

# Production Processes of Mexican Digital Artists

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### Abstract

The studies presented lead us to formulate the following hypothesis: Is it possible to detect in Mexican digital artists the processes of production of ideas, through observation of the processes and the context of their work? In such a way that it is possible to provide other artists with new methods of developing original and novel ideas, as well as facilitating the understanding of digital works, contributing to the growth, diffusion and development of Digital Art in Mexico. This research generates knowledge about contemporary Mexican digital artists and their production processes, because to date there are no virtual or physical documents that address this issue with the perspective shown here. We also study the processes of reflection and conceptualization around the artistic work, from the point of view of the realization, as well as the intellectual process carried out by the artist, reflect on the new production processes in Mexican Digital Art, its sources and how it has transformed the artistic practice of the field. Through the analysis of the production processes of each of the artists of this project an interdisciplinary methodological proposal derived from the study and analysis of the productive processes of Mexican digital artists is elaborated.

### Keywords

Digital Art, Creation, Process, Artists, Methods, Production.

### Introduction

The present work researches about Mexico digital artists and their work, this process is surrounded by a halo of mystery, creation processes are unknown and most of the time, it is only possible to see finished work by the creator or by the public. So the need to research on this process is fundamental to the development of Digital Art; known that there is no research on this respect to this date in Mexico.

The development of the present investigation is based on an inductive logic and process (to explore and to describe, then to generate theoretical perspectives), that is, from the particular to the general, from the data to the generalizations, typical characteristics of qualitative research (for example, a person is interviewed, the data obtained is analyzed and conclusions are drawn, then another person is interviewed, the results are analyzed, the results and conclusions are reviewed, and more interviews are carried out to understand what is being sought: that is, one proceeds on a case-by-case basis, one by data, until a more general perspective is reached); with which data have been obtained the perspectives and points of view of the participants (priorities, experiences and meanings), as well as the

analysis of the interactions between individuals, groups and collectivities. Thus, the type of research that is chosen focuses on understanding and deepening phenomena, exploring them from the perspective of the participants in a natural environment and in relation to the context, so it is selected when trying to understand the perspective of the participants about the phenomena that surround us, deepen their experiences, perspectives, opinions and meanings, that is, the way in which the participants subjectively perceive their reality.

### What is Digital Art

Currently the Digital Art has become a discipline that brings together all those artistic manifestations carried out with the computer. Works of art can be made with digital media and can be described as an electronic series of ones and zeros. A work of this type is also produced by creators who use computational means in the steps prior to the materialization of the work or in its exhibition. The Digital Art combines Art, Science and Technology, although not everything produced with these resources is Digital Art, it can be said that the border is imprecise, but it is because of this that the Digital Art is the seedbed of new ideas, due to its research around to its production processes is indispensable.

### Phases of the idea production process

Here it is worth asking if there really are similar steps for the realization of a creative product that are applicable to any individual who has produced some innovative and original object. The reality is that each individual has his own conception of what is a development of that nature. However, although each individual has his way of working there are conducting threads that could constitute what we call phases for the concretion of a creative product.

These stages are not linear, that is, their order cannot be taken literally, the actual creative processes are developed in an intercalated way, you can be in the stage of evaluation and during the same have intuitions, even during incubation or, as it has been discovered in the present investigation of Mexican digital artists, only one project can trigger other projects, so it has the impression that there is no conclusion but constant and continuous workflows; everything depends on the subject, so there may be incubation periods that last for years.

In any case, the vision of the creative process in six stages, although too simplified, offers a valid and sim-

ple way of organizing the complexity of the process, the following phases are the conjunction of the vision of Mihaly Csikszentmihalyi, Manuela Romo and the Mexican Mauro Rodríguez Estrada on the creative process, which have been joined for considering them complementary.

I. Preparation. Conscious or not, is a set of problematic aspects that generate curiosity. There is a questioning, something is perceived as a problem, a result of intellectual restlessness, curiosity, habits of reflection, perceiving beyond appearance.

II. Incubation / Intuition. Ideas are stirred below the conscious side of the individual, and precisely because of this arise unexpected combinations as the logical-conscious side does not operate at this stage. Intuition is when jigsaw pieces fit together. Incubation and illumination are closely related to each other, so that they are considered as parts of the same process. Incubation is a stage of apparent calm, but actually within the mind are brewing ideas.

III. Evaluation. It is when you weigh whether intuition is valuable and worth paying attention to. This is the emotionally most difficult part of the process, when the creator feels more uncertain and insecure. It is when you need the opinion of others.

IV. Elaboration. It is the phase that takes longer and is the hardest work. At this stage the actual execution happens.

V. Communication. The essence of creativity is the element of novelty and the valuable, both concepts contribute to creative objects, however, the result of creativity demands to be seen and recognized to validate itself, before others and therefore before its creator. This is understandable, for it requires a "judge" to evaluate whether the result is valuable or not; hardly the creator of something can be who evaluates an idea or object created.

## The Methodology

The methods of production of ideas used in Digital Art, are different from the methods of production of ideas in traditional art, since they have different conditions, which make feasible that other processes are viable in this area. Such conditions are: the use of electronic devices, the use of various energy sources and the use of the computer in the process or in the work itself, among others, which require some planning prior to the development of the artistic work. In Mexican Digital Art, the production is not the result of an improvisation, because the elements that participate in a piece, that is, the works investigated in Mexican Digital Art for the present text, have complex work processes. Therefore, it requires more specific phases in the work process that demand most of the time, collective work coordinated among professionals from various disciplines.

The development in the knowledge of the methodology of the research is ample, in the case of artistic production, it has been in many occasions the own artists who have documented their processes or have given to the

task of analyzing them and investigating them, resulting in useful proposals for other artists, it is the case of Bruno Munari and his design method, which consists of a series of necessary operations, logically ordered according to experience, in order to achieve maximum results with minimum effort, these stages are: Problem, Problem definition, Problem elements, Data collection, Data analysis, Creativity, Technology, Experimentation, Models, Verification, Construction drawings, Solution; it should be mentioned that this methodology is valid for other areas like design, not only for Digital Art.

## Mexican Digital Artists

Therefore, we have the analysis of two Mexican digital artists and the "phases of the process of production of ideas" (it is worth mentioning, this article is part of a larger personal investigation where the study is done to eight Mexican digital artists), of which their creation processes were analyzed, as well as their triggers of ideas to later carry out Conceptual Maps of these processes. In order to establish similarities in the generation of ideas in ADM artists and in this way to contribute in the processes of creation of new generations of digital artists.

## Arcangel Constantini Creative Process

I. Preparation. General characteristics: the artist keeps an occasional record of ideas; these are, as he says, of various kinds, as artistic projects but also business, social and political issues, among others. He later assures to concretize such ideas from that universe.

Problems that generate curiosity: there are many themes that interest Arcangel Constantini, such as the parallels between the media and reproduction; the historical parallels of the first mass media, such as photography, film and graphic processes, science fiction; experimental exploration in the network and computers; the computer glitch and the materiality of the computer; the link between previous and later stages in the analog and the digital; the human side of technology, through Glitch, for example, in this respect the artist comments: "...are errors of the process of the machine that generates randomly or intentionally; to err is human, if machines make mistakes that humanize them"; an aesthetic, non-discursive formal criticisms of processes about specific phenomena; concrete digital dream (artist theory); the personal perceptions of space and its link with the adaptive capacity of people; the ludic and the experimental and the chaotic and random processes.

II. Incubation / Intuition. Resources for generating ideas. The artist refers to work with dreamlike lucidity, or what is commonly known as "daydreaming". Participation in workshops on perception of the environment through sleep, the linking of digital spaces of concrete representations of reality with the awakening of the dream: "to make you aware that the space in which you are experiencing is a construction of yours and can be modified... ", also considers it an effective way to generate ideas. The practice of

meditation as a resource (some of his works are inspired by meditation). The emergence of ideas from a whole: from consumption, for example from science fiction books, for example from Philip k. Dick, Bradbury, Asimov, Stanislaw Lem; consumer society in general.

III. Evaluation. The artist practices an analysis; he looks for the why, the how, the what for the situations he is developing, is inserted in a reflection that leads to the understanding and the knowledge of the problem (the artistic practice as a habit). In general it describes its method as visceral. That in terms of the theory of creativity, it would be to operate by means of intuitions, artists like Arcangel Constantini, knows the value of their ideas in loads of experience that are translated in intuition, that is, it is not magical, but obeys the years of experience of the artist, which decants in the confidence of his intuitions.

IV. Elaboration. Due to the technological nature of their works, their way of working in the implementation and construction of them, in most cases, is interdisciplinary with the collaboration of professionals from other areas: engineers, manufacturers, and others. Asked if he collaborated with designers, (as was the case of Alejandro Magallanes in a facility for “Bacteria”) Constantini points out, that sometimes collaborates, but is not very frequent because he considers himself a complicated and very demanding artist. The elaboration also rests on the following conceptual axes: the conceptual loop (In sound is a repetition of a constant pattern, the same in aesthetics); the continuous loop (the idea is maintained, the same idea is repeated, but the shape in each repetition changes); seriality, applied as a practice within the process of production and multiplicity. Everything aimed at obtaining a response from the public.

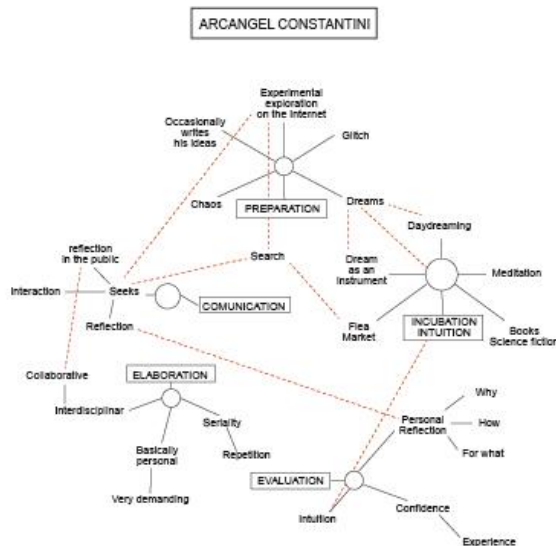


Figure 1. Model of the Artistic Production Process of Arcangel Constantini. © The Author.

As a conclusion after the analysis of the work of the Mexican digital artist Arcangel Constantini has been considered, within the Mexican artistic arena as one of the most recognized and prolific artists of his generation after almost two decades of continuous work. A lover of technology, Arcangel Constantini, to date, has found in it the necessary resources for the expression of aspects of which he considers indispensable to record; with the use of constant repetition, creates continuous sequences in images and sounds, very similar to those experienced in the context of large cities, where the individual does not escape his daily life, which is similar to the artist's continuous loops, who also does not escape environmental concerns, excessive consumerism translated into mountains of garbage in the flea market, evident in his work through the obsession of the artist to reuse, to classify, not to resign to the obsolescence of objects but to try to revive them as one who applies a cardio-respiratory massage with despair, not with a dramatic vision of the matter, but nostalgic and playful.

Thus we have the study of the work and the process of creative production of the artist shed light on these professional paths of imagination and ideas, so the context that has surrounded the artist since his childhood, as well as his aesthetic preferences and concepts are decisive in the concretion of the work itself, as reflection and manifestation of his time.

In relation to the process of creation of Arcangel Constantini, we infer that artistic practice is a habit. The preparation of the problems to be solved is more a series of works that leads the artist to one or another development, although he can also produce works with very few links to his previous work, case of “Nanodrizas”, where he takes up his interest in the spatial theme and science fiction, however, this project essentially encompasses many aspects not previously covered by the artist or Mexican Digital Art, such as bioremediation.

### Leslie Garcia Creative Process

I. Preparation. Physics and Mathematics, Anthropology, Philosophy, Biology and Literature are among her interests. She refers that she has many friends who are writers, she even considers not been a writer a personal frustration, so her pieces have this implicit literary aspect.

Prior to making digital work, Leslie Garcia used painting as a means of expression. The subjects that she treated in her pictorial work were terrestrial maps or people moving; traced paths of time, so her pictorial work is strongly related to what she is currently doing in her digital work, especially in regard to the observation of patterns.

What she discovered while in Mexico City and doing a review of her work in "Dreamaddictive" was her interest in awareness and what she calls the construction of the alchemist within the arts, which refers -according to comments- to the capacity of the human mind to transform reality from the knowledge acquired, where it refers to her personal case and how its taste to know more about biology, mathematics or acupuncture, has extended its capacity

to perceive the environment of a holistic form, that is to say, with a new perspective, where the artist points out that if the individual is able to be more acute in the observation of their interior, then, it will also be so in their external reality.

II. Incubation / Intuition. The artist considers that all work derives from personal searches, from very strong states of confrontation, for her -she says-, her works are a way of proving hypotheses about some question that comes along the way. Leslie Garcia is perceived as a person whom problematizes everything, even refers that for this reason she is constantly in therapy (particularly Gestalt), in addition to combining such therapies with acupuncture treatments. In such a way that the artist considers that this way of being and life translates into her work: in a first part with the use of generators, with her effort, with programs that emulate processes, which simulate something alive through something technological.

So again we find in Leslie Garcia a way of working detected in other digital artists: the continuous work processes a line of central research on which "small projects" are derived of that line or central lines.

She was asked if there were any artists who worked with technology that she considered interesting, or as a form of inspiration, to which she replied, that for her, Nam June Paik (1932-2006, Korea) and his Fluxus works are basic and indispensable reference. In this sense, it refers to the very influential publication of the videotapes community of the early seventies called *Radical Software*, in which Paik collaborated. In the first issue Paik paraphrased Hegel: "What is more educational is more aesthetic and what is more aesthetic is more educational". For artists collaborating in this publication, *Radical Software* was a platform for exploring alternatives to the dominant media structure, it was a form of social activism, rather than an art magazine. The motivation for publication, according to David Ross, was "...technology has probably brought us to the brink of global destruction, has probably enabled the alignment between power and money that kept us on the verge of destruction, but technology is not our enemy. In fact, if it is developed and managed humanely, communication technologies have the power to release something truly revolutionary... ". This also addresses one of the intentions of Digital Art and Art with the use of technology, which is to humanize technology through Art.

Other characters within the art world who find it interesting are musicians such as Raymond Scott who pioneered electronic music by developing his own synthesizer, or French composer Pierre Schaeffer. In painting Leslie Garcia considers Chagall a basic reference and in the current artists of her field of Digital Art, she recognizes the work of artists like the Brazilian Guto Nobrega. The artist considers that all the ideas have already been thought and shaped from different angles, nevertheless their work is to adapt those ideas in contemporary reality.

III. Evaluation. The artist mentions that the evaluation of her works is done through what she calls "an affective probe". It also refers to her unfinished education as

a designer, where she notes that the idea of creating objects of desire in art pleased her, as is done in design. She points out that the moment she gets an idea, she begins to sketch and also talk about it with people in her immediate circle, she looks for bibliography and read about the subject. The way she perceives if the subject has a real "resonance" -she says- is when she begins to have more ideas about it and she realizes that she has a need to discuss the subject; it is at that moment that it is relevant to work on that particular aspect. In her case, she explains that her ideas are of two types: she either feels affinity to them or considers them unfeasible.

Leslie Garcia is always questioning, what follows, for what, what is the resonance. Guto Nobrega has said and applies it in practice: "You have to ask yourself about the resonance of what you are doing, if it is stronger than the resonance of silence...", if so, then do the project.

IV. Elaboration. The elaboration of a piece is built in solitary, when it is the product of very personal searches; but she says she is very pleased with teamwork, as she does in the *Astrovandalistas Collective*, which she formed in Tijuana in 2010, initially with her as a member.

Her collective work is much related to literature, always tries to have a literary presence in it. In that process all ideas are always analyzed; being discussed; proposals arise; there is a search for intentions and interests, there is always a question about what is relevant to her work. The artist considers that being a collective work always seeks a very specific function of social impact, that is to say that the work "deters possibilities", she says, in such a way that it has a social echo (such as *Arma telemática* twitter to a sound metal tower located outside the Campo Marte in Mexico City, home of the Mexican army where many people disappeared in 1968). In *Astrovandalistas*, Leslie Garcia states that the collaboration is of different forms: sometimes she does the work of programming, sometimes of hardware; another friend of hers, called Rodrigo Frenk (also a young artist), is the strong arm of the collective; hence the participation of other professionals is diversified according to the Project: designers, animators, among others, who agree with the statements of the group.

Within these forms of work relationship, in the stage of elaboration of the creation process, Leslie Garcia affirms that there are the relationships that are generated in the experimental spaces. In the workshops, she was tutor in the Interactive event, within a program that the *MediaLab Prado* performs. The artist mentioned having been a tutor on two occasions in 2008 in Mexico City, together with Zach Lieberman (director of Open frameworks, artist and developer) and another with the Colombian artist Alejandro Tamayo (who works in laboratories of biology). Leslie Garcia says that although the work with these two artists was strange -because she was barely around 25 years old- she understood that it was her collaboration in places like *Eyebeam* in New York, her communication with Miller Puckette (developer Of Pure Data), as well as the contact with all the way of thinking of *Computer Science* of the United States (due to the proximity with Tijuana

na), which resulted in the artist's invitation as tutor with those artists.

The artist considers these processes of elaboration of pieces, under the tutorial model, very interesting, because it is the tutor who determines and defines the work process of a group of people, which constitutes an experimental space *per se*. Leslie Garcia refers she enjoys talking with other artists and people interested in production processes, she mentions asking them about their way of working (if they work uninterruptedly or take breaks, for example). She is also interested in knowing the moods that are suitable for creation, what she considers essential to produce better, that is to say, if she is well, she produces better: "you understand faster, you are more creative", she says. In these workshops where she has participated, she comments that she talks a lot with students and tutors about personal and collective forms of creation, where it is essential to understand that the duality of "being good and being bad" is part of the work, which leads to be more humble and not to think that you always have very good ideas and you learn not to cling to them.

In relation to collaborative work, Garcia sheds very important ideas in this respect that imply avant-garde knowledge, adapted to our current reality. It supports the concept of the integral man, in what they call Cosmopolitical tactic. She describes it as the way in which the integral man competes for all areas of world knowledge, that is, in small fractions, she says, people can contribute to solving problems in their community, the more conscientious it is, the solutions will be more complete and friendly with the environment. The artist expresses interest in the search for problem solving from any area: "...Working is very important to me and the need to approach and that function of the artist as a kind of satellite, monitor [...] is trying to grasp the idea [...] of "what there is [...] and lower it to become something tangible".

In relation to art schools versus self-taught education, and the maturity of self-constructing your mind, your method of work and the use of the record as a resource, tells us that intuition is what brings solutions together, and for her, it is in this aspect that the importance of people who, like her, are self-taught, are based on well-documented searches, and registration of the exploration; it is for this reason that in her case, and in that of other self-taught people, there is an obsession to record everything that is happening: thoughts, mistakes, successes, everything marks the route to find the solution to a problem raised; the artist considers this process constitutes a methodology of work.

Another way to work in the elaboration of the pieces, from the conception of the same and from the beginning with *Dreamaddictive*, has been establishing relationships with the outside or with institutions located outside of Mexico, with *Eyebeam*, in addition to the close relationship that they have with *The Medialab-Prado*, Madrid (as tutors), to participation with working groups in Colombia, with Freethinkers, *Sound Cartographies*. She points out the sound aspect as an element present in most

of her pieces, hence her works together are with artists who privilege this aspect. For this reason Leslie's contacts were external; however, there are currently many artists in Mexico who make use of sound as an essential part of their works (according to information provided by the artist Gilberto Esparza for this research).

About her current processes, those in which she is working right now, tells us that she is exploring the idea of creating a mobile laboratory, one that does not have a space to produce, but allows work anywhere, allowing arrival and adaptation. For this reason she considers that this adaptation will also determine the size of the pieces, as well as their complexity. For Leslie it is important that the piece reflect the conditions in which it occurred, because it is part of the circumstance of the artist; and strongly insists that the limitations and conditions of austerity must be reflected, because such works produce empathy with other artists in similar circumstances, so that the processes themselves can be improved through working together. She mentions the case of working with the Brazilian artist Thiago Hersan, who worked with Leslie Garcia in *Inverted Crater* (an autonomous collective that has a space) for a fortnight in Mexico City in 2013, without a specific goal, with experimentation as a way: an exercise of flexibility mentioned by the artist.

V. Communication. Leslie Garcia refers, that the reaction of people to a work varies greatly, some people do not seem to understand anything, while others are reflexive in the face of it. What the artist seeks through her works is reflection, for which she indicates that she constructs her works as archetypes (in the psychological sense of the term, namely, as a representation that is considered a model of any manifestation of reality and / or congenital images or schemas with symbolic value that form part of the collective unconscious), that is, the work as an empty container that is filled with expectations, desires and concerns of the person who observes or interacts with it, as the case may be, says the artist.

In the area of communication, Garcia considers using concepts learned in her design studies, mentions aspects about function and form, and how in her pieces interactivity has to be dictated by the shape of the piece, so that the viewer intuits how he/she should relate to it. For example, in *Deep Thought*, the artist invites people with instructions, such as "deep breathing", "allows chance to happen", which she uses to sensitize the person and initiate a relationship with the work.

The artist considers this process interesting as it creates concerns in the viewer of her pieces. It has happened that she retires from the place where her piece is exhibited and comes to listen behind the audience, a series of questions about the work: "If that happens to two people out of a thousand", for her is perfect, she mentions. It means there is a relationship with the piece. She has even observed very amused children playing with her work, as if it were a video game; she reflects: "...if you can get the attention of the child and you generate a question, a ques-

tioning, a need and an answer, it means that they have a very clear communication process: back and forth."

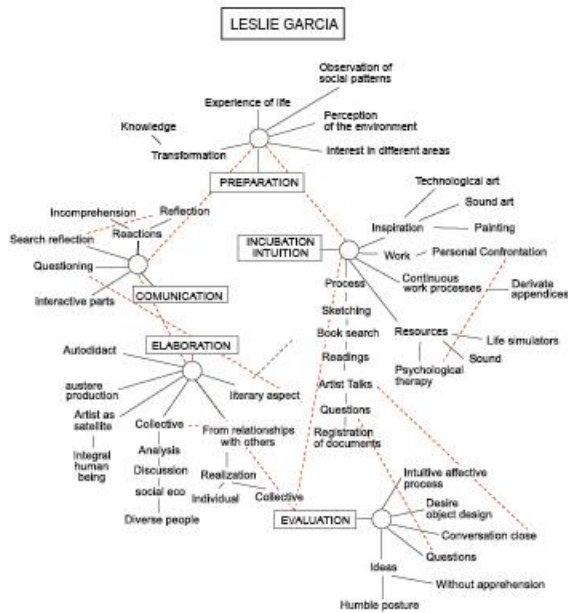


Figure 2. Model of the Process of Artistic Production by Leslie Garcia. © The Author

## Conclusions

Those who describe the broad spectrum on which the Mexican Digital Art field rests and at the same time, also indicate the path followed, as well as the topics addressed in Mexican Digital Art; the artists are those who endorse and subscribe to the definition of the medium, which characterizes it and at the same time makes it unique. Thus we have the genealogy of Digital Art in contemporary Mexican Art obeyed the need and curiosity of some artists who risked to involve emerging technologies in their artistic work. It was not until the artists created their own channels to reach the publics, that they began to recognize that the eagerness to experiment went beyond what the institutions accepted as artistic.

At present, there are spaces in Mexico for exhibiting, creating and generating knowledge about art using technology, which are insufficient and are overcome by the gaps generated over decades of omission of Digital Art within public spaces and institutions, the future is promising in terms of the efforts invested by all those involved in spreading knowledge of Mexican Digital Art.

As far as the production processes of Mexican digital artists and their work are concerned, we have that the Mexican Digital Art is currently carried out by a group of artists, most of whom are fully dedicated to this area, and although this factor is not determinant in the way in which they produce, nor because they are women or men, a common denominator can be established in the majority of

the participants of the analyzed subjects: preparation, incubation, intuition or illumination, evaluation, elaboration and communication.

In the first phase, the preparation phase, which included the context (or previous formation of the creator whose impact on the process is relevant) and a cultural environment rich in various stimuli that have nourished his / her knowledge, is observed in the Artists the interest or innate curiosity towards diverse areas of the human knowledge and not only with regard to the plot of the Digital Art; in appearance, the artists seem not to be overly attentive to their scope, but to the various scientific and technological discoveries. The opposite is true: they have become investigators of what they find with value and ultimately satisfies their curiosity.

In the artists studied, there are links or similarities in all phases of the creation process, in the case of preparation, common interests are in music, reading various texts, in the intention to humanize technology, in finding historical parallels, in the perception of art as a process of knowledge that makes questioning possible, but also social reflection. One of the most important findings of the present investigation is perhaps the detection of artistic work in "Continuous work processes", which branch out in various projects that possibly resulting in appendices or works. Most artists indicate that they have a record of their ideas, which they conserve and make use of during their creative processes. It is important to mention that the artists make very interesting reflections around Digital Art and its works, which corroborates the intellectual vein that the artists of this study possess, therefore it is affirmed, that there can be no artistic creation without intellectual reflection and / or the search of the same through the work.

As for intuition and illumination, we find that good ideas do not arise by chance, but are a product of time and the formation of the artist, a process that in all cases has taken several years. In this sense the quality of ideas is not random, it owes its appearance to the formation, the preparation phase and the context of the artist. Considering the above, we also make use of facilitating resources for the generation of ideas, the artists of Mexican Digital Art mention: sleep, meditation and induction to a high level of concentration through different means.

It has been said that the artists studied find inspiration in science, technology, philosophy, science fiction, obsolete technologies, politics, in social aspects such as injustice, in art itself, although not exclusively and they resort to fantasy or fiction, in the same way as to the contemplation of their national, technological, cultural and social reality. Some of their ideas come out quickly as occurrences, but others take years to emerge.

It is observed that they make use of the principles already studied in the theory of creativity in an intuitive way, such as: the combination, the association and the retaking elements external to the theme to promote original approaches around them, producing "forced" associations that leave behind the results of threshed or common solutions.

As far as the evaluation of the generated ideas is concerned, it is common in all cases, the fascination with the process of acquisition of knowledge (produced and acquired) itself, more than the process in question; therefore, as a general characteristic, the Mexican Digital Art works show that the results are in all cases indeterminate, not predictable; in such a way that the research and knowledge processes initiated by the artists can last for months or years and not necessarily result in an artistic work. When these processes derive in a work, they do not constitute the end of the journey, but possibly the beginning of others. So the work is related and the assessment of an idea, whether it is viable to be realized or not, is complex, because the initial idea has been left behind in time or simply because the artist knows that is what must be done.

The evaluation of an idea, the artists of this research project refer to it, is carried out by intuition, but always respond to personal or collective questions. In other cases, the feasibility of an idea is carried out or not, depends on technical aspects and technological limitations, as well as the lack of economic resources to produce it.

In regard to elaboration, it is observed that the decisions concerning the refinement or adaptation of the works (in technical aspects, in relation to the site, etc.) are carried out —more often than not— with groups of collaborators so the process of finding the idea, that in the cases studied performs the artist. So the idea of the realization of a solo work, most of the time, disappears in this scheme of the development of ideas within interdisciplinary groups.

In this sense, it is important to mention that the lack of exhibition space and support, coupled with the lack of knowledge of the Mexican Digital Art area, make it difficult for the number of artist to grow, but the interest is greater. In a talk that we had with Christa Sommerer at the *Solar Insects Workshop* she gave at the *Alameda Art Laboratory* in Mexico City in 2013, she asked the researcher responsible for this project if she considered that there was a boom in Digital Art in Mexico. Which was answered: that yes, however, this only applied to some cities of the country (such as Mexico City, Guadalajara, Monterrey, Puebla, San Luis Potosi, Tijuana and Leon, among others that have linked centers and / or events related to Digital Art). In most of the country, traditional arts continue to predominate in artistic practice, as well as cultural, educational and exhibition spaces such as painting, sculpture and engraving. Although art with the use of technology has more diffusion, it is not the case of Digital Art.

The artists of the Mexican Digital Art analyzed, emphasize the intense physical and mental work that involves the elaboration of the works, for which, the artists of this area in particular possess a great capacity for the interdisciplinary work and within teams of work with professionals of diverse areas of knowledge, where the work remains open or indeterminate until the end. The duration of the same is variable, the artists comment that a work can take hours, weeks, months or even several years.

In the communicational aspect of the results of these processes of investigation and acquisition of

knowledge, it is observed that there is a concern for the reaction of the public, that is to say, the way in which the spectator participates with the work is part of the aspects that the artist considers when doing it; even in those cases where the work is left open, among whose intrinsic possibilities the public gives the "final form" to the work, or in certain cases that the piece offers varied "ends". Through the work the artist seeks: sometimes a reaction, sometimes the interaction, but usually produces unexpected reactions.

This is how we conclude this research, in the previous pages it has generated knowledge about contemporary Mexican digital artists and their production processes, since to date there are no virtual or physical documents that address this issue with the perspective here shown; we have studied the processes of reflection and conceptualization around the artistic work, from the point of view of the realization, as well as the intellectual process carried out by the artist; a reflection has been made on these new production processes in Mexican Digital Art, its sources and how they have transformed the artistic practice of the field; it is through the analysis of the production processes of each of the artists of this project that an interdisciplinary methodological proposal has been made derived from the study and analysis of the production processes of Mexican digital artists, which is included in a broader study done previously<sup>1</sup>, that is to say, in a greater and deeper investigation of the subject in question from which this article has been derived.

In this pages the reader will hopefully find part of the explanation and reasons for the once considered mysterious process of artistic creation, as well as elucidating the links with an important and fundamental part of the Digital Art scene in Mexico at this time.

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## References

- Benjamin, W. (2003). *The work of art in the time of its technical reproducibility*. Mexico City: Editorial Itaca.
- Brea, J.L. (2002). *The postmedia era, communicative action, (post) artistic practices and neomedial devices*. PDF document.
- Csikszentmihalyi, M. (2007) *Flow (flow) A psychology of happiness*. Barcelona, Spain: Editorial Kairos.
- (1996) *Creativity, flow and the psychology of discovery and invention*. Barcelona, Spain.

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<sup>1</sup> Villagomez, C. P. (2015) Doctoral Thesis, *Analysis of processes of digital artistic production in Mexico: Mexican digital artists and their work*. Doctoral Program: Visual and Intermediate Arts, Universidad Politecnica de Valencia, Spain. P. 353.

- Deleuze, G. Guattari, F. (2009). *Rhizome*. Mexico: Fontamara
- De Quesada, E. (2002). *Creation and design, the method in design and other arts*. Valencia: Institution Alfons the Magnani Diputació of Valencia.
- Gardner, H. (1995). *Creative minds an anatomy of creativity*. Barcelona, Spain: Paidós.
- Hernández, R., Fernández, C., Baptista, P. (2010). *Investigation methodology*. Mexico City, Mexico: McGraw-Hill / Inter-American editors.
- Lieser, W. (2009). *Digital art*. Cologne, Germany: H. F. Ullman.
- (2010). *Digital art, new paths in art*. Potsdam, Germany: H. F. Ullmann. P.
- Malvido, A. (1999). *By the digital path*. Mexico. CONACULTA.
- Manovich, L. (2001). *The language of the new media*. Barcelona, Spain: Paidós.
- Marina, J.A. (2006). *Theory of creative intelligence*. Barcelona, Spain: Anagram.
- (2004). *Praise and refutation of the wit*. Barcelona, Spain: Compact Anagram.
- Maslow, A. (2005). *The creative personality*. Barcelona, Spain: Kairos.
- Paul, C. (2008) *Digital Art*. London: Thames & Hudson.
- Popper, F. (1993). *Art of the electronic age*. New York, United States: Thames & Hudson.
- Rodríguez, M. (1985). *Creativity Handbook. Psychic processes and development*. Mexico City: Editorial Trillas.
- Romo M. (1997). *Psychology of creativity*. Barcelona, Spain: Paidós.
- Rush, M. (2005) *New media in art*. London, England, Thames and Hudson.
- Shanken, E., (2009). *Art and electronic media*. London, England, Phaidon.
- Villagomez, C. (2010). *Methods of creativity applied to graphic design and visual arts*. Guanajuato, Mexico, University of Guanajuato.
- Wands, B. (2007). *Art of the digital age*. New York, United States, Thames and Hudson.
- Zinker, Joseph (2004). *The creative process in Gestalt therapy*. Mexico, Paidós.
- Interview with Archangel Constantini by Cynthia Villagómez at Fonoteca Nacional, Coyoacán, Mexico City. October 1, 2011. Video Interview Length 00:21:43.
- Interview with Leslie García by Cynthia Villagómez (video conference), January 15, 2013. Duration 01:09:41.

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## Author Biography

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