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The grand challenge for psychoanalysis – and neuropsychoanalysis: taking on the game

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As Ebbinghaus (1908) tells us in the opening words of his popular textbook of psychology, "psychology has a long past but only a short history." In my opinion, there are three foundational moments in the history of psychology and, paradoxically, all three are moments of great advancement in biology. First, in the long past of psychology, psychology did not exist as such but was part of philosophy. It is extremely interesting to understand why it has been necessary, at one point of time in the sixteenth century, to invent this field and to create a signifier – namely "psychology" – separate from philosophy, which enabled the field to distinguish itself from philosophy (Mengal, 2000/2001). In this century of religious violence, bare corpses lay everywhere and progresses in anatomy are major. In 1540, the German religious reformer Philippe Melanchthon publishes a book which comments the *De anima of* Aristotle and he completes the Aristotelian text with a long treaty of anatomy (Mengal, 2000/2001). On the basis of this new knowledge, Melanchthon attributes functions to the body which were previously reserved for the soul. The brain becomes the principal organ of sensory functions and displaces the heart as the seat of emotional life and of thought. To the Aristotelian position that all living beings, whether plant, animal, or human, to varying degrees possess a soul which organizes the body, Melanchthon opposes a dualistic anthropology which divides the human in body and soul. The two-dimensional "anthropologia" is articulated in "anatomia," science of body, and "psychologia," science of the soul. It is this new anthropology that is diffused into the world of the Reformation (Mengal, 2000/2001). The Dutch reformer Snellius (1594), for example, defines the body and the soul by their respective essential property: "The rational soul of man is the thought that, coupled with the body, completes man. (…) The physical things closer to natural bodies that move naturally, have an extension and for that reason occupy a space. (…) The faculty of the rational soul is the mind or will. Thought is the faculty of the soul to discourse and think about things which are and which are not."[1] (Snellius, 1594, pp. 26–27). It is as a philosopher that René Descartes proposes his dualist vision much in line with the reformist opinions. Descartes dissects animals and human cadavers and is familiar with the research on the flow of blood (Fuchs, 2001). He comes to the conclusion that the body is a complex device that is capable of moving without the soul, thus contradicting the Aristotelian doctrine of the soul. The metaphysical order, which states that the body exists by the soul, is broken.

At the end of the seventeenth century, this way to present anthropology, science of man, in two parts, anatomy and psychology, is widespread, mainly in the medical literature (Mengal, 2000/2001). However, it is not before the middle of the nineteenth century that psychology, which is still widely regarded as a branch of philosophy, emancipates as an autonomous domain of science. Again, this is concomitant with a period of great advancement in biology. Indeed, the nineteenth century was also the period in which physiology, including neurophysiology, professionalizes and sees some of its most significant discoveries. Among its leaders are Charles Bell and François Magendie who independently discover the distinction between sensory and motor nerves in the spinal column, Johannes Müller who proposes the doctrine of specific nerve energies, Emil du Bois-Reymond who studies the electrical basis of muscle contraction, Pierre Paul Broca and Carl Wernicke who identify areas of the brain responsible for different aspects of language, as well as Gustav Fritsch, Eduard Hitzig, and David Ferrier who localize sensory and motor areas of the brain (e.g., see Brennan, 1998). One of the principal founders of experimental physiology, Hermann von Helmholtz, conducts studies of a wide range of topics including the natures of sound and color, and of our perceptions of them (Warren and Warren, 1968). In the 1860s, while he holds a position in Heidelberg, Helmholtz engages as an assistant a young M.D. named Wilhelm Wundt. Wundt employs the equipment of the physiology laboratory to address more complicated psychological questions than had not, until then, been investigated experimentally. In 1874 Wundt publishes his landmark textbook, *Grundzüge der physiologische Psychologie* (*Principles of Physiological Psychology*) (Wundt, 1874) and in 1879, he founds a laboratory specifically dedicated to original research in experimental psychology, the first laboratory of its kind in the world. Psychology as an autonomous domain of science is born.

In other words, it is the confrontation with the amazing complexity of the body, respectively of the brain, which in the sixteenth and nineteenth century instigates the necessity to invoke, and then to settle, the discipline of psychology. What seems to happen in each of these moments is the recognition that what was previously ascribed to the soul or to the spirit, is in fact taken care of by the body. It is very paradoxical that it is precisely this recognition which, in turn, promotes psychology as an autonomous field. In the sixteenth century, the observation that anatomy in itself can explain how a body comes to move, for example, promotes the institution of a field, separate from anatomy, for the qualities of the soul which do not

[1]Translated by the author from the French translation (in Mengal, 2000/2001, p. 10): "L'âme raisonnable de l'homme est la pensée qui, conjuguée au corps, parachève l'homme. (…) Les choses physiques plus proches des corps naturels qui se meuvent naturellement, possèdent une étendue et à cause de cela occupent un lieu." Original text (Snellius, 1594, pp. 26–27): "Animus hominis est mens quae corpori coniuncta hominem perficit. (…) Physica pressior in corporibus naturalibus, quae physice moventur, magnitudine sunt praedita, and propterea locum implent. (…) Rationalis animae facultas est mens aut voluntas. Mens est animae facultas de entibus and non entibus disserens and ratiocinans."

seem to have an extension and therefore do not occupy a space, such as thought, discourse, and will. In the nineteenth century, the observation that neurophysiology helps to explain perception and language, definitively confirms psychology as a scientific discipline, emancipated from philosophy, but, paradoxically, though firmly grounded in it, also distinct from physiology itself. It is as if, by each progress of anatomy or physiology, the more precise description of what happens mechanically, allows for a sharper definition of what is not explained by the sole biological substrate, thereby paradoxically confirming the necessity of a *psychological* science.

I believe that, since the decade of the brain (1990–2000) and the introduction of brain imagery methodology, we are now in a third moment of this dynamic. This time, the findings are momentous and no characteristic which still might have been seen implicitly as a prerogative of the soul – such as emotions, will, intention, motivation, love, attachment, empathy, intersubjectivity, play, etc., – escapes from biological characterization. These advances in neurosciences oblige us to thoroughly revisit the concept of what it means for something to be *psychological*. Indeed, this forward march of neurosciences has pushed the whole field of psychology to retreat in its ultimate corner, leaving open this fundamental question: if psychological functions and instances have minute and comprehensive brain architectures and can be tied to characterized brain dynamic patterns, what then remains to be understood as psychological, what then is psychology? What this amounts to, in my opinion, is that if the necessity for a psychological science resists nevertheless, that some "hour of truth" for psychology has arrived: not a specific function makes psychology psychology – nor consciousness, nor will, nor emotion, nor agency, nor, for that matter, the unconscious – but *organization principles* different from those at the biological level. In the same way biology does not consist of elements different than already present at the chemical level, but is concerned with another organizational scale, psychology does not consist of functions, modules, components different than what might be characterized as such at the biological level, but is concerned with a radically different organizational scale than biology.

It seems to me, then, that one of the major challenges for psychoanalysis in the years and decades to come, will be to respond to "this hour of truth" for psychology. The way this response is to be articulated remains open, but the challenge lays in taking on the game. Indeed, from all elaborated psychological theories, psychoanalysis is the one that most clearly is articulated at another organizational scale – it is the reason why it is so often still preferentially used when dealing with clinical problems and why it has this epistemological status that is often experienced as different from the rest. But, more profoundly, it is the one theory of which the organizing foundational hypotheses are at the subject-level rather than at the function-level. For example, what fundamentally constitutes the mental apparatus in psychoanalysis is the defensive principle – e.g., repression, denial, dissociation, projection, etc., – and this is as the same time what clinically fundamentally characterizes the subject both in his way of taking up his life, and in his way of interacting with others. This is to say that psychoanalytic theory proposes conceptual tools – a major example being the defensive principle – which are at the same time highly informative about the organization of the mental apparatus and about the clinical profile of the subject. It seems to me no other psychological theory is in this position: e.g., functions like memory, attention, perception, etc., or cognition and intelligence profiles, or eating, sleeping, or other behavioral profiles, though informative about the mental apparatus and potentially contributing valuable clinical information, seem nevertheless (far) less powerful to understand a subject clinically than, e.g., his preferential defensive or transferential modes. It is for this reason, that I think it is important for psychoanalysis to respond to the changing dynamics and stakes in the scientific field of psychology.

This call seems to be heard by various psychoanalytic authors, as many are pleading that it is time for psychoanalysis to become part of or to reintegrate mainstream science (e.g., Kandel, 1999; Hoffman, 2010) or "to take its place at the high table of the scientific study of the mind" (Fonagy, 2003, p. 75) and many are effectively taking steps in that direction, either by engaging in more systematized and quantified research, or by engaging in interdisciplinary research, as is exemplified by this relatively new field of "neuropsychoanalysis" (e.g., Solms, 2004). Fonagy (2003, p. 75) explicitly poses that "to be taken seriously as a scientific study of the mind, (psychoanalysis) has to engage in systematic laboratory studies, epidemiological surveys or qualitative exploration in the social sciences." I would be more cautious, undecided and open than simply voting to rally the proven research methods used elsewhere. Indeed, if I might plead for a plurality of methodological approaches – and there is certainly a lot to say about possible experimental research in the domain of psychoanalysis (e.g., Shevrin, 2001) – I would be far more cautious in seeing in this recourse the condition *sine qua non* for being taken seriously. Psychoanalysis owes to clinics for being psychoanalysis, owes to the laborious, lengthy, imprecise, unsystematic, untargeted, unfocused clinical journeys for its very identity. If it is in the position of proposing a quite different but nevertheless elaborated, systematized psychological theory based on logical principles, it is for agreeing to engage in these open and uncertain clinical journeys. In my opinion, this also makes for being a very basis to be taken seriously.

When questioned about the future of psychoanalysis, Howard Shevrin in an interview in June 2005 said: "What I feel right now is that as more and more neuroscientists and cognitive psychologists get into studying psychoanalysis, they will begin to co-opt psychoanalytic ideas, without giving psychoanalysis any credit whatsoever. They will take what they want to help them understand this particular thing and they will sadly leave the rest of it. And so even psychoanalytical theory may then become sort of irrelevant. That is, what they find useful they will use, and what they do not find useful for their immediate purpose they will ignore and discard and they will have no appreciation of the fullness and depth of psychoanalytical theory. (…) So there has to be some way of presenting the overall theory in a way that you can not just simply pick and choose. You could, but you're going to lose the richness of what the theory has to offer in understanding these things. So that's my fear that unless that theory is presented in a coherent way and in a way that takes into account what is actually going on right now, that it will simply fall, its bones will be picked…" (Bazan, 2010, p. 266).

So, one proposal for responding to the forward march of neurosciences might minimally imply "taking into account what is actually going on right now" and an endeavor to present the theory "in a coherent way." This, I wish, is what this journal "Frontiers in Psychoanalysis and Neuropsychoanalysis" wants to be a forum for: it welcomes any contribution in the field of psychoanalysis which is willing to present itself in a coherent way and willing to take into account what is going on right now, or, minimally, to indicate its awareness of the actual context. The signifier "neuropsychoanalysis" in the title is there to function as an enabling condition, not as a necessary condition.

Finally, a lot of practising psychoanalysts might have this question: what is there to win for psychoanalysis to take recent neuroscience advances into account, or, even, to play a part in the making of science, of psychological science? Let me respond in the most analytical way: I do not know. There is no agenda for what there is to win, nor, for that matter, for what there is to loose. I'm not sure it should be the speculation of the gains and losses – which, as a clinician knows, are *a priori* always and for everybody unsettled – which should form the motive to take on the game. Rather, it is the game itself, the sole faithfulness to something that is happening, which should be decisive. Something is happening, which clearly and loudly summons psychoanalysis to respond; as said, how to respond, is not *a priori* clear, but a non-response would imply a certain loss.

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