



# Neuropsychanalysis and Neuroaesthetics: Between the Approximation of Knowledge and the Critique of Biological Reason

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## Abstract

Movements, in the last fifty years, have been bringing knowledge closer to the new knowledge coming from the neurosciences. In this brief essay, we intend to analyze neuropsychanalysis and neuroaesthetics, as promising areas in these terms. Such an analysis will be based on critical theory, conceptualized mainly by Adorno and Horkheimer, especially considering that "On the path to modern science, men renounced meaning and replaced the concept with the formula, the cause with the rule and probability". Therefore, in relation to neuropsychanalysis, its historical and scientific foundations, the international movement that gave rise to the area, its purposes and objections attributed to it will be analyzed. Regarding neuroaesthetics, its emergence, its relations with conceptual art and the neurohistory of art will be presented, as well as possible intrinsic parallels to sensation and experience. Finally, following the objective of the essay, the epistemological critique of these areas will be done through the concepts of *Gestell* (Heidegger) and *Ecosofia* (Guattari), as well as supported by Valéry and Teresa D'Ávila.

**Keywords:** Neuropsychanalysis; Neuropsychological Studies; Neuropsychanalytic; Neuroaesthetics; Lacanian Psychoanalytic Theory

## The Birth and Development of Neuropsychanalysis

Neuropsychanalysis is a very recent scientific area, focused on the neurobiological foundations of the brain activity of feelings, action and thought to link them to a psychoanalytic model of the mind. It originated with a conference on the study of emotions at the *Royal College of Surgeons* in London in 2000, organized by a group of psychoanalysts from the Psychoanalytic Society of New York, led by Mark Solms. Several psychoanalysts, neurologists

and researchers appear as speakers, all of them authors of extremely innovative research works on the mind-brain relationship, such as Todd Feinberg, Oliver Sacks, Jaak Panksepp, Antonio Damásio, a small group of Portuguese groupanalysts.

The personal involvement of Mark Solms and his wife Karen Kaplan-Solms stems from the fact that they have developed clinical investigations with neurological patients within the scope of their respective doctorates and from their interest in studying psychological impacts on

patients with focal parietal brain lesions. In such studies, these neuropsychologists combined, for the first time, the anatomo-clinical study method with the psychoanalytic study method. Such investigations were substantiated in the work and life of Sigmund Freud, who began his professional life as a researcher in medical histology laboratories, becoming interested in the study of the central nervous system, where he began a specialization in Neurology, and in an epistemological and interdisciplinary effort. Starting from new hypotheses and functional and conceptual clarifications about the Brain-Mind relationship.

It should be noted that, in Freud, the view that psychic and neurobiological phenomena were expressions of a single integrated reality never disappeared. But neurobiology was a precarious science, so Freud chose to use only psychological language in a descriptive way. Only later, from the neuroscience of behavior, from the approximation of neuroscience to psychology, will neuropsychology emerge, which will have Luria as its greatest exponent. This neuropsychology, however, did not incorporate elements of the psychic dynamics accepted and investigated by psychoanalysis.

What I am recommending, therefore, as I believe this to be the essential cornerstone for a lasting integration between psychoanalysis and neuroscience, is a thorough psychoanalytic investigation of patients with focal neurological lesions [1].

It is worth noting that Luria, a Russian by birth, did his studies, basically on language processes, in the closed environment of post-revolution Russia, hence many of his studies arrived in the West many years later.

Freud was influenced by two research traditions: Humboldt's German physiological and anatomical theories, mainly from the laboratory of his master and professor Theodor Meynert, in Vienna, Austria; and the French clinical-descriptive tradition, punctuated by the nosology on hysterias developed by Jean-Marie Charcot, from the Hospital *la Salpêtrière*, in Paris, France. The father of psychoanalysis published around 250 scientific papers in neurology during the first two decades of his professional life as a medical researcher and later as a specialist in neurology. These works can be considered precursors of modern neuroscientific studies: experimental studies on neurons and the central nervous system.

For Freud and his followers, the purpose of Psychoanalysis was to develop a research method, through which a theory and a therapy were developed, which would allow exploring and understanding the dynamic and unconscious nature of the mind. Some of Freud's observations

are worth mentioning regarding brain-mind relationships: psychological faculties are complex functions that have their own internal organization, and psychological functions are dynamic processes and their physiological correlates can never be located within discrete anatomical centers [1].

In the USA, from the 1950s onwards, there were precursor initiatives of modern neuroscientific research. Its authors, most of them physicians (psychiatrists or neurologists) were titled or trained in Psychoanalysis, and they all exercised the so-called "Dynamic Psychiatry", an epistemological and interdisciplinary effort based on new hypotheses and functional and conceptual clarifications about the Brain-Mind relationship. . Dynamic psychiatry, unlike other approaches to psychiatry, such as descriptive, is the "only one that systematically addresses the conscious and unconscious contributions of the psychiatrist in the treatment and evaluation process" [2]. Above all, psychodynamic psychiatry is a *way of thinking* – not just about the patient, but also about oneself in the interpersonal relationship between patient and therapist. It also evaluates the patient in a different way, analyzing the socio-cultural and family context to which he is inserted, and his personality, in a more comprehensive approach, not just his psychopathological symptoms.

In the 1990s, pioneering neuropsychological works were developed, such as: 1) the study of sleep and its subliminal phenomena by Howard Shevrin; 2) neuroscientific studies on emotions, memories and states of consciousness by António Damásio; 3) the pioneering work of Jaak Panksepp of anatomical and neurochemical mapping of the different primary emotional systems, creating a new area of investigation ("Affective Neurosciences").

In this sense, the neuropsychanalytic movement benefited from the courage of another neurologist and neuroscientist, also with psychoanalytic training, later Nobel Prize in Medicine, Eric Kandel, who had already carried out important research on the neurobiology of cognitive and emotional memories. In an article in the "*American Journal of Psychiatry*", he suggests that the future of Psychiatry involves integration with Neurosciences and Psychoanalysis.

## Foundations for the Emergence of Neuropsychanalysis

Although many scientists are of the opinion that Freudian ideas are irrelevant ("not based on scientific evidence"), in the first two decades of the 21st century, neuroscientists and neuropsychologists began to present studies describing how some of the neurological areas and circuits are correlated with the emotional and social dimensions of the mind.

Neuropsychology has, in very recent years, begun to deal with something that it formerly excluded: the problems of personality, complex emotions, and motivation, which are the really interesting aspects of psychology. This provides a unique opportunity for psychoanalysis to build a bridge towards neuroscience, since psychoanalysis has a highly elaborated theory on precisely those aspects of mental life that neuroscience is now beginning to deal with [1].

Generically, neuropsychologists make use of psychometric tests to elucidate cognitive changes. This method, however, does not capture subjective aspects of mental life. Thus, it is not about developing new techniques, but about new formulations about what happens in the human brain. Neuropsychanalysis is an exercise in building bridges and dialogue, cooperation between knowledge, but not the incorporation of theories and models.

The basic assumptions of neuropsychanalysis are based on three bases. First: mind and brain are a single entity (what is conventionally called ontological monism), that is, the functions of the mind are real, as is any biological function. Second, we can gain objective access to the functions of the mind only through a third-person perspective (so-called indirect realism). And third: to understand them and study them systematically, we need to infer, create models based on two different and irreducible sources: the study of subjective experience in individuals or groups (in Psychology, Psychoanalysis and Group-analysis); and the study of brain states and functions in people and groups (with neuroimaging studies and experimental neuropsychological studies, etc.).

In this way, we will have an understanding of the Mind (first person subjectivity) and an acquisition of knowledge about the Brain (third person objectivity), which will be independent scientific practices (epistemological dualism).

### Possible Objections to Neuropsychanalysis

The universalization of neuroscientific models is the main objection to neuropsychanalysis. Such criticism comes especially from some psychoanalysts, based on the understanding that their discipline is not dedicated to the mind-body relationship, but to the subjective meanings and experiences produced by singularities. Such professionals reinforce the objection, stating, for example, that their therapeutic practices approach their patients based on their differences, so they cannot be influenced by neurosciences. right is that.

Given that neither facet is sufficient to fully describe the actual phenomenon (the so-called 'mindbrain' entity), collaboration nor dialogue can constrain and enhance each

other's models, without incorporating or eliminating each other's purpose and practice [3].

We will return to such objections, from a critical point of view, in the final considerations of this brief essay.

### Neuroesthetics as a Resumption of the Aesthetic Experience

Neuroesthetics, in turn, was proposed by the English scientist Semir Zeki and represents a new paradigm in aesthetics: it provides a biological basis for the scientific understanding of visual aesthetic pleasure. As an area of knowledge, it investigates the brain mechanisms that operate underlying pleasure.

Semir Zeki's methodological choice, when analyzing first the movements of modern painting, stems from the similarity between the neuroscientists' experiments with schematic tests and with the simplification of color and form, also present, according to the author, in that type of art. Modern painters were "neurologists" par excellence, because in their singular and unique pictorial investigations, when achieving the desired effects, they ended up finding personal pleasure and, thus, "gratifying" their brains.

Finding pleasure in the realization of their pictorial works, they gratified themselves and their spectators. Therefore, finding visual cerebral pleasure in themselves and in other brains, they ended up unraveling something general about the laws of neural organization, and the brain pathways for obtaining cerebral gratification, even ignoring the specific details of its functioning and of its very existence.

An important consequence of Zeki's precursor work was his discoveries concerning "visual knowledge". Such discoveries restore to the visual experience the importance that it lost in some contemporary currents of art, especially in opposition to the movement of Conceptual Art.

Regarding Conceptual Art, it is worth noting that, in 1973, the North American art critic Gregory Battcock gathered publications of artist manifestos defending that art is a kind of "product of the intellect". These manifestos sought to break with the institution of art, with the official circuit of museums and galleries, giving new autonomy to art (in this sense, not in relation to religion or the formal education of spectators, but to the institutions, which "plastered" the practices creative). Conceptual Art starts to conceive art as an idea or concept, where a philosophical-conceptual reflection on the work of art precedes its aesthetic-sensory realization, its materiality. In this way, the plastic and material qualities of the work of art, such as color, form, expression, lose ground.

After more than sixty years of those manifestos, with the clear intention of breaking with the institutionalization of art, what we now see is a bureaucratization and re-institutionalization of art. This is easily seen in most contemporary biennials: where in general one sees a repetitive art form, most of the time accompanied by a kind of leaflet. The work, as a concept or idea, is manifest, it must be understood, explained, no longer experienced, experienced, felt. This new form of “institutionalization” of art goes against everything that the adepts and followers of contemporary art preach, that is, avant-garde and contrary to the concepts, the aestheticization of the work, the commodification.

### Neurohistory of Art and Neuroaesthetics

With the neurohistory of art and neuroaesthetics there is a rescue of art as sensation and experience. Neuroaesthetics criticizes pure biological reduction in philosophy, easily perceived when one wants to reduce linguistic meanings to mental states, and mental states, in turn, to brain (physical) states. However, one can object to such a statement, questioning whether neuroaesthetics itself does not proceed in such a way.

The approach of Onians, the creator of the neurohistory of art, takes up, in a way, the importance of context and environment in the arts. These factors are fundamental to what neuroscience calls brain plasticity. Brain plasticity is the property of the human brain to develop new neuronal connections. For neuroscience, the subject is “visceral”, that is, it is physically constituted in the brain as a connection of neural networks. Subjectivity, for the neurosciences, is more a real and visceral phenomenon than an ideological and symbolic one, as proposed by psychoanalytic theory.

The neurohistory of art proposes a scathing critique of current ideas from the three main currents of recent thought: Wittgenstein’s philosophy of language, deconstruction and Lacanian psychoanalytic theory, imprinting on them a purely “bureaucratic” label. Studies in the neurohistory of art and neuroaesthetics seek to understand something treated as a fiction by many postmodernists: what the ancients called human nature.

For Semir Zeki, the function of art and the function of the visual brain is, in a sense, the same. Visual arts are a kind of extension of brain functions. They would thus be an externalization or physical manifestation of the brain.

The neurohistory of art and neuroaesthetics undermine the conceptual theses that brain experience is necessarily linked to a purely linguistic and symbolic process. Art is not and should not be an innocuous experience. It must disturb the spectator, provoke bodily sensations, pleasure, states of

euphoria, repulsion, restlessness and anguish. In this way, it revives its mythical potency: transmutation.

### Final Considerations: Criticism of the Models Presented

Some concepts are dear to lines of thought and approaches that may object to the foundations of neuropsychanalysis and neuroaesthetics, especially the latter, given that neuropsychanalysis is a more integrative and non-excluding area. Neuroaesthetics, on the contrary, is emphatic in putting itself as a manifesto against Conceptual Art, for example. Such concepts are that of singularity, style, meaning, desire, ineffable and unspeakable, important for many continental philosophers.

As a questioning of the areas presented, one can infer, with regard to neuropsychanalysis, the criticism of Guattari F [4] expressed in *The Three Ecologies*. The thinker emphasizes that, given the neutrality of *the scientific corpus*, the ethics of the psi field takes even more drastic measures, since it is ethically unsustainable for operators in this field to shelter in a neutrality founded on the control of the unconscious and a scientific *corpus*. The psi fields, for Guattari, are established as an interface and extension of the aesthetic fields. And only then do they fulfill their role in an efficient, non-violent way, far from the perversion of power [5,6].

Heidegger, in a similar sense, emphasizes that modernity, where this knowledge originates, is characterized by the metaphysics of *Armação (Gestell)*. *Armação* is what articulates science, technique, *logos* and machine, and gives meaning to this articulation: the superhuman. For the thinker, the Empire of the Frame is the result of active nihilism, and is evidenced by the attempt to make metaphysical questions logical, calculable, positive or scientific. It is characterized by massification, gigantism, leveling and indifference. Such a critique can be undertaken especially of neuroaesthetics. Even more based on the argument that the German philosopher explains when talking about the origin of art: “Art is not taken either as a field of cultural achievement or as a manifestation of the Spirit. It belongs to the appropriating-poetic-happening, from which the ‘meaning of being’ is determined”.

Finally, how not to question neuroaesthetics, and even neuropsychanalysis, taking into account the thoughts of Paul Valéry and Teresa D’Ávila? The first says: “I fear that the spirit is becoming a superfluous thing”. To which the Doctor of the Church, narrating her ecstasy, adds: “I don’t understand how this happens, but I take great pleasure in not understanding”. It is necessary to have eyes and ears attentive to the overvaluations of the biological field, which denies spirit, meaning, humanism [7,8].

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