of the position to adopt while playing; this is also one of the key areas from a didactic point of view.

In nyckelharpa didactic history and musical praxis, no single position has ever been adopted as being the 'correct' one in either Swedish or continental usage. This is due to the instrument's peculiarities that make it a rare, fascinating and unique member of the large family of bowed string instruments. The player must find a point of balance between the body of the instrument and his own body, aiming at the best possible compromise between body comfort and optimum musical performance. In the personal choice of position the following will be determining factors:

- The length, the shape and the weight of the instrument, given the great variety of models produced
- The anatomy and shape of the player's body

Having said this, I must point out that descriptions of playing positions do exist in the history and in the musical praxis of the nyckelharpa. These have led over time to simplifications of the following kind:



A) "Seated position" or "Position on a chair"

This position in all of its variants allows a better distribution of the instrument's weight over the whole body and is much more suitable for longer musical sessions. Moreover, it allows the player to see the keyboard and the single buttons during the performance. The possible disadvantages are the unnatural curvature of the player's back and spinal column and the load on the right side of the player's body (shoulder, hand, arm).

B) "Standing position"

The standing position allows more freedom of movement and of body expression and it favours a better musical performance. It limits the possibility of looking at the keyboard while playing and it has proved itself to be tiring during longer musical sessions due to the load on the player's spinal column and back.

Furthermore, we can also distinguish between:

"Aerial position"

In these cases the use of the support belt is fundamental; it passes around the neck to find a point of balance between the right side and left side of the body and allows the instrument to be played in an "aerial" way; in other words, hung from the body with the player either in a sitting or standing position.

NB! The varieties of belts used in playing the nyckelharpa merit a deeper analysis.

"Contact position"

In these cases the nyckelharpa is rested on the player's legs and touches the lower part of the body. Consequently there is no need for the support belt.

What is the right position then? Which is the 'most correct'? It is impossible to give a single answer here, as there are multiple factors that influence the choice.

The shape, length, and particularly the nyckelharpa's weight, together with the musician's anatomic structure are the basic elements that will determine the best solution for each person.



The 'right' position has to be the one that is most natural for the individual; that is, one that allows the body to move naturally and expressively, particularly the parts that are called on directly to play, but also one that doesn't inhibit normal breathing.

According to modern theory it is the instrument that must adapt itself to our anthropometric characteristics and not the opposite as used to happen in the past.

Be careful, in any case, of any muscle tension that may build up because of incorrect or prolonged use of the instrument. To avoid this, the indications that come from scientific fields, such as physiologic sciences, physical education and spinal column biomechanics, where the correct relation between posture, load and gravity are studied in depth, may be helpful.

Having said this, it is didactically better to experiment with each of the positions described above in order to try to find 'new' ways to get the best out of the instrument and, when circumstances demand, to be able to change from one position to another with ease.

Care should be taken regarding the relationship between the chosen position of the instrument and the sound quality, because the more of the instrument that is in contact with the body, the more closed the sound, and vice versa. For this reason the position that can allow the greatest freedom for vibration and a vast range of harmonics, is the "violinist" position, especially when a shoulder support is used so that there is no actual body contact with the instrument.

Stretching:

Harmonize body and mind before playing

Musicians doggedly tune their instruments and yet neglect their body. The result is that they play on a well-tuned instrument while their body is decidedly out of tune.

Dr. Marco Brazzo



Harmonizing body, mind and soul before musical study sessions or performances is vital for being totally ready and prepared in body and spirit, and fundamental in creating limitless quality energy, which only this type of preparation can provide.

How? By doing a series of special 'light gymnastic' exercises taken from the practice of yoga and other relaxation techniques.

Example 1

Starting from the head, do gentle rotations anticlockwise and clockwise, then passing to the shoulders alternating the rotation from left shoulder to right shoulder. Repeat the exercise slowly for a few minutes.

Example 2

Raise the arms slowly to the sky and let them fall heavily to the ground, alternating the fall between clockwise and anticlockwise movements.

Repeat the exercise many times, starting with only the left arm then with the right one and eventually with both. Continue with relaxing exercises for the hands.

Example 3

Alternate slow clockwise and anticlockwise rotations of the pelvis, first making a small circle then enlarging it to a bigger circle and then back to a smaller one.

Example 4

With your knees slightly bent and with your hands on your pelvis, push up vertically on your legs.

It is important in all these exercises to pay great attention to breathing in a way that movements and breathing are naturally harmonized.

The exercises can be done in silence or with background music on condition that it is suitable.

Times of exercises minimum 10 minutes, maximum 20 minutes.



Hand and finger massages

The hand – considered in all of its articulations – is paradoxically one of the parts of the body we take less care of despite the fact that its role is of prime importance in performing music.

Example 5

Through gentle pressure on the palm of the hand, activate little rotations starting from the centre and moving outwards, then moving on to every single finger.

Repeat it on the back of the hand and then on the other hand.

The massage strengthens muscles and bones and stimulates blood circulation so that every part of the hand is supplied with blood.

Times of exercise: minimum 5 minutes, maximum 10 minutes.

Doing regular stretching exercises has been proved as being fundamental in keeping the musician's body supple and in particular in preventing all kinds of pathologies.

In fact, musicians – particularly professionals – are in many ways similar to top-class athletes. Like athletes, they dedicate several hours a day to extremely specialized motor activities carried out in unnatural (mostly asymmetrical) positions dictated by the instrument (as in the case of the nyckelharpa) and they often suffer injuries similar to athletes' injuries.

Having to take up unnatural positions has led to an increasing number of musicians being afflicted with professional pathologies such as focal dystonia; this is a neurological illness in which the brain sends wrong messages to the fingers which move unintentionally by contracting or stretching. Focal dystonia is one of the most serious pathologies, but it is also common nowadays to see spinal column distortions, muscular tension, tendinopathies, sciatica, back pains, arthrosis and others that can turn into crippling illnesses if not treated properly.



Stretching is useful in preventing injuries and in increasing movement performance quality.

We straighten out the imbalances of muscular tension and avoid the sensation of feeling tired, rigid, and "heavy" through muscular flexibility training.

Unfortunately, even today, western educational systems do not address this important issue: in music schools pupils learn how to play, but they are not taught about how the body is involved in the act of playing an instrument and the risks that can be faced. In some cases young musicians when performing are made to maintain a static, forced position where their only movements are may-be finger movements. To remedy this problem, it would also be useful to teach biomechanics and/or physiopathology to those who choose to train to become musicians and encourage pupils to attend courses that study techniques related to body awareness (such as the "Alexander" and "Feldenkrais" methods and yoga). This trend has only just started in European music teaching establishments.

This fundamental aspect of the teaching of the nyckelharpa is fortunately given considerable importance in the "European Nyckelharpa Training" method, thanks principally to the Swedish approach to the instrument, which has passed on its emphasis on the warming-up phase to the Italian and German schools. This method has been enriched by the valuable contributions of professor Didier François who lays particular stress on the body-instrument-sound relationship and to possible pathologies deriving from an unnatural posture.

What are the main causes of the above-mentioned pathologies? An incorrect posture, for example, and/or an incorrect study method.

Here are some general rules to follow in your daily practice routine that we would define as "good practice":



- Choose an ergonomic space that favours the study activity;
- pay attention to the choice of the background elements (lighting, music stand, chair, etc.);
- do stretching and warm-up phase before starting;
- pay attention to a correct posture;
- find the right balance between practicing time and necessary breaks;
- change activity during breaks and loosen up muscles before starting to practice again.

In “muscular economy”, playing in a relaxed way is equivalent to playing better. You will see the benefits quickly: some conservatories have just started to offer yoga or Feldenkrais courses.

Exercises and body memory

After the stretching and warming up phase we now analyse a “typical” daily practice session focusing on the body-instrument-sound relationship observed through the consideration of human memory’s fundamental aspect.

Position of the bow: exercises with the right hand

The bow must be grasped as naturally as possible with the right hand at the heel end. For good control of the bow the middle finger and the ring finger should be close to each other on the frog (nasetto) balanced by the thumb on the opposite side, the little finger circling the end of the stick and the index in front of all the others touching the bow between the first and the second phalanx.

The role of the right hand, and in particular the position of the fingers on the bow, is very important for the necessary fluidity of hand and wrist movements and in achieving a “nice sound”.

It should be said that the nyckelharpa’s already-noted unusualness is again clear in the relationship between posture, position of the bow and the way that the instrument is held.

The small size of the bow (about half the length of a violin bow) requires a position on the string parallel to the bridge but with the



bow slightly angled towards the body, towards the bridge. It is this that enables optimum up-and-down movement by exploiting the whole length of the bow.

The position of the bow along the length of the strings also influences the sound or sound-timbre too. Playing near the bridge produces a harder sound which is full of harmonics and that can become very harsh; playing near the keyboard is more delicate and ethereal.

A point of balance between these two extreme positions can be found by playing at the centre of the string, which produces the best sound and the consequent sympathetic vibrations of the resonance strings.

There are other sound effects that you can produce by working on the position and on the speed of the bow, as well as simply using it percussively.

Let’s now look at some examples of bow exercises, a basic step for beginners, but always useful for musicians of any level.

Exercise 1 – the worm

“Climbing” with your hand along the bow from the heel to the point and back down again. Once you have returned to the start point, let the bow slip down to the point, being careful not to let go of the bow completely. Repeat the movement many times.

Exercise 2 – pendulum

Take the point of the bow with your left hand and hold it in a vertical position in the air while your right arm hangs down by the side of your body. With a rapid movement, raise your right hand to take the bow naturally in its right position. At this point relax your left arm so that it hangs back alongside your body. Do different movements and rotations with the bow making sure your wrist is relaxed. Repeat the exercise many times.

Variation: alternate the same exercise but starting with the bow in a horizontal position.



Exercise 3 – little cat

Make small movements up and down with the bow in a vertical direction, taking care to move just your fingers and not other parts of your hand or arm. It is useful to keep your right wrist still by holding it gently with the other hand.

With all the bow exercises described above, you are making a conscious effort to train your fingers to find the correct position automatically. The repetition of finger movements and finger positioning helps muscle memory, or, more generally, body memory. This is true for every exercise for studying the nyckelharpa, those with the right hand on the strings and those with the left hand on the keyboard, where the continuous repetition of each single movement leads to the same result.

Human memory is classified in two types : long term and short term. When any kind of activity is practiced, both are involved: the first one, which is in the hippocampus and in the frontal anterior left lobe, organizes the knowledge and the abilities acquired during childhood and studies and transmits them to the technical abilities area that involve the motor system and the cerebellum.

At the moment of action everything is transferred to the recent memory area (situated in the frontal external cortex) so that anyone can do something and remember having done it.

In the field of music other kinds of memory come into play, such as tactile memory that enables the performer to place his/her fingers in the right way and to remember the correct positions for certain passages and their exact sequence, auditive memory for what concerns the melody, visual memory to remember the score, semantic memory for the harmony and, in the case of sung music, also verbal and emotional memory to remember the words and their meaning.

All these kinds of memory are involved in the execution of a musical piece. Often memory goes on by itself, hands follow their path automatically as if a part of memory resides inside them so that they know how to move on the instrument.



The ability to memorize and repeat a musical phrase or an entire piece is a common thing that anybody can do without making a big effort.

Our memory supports and helps us at every moment of our lives and it is the same thing for music; we can recall our favourite piece of music easily and we can sing it whenever we want without really thinking about it.

At other times our memory activates unconsciously so that we remember things or events we have not learnt consciously, but that have remained embedded on our minds for some unknown reason.

Scales

Scales are part of any musician's background; they are exercises that have multiple uses in performing music from the beginnings up to professional level.

With bowed instruments scales are not appreciated by musicians especially in the first few years of study because they are generally considered as just warm-up exercises.

In many cases expert musicians stop practicing scales during study sessions considering them no longer of any use. This is certainly a mistake, as scales, when practiced correctly, are fundamental exercises which help the musician continue to improve.

In the case of the nyckelharpa, scales have a particular importance (given the small size of the bow) in helping to learn to use the bow to its full potential.

Didactically, it is important to convince the pupil of the great utility of scales by explaining all the possible reasons for practicing them, such as:

- Paying particular attention to the intonation and to the pressure you are giving to the keys on the strings;
- Understanding harmony, major and minor modes and their variants;



- Monitoring your posture, left hand, right hand and the relation bow-instrument;
- Learning how to measure the bowing and improving all possible techniques;
- Trying to produce a good sound;
- Experimenting the different types of bow effects (on the bridge, on the keyboard, etc.)
- Training musical memory in every aspect
- Monitoring and testing the fluidity of movement and the absence of tension;
- Developing a sense of rhythm.

We could go on because there are innumerable positive functions of this practice or discipline.

One of the most frequent mistakes is that of doing the exercise mechanically, without really considering the above points and with little real attention.

In years of violin teaching I have tried to make playing scales as creative as possible by introducing a series of variants; for example, by asking the pupils to invent some new scales with the aim of changing mental attitude towards them and of making the scales themselves an enjoyable exercise, but without losing sight of didactic basics and universal rules which have been passed on in time.

One of these experiment is one which involves playing a scale and coordinating the movement of the bow with your breathing: it is very simple action that can bring unexpected results if practiced correctly.

Example

Play a scale of three octaves starting with an up bow. At the same time as playing the first note, breathe in deeply. Play the following note of the scale with a down bow at the same time as breathing out, and so on for the whole scale. Perform the scale slowly and trying to utilize the complete length of the bow, taking particular care over producing a good, clear sound.



Your breathing should follow the whole movement of the bow. Repeat the scale inverting the bow direction.

NB: There are many other variations of this exercise that are possible, changing, for example, the breathing, the speed of the bow, etc.

In the traditional teaching of string instruments, even less attention is dedicated to the matter of breathing, and this is such an important issue that it should not be missed out.

Breathing is the only physiological body action that is controlled both unconsciously by our vegetative system and consciously by our will. It is one of the most important basic functions and is in close relationship with the other vital functions. Thank to this peculiarity, it is a sensitive instrument that reacts to both external and internal influences.

“Let our breath come, let it go and wait for it to return by itself” it is the key phrase with which the breathing experience is described by Ilse Middendorf, one of the greatest experts on the subject.

Being aware of our breathing movements when playing music brings great benefits and a new consciousness:

- The player’s movement now comes as a consequence of his breathing;
- Such movement is the authentic expression of who shows it up and is feels free from any convention.

Such an aim is attainable through the simple exercise explained in example 1, which over time helps us to be aware of, and understand:

- The presence of the three breathing spaces (inferior, superior, middle);
- Ascending and descending exhalation;
- The influence of our hands and fingertips on breathing;
- Breathing activity that works on our spinal column, on our joints and on our vital organs.



Body, Mind and Musical Performance

Performing on the nyckelharpa always involves assuming one or more specific postures. Often these postures provoke unconscious imbalances of the body and create disharmonies that alter the correct physical equilibrium.

Those who play this instrument know very well how these alterations can influence a performance negatively and cause other physical problems that have already been discussed. Optimizing every aspect that can affect a performance will lead to little improvements that will contribute to an improved musical performance, such as an improvement in the sound quality, in the sense of well-being with the instrument and in the state of concentration during a performance.

By working carefully and consciously on corporeal perception, it is possible to focus our attention on ourselves and on the physical sensations that are emerging from our bodies.

This will bring about an awakening of the real capabilities of each of us, causing automatic readjustments and creating interior tone and strength at tissue level which will favour sharper concentration on what we are doing.

One of the most avant-garde methods regarding body, mind and musical performance is the Ressaëguier method (see bibliography). Its application concentrates on the adjustment:

- of posture and coordination and movement fluidity;
- of contraction phases that must be followed by integration phases so that each exercise can be learnt properly;
- of the muscle-bone-articulation structure of the spinal column and particularly of chest-abdominal dynamics;
- of total harmonization of the body during performances.

During performances artists tend to transfer a musical idea into a gestural state, albeit subconsciously. Through the act of performing, musicians show the relationships that are established inside this idea. Such acts are also the direct cause both of the expres-



sive quality and sound quality. The execution is the result of an interaction between a thought phase (what we want to get to) and a flexible system of gestural planning (with the aim of obtaining it). Thanks to this reciprocity the artist can make adjustments in real time to his expression by choosing when and how to control his own performance.

When we play, we use our whole body to interact constantly with the instrument, and in particular, in the case of the nyckelharpa, we can see how the hands and the rest of the body cooperate in the production and reception of musical sound, simultaneously hearing / feeling and reacting.

In a performance, there are movements to produce the actual sounds and also accompanying gestures involving the whole body that, in spite of seeming less important, are actually functional to the resulting sound. These gestures include posture, facial expressions and all those micro gestures that apparently do not have a musical result. Thanks to these physical factors, expressive content can be analysed through indicators actually observable during live performances.

Let's now look at some examples of good practice to be followed during individual or group study.

Example 1 – the mirror

Do the individual study session in front of a mirror, paying attention to posture, positioning, correct use of the bow, and correct every anomaly to try to obtain a harmonic, natural balance between body and brain in making music.

Example 1 – stop and go

During an individual study session try stopping unexpectedly at random and try to maintain the exact position you are in at that precise instant, checking and correcting every anomaly to obtain a harmonic, natural balance between body and brain in the musical act.



In example 1 we have a conscious self-evaluation where the brain clearly has explicit control of the body. In example 2 it is interesting to see how the unexpected act of stopping has the merit of anticipating the movement of the body ahead of the thought that governs it.

Generally all exercises where we can anticipate our thoughts are beneficial.

Example 3 – group monitoring

During a group lesson, simulate a musical performance by arranging the classroom as a concert hall would be. Everybody should take turns at performing. When not performing, the other members of the class sit facing the performer as the audience, taking note of every detail regarding the body-mind-sound relationship displayed by the performer. At the end of the performance, a feedback session should be done to provide advice for how to improve this aspect. At this point the same player should play the same piece again but concentrate on correcting his/her previous faults, followed by a comparative analysis between the first and second performances. At the end of all the performances the teacher can summarize the good and bad practices.

Example 3 concerns another fundamental relationship: that between player and listener.

Imagine the scene of a concert: the lights go down, silence falls in the room, the orchestra conductor comes in. There is applause and then silence again. He lifts an arm and breathes in ... and at that precise moment we, too, are holding our breath for a split second until the music begins.

Why does the listener feel all this? And why doesn't this happen only to the performers?

Recent studies say that gesture and language are involved in a single coherent system. In fact, gesture precedes the development of language and acquires a specific value in the act of imitation, which represents the first form of sharing with others.



Studies of mirror neurons in our brain have explained the existence of a neural mechanism that directly maps the actions of others as a motor representation of the same actions in the observer's brain. Evidence from the data collected shows that we are able to enter in empathy with actions carried out by other people because our mirror neurons are not only activated when we do an action ourselves, but also when we see someone else doing an action. This mirroring mechanism demonstrates that we can see also with our motor system. Such mechanisms are important in music not only in terms of imitation, when, for example, we are learning specific technical elements like fingering or articulation, but also during the performance of a piece when the listener becomes an active part of the sound process.

It is fair to suppose that an expressive language exists in which the player and the listener agree. The idea expressed in sound by the interpreter takes place not only on an auditory level but also on a gestural level, reinforcing the expressive idea.

Through the act of performing the musician makes the relationships that are established within a musical idea readable. The performance is therefore the result of the interaction between thought and a flexible system of gestural programming.

Interior sound, audiation and the silent strength of what is invisible

You must not only know your pieces with your fingers but you must know how to sing them inside yourself, without the keyboard. You must sharpen your imagination until you can fix in your memory not just the melody of a composition, but also its harmony.

Robert Schumann 1848

The musical gesture of the performer is always preceded by silence and immobility that leaves space for a invisible preparatory act requiring contemplation. That silence has the same value as sound because it doesn't stop any movement or any rhythm but it



interrupts their sound just for an instant. Straight after that silence but before the first played sound, the performer makes a little movement: he breathes in, or moves the bow or places his fingers on the keyboard.

Moquereu defines these gestures as “ars muta”, the maximum expression of which is probably to be found in an orchestral conductor preparing to raise his baton to bring the orchestra in.

This localized movement substitutes what is missing in the auditory sensation through the internal rhythm that lives inside us.

A pupil’s study of music and learning an instrumental should simultaneously allow him to develop the “sense” and the “sensory” of making music.

What enables some musicians to play his/her own instrument in a musical, free way and to improvise is the capacity of audiation which is a true “interior instrument”.

Audiation is the ability to hear in our minds and understand sounds that do not physically exist. It is the basis of the ability to anticipate sounds before playing them on the instrument, the basis of the ability to understand their sense in a musical syntax and pre-hear the ones to be played with consequent benefits for intonation, phrasing, clarity of production and ensemble playing. It is also a fundamental requisite for improvisation. In other words it represents in music what a thought represents in language; it is a cognitive process through which the brain organizes musical sounds and it is acquired through a sequential process that takes time.

It is the same thing when we use other terms such as “ internal ear”, “ internal audition”, “ mental representation”, “auditive imagination”.

Musical memory is a subject that interests us particularly in this essay, and it is linked to audiation. With audiation it is possible to see a piece for the first time and be able to hear it and understand it without actually playing it.



Let’s make a comparison: to sing a song by imitating it is like copying a picture using tracing paper; doing it with audiation is like imagining a picture and then painting it.

In my personal experience, every time a pupil has expressed difficulty in playing without printed music, I have always given this example: if each one of us is able to sing any song we like using our voice, it means that it is possible to do the same thing with a musical instrument.

There are many exercises that can help the passage from musical thought to musical action.

Example 1 – back to back

Teacher and pupil sit back to back with their own instruments. The teacher plays a combination of three or more notes and pupil must reproduce them as quickly as possible. If easier, the pupil can sing them first and then play it on their instrument.

To understand the syntax of a musical piece it is necessary to recognize the structure and the organization by means of audiation. Generally we have audiation when we understand :

1. the direction of the sounds;
2. the key note;
3. the time, the note patterns and note lengths;

There are different phases of audiation as its inventor Edward E. Gordon explains:

1. the sound is heard and mentally retained;
2. the same sound gets organized in a series of tonal and rhythmic patterns while a tonal centre is established together with the main beats;
3. musical syntax, mode and meter, on which the tonal and rhythmic patterns are based, are individuated;
4. these patterns are retained in audiation;
5. these patterns are compared with other similar patterns that belong to songs that have already been heard and analysed
6. anticipations of patterns are made.



The development of these abilities forms the basis of certain musical competencies generally referred as “musicality”. As well as being abilities necessary for good ensemble playing, they are essential skills for improvising.

Gordon’s method includes ideas for improving pupils’ audiation skills concerning:

- The ability to pre-hear notes to improve intonation, clarity of sounds and musical phrases and ensemble playing;
- The development of the ability to improvise;
- The development of musical memory based on audiation;
- The knowledge of modern pedagogic issues inspired by “ Music learning theory” by E.E. Gordon applied to the study of an instrument;
- The knowledge and the experience of practicing solfeggio by E.E. Gordon.

This improved ability to transfer a musical thought into a physical gesture could constitute the basis of a new method of instrumental teaching in which the musical knowledge or skills of an individual, synthesized in an idea, find the most appropriate gesture to render it in sound. It is all about creating a form of instrumental teaching that builds on an individual’s own musicality and the individual himself, making sure that reality is never lost sight of. It is some sort of mirroring or interior resonance that welcomes a state of being present, in constant connection and consonance with one’s own self, one’s instrument and music.

A final exercise I would like to suggest is: playing with an invisible instrument, to refine the training of interior musical thought development so that all of the concepts expressed in this essay can find expression through mysterious invisible forces.

Example 2 – the invisible instrument

The exercise must be taken seriously, simulating every single movement of the hands with precision as if we were actually playing our instrument. It works well with any musical selection, with a song known by heart or with a song that must be read from sheet music, with scales and arpeggios and also improvisation.



NB!“ Invisible practice” can be extended to every single exercise of the hands or of the use of the bow.

John Sloboda defines audiation as “internal abstract or symbolic representation of music”. Music is brought to the instrument and the instrument is just a physical extension of the person who plays it.

As stated before, audiation is an interior instrument which can provide those who use it properly with a very rich musical vocabulary that enables us to think and play the music even if there is no music.

If you try to build up a melody with a piano, it is a nice thing; but if one day those melodies come to your mind on their own without the need of a piano, enjoy it, because it means that the sense of music lives in you. Your fingers must do what your brain wants, not the opposite.

Robert Schumann, 1848

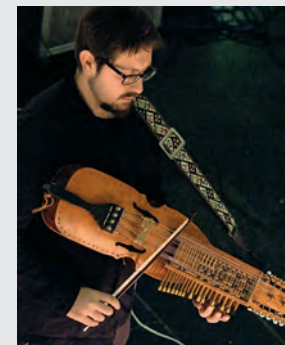


Photo: Giorgio Moser

Corrado Bungaro (Italy)

Corrado Bungaro was born 1969 in Trento where he still lives. He began the violin’s study when he was four and studied in the Conservatoire of Trento.

He is also graduated in law, specialized in international law, he worked for a few years abroad as an expert in human rights.

His love for violin and music made him come back to Italy and he started to dedicate himself totally to the music experience, that he considers the most powerful instrument to communicate with the world.



He is a violin teacher and a musician that dedicates himself professionally to the creation, organization and the direction of cultural events.

He performs in Italy and abroad taking part in various musical projects spacing from jazz, popular, classical and world music up experimental contemporary music.

He has furthered in the years his theatrical, dancing and video taping language, collaborating with international artists and curing the production of his own shows.

His short movie "IlluminAction" has received national and international awards and was selected to represent Italy at the "World One Minute Exhibition" which is an international tour in the contemporary videoart circuite organized by the Amsterdam's "The One Minutes" (TOM) foundation.

Corrado Bungaro is enrolled as author (music, videos, lyrics) in the Italian Society of Authors and Editors. He writes original musics for theatre, dance, video and movies production and soundtracks spaces.

www.arte20.eu

www.myspace.com/corradobungaro

Bibliography in Italian

- Alexander Lowen, Il linguaggio del corpo, Feltrinelli, 2003
- M. Lucia Costa, Il corpo è musica. La coordinazione motoria nella performance pianistica e nella quotidianità, libreriauniversitaria.it 2010
- Enrica Lisciani Petrini, Risonanze: ascolto, corpo, mondo, Mimesis, 2007
- AAVV, Neurofenomenologia. La scienza della mente e la sfida dell'esperienza cosciente, a cura di M. Cappuccio, B. Mondadori, Milano, 2006
- Boella L., Sentire l'altro. Conoscere e praticare l'empatia, Raffaello Cortina, Milano, 2006
- Clarke E., Processi cognitivi nell'esecuzione musicale, in Enciclopedia della Musica, Il sapere musicale, Einaudi, Torino, 2002
- Delalande F., Le condotte musicali, tr. it. Clueb, Bologna, 1993
- Giannelli M. T., Comunicare in modo etico, Raffaello Cortina, Milano, 2006



Schön D., Akiva-Kabiri L., Vecchi T., Psicologia della musica, Carocci, Roma, 2007

Sclavi M., L'arte di ascoltare e mondi possibili. Come si esce dalle cornici di cui siamo parte, B. Mondadori, Milano, 2003

Seggi A., Casti F., Dal pensiero al suono, in Letterature Straniere, Quaderni della Facoltà di Lingue e Letterature Straniere, Università di Cagliari, Carocci Editore, Roma, 2002.

Seggi A., La musica complessa, Riflessioni intorno alla mente, al corpo, alla musica ed alla tecnologia, in MusicInTouch, catalogo delle manifestazioni di ricerca, SpaziomusicaRicerca, Cagliari, 2005

Seggi A., Frammenti e rifrazioni intorno all'arte, alla mente, alla musica e alla neuroestetica, in MusicInTouch, catalogo delle manifestazioni di ricerca, SpaziomusicaRicerca, Cagliari, 2006

Sloboda J. A., La mente musicale, tr. It. Il Mulino, Bologna, 1985

Sloboda J. A., Doti musicali e innatismo. In Enciclopedia della Musica, Il sapere musicale, Einaudi, Torino, 2002

Varela F. J., Un know-how per l'etica, tr. It. Laterza, Roma, 1992

Delalande F. , 1993: Le condotte musicali, Bologna, Clueb.

Freedberg D. , 2007: Empatia, movimento ed emozione, in Immagini della Mente, Neuroscienze, arte e filosofia, a cura di G. Lucignani e A. Pinotti, Milano, Raffaello Cortina.

Gallese V. , 2008: Il corpo teatrale: mimetismo, neuroni specchio, simulazione incarnata, Articolo pubblicato nel sito dell'autore <http://www.unipr.it/arpa/mirror/english/staff/gallese.htm>.

Gallese V. , Freedberg D. , 2008: Movimento, emozione, empatia. I fenomeni che si producono a livello corporeo osservando le opere d'arte, "Prometeo" Rivista trimestrale di scienza e storia, Milano, Arnoldo Mondadori Editore.

Rizzolati G. , Sinigaglia C. , 2006: So quel che fai. Il cervello che agisce e i neuroni specchio, Milano, Raffaello Cortina.

Schon D. , Akiva-Kabiri L. , Vecchi T. , 2007: Psicologia della musica, Roma, Carocci.

Moshe Feldenkrais, Conoscersi attraverso il movimento, Celuc Libri, Milano 1978.

Moshe Feldenkrais, Metodo Feldenkrais – conoscere se stessi attraverso il movimento, Ed. RED Como1991.

Iacoboni M. , 2008: I neuroni specchio. Come capiamo ciò che fanno gli altri, Torino, Bollati Boringhieri.

Plessner H. , 1980: Anthropologie del Sinne, trad. it. M. Russo, Antropologia dei sensi, Milano, Raffaello Cortina 2008.



English Bibliography

- Alexander, F. Matthias, *The Use of the Self*. New York, E.P.Dutton, 1942.
- Aniruddh D. Patel, "Music, Language, and the Brain: The Origins, of Music, Language, Mind and Body", Oxford Univ Press, 2010
- Daniel J. Levitin, *This is Your Brain on Music: The Science of Human Obsession*", Plume, 2007
- Nils L. Wallin, Bjorn Merker, and Steven Brown , "The Origins of Music" published by, The MIT Press, 2001
- Steven Mithen, "The Singing Neanderthals, The Origins of Music, Language, Mind, and Body", Harvard Univ Press 2007
- Oliver Sacks, *Musicophilia: Tales of Music and the Brain* (revised and expanded edition) , , Vintage 2008
- Linda Phyllis Austern, *Music, sensation, and sensualità*, Routledge, 2002
- Ilse Middendorf, *The Perceptible Breath* by Prof. Book with audio tapes Junfermann-Verlag, Paderborn, 1990
- Nell Smyth, *The Breathing Circle: Learning through the movement of the natural breath*, Hawthorn Press, 2006
- Damasio A. R. , 1999: *The Feeling of What Happens*; trad. it. S. Frediani, *Emozione e coscienza*, Milano, Adelphi 2000.
- Damasio A. R. , 2003: *Looking for Spinoza Joy, Sorrow, and Feeling Brain*; trad. it. I. Blum, *Alla ricerca di Spinoza Emozione, sentimenti e cervello*, Milano, Adelphi 2003.
- Moshe Feldenkrais, *Body and mature behaviour*, Frog Books, Berkeley, California, 1949.
- Moshe Feldenkrais, *The Elusive Obvious*. Capitola, CA: Meta Publications, 1981
- Edwin E. Gordon, *Sequences in Music: Skill, Content, and Patterns*, GIA Publications, 1997
- Edwin E. Gordon, *A Music Learning Theory for Newborn and Young Children*, GIA Publications, 1997
- Edwin E. Gordon, *Rhythm: Contrasting the Implications of Audiation and Notation*, GIA Publications, 2000
- Edwin E. Gordon, *Preparatory Audiation, Audiation, and Music Learning Theory: A Handbook of a Comprehensive Music Learning Sequence*, GIA Publications 2001
- Barker, Sarah, *The Alexander Technique: The Revolutionary Way to Use Your Body for Total Energy*. New York: Bantam Books, 1978.
- John A. Sloboda, *The Musical Mind: The Cognitive Psychology of Music* (Oxford Psychology Series) Oxford University Press, USA , 1986
- John A. Sloboda, *Exploring the Musical Mind: Cognition, Emotion, Ability, Function* Oxford University Press, USA, 2005