# Original Paper

# Methodological Approach for the Analysis of Artistic Creativity through First-Person Analysis

Pierre d'Argyll<sup>1\*</sup>

Received: December 20, 2019 Accepted: October 15, 2019 Online Published: October 17, 2019

doi:10.22158/assc.v1n2p180 URL: http://dx.doi.org/10.22158/assc.v1n2p180

#### Abstract

Can the study of a single subject by means of a first-person analysis be considered from a scientific methodological approach? The response from neurophenomenology is yes. The recent science of consciousness led by Francisco Varela claims the need to use first-person data, subjective-experiential reports to link them with neurobiological correlates of classically scientific third-person data. I address here a systematic disciplined methodology to translate first-person analysis to the field of art creativity to be performed by the own artist/subject. The goal is to formulate a methodology to be further validated and standardized by other artists willing to perform an introspective analysis, in what can be considered open to "intersubjective validation" in terms of Varela. First-person analysis by the artist herself might reciprocally offer the basis for scientific understanding of the neural processes involved in the synthesis of a creative artwork. Finally, better understanding in the mechanisms involved in inspiration, synthesis and execution of art-work may also help an artist to enhance his/her creative abilities.

# Keywords

autobiographical memory, artistic creation, first-person analysis, neurophenomenology

# 1. Introduction

Can the study of a single subject by means of a first-person analysis be considered from a scientific methodological approach? The response from neurophenomenology is yes. Several neuroscientists led by Francisco Varela have developed the science of consciousness or neurophenomenology after the progress of cognitive science as well as the development of psychoanalysis and scientific psychology (Varela, 1996; Varela & Shear, 1999; Vargas, Canales-Johnson et al., 2013, Froese, 2015). These authors claim the need to use first-person data, subjective-experiential reports, to link them with neural

www.pierredargyll.com, @pierredargyll, Madrid, Spain

<sup>\*</sup> Pierre d'Argyll, www.pierredargyll.com, @pierredargyll, Madrid, Spain

biological correlates of classically scientific third-person data. First-person or introspective analysis is thus a necessary path towards the development of a "science of experience" (Varela, 1996; Tononi & Edelman, 1998; Varela & Shear, 1999; Varela & Shear, 1999; Northoff & Heinzel, 2006). This is so because mental states are lived experiences in the first person perspective and hence unique to the subject, being the most accurate source to yield insight into the "point of view from within the brain" (Tononi & Edelman, 1998), which is inaccesible to the third-person perspective. The results of introspection further require of neuroscientific tools to be objectively validated in a second analysis (Jo, Wittmann et al., 2014).

In this essay, I shall develop a pragmatic translation to the field of Plastic Arts of the original idea of Varela. For this purpose, I shall follow what Varela postulated as key steps and valid way (disciplined meditation by mindfulness method) for methodological approximation to conscious brain processes, the case here is artistic creation, inherently subjective, from the own subject/artist (D'Argyll & Fernández-Martínez, 2015).

On the other hand, the last two decades has been exponentially fertile on neuroscientific findings of the brain-mind processes. A recent movement of neuroenthusiasts from very different disciplines has oriented the debate on how the last neurobiological discoveries about the functioning of our mind can influence the comprehension and promotion to the rest of fields of knowledge. Among these disciplines, the Neuroesthetics is a young scientific field for the study of art (mainly developed in music) through the biological bases of perception of beauty and creativity (Kawabata & Zeki, 2004). The alignment between art and neuroscience might bring new elements of comprehension of the artistic creation process. We previously hypothesized that the neuroscientific study of these neurological correlates on the basis of the first-person (artist) perspective might help to add understanding to the artistic creative activity (D'Argyll & Fernández-Martínez, 2015).

In this article, I sought to illustrate this first-person methodological study with selected results of my own introspective analysis as artist. This method is intended to be further reproduced by other artists to confirm its scientific truth.

# 2. Method

# 2.1 Introspective First-Person Analysis of the Artwork

We proposed a new approach of first-person analysis to the artwork through a systematic step-wise methodology by means of meditation or introspection, which should be reported in writings, recording or by other means (d'Argyll, P., & Dolores, F., 2014). We designed seven steps to cover different aspects of the intimate memory that offer an integrated view of the artist's perception of his/her lived experience, both in content (for instance, the artist's statement), how he/she has evolved to this content (process), and of how he/she represents this content (execution), as follows: 1) autobiographic memory, analysis of specific childhood memories that are considered essential to the work or the artist's life; 2) memories of dreams, analysis of certain dreams that are related to the work or that the artist recognizes

as key in the process of creation; 3) relationship with the arts, analysis of the influence of the work of other artists, writers, musicians, architects, etc., throughout the evolution of his/her work; 4) collective memory, analysis of the influence of the socio-cultural environment and socio-political events, scientific and technological advances, etc, throughout the life of the artist; 5) statement of the artist, main message; 6) memory of knowledge and experience, analysis of the evolution of the work in his/her personal search; 7) methods or procedures, analysis of the technical aspects of the execution of the work and external factors (geographical, physical), triggering elements of creation.

#### 3. Results

# 3.1 The Autobiographical Memory: Memories within the Grid

The brain encodes every item of our visual and positional perception that arrives to the sensory cortex areas in form of very precise topographic maps of our reality, mainly by two different types of cells in a deep brain region called hippocampus. There are at least two kinds of cells in the hippocampus, space cells and grid cells, which are able to locate what we see and our position with respect to the object. The 2014 Norwegian Nobel prizes Edvard and May-Britt Moser, have been working on this relevant brain classifiers that allows us to memorize space and time. According to their studies, space cells are individually activated specifically in space points in our environment and in the actual time (Moser, Moser et al., 2014). The grid cells nearby are able to construct from influx of the space cells, maps of coordenates of our movement and position, giving a personal referential perspective of space and time. In this context, and according to several authors, oldest and most accesible memories are those from the age of 5 years (maturity of the hippocampus with capability to crystalize memories) to 25 years (Conway & Fthenaki, 2000; Piolino, Desgranges et al., 2009).

Space and scale perception are indeed essential to painting. Through the whole ensemble of my work, one can observe the will of always expressing the space, accentuated by an invented shadow as metaphore of time (Figure 1). Also, there is a persistent will of defining the limits of space. I have selected three vivid memories to illustrate this issue:

- 1) I have a recurrent *souvenir* of one of my first memories of infanthood (around 5 years of age) that highlights the personal perspective of spatial perception and memory. I am located in an enormous enlighted room at my parents place trying to walk among adults' legs at a special family celebration, the space perception dominates all other senses in this vivid memory. Later in life, I have realised the much more diminished dimension of that room with respect to my memory. I keep a sensation of immensity in the memory that does not correspond to the actual size. The personal perspective of space conditions the representation by the artist. The readjustment of the space perception is thus relative to the time-subject, and the artist has always a possibility to reinterpret it.
- 2) A memory that has impacted my life corresponds to my grandfather's death, the impossible word. I can remember every single detail of the day at his burial. This terrible event represents for me the awareness of absence. We enclose the death in a box due to this immense void, so we build structures to

fill it. We somehow put limits to the limitless. The philosopher Peter Sloterdjik has worked the idea of the void and the ancestral fear of man, which could be compensated by the creation of an inner space conceptualized as spheres (Sloterdijk, 2003). Many of the perceptions in this *souvenir* make reference to this idea of inside/outside referencial space, recurrent in my work, as for instance in the series "Silvia's cube" (Figure 1).

3) Another memory in this context inside/outside the box are my *Solex* motorkyke trips around Paris, along the bank of the Seine in a circular tour, feeling myself disintegrated to become fully embodied within the city.



Figure 1. Detail of "Silvia's Cube", Pierre d'Argyll, 2013

Other artists have explored the issue of autobiographic memories in their artwork: Stendhal in his autobiography created maps to better explain different scenes of his life and the main characters of his novels (Stendhal, 1973). A phase of Gerard Richter's work is based in his childhood memories during the World War II (WW2) and the posterior sovietic control that changed his life. He uses the photograpy like a pretext to reconstruct images of his childhood that were forever lost after leaving his country. As Louise Bourgeois said, "the past is guillotined by the present". Bourgeois creates from her childhood souvenirs through her subjectivity and an autobiographical symbolic code, reviving or fixing the past. In her artwork "Cell Choisy" (1990-1993), she reconstructs her past through her memories and with the support of the pictures of her friend Makhi Xenakis to verify the fidelity of her souvenirs with the present (Xenakis, 1998; Bernadac & Storsve, 2008).

#### 3.2 Memories of Dreams

From a semantic perspective, French is very rich in the vocabulary concerning the dream, such as "le rêve", the dream; "le songe": the dream; "le sommeil": to sleep, "la rêverie": daydream and "dormir" to sleep, as well as many other terms: "rêvasser, sommeiller, somnoler, s'assoupir, reposer, penser, planer, méditer, songer, s'endormir, se coucher", which refer to different phases of the active or

passive attitude of dreaming. Nevertheless, the dream here alludes to an active action, in contrast to the passive status of being asleep. The Reinassance conferred extraordinary relevance to dreams, understood as a unique time to relate with the unknown. The exhibition at the Luxembourg Museum in Paris "La Renaissance and le Rêve (2013)"; highlighted this meaning in the selected paintings showing people at rest sleeping with their bodies in abandoned gestures within the visible no-action remarking the mental action of dreaming. At the end of the XVII and early XIX centuries, the French etimology "le rêve" proposes to understand the dream in its full creative potential and source of inspiration. The dream becomes the subject. In 1832, during his trip to Marocco, Eugène Delacroix almost arrived to Tánger, describes in his correspondence his "émerveillement" for the Orient. He uses the transference to the dream and daydream to memorize what he sees and do not want to forget. He says: "je suis dans ce momento comme un homme qui rêve et qui voit des choses qu'il craint de voir lui échapper" (I am in this moment as a man that dreams and that sees things he fears to loose) (de Font-Réaulx, 2014). The surrealists will claim again the importance of the dream in creation. Indeed, the dream abolishes the boundaries of space and time and releases the plastic creation from reason and moral constraints. The representation of the dream in Joan Miró's work becomes colour "Ceci est la couleur de mes rêves", 1925 (This is the colour of my dreams). In this painting of Miró, a blue-pigmented stain focuses our attention and caligraphic texts with the title and a picture. Salvador Dalí is also a clear example of recreation from his dreams and interiorized images of familiar places like his native village of Figueras in his paintings. His game of words, "during the daylight, we search unconsciously the lost images of our dreams. And for this reason, when we find an image that resembles an image from a dream, we believe to know it and just to see it makes us dreaming", as reflected in "The invisible woman" (La femme invisible, 1930). One cannot talk of the meaning of dreams without mentioning Sigmund Freud, for whom the dream is the main route to access our unconscious ideas or desires. He distinguishes two kinds of dream contents, latent and manifest. In his psycoanalytic method, he takes the interpretation of manifest dreams by free association as a starting point to reach the latent dream. Latent dreams have been transformed through diverse mechanisms of secondary elaboration: condensation, censure, displacement and care of responsibility (Freud, 2004). Freud gives a relevant role also to the plastic expression in the process of displacement of psychic material within dreams (Freud, 2004). Moreover, the plastic dimension is essential to oniric representation, as defends the neuresthetical movement (Barcaro & Paoli, 2015).

In my personal experience about the dreams on my paintings, I would like to emphasize also their intense plastic dimension, and more particularly, about the action of dreaming in specific situations related to my creative work. The dreams are the most direct source of our pure intuition and fears, and also rich in absurdity. It has happened to me dreaming of a project of painting, in gestation or during its achievement. This means that dreams makes part of the creative process operating as a stimulus, censure, assimilation or aceptation mechanisms. The development of the painting follows a similar path, which may suggest that the dream is at the genesis of the artwork. For instance, during a

productive period or at quiet times in the search of new topics, my dreams are transformed in reality or push me to translate and I see myself travelling through my dreamt work, as in my Solex trips I feel disintegrated within the painting. I am the painter painting and the painter painted through the images of myself at painting with the gesture of my hand and I have to retain these dreams' memories to get them outside.

#### 3.3 Memory Related to Arts: Neural Plasticity and Plastic Arts, a Two-Way Road

An artist is greatly influenced by other artists and their artworks, by visual advertising and art images. These influences can act as creative stimulus or inspirational ideas, sometimes unconscious, which the artist resolves and, assimilates inside his/her own work. The neuroscientist and philosopher Jean-Pierre Changeux (Changeux, 1996) has reflected on the process of painting from the neurobiology's perspective. Changeux postulates three characteristic steps in a dialogue between the painter and its artwork: first, the mental scheme, in which the artist creates through a selection of the memories (personal experience, other artists' work, etc.) and subsequent composition based on "mnemonic" representations; secondly, the progressive evolution by the mastery of gesture with the raw material; and finally, the completion in an organized and coherent artwork passing the test of logic. In the first step, the selected memories could be conscious or unconscious, but are not arbitrarily selected (Changeux, 1996). The artist would use these memories as material to reflect on, to decompose, to compose and to create (in terms of Louise Bourgeois "I do, I undo I redo"). However, the third step is a conscious reflection and synthesis by the artist in a dominated result.

The work of Eric Kandel, neuroscientist awarded with the Nobel Prize in Medicine and Physiology has shed light into the mechanisms of memorization and recall. Kandel has found that the nature of the memories is built by proteins named by acronym CPEB (protein-binding-of-the-element-ofpolyadenylation), in the synapses or junction points between two neurons. These proteins are able to self replicate like modular construction parts (polyadenilation), to change over time and to persist, main property of memory. Besides, the great paradigm in neurobiology is plasticity, term coined by Santiago Ramón y Cajal (the Croonian Lecture) (Ramón y Cajal, 1894), and an explicit metaphore of what Art is. Ramón y Cajal says that "Todo hombre puede ser, si se lo propone, escultor de su propio cerebro" (Any man could, if he were so inclined, be the sculptor of his own brain) (Ramón y Cajal, 1991). Artistic creation emerges from previous perceptual experience of the artist, in a dynamic process in which memories and direct sensorial experience can be the source of inspiration and creation, which in turn evolves over time. This implies that not only the brain directs the artist's hand, but the hand and the painting itself re-directs to the artist's brain in a bidirectional way and thus shapes his/her brain. According to the psychiatrist Joaquín Fuster, the freedom to create results from an inmense plasticity of evolutionarily gained human brain capability. This plasticity enables the brain to keep in memory a almost limitless source of information and the access to it, information that the brain can freely use to adopt an huge number of alternative actions (Fuster, 2014).

By means of the introspective analysis, I can recognize the influence of various artists that I present

below as illustrative examples:

1) The frescoes of an ancient Romanic church that I visited regularly during my childhood with the predominant presence of the blue always fascinated me. Later on, in several trips to Italy, I discovered **Giotto** in Arena Chapel in Padova and his isochromatic blue and his genious. In the ultramarine of the skies and mountains of **Titian** in Venice, I felt the same attraction. Several years afterwards, at an exhibition of **Ettore Spaletti**, the treatment of blue colour depth has deeply influenced me (Figure 2).

2) My first encounter with **Henri Matisse** work was the Nude Blues and The Fall of Icarus series. These works opened my mind in a new vision of the collage as a different object of painting, its manufacture as a game and its greatly attractive and expressive result. The confrontation of blue of different pieces of paper that, given their diverse nuances, gave a whole new volume dimension. I have recurrently used this superposition of tones in what seem a flat color, as could be observed in Marine series and "Brain tags" (Figure 3), although with my own technique.



Figure 2. "Marine VII", Pierre d'Argyll, 2011



Figure 3. "Brain Tag", Pierre d'Argyll 2015

3) The work of **Gerhard Richter** is confronted by the trauma of the WW2 and what is left, which I myself have confronted with my family souvenirs and the constant presence of memorial monuments in the places where I have lived in France. Richter's urban landscapes with architectural representations evoking devastated buildings; and a later phase in which he represents aerial views with those same reconstructed cities. This kind of allegory of the ruin, the destruction, by the fulfillment of history that

is transformed in something new during its reconstruction, is a way of deleting the past. The idea of the ruin has always intrigued me, from **Piranesi** to **Hubert Robert**, as exaltation of the temporality of human existence, and it is also a persistent concern in my work. Other phase of Richter's work that interests me is the use of the cloud, I rethink on Giotto's clouds transporting angels, as introduction to abstraction. Richter will start a series of random paintings of spontaneous gestures with red-blue-yellow colours with overlying details to give a new dimension. I can recognise certain influences of these reflections in my series "Marine" in the treatment of spontaneous and detail mixture (Figure 4).



Figure 4. Pierre d'Argyll, Detalle de "Marine VII", 2011

4) From **Peter Zimmermann**, I outline his series of layers of pseudotransparent and fluid forms inspired from photographic fragments capted through internet, resulting in an intangible visual 3D dimension. He transposes his paintings towards a new discovery of color through this technique. I interpret the inspirations through images that are external to his own memory but come from a new collective memory accessible to all, to stimulate the creation of his own work. In this regard, I have used material support from advertising sign-boards where collective memory lays and mixes it with my painting, linking global and intimate universe, like in my painting of "Liberty" (Figure 5).



Figure 5. "Liberty", Pierre d'Argyll 2016

5) The monumentality of **Sol Lewit**'s mural paintings inspires me the Reinassance freschoes, representing simple geometric formes like the cubes in grey nuances that give them all their volume within a finite or closed space. I feel a special attraction for the representation of cubes. In my opinion, the cube is a conceptual metaphore of the world as for both continent and content of space (Figure 6). It is also a figure that can close the infinite, which we cannot comprehend or perceive.

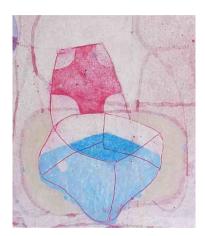


Figure 6. Pierre d'Argyll, Detail of "Silvia's Cube", 2013

#### 3.4 Collective Memory

Numerous facts that have profoundly marked my life ever since I can remember or that pushed me to taking a position or awareness, are the following: 1968, May revolution in France; 1970, death of Général de Gaulle; demolition of the market at the pavillons Baltard; 1973, inauguration of the Maine-Montparnasse tour; 1975, volontary abortion law called Veil law; 1976, first commercial flight of the supersonic Concorde presentation at Le Bourget airport; 1977, inauguration of Georges Pompidou Museum; 1979, Margaret Thatcher becomes first British Minister; 1980, "E.T." by Steven Spielberg; 1981, presidential election of François Miterrand; 1982, terrorist attack at the Goldberg restaurant; 1983, instalation Richard Serra at the Tuilleries' gardens; 1985, the Pont Neuf packed by Christo; 1989, celebration of the bicentenaire of French révolution with Jean-Paul Goude, the Marseillese interpreted by Jessy Norman at the foot of the Obelisk/the inauguration of the Pyramid of the Louvre/the fall of the Berlin Wall; 1996, André Malraux buried at the Panthéon; 2001, terrorist attack the 11th Septembre at NYC; 2004, terrorist massacre in Madrid the 11th March; 2008, last French veteran of WW1 Lazare Ponticelli is dead.

### 3.5 Statement of the Artist

My constant and even obsessive concern in my work is representing space and our referential situation within the space-interior/exterior-, the idea of infinite and its dimension in the space-open/closed-, confronted to our lived time. I need to identify myself within my time and history, to leave the mark of an ephemeral gesture in my work as an indelible mark on our memory. My work is a reflection on whether space is real or mental, what our intuition tells us beyond physics.

#### 3.6 Memory through Personal Experience

Since I started my research in Art on how memory influences the genesis of creativity from the perspective of the artist\subject through introspection (first-person analysis); and reciprocally, on how this analysis shapes my own creativity, I developed simultaneously a series of paintings and writings. During the time of my introspective analysis and while I read about neuroscience, I have painted a series of brains from all perspectives, directly related to the topic of study, as source of inspiration. This led me to better letting myself in the brain anatomy.

In another phase, I make works that intermingle elements of collective memory out of the advertising sign-boards with fragments of my memory (memories of my childhood, characters and key dates in the context of my analysis in the first-person and depending on each work). In this stage, I wanted to give a priority to the development of a message related to the freedom to choose with the potential that each of us have. I use strictly personal concepts with global elements (advertising, communication, cultural myths), personal and global memory.

#### 3.7 Introspection of Methods and Execution of the Artwork

I have selected my last series on brain to illustrate this point. My exploration on my own memory led me to choose, as support of my paintings, advertising sign-boards gathered in public spaces, which have been seen and thus remain in the memories of a huge number of people, worlds interconnected with other worlds. In addition, the advertising posters show a rough texture and many layers evoking the brain convolutions and architecture. They may be covered by other posters or torn and mixed-up on the underlying posters, generating new complexity by successive glued layers. Sometimes, there are little notes with text messages and a repeated and precut phone number, or testimonial graffity as fossilized inside the glue, vision of destruction, cuts in replacements, vision of the ephemeral, the weather and time effects, the ruins of memories. All converge into a big picture in perpetual transformation, in constant recomposition, as an evolution of its meaning. The resulting painting has direct and indirect read-outs and the observer receives these images as brief, accidental, voluntary or involuntary, with an interpretation or reinterpretation of the message. Thus, the poster stands as a collective work that happens to be information or discussion, and as a reappropriation of the object. Now I take this material as my own, while each element of it triggers my imagination and creation to be from this point the one responsible of its evolution.

#### 4. Discussion

This work is an essay that addresses the important challenge of translating neuroscience into the arts, towards an innovative vision that is more aligned with the science of our time. The 21st century is "the century of the brain", the great unknown, which augurs novel research about its functioning and the rise of artificial intelligence. In this setting, the knowledge of how the artist's brain works acquires an unprecedented interest importance so far, which opens up new possibilities for the knowledge of artistic creation.

The challenge in the last decades, from neurophenomenology and neurosesthetics, is the essential contribution of the subjective experience to better understanding of brain's functioning. As Francisco Varela explains (Varela, 2001), we cannot stand in the analysis of neurological tests of isolated responses of the subject (such as pushing a button in response to a stimulus) while losing most of what happens in our mind during the interval between the cognitive stimulus and the motor response, namely the conscious experience as such, which until now was inaccessible to the laboratory.

A possible model to test the truth of the proposed methodology for the first-person analysis, which is experiential and hence subjective (by the artist, first step analysis), into the classical objective third person analysis of scientific method (by a neuroscientist, second step analysis) was proposed by Varela (Varela, 1996). For this second-step, the intervention of a neuroscientist is necessary, in order to design experimental approaches to verify the results of introspection. A potential way for this could be to take the content of a particular experiential report from the artist and explore its validity by means of neuroimaging functional tests. For instance, when I explain that the main axis of my artwork is "space", it could be testable that brain areas related with space are the most developed areas in my brain and additionally that these areas are the most activated during visual exploration with respect to other areas, such as color, form, meaning (abstract thought), etc. In order to test the activation of brain areas related to space, the subject might be stimulated with different images (comparing selected images of familiar objects or paintings, known and unknown paintings for the artist), by means of functional magnetic resonance imaging or by magnetoencephalography. Thus, even by these proposed simple tests, the results of introspection may represent useful tools for traslational scientific research of consciousness applied to the artistic brain.

An anti-naturalist and purely philosophical perspective of the mind is represented by the recent philosophical New realism or philosophy of the spirit, with the work of Markus Gabriel as maximum exponent, who denounces the interference of science and the neurocentrism in the philosophy. He claims the role of the philosopher in the theory of mind (Gabriel, 2016). To the basic idea of neurocentrism "I am my brain", that is, everything that the "I" implies (consciousness, mind, will, freedom, spirit) can be explained from neurobiology and evolutionary biology in a neuroconstructivism view, Gabriel argues that we are not energetic material reality. The spirit cannot be reduced to consciousness and this in turn to neural storms. According to this philosopher, we are "spiritual and free beings in the realm of purposes".

Neurophenomenology emerges by overcoming pure neurocentrism and bridging the humanities, in an integrative vision between biology and philosophy, which transcends the dualistic or partial tradition of both disciplines opening to interdisciplinarity (Bagdasaryan, 2013; Desbordes, 2013). This new neurophenomenological view is rooted in the concept of a mind imbricated in a body (*embodied*) (Varela, 1991; Damasio, 1999; Lakoff, 1999), so that the dual approach from philosophy and science are two different and complementary ways to seeing the same object, surpassing the mind-brain dualism or in the neurobiologist Gerald Edelman's terms the mind-brain-culture triad (Tononi, 1998).

In this framework, the results of introspection or first-person analysis can become an original and tremendously attractive tool for scientific research and an exceptional and very relevant source through which to discover the beauty of our aesthetic brain. Through this introspection and in phenomenological terms, artistic creativity as an object reveals its essence returning to its mental and corporeal roots (Franzini, 2015). Several authors claim the need to invest resources for the systematic study of phenomenological analyzes, in order to construct a detailed map of the level of phenomenological description that can drive the science of consciousness in the search for potential explanatory mechanisms within the brain (Berkovich-Ohana, 2014; Revonsuo, 2011).

In the last decades, different proposals have tried to define new scientific methodologies for the analysis of conscious experience, and that advocate the first-person approach. This essay has developed a method of first-person or introspective analysis of artistic creation in the context of neurosesthetics from the fine arts, in the open door that leaves neurophenomenology to multidisciplinarity. This perspective of first-person analysis had not been approached until today in a methodological way applied to the analysis of artistic creation. This gives the artist a dual role in the interpretation of his own work, as a creative subject and as a source of study of the keys in the genesis and reading of his work. In turn, this methodology requires a rigorous and honest commitment and procedure by the artist to obtain a legitimate, true and complete result.

The application of the methodological approach through the first-person analysis to my own personal artwork is shown through a few illustrative examples not to be exhaustive. The core element common to the introspective analysis is to distinguish between a particular *content* in a painting (for instance, the cube and its symbolic concept); the process through which such content emerges (how I come to paint cubes) (Varela, 1996; Varela & Shear, 1999; Varela & Shear, 1999), as well as the treatment to represent the object (the material, texture, colour and volume to representation the cube). Following all the previous steps of our proposed systematic methology, the artist configures and reflects on the foundation, the raison d'être of its research as artist, its recurrent reflection on a statement that gives coherence and consistence to the long path of its work. I intended to formulate a methodology to be further validated by other artists willing to perform an introspective analysis, in what can be considered open to "intersubjective validation" of Varela (Varela, 1996). The goal of the first-person analysis of artistic creativity should not be understood as the anlysis of a work of art. I do not intend to propose a magistral formula that can explain the creative act from a scientific or philosophical way, but instead to explore by a disciplined, integrated and practical method the conscient ingredients that convey in the genesis of own artistic creativity, like a research on the reconstruction of events and the will of the artist. In the novel of Marcel Proust "A la recherche du temps perdu" (Remembrance of things past) (Proust, 1987), he distinguishes two kinds of memories in what is considered by some authors a real theory of art: voluntary memories recalled at will, as instantiate worked-over interpretations of the past; and involuntary memories, in which a sensory cue triggers the re-experiencing the event (in words of Proust "a fragment of time in the pure state") (Epstein, 2004; Lehrer, 2007). Are these voluntary

memories that enter mainly in the field of first-person analysis, while the recall action by means of trained meditation trigger involuntary vivid memories of special events.

What is this firs-person analysis proposed for? By the artist's side, this approach would provide a better understanding of his/her work and to build-up a language to communicate his/her work as creative subject and source for the study of the genesis of the artwork, which could be key in a new reading of it. It favours also a long-term work program, better built and more mature. Indeed, the introspective analysis makes the artist become more aware of his/her conscious experience. By the public viewer side, the introspective analysis could provide new elements of comprehension of the artist work and cultural and biographical bagagge. Art is intimately personal. Every artist contructs from a dialogue with what other artists have done before him and has to find its own voice among all these resonances. In words of the philosopher Fernando Savater, art joins together the intemporality and historical validity (Savater, 1989). The introspective analysis would afford the autobiographical validity to other approaches in second-and third-person analyses, which are objective and empirically based. This link between first-person and external approaches lies in the basis of the science of consciousness (Varela 1996; Varela & Shear, 1999; North). The neuroscience of artistic creativivity would need these rich first-person data to unravel the physiological processes crucial for consciousness, and is central to neurophenomenology (Lutz, Lachaux et al., 2002; Lutz & Thompson, 2003; Thompson, Lutz et al., 2005; Garrison, Santovo et al., 2013; Petitmengin & Lachaux, 2013). Art does more than just evoke a raw emotion in the observer/reader. It conveys a network of significances by which a particular person (the artist) assigns meanings to individual elements of the world. In other words, artworks are of translations of something that already exists: the organization of the artist's mind, expression of the artis'ts memory networks (Epstein, 2004). According to Proust, the function of the artwork is to permit the observer to share the consciousness of the artist, test of its truth (intersubjective validation).

What could be the limitations of this approach? From neurophenomenology, there is a debate between first-person and second-person methods to access subjective experience, this later as a good means to guide subjectivity by trained interviewers (Petitmengin & Bitbol, 2011; Froese, 2013; Olivares, Vargas et al., 2015). There is no neutral methodological approach to the mental, and every method inevitably introduces a subjective interpretation within its referencial framework (Varela & Shear, 1999). Second-person methods present also several difficulties turn as possible bias by the interviewer or the limitations imposed by it. The possibility of an intermediary to introspect not seem strictly necessary, if the artist confronts itself without tampering than those derived from unconscious processes of reconstruction of his memories. The autobiography continues to be a personal reconstruction. In contrast to the cognitive psychology second-person method, the second-person analyses raised the art history perspective, rely on the Bonnefoi idea of the necessary biographic source from the artist to draw an accurate study (reviewed extensively in (Sánchez-Ramón, 2005), which could be considered more a scientific approach from at history by a trained historian.

A better knowledge of how memory works and how creativity takes place can change and should

change the way we understand our choices in life and could even enhance our abilities in the creative process. For instance, through reiteration of the same topic in a series of paintings until overdose, it does happen to emerge an original idea that scapes towards the next work, as if reiteration enhances memory and favours creativity. The first-person analysis can illuminate cognitive and neuroscientific theories of artistic creation, which remain inaccesible in third-person perspective. For this purpose, firsperson analysis can be linked to objective third-person perspective by means of neuronal states, overcoming the dualism between the two perspectives (Northoff & Heinzel, 2006).

In conclusion, the contribution of this new proposal for structuring artist introspection and to lay the foundation for a methodology of memory in the work of art can serve as a starting point to an attitude of meditation on aspects of personal memory that you can to turn raise new ideas and directions for exploration of the artist. Finally, understanding what mechanisms are involved in inspiration, synthesis and implementation of a work may also help an artist to enhance their creative abilities. Introspection by the artist himself can reciprocally offer the basis for scientific understanding of the neural processes involved in the synthesis of a creative work of art. The relevance of this model could only be validated by other artists and the scientific study of neural correlates of art creation based in such first-person analyses. As Markus Gabriel says, we are here and now, that's all (Gabriel, 2016). Our memory brings together past and present. And yet, the artwork is a metaphor for our longing for eternity.

# Acknowledgement

The author is most grateful to the valuable aid and comments of Dr. Silvia Sánchez-Ramón.

#### References

- Barcaro, U., & Paoli, M. (2015). Dreaming and Neuroesthetics. *Front Hum Neurosci*, *9*, 348. https://doi.org/10.3389/fnhum.2015.00348
- Bernadac, M.-L., & Storsve, J. (2008). Louise Bourgeois. *Exposition, Paris, Centre Pompidou*, 5. Mars 2008-2 juin 2008. Paris: Centre Pompidou.
- Cecchi, A., Hersant, Y., & Rabbi Bernard, C. (2013). La Renaissance et le rêve-Bosch, Véronèse, Greco. *Musée du Luxembourg*. Paris: RMN-Grand Palais.
- Changeux, J.-P. (1996). Razón y placer. Barcelona: Odeile Jacob.
- Conway, M. A., & Fthenaki, A. (2000). Disruption and loss of autobiographical memory. *Memory and its disorders* (pp. 281-232). From: Cermak L. Amsterdam: Elsevier.
- D'Argyll, P., & Fernández-Martínez, D. (2015). La Introspección en la Convergencia del Arte y la Neurociencia. *Revista Bellas Artes*, 13, 249-256.
- De Font-Réaulx, D. (2014). Catalogue de l'exposition «Delacroix-Objets dans la peinture, souvenir du Maroc». Musée du Louvre. Paris: Éditions du Louvre/Le Passage.
- Epstein, R. (2004). Consciousness, art and the brain: Lessons from Marcel Proust. *Consciuosness and cognition*, 13, 231-240. https://doi.org/10.1016/S1053-8100(03)00006-0

- Franzini, E. (2015). Phenomenology and Neuroaesthetics. *Aisthesis. Pratiche, linguaggi e saperi dell'estetico*, 8, 135-145.
- Freud, S. (2004). La interpretación de los sueños. Madrid: Alianza Ediitorial.
- Froese, T. (2013). Interactively guided introspection is getting science closer to an effective consciousness meter. *Conscious Cogn*, 22(2), 672-676. https://doi.org/10.1016/j.concog.2013.04.004
- Froese, T. (2015). Enactive neuroscience, the direct perception hypothesis, and the socially extended mind. *Behav Brain Sci*, 38, e75. https://doi.org/10.1017/S0140525X14000892
- Fuster, J. M. (2014). Cerebro y libertad. Los cimientos cerebrales de nuestra capacidad para elegir. Barcelona: Ed. Planeta S.A
- Gabriel, M. (2016). Yo no soy mi cerebro: Filosofía de la mente para el siglo XXI. Madrid: Pasado y presente.
- Garrison, K., Santoyo, J. F., Davis, J. H., Thornhill, T., Kerr, C. E., & Brewer, J. (2013). Effortless awareness: using real time neurofeedback to investigate correlates of posterior cingulate cortex activity in meditators' self-report. *Front. Hum. Neurosci*, 7, 440. https://doi.org/10.3389/fnhum.2013.00440
- Jo, H. G., Wittmann, M., Borghardt, T. L., Hinterberger, T., & Schmidt, S. (2014). First-person approaches in neuroscience of consciousness: Brain dynamics correlate with the intention to act. *Conscious Cogn*, 26, 105-116. https://doi.org/10.1016/j.concog.2014.03.004
- Kawabata, H., & Zeki, S. (2004). Neural correlates of beauty. *J Neurophysiol*, *91*, 1699-1705. https://doi.org/10.1152/jn.00696.2003
- Lehrer, J. (2007). *Marcel Proust. The method of memory*. From: Proust was a neuroscientist. Boston: H. M. Comp.
- Lutz, A., Lachaux, J. P., Martinerie, J., & Varela, F. J. (2002). Guiding the study of brain dynamics by using first-person data: Synchrony patterns correlate with ongoing conscious states during a simple visual task. *Proc Natl Acad Sci U S A*, 99(3), 1586-1591. https://doi.org/10.1073/pnas.032658199
- Lutz, A., & Thompson, E. (2003). Neurophenomenology integrating subjective experience and brain dynamics in the neuroscience of consciousness. *J. Conscious. Stud*, 10, 31-52.
- Moser, E. I., Moser, M. B., & Roudi, Y. (2014). Network mechanisms of grid cells. *Philos Trans R Soc Lond B Biol Sci*, 369(1635), 20120511. https://doi.org/10.1098/rstb.2012.0511
- Northoff, G., & Heinzel, A. (2006). First-Person Neuroscience: A new methodological approach for linking mental and neuronal states. *Philos Ethics Humanit Med*, *I*(1), E3. https://doi.org/10.1186/1747-5341-1-3
- Olivares, F. A., Vargas, E., Fuentes, C., Martinez-Pernia, D., & Canales-Johnson, A. (2015). Neurophenomenology revisited: Second-person methods for the study of human consciousness. *Front Psychol*, *6*, 673. https://doi.org/10.3389/fpsyg.2015.00673

- Petitmengin, C., & Bitbol, M. (2011). Lets Trust the (Skilled) Subject! A Reply to Froese, Gould and Seth. *Journal of Consciousness Studies*, 18(2), 90-97.
- Petitmengin, C., & Lachaux, J.-P. (2013). Microcognitive science: Bridging experiential and neuronal microdynamics. *Front. Hum. Neurosci*, 7, 617. https://doi.org/10.3389/fnhum.2013.00617
- Piolino, P., Desgranges, B., & Eustache, F. (2009). Episodic autobiographical memories over the course of time: Cognitive, neuropsychological and neuroimaging findings. *Neuropsychologia*, 47(11), 2314-2329. https://doi.org/10.1016/j.neuropsychologia.2009.01.020
- Proust, M. (1987). À la recherche du temps perdu. Paris: Gallimard.
- Ramón y Cajal, S. (1894). La fine structure des centres nerveux. *The Croonian Lecture*. London: Proceedings of the Royal Society.
- Ramón y Cajal, S. F. (1991). *Reglas y consejos sobre la investigación biológica*. Los tónicos de la voluntad. Madrid: Espasa-Calpe.
- Revonsuo, A., & Arstila, V. (2011). Can consciousness be measured? Duodecim, 127, 1219-1225.
- Sánchez-Ramón, M. (2005). Escritura e imagen en Yves Bonnefoy. Una aproximación desde la historia del arte. *Escritura e Imagen*, 41-58.
- Savater, F., & De Villena, L. A. (1989). Heterodoxias y contracultura. Barcelona: Montesinos.
- Stendhal. (1973). Vie de Henry Brulard. Paris: Gallimard.
- Thompson, E., Lutz, A., & Cosmelli, D. (2005). Neurophenomenology: An Introduction for Neurophilosophers. From: Cognition and the Brain: The Philosophy and Neuroscience Movement. A. B. a. K. Akins. New York and Cambridge: Cambridge University Press.
- Tononi, G., & Edelman, G. M. (1998). Consciousness and complexity. *Science*, 282(5395), 1846-1851. https://doi.org/10.1126/science.282.5395.1846
- Varela, F. J. (1996). Neurophenomenology: A methodological remedy for the hard problem. *Journal of Consciousness Studies*, *3*(4),330-349.
- Varela, F. J., & Shear, J. (1999). First-person Methodologies: What, Why, How? *Journal of Consciousness Studies*, 6(2-3), 1-14.
- Varela, F. J., & Shear, J. (1999). The View from Within: First Person Approaches to the Study of Consciousness. Exeter: Imprint Academic.
- Vargas, E., Canales-Johnson, A., & Claudio Fuentes, B. (2013). Francisco Varela's neurophenomenology of time: Temporality of consciousness explained? *Actas Esp Psiquiatr*, 41(4), 253-262.
- Xenakis, M. (1998). Louise Bourgeois: L'aveugle guidant l'aveugle. G. Lelong. Paris, Actes Sud, 105.