

Letter to the Editors

Neuropsychanalysis: a new paradigm for psychoanalysis in the 21st century

About 100 years ago, the neurologist Sigmund Freud created a new clinical method for psychological treatment, the psychoanalysis.

Initially, the method was used only to treat neurotic individuals. Only in the 1920s psychoanalysis started to open up its application scope, with the works by Sandor Ferenczi about the war neurosis; Karl Abraham and Carl Gustav Jung on dementia praecox; Anna Freud and especially Melanie Klein on child psychoanalysis. Those psychoanalysts broke up with Freud's idea that psychoanalysis should be constrained to neurotic adults. After the 1950s, Winnicott extended the application of psychoanalysis to antisocial disorders and juvenile delinquency; as well as Lacan developed a theory that provided support to the clinic of psychosis and perversions. Each psychoanalyst mentioned above developed new theories and techniques in their own fields of work.

After completing 100 years, psychoanalysis is still widening its scope. With the most recent advances of the neuropsychanalytical method, which derives from the neuropsychological method by Luria, psychoanalysis once more is enlarging its clinical capacity to treat patients with neurological lesions. This clinical research method has been developed by researchers such as the South-African Mark Solms and the Indian S. Ramachandran. Curiously, neuropsychanalysis has been developed by scientists of historically marginalized countries. In Freud times, psychoanalysis also had a marginal status, it was almost constrained to European Jews. Yet, neuropsychanalysis represents a return to the neurologist Freud, the pioneer of the current neuroscience. As Faust, psychoanalysis is in debt with its Mephisto. Even being distant from science over the last years, today, with neuroscience, psychoanalysis, such as Mephisto, enlightens the historic debt with the current disciples of Freud, our Faust. Neuropsychanalysis allows for psychoanalysis coming to terms with science.

Neuropsychanalysis has been the topic of many discussions lately, however, little is known about this new interdisciplinary proposal. In the following lines we will briefly outline the origin of neuropsychanalysis while a research method and interdisciplinary movement. Then, we will try to analyze the objectives proposed by this new knowledge area and make some comments and suggestions, considering that neuropsychanalysis could be a new paradigm for the 21st century psychoanalysis.

In 1999, Eric Kandel, a prominent neuroscientist, published the article entitled *Biology and the future of psychoanalysis: a new intellectual framework for Psychiatry*,¹ in which he points out some suggestions for psychoanalysis in the 21st century. Among other ideas, Kandel proposed an approximation between psychoanalysis and neuroscience, with the objective of developing new studies and theories in the field of psychoanalysis. According to this author, neuroscience could provide more concrete empirical and conceptual basis to psychoanalysis.¹ One year after Kandel's text was published, in 2002, he won the Nobel Prize in Medicine for his contributions to neurobiology and the introduction of the neural plasticity concept. Yet, in 2000, the 1st International Congress of Neuropsychanalysis took place in London, when the International Neuropsychanalysis Society was founded. Among the members of this society, there were, besides Kandel himself, some of the most remarkable names in the field of neuroscience such as Antônio Damásio, Oliver Sacks, Gerald Edelman, V.S. Ramachandran, among others; besides famous psychoanalysts, such as Charles Brenner and André Green.

Mark Solms, president of the Society, has published some works since the late 1990s, in which he presents a new method of research in neuroscience.² Such a method has been the main reference in the neuropsychanalytic movement. It consists of an adaptation of the traditional neuropsychological method developed by Luria for the study of the brain activity linked to emotional phenomena, which psychoanalysis has been investigating for over a century. Such modification in the axis of investigation in neuroscience – from cognitive processes to emotional phenomena – has been more frequently lately, fostered by the development of highly specialized

devices for the precise mapping of the brain activity, as it is the case of PET-Scan and the functional Magnetic Resonance Imaging (fMRI). The neuropsychanalytic method introduced by Solms is intended to gather observations made during psychoanalysis sessions with patients who have brain lesions found through modern technology of brain mapping. His goal was to find out which areas of the brain correspond to the psychic phenomena that Freud described during his works with psychoanalysis.

As an example of findings obtained with the neuropsychanalytic method, we cite the first experiences of V.S. Ramachandran with patients that had lesions in the right brain hemisphere, carriers of a disorder known as “anosognosia”. These patients are unable to recognize a limb paralysis, a symptom named “negligence”. After dropping a small amount of cold water within the left ear of some of his patients, Ramachandran observed that negligence disappeared completely and reappeared after some minutes. Such stimulation may be interpreted as “a temporary and artificial correction of the attention unbalance between both hemispheres”² (p.57). The outcomes of such an experiment help find out that the phenomenon of repression, as well as defense mechanisms described in the psychoanalytic literature, are mediated by the left brain hemisphere.

It is then proved that the neuropsychanalytic method seems to be effective in the localization of brain areas that correspond to unconscious phenomena that have some influence in the psychic life of individuals. Besides, such method fills the blank observed by Kandel¹ in what concerns the psychoanalysis necessity for an empirical base. However, we must now find how the neuropsychanalytic method can contribute to advances in the conceptual knowledge of unconscious processes. In this sense, the method developed by Solms is not the only one that can provide the conceptual foundations to psychoanalysis, although it is the first to establish the possibility of experimental scientific investigation for such concepts. Psychoanalysis, through the method of free association and its own techniques has been developing a vast theoretical framework during more than one century. It is evident that neuroscience,³ through the neuropsychanalytic

method, can not validate all psychoanalytic concepts; however, we should not censure the effort that neuropsychanalysis followers have made to increment research on the psychoanalysis field.

Even if we can not deny the pioneer initiative of the neuropsychanalytic method, we should ask to what extent the method of neuropsychanalysis can contribute to the psychoanalytic theory and to psychotherapy. The merits of the neuropsychanalytic method so far was to draw the attention to the need of a dialogue with neuroscience, once today we have more effective means to investigate the human mind. The movement of neuropsychanalysis has shaken the psychoanalysis field, offering a new paradigm for the psychoanalysis of the 21st century. Notwithstanding, the neuropsychanalytic method needs a theoretical framework that offers well-designed and defined concepts, in a conceptual, scientific language. The concepts were offered by Freud when he developed his metapsychology, in parallel with the psychoanalytic practice. The metapsychology is the pure psychoanalytic theory, a theory about the human mind. The Freudian metapsychology was built to be a science.^{4,5}

Having an experimental method and a scientific metapsychology, neuropsychanalysis – while a movement – still needs a neuropsychanalytically-based psychotherapy, in order to offer full conditions for the development of a new paradigm. Thus, in principle, the psychotherapy based on neuropsychanalysis would not be so different from the traditional psychoanalysis. We are then considering that classic psychoanalysis still has much to offer to the psychoanalytical practice.³ The psychotherapeutic techniques have a continuous development as new symptoms arise as a response to demands and transformations of the society. The way how the content found through the clinical practice is approached should be rethought, once neuroscientific findings, specially the neuropsychanalytic ones, would affect the development of a scientific metapsychology.^{4,5} With time, changes and additions to metapsychology would have effects on the clinical practice, on the creation of new psychotherapeutic techniques.

One of the major challenges of psychoanalysis today is to understand the dynamics of new symptoms, such as depression, panic syndrome, toxicomania, among others. Such difficulty is not

only because the dynamics of symptoms is new, as many psychoanalysts believe, it goes far beyond. It is useless to try to adapt new symptoms to old theories, but it is necessary to review the theory and even modify it. This also seems to be the problem some theories face to convey their content to the others. The problem is not only with the theory complexity or with the difficulties to understand it. The major problem is that some theories are not following up-to-date paradigms, thus they do not reflect the current way of thinking. Part of this difficulty could be solved if the psychoanalysts were more open not only to new cultural phenomena but to new discoveries developed in the scientific field above all. This is the challenge of today's psychoanalysts: to think psychoanalysis based on the scientific paradigm of their time.

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Carlos Eduardo de Sousa Lyra

Undergraduate student, Psychology and Philosophy, Universidade Federal da Paraíba (UFPB),

Brazil

Cidade Universitária - Campus I

58059-900

João Pessoa – PB – Brazil