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A Contemporary Scientific Study of André Breton's Automatic Writing

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Abstract

This paper proposes a new scientific way to study the concept and technique of automatic writing in Surrealism. Based on the specialists of André Breton's work and the experts of automatism, we expose here the literary, psychiatric, neurological and parapsychological influences that Breton had to create his own concept and writing technique. We suggest here that we have to add to all these influences, the spiritist one, specifically, that of Allan Kardec, whose doctrine and concepts, such as psychography, were a direct impact to the surrealist automatic writing, even when Breton wanted to dissociate his movement from Kardec's doctrine. Automatic writing has been studied from many angles, specially from literary and art theory and criticism, but also from history of science, philosophy, neurology, psychology and psychiatry and even from occultism, hermeticism and esoterism. Nevertheless, we don't know any contemporary scientific experiment on this surrealist practice, maybe because materialist principles that support traditional Neurosciences are unable to study automatic writing. For this reason, we propose to study automatic writing, not from regular Neuroscience principles that we disapprove here, but from a post-materialist Neuroscience viewpoint, which agrees with the values that Surrealism defended.

Keywords: Automatic writing, Surrealism, Allan Kardec, post-materialism, psychography

Un Estudio Científico Actual sobre la Escritura Automática de André Breton

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Resumen

Este artículo académico propone una nueva manera de estudiar el concepto y técnica de la escritura automática surrealista. Con base en los especialistas de la obra de André Breton y los expertos en automatismo, aquí exponemos las influencias literarias, psiquiátricas, neurológicas y parapsicológicas que llevaron a Breton a crear su concepto y técnica de escritura. Planteamos que a todas estas influencias hay que agregar aquella espiritista (espírita), específicamente, la de Allan Kardec, cuya doctrina y conceptos, tales como psicografía, tuvieron un impacto directo en la escritura automática surrealista, aún cuando Breton quiso desligar su movimiento de la doctrina de Kardec. La escritura automática ha sido estudiada desde varios ángulos, particularmente, desde la teoría y crítica de la literatura y el arte, pero también desde la historia de la ciencia, la filosofía, la neurología; la psicología, la psiquiatría e incluso desde el ocultismo, el hermetismo y el esoterismo. Sin embargo, no conocemos ningún experimento neurocientífico sobre esta práctica surrealista, tal vez porque los principios materialistas detrás de las Neurociencias no permiten estudiar la escritura automática. Por esta razón, proponemos estudiar la escritura automática, no desde los principios de la neurociencia tradicional, que aquí desaprobamos, sino desde un punto de vista de la Neurociencia post-materialista, que está en concordancia con los valores que el Surrealismo defendió.

Palabras clave: Escritura automática, Surrealismo, Allan Kardec, Post-materialismo, psicografía

Marguerite Bonnet's editions, critical papers and miscellaneous texts inside André Breton's *Oeuvres Complètes* are the most important references to consult when we want to have the first approach to *automatic writing* in Surrealism. Bonnet's writings are also fundamental to understand the old and new critical, analytical and historical texts related to *automatism*; a concept studied not only in the French and the foreign literary fields (Balakian, 1947), but also in the history of science and philosophy (Bacopoulos-Viau, 2013), and even in those fields concerned with hermeticism (Balakian, 1963), occultism and esoterism (Baudin, 2012).

As we can see, *automatic writing* is a complex concept that could be analyzed from different angles such as spiritism, occultism, psychiatry, neurology, or literary theory. In this particular paper, we want to expose the roots of automatic writing in Surrealism in order to propose a contemporary scientific approach to this practice.

Breton, as other surrealists, was always interested in sciences such as chemistry and physics (the title of his first literary work refers us to physics, electricity, magnetism or magnetic poles) and mind and brain sciences such as psychology, psychoanalysis, psychiatry and even neurology; he had even studied medicine and started to specialize in neurology with the famous neurologist Joseph Babinski (Joost Haan et al., 2012). Consequently, the father of surrealism read books and papers related to medicine, psychology, neurology and psychiatry, and in those years his interest and even passion for mind and brain explorers was born. He read Freud's *Oeuvres*, Pierre Janet's *L'automatisme psychologique* and John Hughlings Jackson's studies on epilepsy and neurological investigations about brain automatisms. Nevertheless, his vocation for literature and specially, his passion for poetry never died. Automatic writing in Surrealism is the consequence of Breton's interest in mental sciences and his passion for language, art and poetry. He believed that reason and logical thought were part of a dictatorship imposed to human beings, and that this despotism stole humans' capacities to be free. According to Bonnet, Breton thought that every human being had the potential to produce art and poetry when their consciousness was blocked and they allowed their unconscious to act completely. This is the basis that supports *automatism* and it was firstly applied to the act of writing (Bonnet, 1988).

Les Champs magnétiques, written between 1919 and 1920, illustrated by Picabia and originally published in the French literary magazine *Littérature*, was the literary work that marked the end of Dadaism and the starting point

of Surrealism. This literary piece was the outcome of the first experiment that Breton and Soupault carried out with automatic writing. During that period, Breton and Soupault wrote frenetically 10 hours daily, during various days. This activity affected their mental health and provoked them hallucinations. Both writers believed that the violent irruption of the unconscious material into the daily life of the individuals was very dangerous and the result of their writing experiment confirmed that theory. From that experience on, they realized that automatic writing, frantically or wildly practiced during a long time could have the same properties of a hallucinogenic drug (Pollizzotti, 2009). However, throughout all his entire life, Breton sometimes wrote automatically, predominantly in periods of spiritual crisis. *Clair de Terre* and *Poisson soluble* are latter texts written with this dangerous technique (Bonnet, 1988) that Breton discovered that could also be advantageous to human beings if practiced carefully and in a restrained way, because automatic writing, cultivated with moderation, could also be helpful to transcend a harming or a traumatic phase.

In 1933, Breton wrote “Le message automatique”. This is the most important essay devoted to automatic writing. Whoever analyses this text could discover which were Surrealism’s roots and influences to create the concept of automatic writing. Firstly, it is accepted -almost a commonplace- to say that Breton admired Freud but Freud neither understood him nor comprehended the goals of his movement. Breton didn’t want to separate arts and poetry from natural sciences. This quest was linked to the disapproval that Surrealism always expressed towards XIX century positivism (a positivism that Breton saw still incarnated in Freud’s figure). For this reason, in spite of the admiration that Breton had for Freud, there are reasons to think that Breton’s automatic writing had a greater influence, not from Freud but from other mind and brain explorers such as Pierre Janet, Frederic W. H Myers, Théodore Flournoy and other members of the *Society for Psychical Research*. Anna Balakian saw that it was not really Freud’s work but that of Pierre Janet the one that influenced Breton’s concept of automatic writing in a psychological and psychiatric way (Balakian, 1986). Likewise, Jean Starobinski detected not only Janet’s influence but also the influence of Myers, Flournoy and other members of the *Society for Psychical Research*, who were interested in parapsychology, mediumistic studies and spiritualism (Starobinski, 2008).

As a medical student, Breton and Soupault were in contact with a very important book that was one of the main influences for their surrealist concept. The title of the book was *L’automatisme psychologique*, and the author was

Pierre Janet, a French philosopher, psychologist and psychiatrist who employed a writing technique with hypnotized patients to bring out their traumatic events that were *dissociated* in their conscious minds. He asked them to write something as they were in a hypnotized state, and the stories that they wrote spontaneously, helped them to become aware of all of their mind's occult materials that were hidden very deeply and that perturbed them in a very serious way (Hustvedt, 2010).

According to Bacopoulos-Viau (2012), Janet linked *psychologic automatism* to a very poor mental state of the human being, almost concomitant to a mental illness where humans had no control of themselves and their actions. In contrast of *automatism*, *integration* of consciousness meant mental health, rationality and the perfect state of humans able to control and conduct their actions with logic and rationality (Bacopoulos-Viau, 2012). This book and theory were supposedly the main influences for the writing of *Les Champs magnétiques* in 1919. It is very probable that in 1919 neither Breton nor Soupault understood very well Janet's theories and just took the name "automatisme" and adapted it to their movement, because Surrealism is just the opposite of what Janet defended. Janet always saw in automatism an abnormal, unhealthy, and the lowest form of consciousness. In his model, Janet exposed a conflict between two forces inside the mind: *synthesis* (unity) and *automatism* (disintegration). *Synthesis* was seen as a psychologic strength and *automatism*, a mind weakness, (Bacopoulos-Viau, 2012), a feebleness evident mostly in the hysterical ones.

However, in 1933, when Breton tried to explain the roots of automatic writing in "Le message automatique", his vision was very different from that of 1919. He was very interested in parapsychology and now rejected Pierre Janet's theories, considering them "positivist". Therefore, instead of Janet, Breton gave importance to Myers --who had read in 1925, a year after his first Manifesto--, Flournoy and other members of the *Society for psychical research*, whose theories and philosophies adapted better to the surrealist causes (Starobinski, 2008). As Bacopolous-Viau presents us in her investigations, Breton did not mention any more Pierre Janet as an influence of Surrealism, because the writer realized latter that Janet's model of mind, as well as other of his psychological theories were progressively going against the purposes of Surrealism (Bacopoulos-Viau, 2013). Likewise, we propose here that Allan Kardec was another central influence for automatic writing in Surrealism, that Breton also "forgot" to mention in his famous essay.

In "Le message automatique", Breton tried to differentiate his automatic writing from those writings that mediums practiced. The strange thing here is

that, even when Breton and other writers and artists –members of the surrealist group-- knew very well Allan Kardec's books, theories and his *Doctrine Spirite*, they never mentioned neither the most important codificator of Spiritism nor the classification of mediumistic writings. "Le message automatique" reveals how Breton distinguished very well some concepts that were part of Kardec's doctrine. One of the most important of them is *psychography*, which was a specific mediumistic writing that was clearly adapted by Breton to create his own automatic writing concept in his movement. Breton's writing and ideas in "Le message automatique" unintentionally disclose how much of his automatic writing owes to Kardec's doctrine and concepts (Breton, 1992).

Allan Kardec, Frederic W. H. Myers, Théodore Flournoy, Richet, Gabriele Delane, Camille Flammarion, William James, William Crookes, Oliver Lodge, Henry Sidwick, were some of the explorers that at the end of the XIX century and at the beginning of the XX century, tried to investigate scientifically some human life issues concerning to spirituality; life after death, reincarnation, telepathy, and other kinds of unmaterial communications where writing was involved. Without Pierre Janet's psychiatric model of automatism to cure hysterical patients and those heterodox investigations of the researchers mentioned in this paper, *automatic writing* in Surrealism could not be possible. Therefore, in this paper we want to present a current scientific way to explore this surrealist concept.

Heterodox Neurosciences

Despite the great importance of Neurosciences and other materialist brain and mind disciplines, in this study we think that none of them are sufficient to give a scientific viewpoint of automatic writing in Surrealism. Those sciences have not been yet able to reveal much of the secrets behind the relationship between mind and brain, brain and language, and other issues concerning to philosophy of mind and neurobiology and, part of those barriers that obstruct these explorations could be teared down through a more inclusive thought, able to cross the frontiers of neurobiology and traditional mental medicine; disciplines prone to diagnose as mental illnesses many of the human events that cannot be explained through a positivist viewpoint, and that qualify new technologies –such as those current brain scanners— as the main future tools of all the knowledges of minds and behaviors.

Traditional neurosciences have made very important discoveries concerning with the brain and here we withstand their importance for

humanity, not only because they have been essential in the medical field, but also because they have been transcendental to approach ourselves to the *image* of our brains. Nevertheless, these technological advantages have also been the nucleus of the defeat of human thought. This is because traditional Neurosciences are sustained in brain discourses that emerge from a localizationist ideology and have forgotten, ignored or disregarded a broader part of the humanistic, philosophical, religious, artistic, literary or anthropological knowledges; they also have dismissed all idealistic reflection and worship a new God, incarnated in the contemporary version of scientific materialism. This seems to be their cognoscitive limit and for this reason, these sciences are not enough to give a contemporary answer to automatic writing in Surrealism. We cannot forget that this concept and technique is not only inspired in one part of the materialist brain and mind sciences, such as psychiatry or neurology, but also has strong backgrounds in the unorthodox discourses and knowledges opposed to the established mental health; in poetry, art, esoterism and those uncommon scientific studies practiced by Flournoy, Myers and many other members of the *Society for Psychical Research* (Starobinski, 2008), who, without setting aside their scientific meticulousness, could abandon the materialist ideology that prevailed in science at their epoch.

Questioning Materialism in Contemporary Mind and Brain Sciences

Before starting to expose the new unorthodox brain and mind scientific theories with regard to automatic writing, it is necessary to define concepts such as “materialism” and “idealism”. Without a definition and fundamental notes about them, it will be difficult to comprehend the relevance that the explorations of Kardec, Myers, Flournoy and others, still have; it will not be possible to appreciate the importance of certain contemporary debates concerning to the liaison between writing and brain and the experiences with regard to *psychography* and writing mediums.

Paranormal events have usually been ridiculed and confronted, even by many of the same researchers who have firstly believed in them and afterwards have remained silent or have denied their existence. The reasons of these silences, mockeries and oppositions are normally explained by the fear of ridicule, as in the case of Pierre Janet in psychiatry or of André Breton in literature. Pierre Janet had firstly flirted with psychical research, but latter, in order to be respected inside the medical circles where he worked and interacted in several ways, he decided to abandon the experiments on

mediumship and other kinds of psychical phenomena that were seen as ridicule studies by the medical establishment (Bacopoulos-Viau, 2013). The case of Breton was even worst. He denied that Janet's concept and technique had influenced him when he discovered that those were not useful for the purposes of Surrealism (Bacopoulos-Viau, 2012), and as we have mentioned above, he was also ashamed that Allan Kardec's writings and concepts such as *psychography* were a direct influence for automatic writing in Surrealism. We suggest that Breton was ashamed to link his movement to Spiritism, because Kardec's doctrine that was still very popular in France in the time of surrealist automatic writing, and in Breton's estimation, Spiritism was a "religion" destined to naïve and credulous people; to a rabble ignorant of the basic notions of science.

In both cases, materialist ideology prevailed over the preliminary idealist one. In both cases, the cause was the fear of ridicule and subsequently, the fear of losing power and placing themselves in a weaker position inside a scientific or a literary field. This fear of ridicule is normally upheld by a materialist vision of the world and an aversion towards all idealist thought, understanding *idealism* as a metaphysical doctrine that considers that the essence of the things has to be found in an intelligible world, in God, in the soul or in life. This concept opposes to *materialism*. In an epistemological way, it could be a doctrine of ideas that we have and fluctuate according to the point of view --from Protagoras subjectivism or Berkley's immaterialism to Hume's skepticism--. *Idealism* is the name that is usually given to the German philosophical movement initiated by Kant, carried on by Fichte and Schelling and ending in Hegel's system (Xirau, 2008, p.535). *Idealism* could also be defined as a word that could indicate a subjectivist attitude --man as the measure of all the things, Protagoras-- that denies the necessary existence of the world; an *epistemological* attitude --knowledge of the phenomena, absence of the knowledge of the "things-in-itself" for Kant--; a *metaphysical* attitude --the reality must be found in a transcendent world from which our own is just an image (Plato, Saint Augustine); a *spiritualist* attitude, that supports that the substance of the world is spiritual (Anaxagoras, Leibniz); an *immaterialist* attitude, such as Berkley's empirist spiritualism (Xirau, 2008, p.518-519).

Even though, *idealism* is a word with many nuances with respect to this or that philosophy, all of them share the idea that the world is not composed only by matter. In the case of this paper, we are interested in taking the first connotation of *idealism*: as a philosophy opposed to the material conception of the world, one that would like to find the essence of the things in God and

in a spiritual world. As we can deduce, it is a doctrine in harmony not only with the many different religions but also with Spiritism and its scientific enquiries. Materialism, on the contrary, is a doctrine that denies the existence of spirits, souls, of an intelligible world and God, and it has taken many forms: *Greek's atomism* (Democritus, Epicurus); *biological materialism* (which subordinates human thought to brain processes or, in the case of certain evolutionary theories, makes the evolution of species dependant to pure physical agents); Marx's historical materialism that makes the political, religious and ideal life determined by the economical and social causes. (Xirau, 2008, p.538).

When we mention here *materialism*, we are not referring to *historical* and *dialectical materialism*, the origins of the Marxist theory (Geymonat, 1998), rather, specifically to the ideas that reject the existence of the soul, the spirits and God, and that at the same time, try to demonstrate that all human thought is reduced to the biological brain processes (Xirau, 2008). Those materialist ideas are ancient and their grounds are in the beginnings of physics; they originate in the V century B.C., when Leucippus and latter, Democritus, proposed that nature was composed by tiny indivisible particles called atoms. Both philosophers suggested that all the universe was constituted by matter and even what we call spirit is part of the matter, a much subtle matter, but matter at the end. Xirau states that modern science has been developing since its beginings on this assertion (Xirau, 2008, p.38-39). Physics in XVI and XVII centuries highlighted "mechanistic materialism" and "nature's determinism". These two concepts that declared that the world is ordered by non-movable mechanical laws, where it seems to be no place for individual's will or freedom, would be inconceivable without Democritus' atomistic thought (Geymonat, 1998, p.51).

Many philosophic-scientific discussions about the material or ideal nature of the world arose during those centuries, from the V century B.C., with the Greek atomists, up to the XVII century, when Isaac Newton published his *Mathematical Principles of Natural Philosophy* and when philosophy still meant the same as in the Middle Ages or in the times of Aristotle: the science of all things (García Morente, 2000, p.18). Since the XVII century, the fields of study began to separate from each other and philosophy started to drift apart from natural sciences, which commenced their specialization process and their progressive distancing of the philosophical reflection. For this reason, materialist discourses were strengthened and finally established as those that dictated the truth in the scientific world. By the XVIII century, according to García Morente, there is no human spirit able to contain in one unity the whole

encyclopedia of human knowledge, and then the word Philosophy does not designate anymore the encyclopedia of knowledge. On the contrary, of that totality of disciplines, there has been a detachment of mathematics on the one side, physics, on the other, chemistry, astronomy, etcetera (García Morente, 2000, p.19).

Between 1830 and 1842, Auguste Comte wrote his *Course de philosophie positive*, six volumes that had a great importance for subsequent science and that introduced Comte as the initiator of *Positivism*, a concept that ended up designating a movement directed towards the exaltation of the facts against ideas, the experimental sciences against theoretical sciences and physical and biological laws against philosophical constructions (Geymonat, 1998, p.548). This movement permeated all Europe and afterwards was imposed in the philosophical, scientific and even historical and literary fields of study, and was associated to the ideology of the bourgeois societies of the second half of the XIX century in Europe (Geymonat, 1998, p.548).

Positivism gave a very tiny space for real philosophic reflection to study the world. Additionally, Comte's theory affirmed that the world and all human beings evolved through three different and consecutive stages. The first one was "theological" and at this stage, human beings supposedly tended to a fantastic, magic and mythical thought; they believed in gods and supernatural beings. The second stage was the "metaphysical" one, and at that stage, reason substituted phantasy. Nevertheless, all the logic kept stuck in a conceptual and verbal level, without any empiricism. The third stage was "scientific" and at it both "theological" and "metaphysical" phases were rejected and knowledge was born from pure experience (Geymonat, 1998, p.549-550). Taking these ideas into account, Comte made a list of the existing "real sciences": mathematics, astronomy, physics, chemistry, biology, sociology and however, he didn't include psychology, a very curious data, because, for Comte, psychology could be reduced in part to biology and, in part, also to sociology. On the one hand, he considered –influenced by Gall's phrenology—that any individual psychical process could be explained by means of rigorous physiological brain observations; on the other hand, he believed that the only method to study empirically the collective psychical processes consisted in relating them with social manifestations (Geymonat, 1998, p.552).

It is important to analyze Comte's unfortunate positivist ideology: his poor notion of what "science" means, his fallacious and deceitful use of such concept; his detachment of all humanism and his will to establish a new form of materialism, which from that time on, has appeared and disappeared in the history of sciences. In our days, materialist ideology rules in the fields of

Neurosciences and other disciplines associated to mental health. Nonetheless, a group of different scientists have emerged from the areas of Biology, Neurosciences, Psychiatry, Medicine, Physics, Mathematics and Psychology to confront materialist ideology from different flanks. In a text titled *Manifesto for a Post-Materialist Science*, Neuroscientist Mario Beauregard and other researchers mention that there has been empirical evidence of spiritual phenomena or related to *psy* investigations that have not been accepted due to the materialist narrowness of the contemporary scientific model (Beauregard et al., 2014). In the mentioned text above, researchers conclude that the modern scientific perspective is still linked to the origins of classical physics, and that the idea that upholds that materialism is the only reality in the universe, is only one of those classical assertions (Beauregard et al., 2014). During the XIX century, these statements turned into dogmas that constituted the roots of scientific materialism; a system that proposed that the mind was only the outcome of the brain's physical activity and that our thoughts didn't have any consequence in our brains and bodies, in our actions and in the physical world. In the text, it is also mentioned that during the XX century, the ideology of scientific materialism became so dominant in the academical realm that most of the scientists started to think that this belief was based in real empirical evidence and represented the unique vision of the rational world. In the opinion of the *Manifesto* signers, materialism obstructs scientific studies that concern with mind and spirituality; instigates researchers (for shame or fear), to deny the subjective dimensions and the diverse human experiences. For this group of scientists, science is mainly and above all, a non-dogmatic and open-minded method to acquire knowledge about nature and through observation, experimental investigation and theoretical explanations of the phenomena. In consequence, science methodology shouldn't be, neither a synonym of "materialism" nor be attached to any ideology, particular belief or dogma (Beauregard et al., 2014). Something similar thinks Saulo De Freitas Araujo (2013) when he states that:

Therefore, the expression 'scientific materialism' can serve at most to designate the ideological stand or the professional status at those who believe in it (scientists), but in no way does this entail that they are proposing a scientific theory. This confusion being unraveled, it should now be clear that the legitimacy of science does not depend on scientists' commitment to materialism, but only on their commitment to logic and scientific methodology. Thus, it should be noted that all that science can do is to discover the existence of phenomena and their relations, but never the essence and ultimate nature of reality, since this

cannot be given in the empirical level and would thus require a different kind of knowledge. (De Freitas Araujo, 2013, p.5)

Besides all of the previous criticism towards materialism, this philosophic idea is also destined to failure due to its monist nature (Beauregard & O'Leary, 2008). This means that its philosophic position concludes that all that is existent in the universe is constituted only by one substance, which is, in this case: matter. Monist systems have the disadvantage of being unable to test if their posture is true or false, since they have no other element with which to compare. Therefore, a monist system such as materialism, could be easily contested when we present any evidence against it. Due to this scientific weakness, those investigators that uphold systems such as this one, tend to be aggressive against those researches that present evidences that contradict monist systems (Beauregard & O'Leary, 2008). An example of this hostility is the already alluded ridicule, teasing and mockery of many materialist scientists towards the investigations accomplished by Allan Kardec or towards other members of the *Society for Psychical Research*. Such scorn, disrespect and mistrust displayed by materialist enthusiasts, was also exhibited against the quantum mechanics researchers, who revolutionized XX century physics and whose theories are now employed by various unorthodox neuroscientists to demonstrate that the mind is not reduced to the operations carried out inside the brain (Beauregard & O'Leary, 2008).

Beauregard and O'Leary suggest that Newton's laws work well because they describe a medium --neither very big nor very small--level of reality. Nevertheless, in a tiny (a quantic) level of the universe, those laws of nature that seem obvious to us, do not operate in the same way. Quantum physics is then, the study of matter and energy's behavior in a subatomic level of the universe. Therefore, inside the brain, the mistake had always been to apply the classical (Newtonian) laws of nature, rather than the quantic ones, since the synopsis (the neuronal connections), which could be electrical or chemical, use atoms called *ions* that should be analyzed in a *micro* level. In other words, in the synaptic communication we are in a subatomic level inside the brain, where neither the determinism, nor the laws of the superior levels of nature rule. For this reason, Beauregard and O'Leary propose that the brain is a "quantum system", whose laws are those of the probability (Beauregard & O'Leary, 2008, p.31-33).

If for classical physics, the universe is formed by tiny fragments of matter that interact according to the mechanical laws, for quantum physics, the universe is constituted by overlapped states that neither are disconnected

between them, nor operate according to mechanical laws. Consequently, the difficulty that materialist neuroscience has to explain the problem of consciousness and mind, resides in its stubbornness to analyze these subjects from a mechanistic viewpoint, which is now clearly in opposition to modern physics; antagonism that is clearly seen between modern physics and materialist biology:

The conflict of materialist biology and contemporary physics is becoming more and more obvious all the time. As Harold J. Morowitz has pointed out, biologists have been moving recently toward the hard-core materialism that characterized nineteenth-century physics, just as physicists have been forced by the weight of the evidence to move *away* from strictly mechanical models of the universe toward the view that the mind plays in all physical events. (Beauregard & O'Leary, 2008, p.123)

For all these reasons we can suggest that the brain is neither a computer nor any other kind of intelligent machine; its functioning is not reduced to a mechanical one, as some mind philosophers or neuroscientists declare. Even if science had advanced in a very important way and some technology magnates guarantee us that computers and artificial intelligence are the remedy against all the problems of the world, we cannot submit neither that the brain is only a calculator machine, nor that it could answer all the questions about the meaning of life, since “computers, however cleverly we build them, do not become spiritual machines, nor can they shed light on the spiritual nature of the human” (Beauregard & O'Leary, 2008, p.23). Those materialist scientists that conceive the brain as a computer, consider human existence as that of an automaton, a robot without free will. Their strategy is simple: they deny the existence of the mind or consciousness, assuming that those are old concepts, taken from poor-scientific theories, from non-rigorous psychology or even from quack authors. The real issue is that most of them do not want to deal with other disciplines that they ignore:

The mind-matter problem is resolved by denying that mental processes exist in their own right. ‘Consciousness’ and ‘mind’ (intentions, desires, beliefs, etc.) are prescientific concepts that belong to unsophisticated ideas of how the brain works, sometimes called ‘folk psychology’. They can be reduced to whatever the neurons happen to be doing (neural events). ‘Consciousness’ and ‘mind’ as concepts will be eliminated by the progress of science, along with such ideas as ‘free will’ and the ‘self’. Current key exponents of this view include

philosophers Paul and Patricia Churchland and Daniel Dennett.
(Beauregard & O'Leary, 2008, p.106)

Since 1950, Cognitive psychology developed the comparison between brain and computers and the belief that the human mind model was that of the CPUs. These beliefs began to strengthen since the development of Artificial Intelligence up to the creation of the metaphor of the frontal lobes as the “executive center” of human beings; a metaphor still alive in neuroscience. Elkhonon Goldberg's book: *The executive Brain: Frontal lobes and the civilized mind* (2001) is only one example of all the neurology and neuroscience books that work very hard to reinforce this metaphor. As it is indicated in the title of this book, frontal lobes are those parts of the brain that humanize us, that separate us from those violent and irrational animals that we keep inside us (Goldberg, 2001). This is a commonplace in neurology and neuroscience, and even when these theories have a hard scientific and clinical support, it is important, on the one hand, to remember that brain still hides many secrets and that “executive centers” might latter have other functions “inside the machine”, just as when neuroscientists discovered that subcortical areas in the brain do not operate independently and that they even participate in complex functions such as speech and writing. On the other hand, we must distinguish the danger of the old metaphor of the “executive center”, now lexicalized and incorporated to the popular language, associating human minds to robotic operating systems.

This metaphor has become a poorly, reductionist, scientific assertion, since it doesn't considerate human beings as complex entities, with desires, beliefs, feelings, aspirations, aims, intentions; irrational, metaphysical or spiritual experiences; entities which are influenced more by their historical or sociocultural context --by their ideology and symbolic or immaterial reality, etcetera-- than determined by a brain localizationist theory.

The “executive center” metaphor originates from a cognitive psychology and neuroscientific doctrine called *Computational theory of mind*, which tries to understand mind and brain as if this one was a computer (Beauregard & O'Leary, 2008). Therefore, this theory assumes that human behavior is determined by the activity of the unconscious executive processes called modules and by their neural counterparts. The mentioned above metaphor goes so far, that scientists believe that these modules function just like files in a computational program (Beauregard & O'Leary, 2008, p.112). This assumption from materialist neurosciences is very poor and tries to throw into the garbage all the great humanistic, philosophical, literary, artistic, spiritual,

and critical tradition, in order to unify, simplify and even control thought, since we can even speculate that the great political and financial funding from wealthy governments and powerful institutions to all these materialist disciplines has behind, programs of mental control, brainwashing and indoctrination. These aims are obviously not those of the materialist scientists that support them, but indirectly, scientists help to exalt the figure of the robot and turn it into an aspirational model of the human being; an entity without the capacity of critical thinking, ethics, freewill or action; an automaton easily controlled by any power.

In *I am not a Brain*, philosopher Markus Gabriel states that the great support that traditional Neurosciences receive, have a very important political background (Gabriel, 2020). First of all, Gabriel goes against the idea that the reality as something structured and complete is a mistake not only from religions but also from natural sciences. This idea affects our perception of what is real and what is not, and since we live in an audiovisual period, we are used to believe that those images that we see are the complete evidence of the reality. That is why traditional Neurosciences are very respected; because they show us colored images of the regions of our brains “in action”. Consequently, when we observe a brain in a scanner, we believe that we can *see* how this brain *thinks* (Gabriel, 2020). But Markus Gabriel proposes an idea that we support here: to *localize* is neither to *understand* nor to *think*. That is why he also criticizes that traditional Neurosciences try to localize thought (Geist) in the nervous system and that this *localizationist* idea is an ideology that he calls *neurocentrism*. He mentions to be unable to understand how can some neuroscientists believe that ideas could be “mapped” inside the brain, because in his opinion, people are neither only brains nor biological machines, as many neuroscientists state (Gabriel, 2020, p.10-11). He suggests that:

There is also a suspicious political motivation associated with neurocentrism. Is it really an accident that the decade of the brain was proclaimed by George H.W. Bush shortly after the fall of the Berlin Wall in 1989 and thus with the end of the Cold War looming? Is this just a matter of political support for medical research? Does the idea of being unable to watch the brain –and thereby the citizen—while thinking not also imply a new possibility for controlling social surveillance (and the military-industrial complex)? It has long been well known that possibilities for controlling consumers are expected from a better understanding of the brain: think of neuro-economics, another theory-golem out there. (Gabriel, 2020, p.15)

However, we must repeat that traditional mind and brain sciences have been very important to understand many issues of the brain and mental illnesses and that they should be a central part of our culture. Nonetheless, neither brain is a machine nor mental processes could be simply “localized” in brain’s anatomy due to the simple fact that there is no way of capturing thoughts directly from the study of brain activity (Beauregard & O’Leary, 2008, p.150).

Gabriel asserts that “Natural science will never figure us out, not just because the brain is too complex (which might be a sufficient ground to be skeptical about the big claims of neurocentrism), but also because the human mind is an open-ended process of creation of self-conceptions of itself” (Gabriel, 2020, p.16). According to this opinion, mind and brain, could not be the same thing, but two different entities, as great brain surgeon Wilder Penfield knew. He stated that it is possible to put an electrode in different areas of a patients’ brain to make him move his body parts, to make him stop speaking and even to make him remember past events. Nevertheless, according to Penfield, an electrode in the brain has never been able to influence in a patient’s belief or decision, since beliefs and decisions do not arise from the brain but from the mind (Penfield, 1975, p.76-77). According to Penfield, it is the mind the one that communicates through the mechanisms of the brain. For this reason, Penfield --a brain surgeon and a very important scientist in the history of neurology and neurosurgery-- agrees that the mind could sometimes be called *spirit*, and even understands that some of his colleagues or other scientists could believe in the existence of the soul and in spiritual entities. Penfield, in contradiction to other neuroscientists and materialist brain explorers, suggests that the mind has no anatomical localization, and that it could also permit the communication between God and human beings (Penfield, 1975, p.85-88):

I mean that if the active mind of a man does communicate with other active minds, even on rare occasions, it could do so only by the transfer of some form of energy from mind to mind directly. Likewise, if the mind of the man communicates with the mind of God directly, that also suggests that energy, in some form, passes from spirit to spirit. (Penfield, 1975, p.89)

Even if the mind allows us to interact with the brain for body movement, mind could also be able to operate outside the brain, communicate with other minds in and out our bodies. These and other issues of a spiritual and parapsychological order try to demonstrate the new heterodox neuroscientists,

inspired in non-materialist psychologists and in classical explorers such as those investigators of the *Society for Psychical Research*. If Myers wanted to prove that life survived human's disembodiment, the new *post-materialist* scientists are moved by the same interest: "to investigate if mediumship provides evidence that there is some kind of nonbodily aspect of personality that persists after bodily death" (Moreira-Almeida, 2012, p.196).

A New Approach to Automatic Writing

Allan Kardec and latter other investigators proved that there have been many cases of mediums, who, in trance states, have manifested abilities that they had never showed and that was impossible that they could have in their common lives, since they were uncultured or even illiterate; it was almost impossible that they had these abilities that they exhibited in trance states, as Moreira-Almeida suggests:

Other kinds of unlearned skills displayed occasionally by mediums are xenography (writing in a real but unlearned language), painting, drawing, and poetry (by mediums who had no prior training and do not exhibit those skills in their ordinary lives). Finally, some mediums channel by writing with a handwriting similar to the alleged communicating personality when that person was alive, a still poorly studied phenomenon. (Moreira-Almeida, 2012, p.201)

The history of literatures and arts around the world, have demonstrated us that there have been many writers who believed that those texts that they wrote where not written by them but "inspired" by some external entity or spirit. If we just concentrate in the European tradition, since Homer to our days, there have been many cases of writers and painters who believed that were "possessed" by muses, spirits, devils, or other entities that dictated them what they should write, or order them what they should paint, sing, compose, etcetera. This does not mean that all of those visionaries, prophets and possessed were mentally disturbed. Paul Bénichou's studies --*Les temps des prophètes, Les mages romantiques*--, Albert Béguin essay --*L'âme romantique et le rêve*-- and Jean-François Chevrier's *L'hallucination artistique: de William Blake à Sigmar Polke*, are not only some interesting studies about Romanticism and Symbolism --two literary and artistic movements that have changed the whole history of western arts and literatures--, but also interesting investigations about writers, painters, poets, philosophers and other artists who believed in the existence of the soul and the relationship between

literature and art on the one side, and vision, hallucinations and prophecy, on the other side. Most of these artists and writers were not only literate, but also highly cultivated. This is a very important detail, opposed to the cases that we will mention: from the middle XIX century to our days, scientists have investigated many writing mediums that had supposedly exhibited extraordinary abilities for writing, without having enough education, or even being illiterate. The technology used today is obviously a great advantage if scientists know how to employ it to analyze automatic writing. Nevertheless, neuroscientific analysis for *psychography* is not very common due to the already mentioned materialist ideology that rules Neuroscience; an ideology that interferes with the work of *post-materialist* researchers, investigators who almost never receive government budget for these investigations. According to a recent research carried out by worldwide experts in psychiatric studies concerning with trance, spiritual and mediumship experiences, there is only one investigation published in which using a functional neuroimaging technique, writing mediums' brains are explored (Ghinato Mainieri et al., 2017). This investigation is called "Neuroimaging during trance state: A contribution to the study of dissociation" (Peres et al., 2012) and is specialized in *psychography*. In this study, scientists tried to discover what kind of alterations did mediums' brains suffered during those states in which a spirit supposedly *occupied* writers' body and was able to write through their hands. 10 writing mediums were examined; 5 with little experience and other 5 very experienced in mediumistic writing: the years of practice oscillated between 15 and 47 and the texts produced by them monthly, fluctuated between 2 and 18. Experts used the neuroimaging technique called SPECT (*Single-photon emission computed tomography*) while the psychographs wrote, not only in a trance state but also in a regular one (of non-trance). Let us remember that SPECT, just as PET (*Positron emission tomography*) and fMRI (*Functional magnetic resonance imaging*), are modern techniques that help scientists to observe the brain dynamics in real time. That is to say, that experts are able to examine what happens inside the brain while the analyzed person executes an action such as writing, singing, solving math problems, etcetera (Kandel et al., 2013).

Since *psychography* is one of the various forms of dissociation within mediumship, it would had been unexpected that the content of the texts revealed any traces of consciousness. Still, the *psychographed* texts were coherent, structured and exhibited legible narratives, even when the mediums affirmed to ignore not only the grammatical structure that they had used, but even the texts' content that they had written. One of the goals of this study

was to investigate if dissociative trance state that occurred during psychography corresponded to brain alterations that were distinct from those observed when mediums wrote in a normal mind state. They used SPECT technique, because with it they could measure the blood flow that went to each brain area that was apparently active during both psychography and normal (conscious) writing. The hypothesis of the researchers was that the brain areas associated to writing should activate in both kinds of writings (when the mediums wrote normally (conscious) and also when they practiced automatic writing (psychography)). This study also included the analysis of a Portuguese-language expert, who qualified the complexity of all the texts produced –both in trance and in a conscious mental state-- by the writing mediums. The scientific hypothesis was not confirmed because the outcomes showed that in writing mediums with more experience, those brain areas that are classically linked to conscious writing had activated less during *psychography* than during *normal* (non-trance) writing. They had activated less because the *SPECT* detected that less blood flow arrived to that brain area. The brain areas that had activated less in expert writing mediums were: the left culmen, the left hippocampus, the left inferior occipital gyrus, the left anterior cingulate cortex, the right superior temporal gyrus and the right pre-central gyrus (Peres et al., 2012).

Likewise, the results concerning to writing complexity were much better in *psychographed* texts—both experts’ and beginners’--than those texts written in a non-trance state. In other paper (Peres & Newberg, 2013) in which the authors referred to that 2012 survey, it is explained that the investigated mediums had claimed that during that examination they had experienced a relaxing mental state while they were in trance, element that could be explained by the reduced mental activity detected by the SPECT. However, the fact that the mediums had written a text with a complex content while being in a dissociative trance state, suggests that the mediums were not relaxed. Nevertheless, the results of the experiment did not indicate that the writing mediums were fraudulent or dishonest about their mental states because in that case, the SPECT would have detected the activation of the neural circuits associated to the planification of actions, in this case, of conscious writing (Peres & Newberg, 2013). This is so because a person can not avoid that more of his blood flow gets to the main brain’s zones that control the conscious writing, while he is planning and writing a text, especially when this is coherent, structured and complex.

This research supports the assertion of the mediums, who after the experiment reported to have ignored the content of their *psychographies*;

content related to ethical or spiritual topics and about the importance of bonding science with spirituality. Most important is that all the mediums asserted that the *psychographed* texts didn't originate inside their brains, rather, inside of other spirits that communicated with them (Peres et al., 2012). This is why this experiment is fundamental and could possibly confirm the hypothesis that mediums' brains act sometimes as transmitters rather than as producers of the mind; that the mind could find itself "brainless", this means, without any material or biological structure.

Writing, explained from classical neurology, psychology and neurosciences, requires the functioning of several brain areas, not only the classical Broca and Wernicke's areas (Kandel et al., 2013), but many other such as those areas that involve the *explicit* and the *implicit* memory, as Kandel (2012) explains in *The age of insight*:

There are, in fact, two major forms of long-term memory storage. *Explicit memory*, the memory that H.M. had lost, is a memory of people, places and objects. It is based on conscious recall and requires the medial temporal lobe and the hippocampus. *Implicit memory*, which H.M. retained, is the unconscious recall of motor skills, and emotional encounters, and it requires the amygdala, the striatum, and, in the simplest cases, the reflex pathways. (Kandel, 2012, p.308-309)

Maybe to understand some of the foundations of automatic writing in surrealism we need to understand the relations between implicit memory and writing. But this is only a starting point. To write a complex, logical and well-structured text, we have to use --at least as a platform-- grammatic, rhetoric and poetic, and in order to achieve this, we allegedly need to activate different attentional brain circuits as well as language and writing areas (Diéguez-Vide & Peña Casanova, 2012). The areas and the circuits of the brain involved in language and writing are more than those that neuroscientists have always believed, and include subcortical areas (Maestú et al., 2015). The neuroscientific studies with all their scanners and machines to explore the brain are important but not enough. The complexity of the brain and the fact that the mind might exist without a neurobiological support, puts more problems on the way to study the relations of the mind with the brain.

The experiments carried out with writing mediums open more doors to the understanding of brain, language, writing and mind, and we suggest here that they also permit us to prove many of the hypothesis proposed by some important spiritualists and investigators of the *Society for Psychical Research*. We have to employ our new neuroimaging and neurophysiological tools to

study the brain, but we can neither believe that technology will solve the human issues by itself, nor stop questioning the boundaries of materialism and the differences between mind and brain.

Thanks to the texts of Breton, to other writings of some members of the Surrealist group, to the historians of Surrealism and to the art and literary critics, now we know that Surrealism is the heir, on the one hand, of a medical-philosophical-scientific family represented by Janet and other members of the *Society for Psychical Research*, and on the other, of an artistic and literary tradition that commenced with the German and French Romanticism; passed through French symbolism, with its hermeticism, occultism and visionary tradition and ended in the first decades of the XX century French poetry and arts. But we cannot forget that automatic writing is also the beneficiary of that Kardecian practice called *psychographie* –even if Breton denied it, as well as he denied that he took the name of his practice from Janet’s *écriture automatique*--.

We propose that experiments on writing mediums, such as the one studied here might demonstrate the existence of something called “spirit” (a mind “brainless”). With a post-materialist perspective and methods, many of the *Society for Psychical Research* hypothesis could be tested and serious parapsychological scholars --such as Carl Gustav Jung-- could recover the academic prestige that materialism stole them. Finally, we suggest that post-materialism is the only movement able to test Breton’s automatic writing in an experimental and contemporary way, since post-materialism maintains itself in perfect harmony with the standpoints of Surrealism, movement open to modern science, but also to arts, poetry, occult philosophy, and many different knowledges that support the existence of the spirits and the souls.

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