

THE HEALING POWER OF MUSIC. MUSIC IN PRACTICE

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SUMMARY. Feelings, emotions – musical ones too – are constituted by the simplest elements, which form the basis of psychological phenomena. Their knowledge is indispensable in order to be able to approach the psychology of hearing, of sound and music psychology. The brain research conducted in the second half of the 20th century has demonstrated the fact that the right hemisphere is the one responsible for music: it has the functions of recognizing melody, while the left one to identify rhythm. Music has a particular effect on the aesthetic functions of emotions, polishing, educating and - if need be – healing them. The most important role of music, however, is preventing the possible ailments of our emotional world.

Keywords: aesthetics, music therapy, emotion

*MOTTO: "There is no complete spiritual life without music,
for the human soul has regions
which can be illuminated only by music."
Kodály Zoltán*

Introduction: The psycho-aesthetic characteristics of music

In order to be able to define those feelings and emotions to which musical feelings belong to, we must firstly be acquainted with the basic elements that make up the foundation of the psychological phenomena.

At the beginning of the 18th century, a new chapter into musical research had begun in Europe, based on scientific investigation. Two separate movements can be distinguished: on the one hand, there is the school of psychology, which uses music therapy strictly for the treatment of psychological illnesses and is recognized as being a subspecialty of psychology. In contrast, the other approach focuses on studying the biological effects of music, stressing on its physical, scientific facet, thus offering the possibility of incorporating music therapy within the field of natural sciences (medicine, biology, physics, etc).²

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² <http://www.freeweb.hu/teha/music2.htm>

Until the middle of the 19th century, the following aphorism was meant to describe the brain and its workings: „Textura obscura, obscuriores morbi, functiones obscurissimae”, as in having: “An obscure texture, more obscure diseases, and the most obscure functions”.

It was in this time they first started to study the connection between the brain and the organs that made hearing and vision possible. Psychological research institutes were created and every new discovery was put into play for the development of psychology.

German philosopher and psychologist Carl Stumpf (1848-1936) played a decisive role in the history of music psychology. In his study *Tonpsychologie*, Stumpf based his most difficult experiments in music psychology on the theories of psychologist Franz Brentano (1838-1917).³ In his later writings, we already find traces describing the experience of musical forms. Ernst Kurth and Albert Wellek continued the work. While Kurth was preoccupied with verbal behavior, with observing the process of judgment related to music, Wellek substituted Stumpf's 'psychology of hearing' with the concept of 'tone-psychology', referring to his research on simultaneous phenomena. Today we call this field by the name of *music psychology* and investigate these phenomena mostly from a psychological standpoint.⁴

Up until the first half of the 20th century, psychological phenomena were studied as human experiences or human behavior, for there was little information concerning the brain as such. The brain research that developed after the 1950s had as its core the investigation on the foundations of known psychological processes and phenomena and their scientific explanation. It also made possible – with the help of specialized tools – to visualize the live human brain and the chemical and electrical processes that take place inside of it. This is how it was discovered that behind anxiety, depression, coercion thoughts or even hallucinations actual brain modifications could be detected and measured.

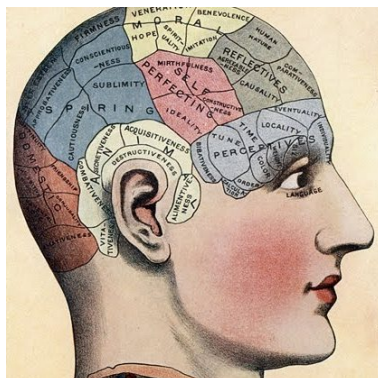
Of course, it is a well-known fact that the human brain has two hemispheres, which both have distinct and complementary roles. The left hemisphere is rather linked to reason, it helps us to make sense of the world based on logical thinking, while the right hemisphere does the same thing only with the help of emotions, fantasy, intuition. The two re joined together by a network of nerves. The right hemisphere is more musical, it has the function of identifying melodies, while the left one does recognizes rhythmic patterns. These are learnt traits and the consequences of brain maturity.⁵

³ Ionescu, Constantin A., *Istoria psihologiei muzicale (The History of Music Psychology)*, Editura muzicală, București, 1982, p. 11.

⁴ Brockhaus – Riemann, *Zenei lexikon (Music Encyclopedia)*, Zeneműkiadó, Budapest, 1985, music psychology

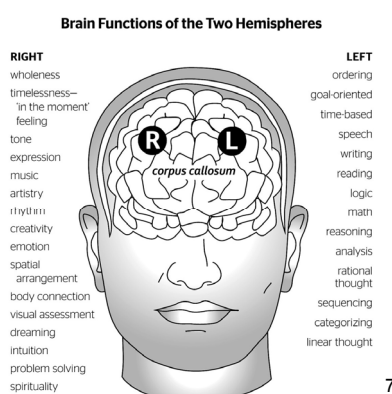
⁵ Lindenbergerné Kardos, Erzsébet, *Zeneterápia szöveggyűjtemény (Music Therapy Reader)*, Published by Kulcs a muzsikához, Pécs, 2005, p. 129.

Fig. 1



The localization of psychological traits in the brainstem, according to Gall – following the work of Hámori József.⁶

Fig. 2



“A hen is only an egg's way of making another egg.” says Samuel Butler,⁸ which is similar to psychiatrist Csaba M. Bánki's⁹ opinion, that: “Body and soul, mind and brain are not distinct matters, they all are one and the same thing.

⁶ Hámori József (1932–) biologist, Szentágothai János (1912–1994) was one of the greatest figures of Hungarian brain research, he laid the groundwork for the works of most of the researchers today) was one of Hámori's closest collaborators, who since 1995 is a professor at the University of Pécs, and a brain researcher.

Source: <http://nbif.blogspot.com/2010/05/right-versus-left-hemispheric-injury.html>

⁷ Source: <http://williamdonius.com/page/2/>

⁸ Samuel Butler (1835 – 1902) was an iconoclastic Victorian author, one of the most controversial writers of the end of the 20th century, a foremost representative of English modernism.

⁹ Dr. Csaba M. Bánki, physician, psychiatrist, pharmacologist, Ph.D., doctor of the Hungarian Academy of Sciences.

The questions of which came first, which one is more important, 'superior', or which one would 'define' the other are merely circular chicken-egg questions, to which each person could give different answers based on their own personal taste and liking".¹⁰

However, we could also say that "music is man's own invention, which exists so it could be heard by more people"... – in the same manner in which we cannot live without listening to music, for this makes us happy – and other than words, music expresses best our own happiness.

The power of music

*"All animals, except man, know
that the principal business of life is to enjoy it."*
Samuel Butler

*"Music is the voice that tells us
that the human race is greater than it knows."*
Marion C. Garretty

1. Music as a psycho-aesthetic phenomenon

Art sociology and art psychology could not be supported without adopting an aesthetic attitude. The role of aesthetics is to determine the content of art and the manner in which this content comes into form (and vice versa, the way in which we can find content beneath the form of an artwork).¹¹

Music is true revelation, the manifestation of something that cannot be expressed by way of any other "language". In other words, music wakes up the souls of the audience and conjures them to join it, vibrate together with it; it calls on their most intimate exuberance and imparts that indescribable feeling with them.

Doubtless, every art form has this unifying power to a certain extent – it retunes, rearranges and harmonizes the soul. However, not a single art form has the sheer amount of power music possesses.¹²

Similarly to other dynamic forms of art, the functional aspect of musically metaphorized feelings is due to the dynamic nature of the acoustic material: musical sounds exist only in and through movement, their creation resides in the

¹⁰ Bánki, Csaba M., *Életünk és az agy (Our Lives and the Brain)*, Biográf kiadó, Budapest, 1995, p. 152.

¹¹ Vitányi, Iván, *A zene lélektana (The Psychology of Music)*, Gondolat Kiadó, Budapest, 1969, p. 9.

¹² Hartmann, Nicolai, *Esztétika (Aesthetics)*, Translated by: Gábor Bonyhai, Magyar Helikon, 1977, p. 315.

articulation and organization of movement; the musical sound is equally dynamic whether analyzed as an element of artistic reality or viewed as a manifestation of a sensualized ideal.¹³

The power and miracle of music resides in the fact that it has the ability of transporting the listener – even if he/she has no prior education in this regard – to a “different dimension”.

Music plays a great role in our lives: it soothes and gives joy to our souls, moves our bodies and last but certainly not least channels our thoughts in the right direction. Music is a universally accepted communication tool. It has been used since ancient times to express emotion, and with its help, certain thoughts and feelings that could not be put into words can still be conveyed. Classical music composers – Bach, Vivaldi, Mozart, Beethoven, Verdi, Chopin, Strauss etc. – created such miracles that have the ability to carry audiences on a so-called “emotional roller coaster”.

The fact that music whisks us away is perceived as a sort of spiritual rapture, the delight of self-surrender takes hold of the soul; it contracts and relaxes, thus melting away its tensions and spasms.

These are not by any means restricted to great, serious music, which requires a lot of exertion from our part during its audition. It is also valid for a lighter, more playful music – to dance music, marches, lively songs, to the capriccio – only these pieces take us onto less lofty heights. However, these can also have the same purity and ethereal quality; only the depth of enjoyment differs, while it seizes a different level of spirituality.¹⁴

2. The Positive and Negative Effects of Music on the Nervous System

The physiological effect of music is a well-known fact that has been empirically proven. It influences the involuntary nervous system, regulates the cardio-vascular system and blood pressure, and affects breathing. It could generate an overall relaxed mood, or it could initiate action; it also lowers the pain threshold.

Music's effect on living creatures had been evident since the age of the Neanderthal man, for he had already employed a technique only recently proven by today's medical community, namely the fact that the employment of different rhythms can be used to activate the rhythmic functioning of the body and the involuntary nervous system. The so-called *stimulating rhythms* activate the sympathetic nervous system (raising stress levels, elevating blood-sugar levels,

¹³ Angi, István, *Zeneesztétikai előadások (Lectures of Musical Aesthetics)*, Vol I. II., Scientia, Cluj-Napoca, 2003, p. 103.

¹⁴ Idem, p. 318.

heightening muscle activity, as in war dances), while melodies focus on the parasympathetic nervous system, which has the opposite effect on the body, calming the tired warriors after hunting. Naturally, ancient cultures have discovered this through their experience and employed it to improve their lives.

However, depending on the situation and certain conditions, music can also harm the human body system. For instance, when the music that we listen to exceeds 65 decibels, it becomes harmful, while over 90 decibels it can provoke the dilation of pupils, raise adrenaline levels, cause heart palpitations, insomnia, epileptic crises, temporary or even long term deafness.¹⁵ At the same time, total phonic insulation can also cause harm: a Paris-based Institute for Music/Acoustic Research and Coordination has concluded that a person who is entirely isolated phonically starts feeling his/her own heartbeat and blood circulation.

In addition, these negative modifications can arise not only when the proper decibel levels had been exceeded, but also depending on the type of music listened: for instance, at the modification of rhythmic frequencies, at the acceleration of certain musical fragment, in case of dissonance.

3. Some aspects concerning the history of music therapy

According to an old Chinese tale, there is a frightening melody, the Cing-Kiao, the melody of destruction, which - when it was played by a musician at the order of ruler - gathered black clouds in the sky, started a storm, had bricks fall down from the roof, caused the columns of the terrace to crack and the entire castle was flooded. The ruler had trouble sleeping that night. He soon lost his mind and died. In the Chinese philosopher Hsün-Tsu's writings (cca. 300 BC) he says that music brings about inner harmony, joy, goodness, converts morals, and changes a person. According to him immoral music is "harmful, dangerous" for a person will become vulgar, menial and rebellious.¹⁶

Nevertheless, ancient tales spoke about not only a music that devastates, but also about one that does good; in ancient cultures music is represented as the gift of gods, which endow musicians with miraculous powers. One of the most famous among them was Orpheus, who charmed all living things around him with his lyre; the enchanting music made savage beasts to follow him, while the gods of the underworld - tamed by his music - gave him back his departed wife, Eurydice.¹⁷

¹⁵ Athanasiu, Andrei, *Medicină și muzică (Medicine and Music)*, Editura Medicală, București, 1986, p. 52.

¹⁶ Lindenbergerné Kardos, Erzsébet, *Zeneterápia szöveggyűjtemény (Music Therapy Reader)*, Kulcs a muzsikához kiadó, Pécs., 2005, p. 10.

¹⁷ Ibidem

Homer's famous hero, Odysseus had also encountered the magic of music throughout his adventures: in the vicinity of an island surrounded by rocky reefs, the seductive song of a mermaid was heard – the ones who could not resist that song sailed into the reef and died -, but he managed to outsmart the mermaid by stuffing his mates' ears and tying himself to the mast of the ship, thus nobody getting hurt.

Greece is viewed as the bastion of music. Damon, Pericles' music master taught that the "soul" is made up of movements, which can be influenced by music. Plato writes in his Republic: "There can be no nobler training than that; [...] musical training is a more potent instrument than any other, because rhythm and harmony find their way into the inward places of the soul, on which they mightily fasten, imparting grace, and making the soul of him who is rightly educated graceful, or of him who is ill-educated ungraceful [...]. Indeed, at the heart of music lies education."¹⁸ According to Aristotle music has a threefold function: entertainment (amusement), to calm and sooth the soul's harmful urges, and an educational one – thus making music become a tool that helps shape a man's education according to the goal of the state.¹⁹

The Greek culture was the first one that used precise mathematical formulas in the field of music as well. Music and tone alike have received important roles in the process of healing. Pythagoras discovered the distances between frequencies, which define our music until this day. He considered it crucial to listen to a melodious music while working.

The Greeks have already linked their scales to different moods – in their own terminology:²⁰

- Ionian: soft melody type, suitable for drinking
- Dorian: solemn, dignified
- Phrygian: exciting, could stimulate the listener to the point of frenzy
- Lydian: expresses pain, lament, sorrow

This goes to show that "the name of the eight scales identified by numbers within the system was modified most likely in the 9-10th century based on a terminology borrowed from ancient Greek music, although their meaning differed from that of the ancients. For certain scales of the succession in the Middle Ages (Dorian, Phrygian, Lydian, Mixolydian) were based on the note D, forming an ascending scale of four degrees, whereas in antiquity the same meant a descending scale starting from the note E".²¹

¹⁸ Ibidem

¹⁹ Idem, p. 11.

²⁰ The modes have suffered various renaming processes throughout the aesthetics of the Middle Ages. (More in: Knud Jeppesen, *Ellenpont (Counterpoint)*, Zeneműkiadó, Budapest, 1975.

²¹ Jeppesen, Knud, *Ellenpont (Counterpoint)*, Zeneműkiadó, Budapest, 1975, p. 65-66.

Table 1

Antiquity		Middle Ages
Mixolydian		
Lydian		
Phrygian		Dorian
Dorian		Phrygian
		Lydian
		Mixolydian

Their name changes took place in the 9-10th century and can be explained by the inconsistent transfer of names from the Greek terminology to the Gregorian one.²² Bárdos Lajos uses the same argumentation when demonstrating that “by a rupture within the live tradition of the ancient culture, the western composers of the Middle Ages renewed differently the old scale titles. Another possible source of the misunderstanding could have also been the fact that the Greeks wrote their scales in a descendent direction. Hence, their basic notes: Dorian – Phrygian – Lydian – Mixolydian – Aeolian were in a descending succession and not an ascending one (E-D-C-H-A)”.²³ The differences are clearly visible on the table. It creates its own system in light of today’s traditional (folklore) music, while it augments the interpretations given to it in the Middle Ages. The system – which was originally made up of only the four authentic modes – has been broadened to include all seven notes of the scale; whereas it also sheds light on the plagal scales belonging to them. Moreover, it compares them to the ancient systems:

²² „Besides the actual ‘authentic modes’, the Greeks also had a so-called transposed system also. This was created by transposing the original modes within the E-E octave and completed the new 8 note scales so they would develop into a scale that was similar to our today’s minor scale ranging on two octaves.”

²³ Bárdos, Lajos, *Modális harmóniák (Modal Harmonies)*, Zeneműkiadó, Budapest., 1961, p. 26.

Table 2

The authentic scale of the modes		numbering	Ancient Greek Name :
		melodic dominant aut. plag.	
Phrygian		I II	Phrygian
Dorian		III IV	Dorian
Hypolydian		V VI	Hypolydian
Hypophrygian		VII VIII	Hypophrygian
Hypodorian or Aeolian		IX X	Hypodorian or Aeolian
Mixolydian		— —	Mixolydian or Hyperdorian
Lydian		XI XII	Lydian

Therefore, the correspondence is as follows:

- Middle Ages	Antiquity
- D Dorian	Phrygian
- E Phrygian	Dorian
- F Lydian	Hypolydian
- G Mixolydian	Hypophrygian
- H Hypophrygian	Mixolydian or Hyperdorian
- C hypolydian	Lydian
- D Hypomixolydian ²⁴	

A correspondence has been found between musical instruments and scales also: chord instruments were tied to the Dorian scale, while the flute to the Phrygian one...

Neither Monteverdi and Bach's interpretation of a musical chart nor Wagner's leitmotif²⁵ do not move that far away from the Greek's moral attitude. Music continues to be the materialization of the ethos-affectus relationship.²⁶

²⁴ Angi, István, *Az éthoszrendek szimbolikája a gregorián ének történetében (The Symbolism of Ethos Structures in the History of Gregorian Chant)*, in: *Psallite Sapienter. Festschrift zum 80. Geburtstag von Georg Béres*, Szent István Társulat, Budapest, 2008, p. 69-70.

²⁵ Leitmotif – "leading motive"; a recurring musical theme that is used to reinforce dramatic action, to provide psychological insight into the characters. The critics of Richard Wagner's works first used the term, composer to whom the leitmotif technique is particularly associated. In *Die Meistersinger* there are some 40 such leitmotifs used. Source: <http://www.britannica.com/EBchecked/topic/335529/leitmotif>

Consequently, since the myth of Orpheus it is not a novelty that music has a particular effect on animals, for we know that horses, for instance, - due to the reflex responses that have developed in their brains - consistently react to car noises, to military trumpet calls, are able to lift their legs on rhythmic cue in the circus or whirl as a result of special training.

The Egyptians did not neglect finer therapies either. We can find several references regarding therapy by music in the *Book of the Dead*. The so-called Astronomic Dances were quite remarkable, in which the movement of stars was imitated. Unfortunately, very few written documents have survived in this respect, moreover, experts can only make suppositions about the original Egyptian music, before the Arab conquest.

In the Middle Ages, 11th century Arab doctor Ibn Butlan's well-known treatise spread the notion that "the playing of instruments and chord helps to regain and maintain good health. The effect of a melody on a disturbed mind is like the effect of medicines on a sick body."

Music therapy played a crucial role in the therapeutic systems of India. The Ayurveda cannot neglect the sounds, for the repeating chants of the sacred mantras make our inner organs to vibrate and alter the mood. Several scientific researches have already proven the positive effects of these practices.²⁷

A mysterious stranger appeared in a German town, Hameln, in the second half of the 12th century, who offered to rid the town of its rats. He blew his pipe and the rats – as if under a spell – followed him and rushed in the Weser River.

Giovanni Pico di Mirandola, the famous 15th century thinker of Florence, said in the Aristotelian spirit: "Medicine heals the soul through the body, whereas music heals the body through the soul."²⁸

According to Italian popular belief, the fast paced Italian dance tarantella was a result of the bite of the tarantella spider, which had the effect of inflicting a person with dance rage, causing them to ecstatically dance until they fell down of exhaustion.

After the religious and scientific debates he had with his rivals, Galileo Galilei found solace and relief by playing his lyre.

Architect Antonio Gaudi was a great admirer of Wagner's music and treasured the role music played in the everyday life of man so much so, that he planned for more than 2000 seats for the choir of the "Sagrada Familia".

The notion of music therapy as such appeared only in the 20th century; music therapy research started, workshops, lectures, institutes and magazines were created, people were preoccupied on a global scale with the healing taking

²⁶ Preda, Vasile, *Terapii prin mediere artistică (Therapies Using Artistic Mediation)*, Presa Universitară Clujeană, Cluj-Napoca, 2003, p. 122.

²⁷ <http://www.friweb.hu/teha/music2.htm>

²⁸ <http://members.iif.hu/visontay/ponticulus/rovatok/hidverok/malina.html>

place on the level of the brain, and the influence music had on the brain with the scope of enhancing the quality level of human existence.

Music affects the aesthetic functions of feelings, it refines them, educates them and - if need be – heals them. However, its most important role lies in preventing the ailment of our emotional world.

The aesthetic qualities of emotions play an essential part in music therapy, both in its preventative and curative form.

The most important aesthetic traits of emotions are:

1. The emotional attitude within the aesthetic field creates the artistic analogy of true emotions, and through it generates the mediatory prospect between art and society. The effective basis of the analogy is the dialectical presence of force factors in both mediums: the complementarity of assertion and negation both in society as well as in art. Plus, the harmony of beauty thus will be transformed in dynamic harmony: beauty has to defeat ugliness, the same manner the sublime has to confront the base, the tragic face the comic. Distanciation from and the act of revisiting beauty not unlike the movement of a pendulum on a micro and macro level is accompanied by the ambivalence and plurivalence of the mediator emotion in the light/shadow, variegation crossfire of positive and negative differentiation.²⁹

2. Emotion, as the mediator and dynamic core of the aesthetic field, in being the intermediary in the relation between our own reality and ideals realizes its aesthetic duty by throwing its inner qualities in trying to develop the aesthetic experience: it uses its independence and the dialectics of its direct and indirect stages.

3. The guiding power of aesthetically sublimated emotion lies in the accurate formulation of its orientation. It changes from a simple relationship of vicinity to one that emphasizes complementarity and views the parts in relation to each other. Balancing the distance between the factors of the social and aesthetic fields, this distance (in both time and space) is made into a “road” that can and will be traveled. It leads from reality to outlining of distant goals, to the postulation of the ideal and beyond, to the possibility of actual realization of emotional certainty. Thus, by way of emotion the orientation becomes conscious direction. For the reason that emotions possess their own guiding power, their own vector. Its role as a mediator and the dynamic of its mediation is resolved based on this vector. Its vectoriality however plays a role not only in the development of aesthetic and artistic values, but also leaves a clear trace in the existing artistic-aesthetic structures, the pursuit of which ensures the esoteric deciphering of the hidden content.³⁰

²⁹ Angi, István, *Zeneesztétikai előadások (Lectures of Music Aesthetics)*, vol. I, Ed. Sapientia, Cluj-Napoca, 2004, p. 83-101.

³⁰ Idem

4. The artistic metaphor of the vector is a diminutive informational paradigm, which leads to the realization of the emotional facet of knowledge. This particular feedback in the artistic-aesthetic realm of memory and acceptance can be traced only to the dialectics of its dual status, namely in the psychic-aesthetic fact according to which the indirect stage of emotion does not only deprive the concrete objectification of emotional preparedness within the work of art, but also in the memory of the individual. It is no coincidence, that the stage aesthetics of Stanislavski was mainly focused on this emotional memory.³¹

As Zoltán Kodály (1882-1967) put it, "Music is joy!" – A true medicine for our ears, it stimulates our brain function, and heals our ailments without any side effects.

The rhythm of the music involuntarily heard balances out the biologic rhythm of man and aids in the proper energy-consumption of the system. Besides everyone having their own rhythm – defined by their individual constitution and other genetic factors – it also affects the harmony of the human system.

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³¹ Sztanyiszlavszkij, K. Sz., *A színész munkája I. (An Actor's Work)*, Hungária Kiadó, Budapest, 1950, p. 238-277.

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