

## The Triune Brain: Limbic Mind Mind Plastic, Emotional Mind

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**Abstract: Problem statement:** The theory discussed is revealing, as compared to studies on the human brain, the fact that he has inherited the structure and organization of three fundamental types of reptiles, ancient or primitive mammals and mammals, or recent evolved. What is very disconcerting is that nature has been able to connect with each other and establish a sort of communication between them. **Approach:** The objective was to focus the study on chemical substances that regulate the activity of nerve cells, neurons. We can define neuromodulators or modulators of behavior because their intervention more or less obvious influence our own actions. The method under consideration is the TMS, transcranial magnetic stimulation, a noninvasive technique of Neurostimulation and neuromodulation which is based on a type of electromagnetic induction of an electric field. **Results:** This property of TMS allows us to understand the precise moment when a brain region contributes to a certain task, to map the functional connectivity between different brain regions, to identify the causal relationships involved far treated between brain, cognition and behavior. **Conclusion:** It 'as certain that the thoughts and experience change the configuration of our brain connections, but so can the induced systems, based on the same principle, capable of altering particularly for therapeutic, rehabilitative or educational, the brain matter on the basis of premises of the so-called phenomenon called Hebbian learning based on chemical changes in the cells and synapses known as long-term potentiation.

**Key words:** Triune brain, limbic system, cross fiber, unusual maps, information emotional, Hebbian learning, region contributes, limbic system

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### INTRODUCTION

The term limbic system has been proposed since 1973 by the scholar (MacLean, 1974), indicating a significant expression of the limbic cortex and brain stem structures with which it has direct connections. Clinical and experimental data show that the lower part of the limbic, which is accessed through the amygdala, is the center of emotional control-emotional man.

The theory is revealing, as compared to studies on the human brain, the fact that he has inherited the structure and organization of three fundamental types of reptiles, mammals ancient or primitive and recent or mammals evolved. What is very disconcerting is that nature has been able to connect with each other and establish a sort of communication between them.

He then highlighted the fact that the brain, in its evolution, has developed as a building various superstructures; oldest reptilian brain, which forms the

matrix of the upper brain stem of the brain and includes much of the reticular system, the midbrain and based cores, the old mammalian brain that is characterized by the development of a clear cortex that corresponds to the primitive limbic cortex and finally, a more complex type of cortex, the neocortex, which contains the highest mental development and becoming the human brain brain that can read, write and perform any other action structured.

Using the present terminology, the three subunits of the brain could be considered biological computers, each with its own specific form of subjectivity, his intelligence, his measure of time, its memory function, motor and other related to them.

Therefore there is no doubt in our research hypotheses (Corona, 2008; Corona *et al.*, 2011; Corona *et al.*, 2010) that the entire human race to survive, by virtue of the triad just mentioned, without considering mainly the limbic emotions because whatever we do, they ensure the existence of conflict and discussion

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and that in turn provide the shuffling of the genetic heritage of ideas. A remarkable achievement that you can for example translate to the two young mature in the world today, the intellectual and the emotional. So much so that often there is a clear asymmetry, with a very intelligent young people however cannot handle the feelings and emotions curb.

The third brain is intelligence, social responses and innovation is an organ that is bringing the world to change but shows a significant weakness in impulse control limbic amazing. It has often been used to motivate this concept to the term plasticity states that brain plasticity refers to the ability of adaptability of the central nervous system and its ability to modify its operation. This is a reply to a functional adaptation, for which the plasticity of the brain that causes long-lasting functional changes may occur (Granit, 1979) in, The purpose of the brain, had characterized his research on the brain as an organ with an incredible degree of adaptability. Robertson (2000) describes in this regard the brain plastic, plastic still limited by our genetic makeup, a guide that forms us, but at the same time leaves plenty of room for the adaptability of the brain responsible for thoughts, emotions and behavior (Robertson, 2000). Are known examples of plasticity induced by some hundreds of years, but awareness of their value as research tools is relatively new. Even (LeDoux, 1998; 2002; Phillip *et al.*, 2008; MacFabe *et al.*, 2008; Cheng and Zou, 2010) states that the mind feels and thinks only devoting a large part of their studies to the understanding of how the brain perceives the emotionally relevant stimuli, how the experiences are encoded and how our conscious feelings emerge from unconscious processes. Separating the emotion from cognition, it becomes very artificial channel according to this study we pursued and treated experimentally.

**Objectives and functions:** The aim was to focus the study on chemical substances that regulate the activity of nerve cells, neurons. We can define neuromodulators or modulators of behavior because their intervention more or less obvious influence our own actions. The modulators can not only produce a temporary facilitation of the transmission circuits actively involved in significant events, but are also able to promote synaptic plasticity and thus learning and memory, in those circuits.

One of the most influential contemporary theories in favor of monoamine treatment of mental disorders is that these substances induce an increased availability of serotonin and/or norepinephrine at the synaptic level, thereby triggering intracellular molecular cascades that

promote synaptic plasticity. Modulation of plasticity across brain systems is important, therefore, both in normal conditions and in those mental disease.

From this new perspective, new features emerge that look at the network of neural interconnections as a modified structure, with highly dynamic and able to organize independently. And that's why so far, focusing on the different ways in which the brain after being hit by an injury, or distortions of information caused by such disturbances of emotion and mood, feelings of depersonalization, perceptual distortions, symptoms paranoia, all the functional causes of disorganization, is able to induce an active reorganization can often lead to functional recovery.

## MATERIALS AND METHODS

The method under consideration is the TMS, transcranial magnetic stimulation, a noninvasive technique of Neurostimulation and neuromodulation which is based on a type of electromagnetic induction of an electric field. The essential tools of TMS is a generator of electricity and a mobile probe, called coils, which is put in direct contact with the subject's brain. A flow of electric current in the coil generates a brief magnetic field perpendicular to its surface which causes immediate changes in time, a flow of electrons that interfere in the normal brain electrical activity, causing a depolarization of the underlying cortex.

This effect leads to neuronal depolarization induced to activate groups of neurons that is coming apart at the area directly stimulated.

The possibility of using various TMS protocols, such as single-pulse stimulation, has allowed the study of continuous processes and treatments.

TMS has the advantage of studying the relationships between brain areas, cognitive and behavioral processes. As with any rehabilitation therapy is necessary to select appropriate stimuli, so as to help the networks to reconnect in an appropriate manner, avoiding faulty connections, for example, repeatedly providing the same input. Our actions and our thoughts can change the organization of neural connections in our brains even when it is operating abnormally.

## RESULTS

This property of TMS allows us to understand the precise moment when a brain region contributes to a certain task, to map the functional connectivity between different brain regions, to identify the causal relationships involved far treated between brain, cognition and behavior. A useful investigative tool to

study the dynamics of the brain compared to the study of cognition, perception, emotion, memory, attention and consciousness and the nature of visual and non-propositional mental representations.

### DISCUSSION

The TMS and then characterized as being non-invasive therapeutic practice, could be part of a national protocol for prevention education as a functional diagnostic and screening activities to support educational activities specifically for pupils with specific learning disabilities. This synergistic action with other institutions of competence would allow the acquisition of a database useful as a first inter-institutional trial to study the creation of new avenues of research.

### CONCLUSION

Every element that is the ego, is woven in a pattern in continuous activity of billions of neurons that make up a dense network of fibers crossed that often give rise to the creation of unusual maps. This is partly a process that you can document and is the key principle underpinning our research. As each moment we live events that cause different groups of neurons in our brain and it is essential to interpret the connections between brain cells that affect our feelings and senses of the map of the brain itself.

Conclusion is given some thoughts and experience change the configuration of our brain connections, but so can the induced systems, based on the same principle, capable of altering particularly for therapeutic, rehabilitative or educational, the brain matter based on the premise of known phenomenon called Hebbian learning (Hebb, 2002) based on chemical changes in the cells and synapses known as long-term potentiation.

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