



Svetlana Masgutova Educational Institute

The Masgutova Neurosensorimotor Reflex Integration - MNRI® Method

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Alexander Luria, Russian Psychologist and Neurologist, 1902-1977

Alexander Luria along with Aleksei Leontyev, worked closely with Lev Vygotsky to help Vygotsky put forth his Natural~Cultural Theory of Development. Upon Vygotsky's early death in 1934, Luria's went on to focus on elucidating the biological functions that play into the development of higher psychological functions and the restoration of higher psychological functions through the brain mechanisms that control them.

With the advent of WWII, Luria was assigned head of neurosurgical rehabilitation in Kissegatch for those with brain injuries and subsequently treated over 3,000 injured soldiers. Through his work, he developed a systematic approach to understanding the brain and cognition and determined that complex behavioral processes are comprised of a number of brain structures, each playing highly specific roles and all contributing to a form of coordinated control. Further, Luria found that complex brain functions do not reside solely in specific brain areas. Instead, brain function is distributed among all parts and levels of the brain. Each area makes its own contribution and adds to the work of the functional system as a whole. (Luria, Haigh, 1992)

It is not surprising, then, that Luria discovered while working with brain-injured soldiers that although damaged brain tissue could not be regenerated, general brain function often remained highly adaptable. His work in this area documented the recovery process of many of his patients who regained function after sustaining injury. Luria demonstrated that function could be improved or even restored in one of two ways, either through the "de-inhibition" of neural pathways or by establishing new neural pathways through reorganization. In cases where Luria could not find any apparent damage, function simply seemed to be inhibited or out of commission. Luria found that an inhibited function could be reversed and restored through a process of "de-inhibition." When actual damage had been caused to neural pathways, Luria found that while function could not be restored through the damaged pathway, function could be restored through alternate neural pathways, by either engaging related pathways in *other functional centers* (*intra-functional reorganization*), or by engaging related (non-damaged) pathways in the *same functional center* (*inter-functional reorganization*) that was damaged during the injury.

Luria's brain restoration work helps to support Nikolai Bernstein's concept of engrams (today known as motor programs). If motor programs did not exist in the body's memory system, Luria would have been unable to improve or restore function. While Bernstein and Luria did not work together as colleagues, they were known to have been very good friends, socializing and supporting each other through times of success and difficulty. It is likely that conversations held outside of their research facilities helped to inform and broaden the perspective of each relative to the distinct areas of study.

Luria is among the historical figures Dr. Masgutova cites as having shaped many of her fundamental ideas when formulating the MNRI method. For more in depth information regarding Luria please refer to the biography included in the [Scientific Underpinnings section](#).