A CONCERT OF NEURONS.

MUSIC DIGS THE HEAVENS

( *BAUDELAIRE)*

According to Baudelaire the music digs the heavens, but it escavate also the human brain and manages to pick out its numberless capacities included those of self curing.

This is the deep conviction that stimulate the founders of a new born scientific society recently formed in Germany by the meeting of neurosurgeons who dared to look beyond their surgical knife and to recognize to the musical notes the power of curing some pathology that they were not able to cure by means o medicine.

But what happens in a brain that perform a musical piece or that listen to it ?

Let’s start with the first option : in order to well under stand the magic effect of music nothing better than to seat close so a “maestro” at piano as recently happened to me –

She , the maestro, was Yoko Kikuchi and played pieces of Mozart and Chopin.

While observing her , so concentrated, inspired and dreaming I thought to the billions of neurons that in her beautiful head were activating simultaneously during the interpretation of those pieces.

The complexity and speed of her hands movements, the coordination of hands and feet , pushing on pedals to give more resonance or to put on damper were of course only a part of the brain activity of Yoko.

All the faculties of her brain were coordinately functioning : the neurons of the cortical areas of willing, activated by those of ideation sent commands to the premotor and motor areas of rigth brain for the movements of the left upper and lower limbs.( and viceversa ).

That was under the supervision of the right emisphere , that of the artistic functions.

But not only the neurons of willing were speacking with those of movement but also the auditory , visual and syntactic neurons of the left emisphere were called to the concert.

Yoko was playng by hearth, but I realized that to do so she had had to read the music on the pentagram tens and tens of times recognizing the notes on the pentagram, transforming the visual sensation in a brain musical image , recognizing the length of any note and the semitonal alterations.

While she continued playing I considered that any movement , even that of a single phalanx gave her tactile sensations in corresponding cortical aerea and in basal nuclei where primordial emotions occur.

All this happened with the involvement of the necessary memory to remember the note of the pentagram, the correspondence with the keys and, what is more, the development of the musical phrase of the piece.

And the performance was perfect , because Yoko was playng wholehearthedly with the involvement of the deeper and more antic parts of the brain, those involved in emotion and passion.

All this explains the massive involvement of a brain in musicaltherapy, in its receptive , passive component that introduces a multi sensitive , emozional and cognitive stimulation that proved to be usefullin parkinson, traumatic coma , Alzheimer and autism.

In autism the patient refuses any type of communication with the world as well as in traumatic coma, but music succeeds to open a passage-way in the silence and consents , slowly but always, to give back to patients a contact with the environmment and the therapists infact with the life.

Music enters the brain trough the auditive apparatus and provokes a progressive activation of all the brain functions starting with attention up to the total embodyment .

The musical notes as well as the words of known songs make the various memories and sentiments come back restauring mental connections which put again in contact the patient with the environment. It will be care of the musicsalt herapist to recognize the tipe of preferred music that the patient liked before the accident

( Synfonic, opera, jazz , western, folk , soul ) and so on.

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