Soul Cycles

Personal & Collective Evolvement
Alternative Healing
Social Artistry

The Neo Cortex

The neo cortex is the last brain in the evolutionary sequence and located on top of the other two brains. It directs the abstract mind and we must credit it for the towering human achievements in cognition, language, problem- solving, physics, and mathematics. It enables us to speak, to name our emotions, to become conscious, to think about thinking, which is unique to the human species. But while the neocortical brain does not produce emotionality, it does have a role in modulating feelings and integrating them with some of its own symbolic functions.

So called intelligence does not depend on a highly developed forebrain but rather on how well neo cortex and limbic brain are able to communicate and pass information to each other. Good things happen when both of them are in good contact.

By the time of birth the nerves of the neo cortex still need to develop. Through the interaction of mother and child through eyes, touch, and face, billions of neurons in the brain of the baby are released during the very first years; building the web that creates the function of the neo cortex. If the interrelation between mother and baby was stressful and often not good enough, the baby needs to develop too fast and doesn't have enough time to grow a strong communication- web.

Ornstein/ Thompson: "The surface of the cerebrum, which is made up of more neurons than any other brain structure, is called the cortex. It performs the functions that have greatly increased our adaptability. In the cortex decisions are made; the world is organized; our conscious individual experiences are stored as memory; speech is produced and understood; paintings are seen, music is heard. The cortex is only one eighth of an inch thick, but is intricately folded. Of all the mammals humans have the most enfolded cortex; perhaps such a large cortex had to fit into a head to survive birth.

It seems as though a lot is known about the cortex, but in fact we know very little about how it works. We do know that certain activities are centred in the cortex, and we also know that some kinds of memories are cortical. We don't know, yet, exactly where memory is stored or how, and we don't know how we retrieve specific memories. We do know that thinking and some aspects of learning are cortical functions, but we don't know exactly how we get new ideas or what happens in the brain when we learn something new."

The cortex is the executive branch of the brain, responsible for making decisions and judgements on all the information from the body and the outside world. First it receives information, it analyses and compares this new information with stored information of prior experiences and knowledge and makes a decision; it then sends its own messages out to the muscles and glands.

The cerebrum is divided into two hemispheres. Each one is responsible for the opposite half of the body. The left side of the brain controls movements and receives information from the right side of the body; the right side of the brain, from the left side of the body. The two hemispheres are connected by a band of nerve fibres, called the corpus callosum, the largest fibre pathway in the brain, of some three hundred million nerve fibres. Before four million and one million years ago, the fourth (and to date final) level of human brain organisation emerged: the lateral specialisation of the two hemispheres. These differences in function appeared at the time humans first began to make and use symbols (both language and art). One commentator has named this level of brain organisation the asymmetric- symbolic level.

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