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Université Paris 8:

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Arts et Réalité Virtuelle Multi-utilisateurs

Downloading the objet trouvé: towards a ready-made digital aesthetics

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Abstract

The current thesis is an essay on the concept of digital objet trouvé/found object and its application in the field of digital art. The essay traces and conceives the term digital objet trouvé since there is not a clearly statement or text on this term. The definition of the term is based on the concepts of objet trouvé and ready-made from the history of art from where it is retrieved. The proposed new term is examined mainly in the practice of Net Art. With the help from various bibliography its characteristics and artistic value are finally concluded as results of this personal search.

The above conclusions are then put in practice in some four small projects created in Unity environment with the help of external assets concerning internet browsing and data retrieved from Twitter API. The experiments and the theoretical text are connected in parallel and are not to be seen the one as consequence of the other. The trace and the definition of the term “digital objet trouvé” is mostly the outcome of personal reflection and research as well as the primary aim of this thesis.

Resumé

Cette étude est consacrée à l’analyse de l’ objet trouvé numérique et de son application dans l’art numérique. Il s’agit d’un effort de tracer et de concevoir le terme “objet trouvé”, vu qu’ il n’y a pas de texte ou de rapport comprenant ce terme. La définition du terme est liée sur l’histoire de l’art et, plus précisément, sur les concepts de l’objet trouvé et du ready-made. Le terme proposé est examiné plutôt à travers la pratique de Net Art. Ses caractéristiques de même que sa valeur artistique sont finalement conclus, à l’aide d’une certaine bibliographie, comme résultats de cette recherche personnelle.

Ces conclusions ont été appliquées sur quatre mini projets, créés sur Unity à l’aide des ressources externes concernant la navigation sur l’internet et les données récupérées de Twitter API. Bien que les expériences ainsi que le texte théorique correspondent, ils ne sont pas censés être l’un conséquence de l’autre. La trace et la définition du terme “objet trouvé numérique” est plutôt le résultat de réflexion et de recherche personnelles ainsi que le but initial de cette étude.

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Ill. 1: Wasser, Julian. 1963. *Duchamp at the Pasadena Museum of Art*. Photograph.

Introduction

The texts following this introduction are nothing more than personal reflections that took the size and the form of an essay following, with respect to, on the one hand, some basic observations and, on the other hand, a simple methodology. Thus, before demonstrating its subject, may I be allowed to introduce this essay commencing from the conditions as well as the initial thoughts which contributed to its creation.

This subject, both as a personal reflection and as an effort to construct a new concept in the field of digital media, is based on a very first observation concerning the term digital image and its character. Seen as a term, digital image, embodies a fundamental ambiguity directly related to the digital media as means for a wide variety of functions. More precisely, this ambiguity is related to the primal means mediating the functions of digital media to us, the screen.

As digital media are connected to more and more instances of human activity, the content of the screens, from which we experience this functional expansion of digital media, acquires a crucial importance in various concepts of our lives. However, as screens can be seen as a means of depiction, their content can be described as images. Whether these images depict a two or a three dimension object is less important since their surface is strictly flat.

Digital image carries, therefore, this the ambiguity of being at the same time a distinct image created to be viewed as such and, also, the content of the screens, regardless of what the latter depict.

This initial observation led me to draw a line of separation inside the concept of digital image. I saw the images as being a part of a “closed” or of an “open” experience. A closed experience should be the strictly designed one, in terms of control of its form, its duration and its conditions of perceiving. A movie, a video game or an application can be examples of that. On the contrary, an open experience in terms of the digital image should be the less predictable one in terms of form, duration and conditions of perceiving. The procedures of browsing and online socializing can be two very clear examples. As it is obvious, an “open” experience can include one or more instances of a “closed” one. That is the case of hitting a link that directs in a video and after that in another one.

This need of drawing lines, however, could be of no use or interest if it was not for the impressive universality of the digital media and therefore their omnipresence. For example, it would be of no importance to divide the video as medium in an “open” and “closed” experience before the emergence of the digital media, since then, the medium of the video had much less application in personal communication or information retrieving.

Under the prism, though, of *“Arts et Technologies de l' Image”* as well as under the massive impact of the digital media, this distinction acquires an interesting character and leads to the basic question on

which the subject of this essay lies. If the creation and the manipulation of images intended for “closed” experiences is generally known and usual and, if their value and importance are also known, then what is the case for the images related to “open” experiences? What can be the position and the importance of the digital images of our daily use in the context of digital art? What can be their artistic and conceptual value?

Having this question set, a methodology of approaching the answer was, then, essential. It was, consequently, based on relating the different types of the digital image to the material from which they are made of. Thus, since, the images belonging to “open” experiences are almost not conceived as images themselves but rather as the functional objects of daily digital activity -and, as such, they are not often the material from which digital art is made- they took the role of the “objet trouvé”.

From this point on, the methodology was all about making a parallel description and examination of the objet trouvé, as it is known from the history of art and the digital images we encounter everyday outside the context of an artistic creation. In order to get this parallelism “working”, I had to examine the crucial characteristics that allowed objet trouvé to take its role in the environment of art. I relied on that because the basic source that objet trouvé derives from is our direct experience, namely from what we can call “reality”.

Indeed, reality would come up in many occasions throughout the development of the essay, proving that not only digital media are part of the way we conceive reality but also that the artistic practice concerning the concept of the objet trouvé is always somehow related to the reflection upon reality.

The latter would be the basis of extracting notions of the artistic value of the digital objet trouvé and, finally, it would constitute the basis for extracting its potential political significance considering the common relationship that politics and art have in common according to Jacques Rancière:

We are now in a position to address the paradox that resides at the heart of the relationship between art and politics. Art and politics each define a form of dissensus, a dissensual re-configuration of the common experience of the sensible. If there is such thing as an "aesthetics of politics", it lies in a re-configuration of the distribution of the common through political processes of subjectivation. Correspondingly, if there is a politics of aesthetics, it lies in the practices and modes of visibility of art that re-configure the fabric of sensory experience.¹

In the following chapters lies the effort to develop the above mentioned idea towards the definition and the description of the “digital objet trouvé”. This procedure will begins from general descriptions of the

¹ Rancière, Jacques. 2015. *Dissensus: On Politics and Aesthetics*. London: Bloomsbury Academic. p.140

basic terms of objet trouvé and of ready-made in the history of art, their basic characteristics and their relation to reality. There will be developed, in an investigation of the above, terms in the practice of Net Art and digital media in general, before it ends up in some concluding notes on the nature and the value of the digital objet trouvé. Finally, my personal attempts on working with the digital objet trouvé in the context of digital art will highlight the real potential and value that these concepts have under my personal view.

Throughout this essay one may find my theoretical interest to be stronger than my creative appetite. This could be, nevertheless, true, although I would insist on the idea that any practice should be the consequence of some theoretical concern. The paradigm of artists like Marcel Duchamp who will be rather present in the following chapters may be a proof of that.



Ill. 2: Dubuffet, Jean. 1953. *Butterfly-Wing Figure*. Butterfly wings and gouache on cardboard.

PART I: THE OBJET TROUVÉ THROUGHOUT HISTORY

1.1 The objet trouvé in the history of art

Any attempt to approach the history and the evolution of the term “objet trouvé” -or as it alternatively translated as “*found object*”- cannot be solely attached to this term only. From the very first moment of its appearance, the objet trouvé coexists and co-evolves with some other terms. To this day, where objet trouvé still holds a significant place in contemporary art, these terms are getting more and more connected and perplexed. While there is artistic evidence and, mainly, texts that attempt the strict drawn of lines between the terms, in fact, their use is rather common and free, in our days, that even in cases of art-dictionaries and encyclopedias the separation lines cannot be traced.

The terms ready-made and assemblage are the main relative terms we should examine through this attempt to understand and conceive the very meaning of the objet trouvé. Added to them are the terms of collage, photomontage, junk art, juxtaposition, mixed media, appropriation etc. As artworks, movements, texts and epochs pass the terms are constantly being re-approached and re-invented in such a way that we can never clearly grasp them in one closed definition or presentation.

Ready-made is undoubtedly the best surviving term among the preceding, however, it almost always coexists with the term “found object” or “mixed media”. Moreover, it is sometimes, replaced by terms as juxtaposition or composition, proving, in this case, that the objet trouvé is now a rather common element of contemporary art.

The effort to construct a review of the objet trouvé -that will be useful for the development of the general concept- will follow the same method: a strict description beginning with the birth of the term will lead to a looser one as we move towards the present.

The basic idea we need to handle throughout this narration is that of an object: “existing, manufactured or of natural origin, used in, or as, works of art”². From this idea we can set up a first distinction: the above mentioned description can be applied, according to Matthew Gale, to the objet trouvé which is

2 Matthew Gale, 2009, Grove Art Online, Oxford University Press, retrieved by “MoMA | The Collection | Objet Trouvé.” 2010. November 25, 2010. https://web.archive.org/web/20101125115350/http://www.moma.org/collection/theme.php?theme_id=10135.

generally the kind of elements used in an assemblage in contrast to the ready-made that is usually “presented on its own without mediation”³. In fact, a ready-made can be usually assembled from more than one objects while on the other side an assemblage can combine painting along with one or more found objects.

A commonly accepted starting point for the conception of these terms are the years 1912 and 1913 when Pablo Picasso and Marcel Duchamp create the first examples of assemblage and ready-made respectively. Before, though, presenting these first works that seem to have set the birth of what we are intending to explore, I should present a couple of notes that will reveal the complex character of the story we seek to present here.

Firstly, the term assemblage was coined in 1953 -far from 1912- by Jean Dubuffet. However, the term can be obviously and clearly applied to any previous work of modernity even if they also belong to different artistic movements (cubism, Dada, surrealism etc). Likewise, the term ready-made was invented by the creator of the first works of the ready-made concept, Marcel Duchamp, and was initially introduced as a descriptive name of his own artistic practice. In the same way, ready-made can be applied to many other cases of works and practices. Finally, it should be underlined that this tendency of incorporating fragments of the “pre-existing” in an artwork can be traced initially in the technique of collage. Furthermore, this “tendency” -as we will see- seems to have even deeper roots in time, in similar practices attempting to question problems of reality and representation.

Returning to the starting points we have already set, in the year 1912 Picasso completes his work *Still Life with Chair Caning*. The work can be described generally as an oval canvas with an abstract composition. Almost half of this oval canvas is covered by a fabric imitating the caning of a chair along with other “fragmented” everyday objects and planes painted in a typical cubist way as well as the three letters J,O,U, painted, however in a strict typographic way -deriving apparently from the word journal. The whole canvas is wrapped with a rope as a kind of frame.

As the title indicates, the work depicts some real objects that the painter may encounter arranged in

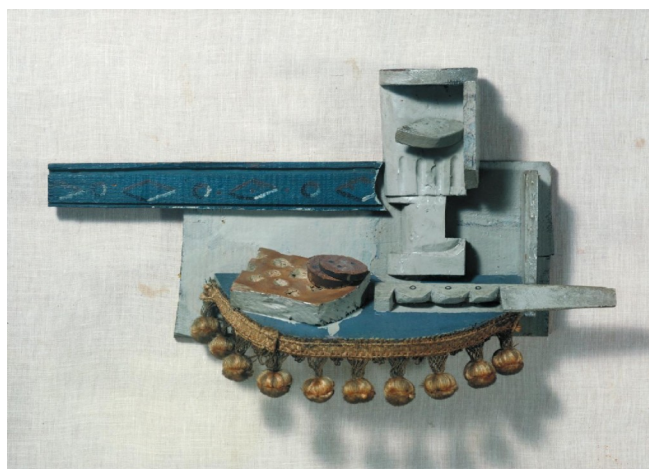
3 Matthew Gale, 2009, Grove Art Online, Oxford University Press, retrieved by “MoMA | The Collection | *Objet Trouvé*.” 2010. November 25, 2010. https://web.archive.org/web/20101125115350/http://www.moma.org/collection/theme.php?theme_id=10135.

front of him while is painting them. However, there seems to be a strong intention of escaping or blurring the distinctive line of a typical depiction/representation of reality. This is obvious not only by the well-known cubist technique used in painting, but also from the movement of cubism in general. In this case, however, an extra force is applied, by the use of the fabric and the rope, to strengthen this proposed view of the real world. The rope and the fabric -used here- challenge the spectator to trace for a moment the real three-dimensional space of what the artist was observing.

The same year Picasso would experiment with the pre-existing materials in another work the *Guitar* (1912). From this second work the form has already been significantly liberated towards the third dimension and, a few years later, in his work the *Still Life* of 1914 the frame as well as the representational reference has moved a lot more towards an abstract mature assemblage. In this later work we still have the general concept of the still life, the depiction of some everyday objects arranged in a composition, such as a knife, a slice of cheese, a glass and a part of a decorated table. Thus, here, the work is much more liberated towards a fragmented moment of the reality that, even if it retains some clearly recognized objects, the general essence is rather abstract and fragmented.



Ill. 3: Picasso, Pablo. 1912. *Still Life with Chair-Canin*. Oil and oilcloth stuck on oval canvas, framed with rope.



Ill 4: Picasso, Pablo. 1914. *Still Life*. Painted wood and upholstery fringe.

A year later, Duchamp will complete another work the *Bicycle Wheel* (1913). It can be seen as a simple composition of two pre-existing objects which anyone could find in a store: a stool and a bicycle wheel. In the next years he produced numerous works in this direction with the most highlighted of these to be his renowned *Fountain* (1917). That is an even more simple composition consisting only of a urinal

placed upside down, signed by the name R. Mutt and the date 1917. Duchamp's ready-mades had a massive impact in the world of art which is still appreciable in many artists' work.



Ill. 5: Duchamp, Marcel. 1951. *Bicycle Wheel*. Metal wheel mounted on painted wood stool.



Ill. 6: Duchamp, Marcel. 1917. *Fountain*. Porcelain Urinal.

A rather indicative proof of this impact is the term ready-made itself, invented by Duchamp who actually borrowed it from the term “prêt-à-porter” (ready to wear) of the clothing industry. While the term was initially invented by Duchamp to describe and identify his own work and, especially, his works between 1913 and 1921, it was soon spread as description as well as a strategy in different movements and eras.

Duchamp was developing year by year his practice by using different techniques and even “directing” the creation of a readymade as once did from a distance to his sister Suzanne Duchamp⁴. He was seeing

⁴ Man Ray, 1961, *Preface from a proposed book, One Hundred Objects of My Affection* in *The Art of Assemblage*. Seitz, William Chapin. 1961. 1st edition. Museum of Modern Art. p.45-49.

this practice as a provocative, anti-art gesture against any definition of art and he was insisting in the use of man made artifacts rather than other natural material.

*Because they are artifacts, the ready-mades differ fundamentally from leaves, weathered wood, butterfly wings, shells, or other natural found objects. According to the only definition of art Duchamp will accept as true for all times and places, all man-made objects are works of art. The readymade, therefore, was for Duchamp “a form of denying the possibility of defining art”.*⁵

However, even apart from the direct report to Duchamp's work all the modern movements embraced the use of “real” objects in their artistic production. In Dada, surrealism, cubism and futurism -as collective artistic movements- we can trace the use of such strategies in one or more cases.

Another instance of this tendency which was also identified by a new original term was the merz collages/assemblages by Kurt Schwitters. For him the term merz was a practice to include “*painting, collage, agglomerate sculpture, theater, architecture, typography, poetry, and even a form of singing*”⁶. The term merz was, in fact, the fragment of an advertisement including the German word *Kommerz* that Schwitters once used in one of his collages. The most famous works of these practice are mostly his merz collages where he uses -among many materials and color pigments- fragments of packaging, mass produced material, newspapers and stamps.

Schwitters turned towards this practice in an effort to oppose the high quality materials that the high art of the bourgeois was using⁷. Thus, he focused on everyday materials, junk and found objects to make his works which can be seen as mere moments of their present as many of its elements indicate in a bold way their age or their date of creation. Fragments of newspapers and advertisements are maybe the most indicative materials not only in the matter of present but also in the matter of the underlying the essence of the everyday material.

5 Ibid.

6 Kate Steinitz, n.d., *The Merzbau of Kurt Schwitters*, Los Angeles, unpublished ms in *The Art of Assemblage*. Seitz, William Chapin. 1961. 1st edition. Museum of Modern Art. p.50.

7 xtine burrough, *Add-Art and Your Neighbors' Biz: A Tactical Manipulation of Noise* in Nunes, Mark, 2010. *Error: Glitch, Noise, and Jam in New Media Cultures*. Continuum. New York. p82-96.



Ill. 7: Schwitters, Kurt. 1947. *Cigar*. Collage.



Ill. 8: Schwitters, Kurt. 1937. *Opened by Customs*. Paper, printed paper, oil paint and graphite on paper.

Up to present, the use of pre-existing objects, as a part of an artwork or as an artwork themselves has developed in many directions and has created tendencies and movements throughout art history. The work of artists like Spoerri, Damien Hirst, Joseph Beuys, Robert Gober, Tracey Emin and many others, is crucially defined by the use of pre-existing objects. The term *objet trouvé* itself has been expanded and reexamined over the years. Apart from every day objects animals, bio materials, food, appliances or buildings would expand and even blur the limits of ready-made and the limits of art as well. Also, movements like conceptual art and *arte povera* shaped their disciplines around the use of specific categories of pre-existing objects.

We can examine the expansion of the terms we discuss here through some works that I think are very indicative of this procedure and that each one highlights different aspects of it. As we already mentioned the term *assemblage* was coined in 1953 by Jean Dubuffet “to refer to his series of

butterfly-wing collages”⁸. Butterflies are obviously not a kind of an everyday object we use daily, yet their presence as an “object” we are familiar with in general and, at the same time. it is not usually a material from which art is made, retains the notion of the objet trouvé.



Ill. 9: Hirst, Damien. 1990. *A Thousand Years*. Glass, steel, MDF, cow's head, flies, maggots, insect-o-cutor, sugar and water.

Butterflies and animals can be seen as an “artistic material” in many moments of the work of Damien Hirst. In his very usual provocative way of creating, Damien Hirst, would expose as works of art entire animals cut in two pieces, as if it was a scientific practice and presented in normal poses inside glass cages full of formaldehyde solution. Hirst also used living butterflies in his work *In and out of Love* (1991), but what, in my opinion, is the most impressive and revolutionary use of living beings as objet trouvé is the work *A Thousand Years* (1990) where he used flies in an artificial ecosystem between reproduction (a specially designed closed volume), feeding (a real cow's head) and death (a trap). In this work flies are not only embodied as a material of art but they also play a crucial role to the “work's function” with their lives.

8 Matthew Gale, 2009, Grove Art Online, Oxford University Press, retrieved by “MoMA | The Collection | Assemblage.” 2010. November 25, 2010. https://web.archive.org/web/20101125100859/http://www.moma.org/collection/theme.php?theme_id=10057.

Another direction for the objet trouvé is its personal relationship with the artist which is also the vital key to unlock its very meaning in this works. This is the case of the work *My Bed* (1998) by Tracey Emin. This work consists entirely of personal objects of the artist. This work is intended to be the composition of these objects in exactly the same way as they existed in a specific period of the artist's life. The bed of Emin along with pillows, clothes, bottles of alcohol, medication packages and many other objects compose her very personal space as it was on a very difficult period for her when “*she had remained in bed for four days without eating or drinking anything but alcohol*”⁹. The work she presented was in a way the unintentional creation of her life at that moment.



Ill. 10: Tracey, Emin. 1998. *My Bed*. Box frame, mattress, linens, pillows and various objects.

In this direction the felt and the fat that Joseph Beuys uses in a regular basis throughout his work are directly related to his experience of the World War II and more specifically to a myth that he invented according to which after the crash of the military plane his was in, during the Battle of Crimea, he was rescued by nomadic Tatar tribesmen “who had wrapped his broken body in animal fat and felt”¹⁰ in order to rescue him. The felt wrapped objects with the red cross printed on them, the felt suits and other

⁹ Wikipedia. Retrieved in 04/2020. “*My Bed*”. last modified 4 October 2019, https://en.wikipedia.org/wiki/My_Bed

¹⁰ Wikipedia. Retrieved in 04/2020. “*Joseph Beuys*”. last modified 30 March 2020, https://en.wikipedia.org/wiki/Joseph_Beuys

objects made of felt fabric are among his most recognizable works; they always recall the military atmosphere of this era and its catastrophic consequences.



Ill. 11: Beuys, Joseph. 1966. *Infiltration for Piano*. Felt,piano.

Another artist that we could argue that is expanding the notion of the objet trouvé with its practice, is Gordon Matta-Clark. His most notable works were interventions on real buildings where the artist would make three-dimensional cuts and openings in a way completely irrelevant to the structures' geometry. His most notable work was his interventions on house buildings, in Paris in 1975, that were to be demolished for the construction of the Centre Pompidou. For Matta-Clark, the basic material for exercising his sculptural practice were real existing buildings -that even if they cannot be seen as objects- that maintain in their presence, after the artist's interventions, the very notion of objet trouvé as an object that was not created to be an artistic material.

Concluding this short review of the objet trouvé, we are confronted with a significant weakness to state a closed definition of the term. Yet, even more, we determine a very strong relationship between the pre-existing objects and the contemporary artistic practice. What was in the past a strong statement for

the world of art, now seems to be a normality. The reason why the pre-existing object has now been settled almost permanently in the ecosystem of the contemporary art is the next crucial question that would allow us to make the intended connections with the digital forms of art and the web in general.



Ill. 12: Gruyaert, Harry. 1975. *Gordon Matta-Clark and Gerry Hovagimyan Working on Conical Intersect.*

1.2 The objet trouvé and its relation to reality

One of the most significant questions, set almost in every moment of the art history, is the relation of the artistic expression with reality and its depiction. Undoubtedly, this question was once again a major subject in the modernism movement, where we already traced the first signs of the birth of the objet trouvé. The discussion of this inter-temporal subject of reality and its depiction was fundamentally shaken by the appearance of photography and its widespread application. The demand for the most precise depiction of reality was now the matter of mechanical device, which could replace in a more effective and affordable way any effort of the human talent. In Breton's words:

Photography was to deal it a decisive blow by mechanizing to the extreme the plastic mode of representation. Because it did not accept the necessity of engaging in a struggle with photography that was discouraging even before it was begun, it was necessary for painting to beat a retreat so as to take up an impregnable position behind the necessity of expressing inner perception visually. It must be admitted that painting thereby found itself forced to take possession of a terrain that lay fallow. But I cannot emphasize too strongly the fact that this place of exile was the only one left to it. It remains to be seen what this soil promised and to what extent that promise was kept from this moment on¹¹.

Along with other questions, set up by the times of modernism, many artists turned towards abstraction under various different directions and ideas. For many of them abstraction was the radical direction of opposition to the academic establishment but moreover, the materials that should be used indicated by their character and quality another serious way of expressing this opposition.

There has been a tendency in the past fifty years to extend the boundaries of legitimate art; in painting by the use of materials extraneous to canvas and pigment, in sculpture by the employment of other materials than the classic bronze or stone that identify such sculpture as a work of art. Of course, many have remained faithful to the traditional materials for fear that their authenticity as works of art might be questioned, at the

11 Breton, André. 1969. *Manifestoes of Surrealism*. University of Michigan Press. p.272

*same time forcing their medium into new paths and utilizing it in as unacademic a manner as possible.*¹²

At the same time, different movements of modernity were giving different directions to this unacademic opposition but what is admirably common is this catholic accept of the pre-existing objects that were at the same time approached by different ideas.

For Duchamp, these objects were the opportunity to make a bold statement towards an anti-art direction and towards a negative answer to the question of defining art. This anti-art statement was trying to indicate any man-made objects as works of art giving a strong strike to the old discussion on beautiful but also striking other boundaries such as authenticity, inspiration etc. *“The readymade is a limit case that throws into sharp relief our deeply embedded expectations of a work of art”*¹³.

According to Margaret Iversen Duchamp triggered the old idea of Kantian “disinterestedness” to its very extend. The question of the quality of an artwork “undistorted by appetite or desire” was answered in his work by an already existing man made object which when proposed as a work of art, it was clean from every intention and personal aspiration.

*Duchamp pushed the logic of disinterestedness to such an extreme that it bites its own tail. [...] The readymade can be seen as a limit case of the aesthetic -its near reductio ad absurdum- which forces us to reflect on the relation of art to the commodity, of the aesthetic to the appetitive.*¹⁴

Breton, though, had called artists to retreat to “the only domain left for the artist to exploit that of pure mental representation, such as it extends beyond that of true perception without for all that being identical with the hallucinatory domain”. For him the objet trouvé was an encounter that had its effect on the psyche. This random encounter was seen “as a solution found not by logical means, and one that differs completely from what is anticipated”.

12 Man Ray, 1961, *Preface from a proposed book, One Hundred Objects of My Affection* in *The Art of Assemblage*. Seitz, William Chapin. 1961. 1st edition. Museum of Modern Art. p.45-49.

13 Iversen, Margaret. 2014. “Readymade, Found Object, Photograph.” *Art Journal* 63 (April). p.44–57.

14 Ibid.

In the above comparison we can see two different aspects of the use of the pre-existing object in the artistic practice. This comparison, to be accurate, is the attempt of Margaret Iversen to draw a separation line between the terms ready-made and objet trouvé. According to her, the ready made can be seen as a statement deriving from the theory of aesthetics and strictly referring to everyday artifacts. On the contrary, the objet trouvé, on Breton's point of view is a pre-existing object that it has, however, a special impact on the person encountering it. For Breton that was not a usual everyday object but a more special one. His thoughts about this concept, derived by his encounter with a rather special/unique object, a wooden spoon with a boot carved under its handle.

Although, these two approaches seem to distinguish the two basic terms that we examine here, I insist that even in this separative aspect the pre-existing object plays a key role to two contemporary issues of that time. In the first case -the one of Duchamp- the mass produced object was an effort towards a clear “undistorted art” and for the second case -that of Breton- the contemporary of that time theoretical ideas on psychology and the human psyche in general -that had a massive impact on the movement of surrealism- found an artistic practice for their expression through the use of objects that, in a way, were opposing to the homogeneous reality of the mass produced objects.

Another direction categorizing but also unifying this practice was the attitude of Dada artists. Dada, although as movement was rather unclear, its general practice was “*propagating attitudes abhorrent to the complacent bourgeois mind: tomfoolery, accident, irrationality, use of vulgar language, symbolic vandalism, and contempt for venerated cultural standards*”¹⁵. The use of everyday materials was, again here, a sign against the academic formal art and its representatives, the bourgeois. For Schwitters - mentioned above- the use of “*found objects, everyday materials and junk in his merz collages alluded to commonly understood life. [...] Blurring the boundary of between art and life, Schwitters recognized the poetic or artistic value of visual noise or abstraction*”¹⁶.

This catholic presence of the objet trouvé in the art practice of modernism and especially its presence across different artistic movements -that were really persisting in defending their practice, at that time-

15 Seitz, William Chapin. 1961. *The Art of Assemblage*. 1st edition. Museum of Modern Art. p.33-34

16 xtine burrough, *Add-Art and Your Neighbors' Biz: A Tactical Manipulation of Noise* in Nunes, Mark, 2010. *Error: Glitch, Noise, and Jam in New Media Cultures*. Continuum. New York. p82-96.

is what I would like to draw attention to. For, while different theoretical approaches may draw distinctive lines between the terms, I think that beyond these lines the emergence and the survival of these objects in the artistic practice can reveal us on the one hand the reasons that the pre-existing objects entered the art world and on the other hand, their very characteristics that make them capable of surviving in the ecosystem of the art throughout different eras.

Approached by different aspects the objet trouvé seemed to be an inevitable part of the artistic expression in the time of modernism. Although, it was more or less a fragment of the reality, the objet trouvé had a significant role in the turn towards abstraction that modern art was attempting. Moreover, this fragment marked by its presence the general urge to express the very moment of present. This very moment of present, put differently, can be seen as the clearest notion of modernity itself, as modernism can be seen -in its more simplistic definition- as the notion of the instantly “new”. In this concept, the instantly changing essence applied to reality and the artistic discipline of being constantly up to date in the more accurate way, could be the root of the act of placing an existing object within the frame of an artwork.

Along, though, with the reality of modernism as a state of being, the reality of modern art that was attempting its first steps towards abstraction found in the existing objects another way of engaging the spectator to the tangible reality far from its representation.

Intrinsic to the medium of assemblage is an entirely new relationship between work and spectator: a reconquest, but by different means, of the realism that abstract art replaced.¹⁷

We can securely affirm that the object state in general was of crucial point in that era. Industrialization along with urbanization were shaping a new strong experience flooded by new objects, habits and procedures that were challenging the collective conscious of the time.

The cityscape gives striking evidence of the world-wide collision of moralities and panaceas, facts and propagandas, and sets in relief the countless images of

¹⁷ Seitz, William Chapin. 1961. *The Art of Assemblage*. 1st edition. Museum of Modern Art. p.81.

*contemporary life. In the past, the great determinants of the arts were nature, man, and God. For the twentieth century a fourth must be added: the artifact.*¹⁸

Cartons, newspapers, cans, mechanical parts, furniture, glasses and many other objects used in the works of these days were above all mechanically mass produced objects which, in that days, would express a general new state of the human kind, that of the modernity. Along with the notions of movement, speed, massive media, the mass produced object mark a very specific reality of that time.

This relation of the objet trouvé with its very present I think is a crucial point for extending its importance to our “digital era”. The different approaches examined above indicate this relation of the modern man with new tangible experiences which formed their environment in a massive new way compared to the past years.

While modernity seems to have triggered the emergence of the objet trouvé, this practice continued to express the relationship of the artist with its present even in the following years. The reaction/evolution of the objet trouvé in the time -after the strict core of modernity, namely the interwar period- was constantly directly related to the way artists conceived reality and their era in general. In the postwar period, the heroic industrial artifact gave its position to the ugliness the of the cities and the omnipresence of consumerism. Artists like Raymond Hains, Cesar, Jannis Kounellis, Daniel Spoerri, Joseph Beuys and even Andy Warhol would form movements like Nouveau réalisme, Arte Povera, Fluxus or Pop Art and would use torn posters, cars, clothes, packages and other objects in an effort “to break down the dichotomy between art and life, mainly through the creation of happenings and sculptures made from everyday materials”.

More recently, among others, Damien Hirst would reconstruct a whole pharmacy inside Cohen Gallery (1992) reporting our relation to science, hygiene and eventually death. Lastly, Jeff Koons would use many different commercial objects in his works like vacuum cleaners, basketballs or inflatable toys before he almost turn his own dog sculptures in a commercial product almost inseparable from the idea of a pre-existing object.

18 Seitz, William Chapin. 1961. *The Art of Assemblage*. 1st edition. Museum of Modern Art. p.73.

Hence, in contemporary art the use of existing objects has been so extended that we can name not only numerous of artworks but also dozens of different strategies and approaches, as well.



Ill. 13: Raymond, Hains. 1976. *Untitled*. Lacerated posters on sheet metal (diptych).



Ill. 14: Spoerri, Daniel. 1959. *Prose Poems*. Glass, paper, ceramic, metal and plastic on wood.



Ill. 15: Kounellis, Jannis. 1969. *Untitled*. Burlap and beans.



Ill. 16: Koons, Jeff. 1980. *New Shop/Vac Wet/Dry*. Vacuum cleaner, acrylic, fluorescent lights, plexiglass.

1.3 The contemporary reality under the digital revolution

The question arising after all this examination of the objet trouvé is yet clear. What are the real facts or more precisely the circumstances forming a different reality that could justify the emergence of the digital objet trouvé as natural -in the same analogy as in the era of modernism- and moreover as crucial for the artistic practice that wants to challenge and reflect on the contemporary reality?

There is no doubt that one of the major phenomenon that characterizes our era is the emergence, the booming and the spread of the information. It's not easy to conclude this phenomenon in one term, however, we can choose among many available such as Information Age, Computer Age, Digital Age, New Media Age or even Digital revolution. This variety in terminology indicates first of all the complexity of the impact of digital technology in our time ranging from economy, science, society, communication and culture to personal relationships, everyday habits and politics.

The signs explaining why this phenomenon has primarily the character of a revolution in terms of economy, analogous to that of the industrial revolution, are clearly stated by Manuel Castells:

Two basic features characterize the current technological revolution

a. It is focused on process, as are all major technological revolutions, although it is also spurs the continuous innovation of products. Because it is process orientated (as was the industrial revolution) its effects are pervasive, and cut across all spheres of human activity.

b. Its fundamental raw material, as well as its principal outcome, is information, as the stuff of which the industrial revolution was made was energy. While information and knowledge were always essential elements in any process of scientific discovery and technical change, this is the first time in history in which the new knowledge applies primarily to generation of knowledge and information processing.¹⁹

The purpose, here, is to draw the similarities that could justify the emergence of the digital objet trouvé or its natural evolution to its new digital form since it appears rather active in the ecosystem of the art

¹⁹ Castells Manuel, *The Net and the Self, Working Notes for a Critical Theory of the Informational Society*. p35 in Weibel Peter, Timothy Druckrey, ed. 2001. *Net_condition Art and Global Media*. 1st edition. MIT Press. p.30-47

world. As demonstrated above, the character of the objet trouvé was always shaped by the changes artists were experiencing before the real world around them. Thus, it is exactly this description of the changes that have taken place recently and that can trace the kind and the impact of the new objects we are looking for. Differently stated, the description of the general character of the digital revolution that has occurred in terms of everyday perception of the reality can smoothly introduce us to trace some very first notions on a description of the digital objet trouvé.

The new massively produced object or the new idea describing our time is information, its creation, its handling and finally its flow. Yet, in order to better understand the information in comparison to the energy as the basic material of modernism we can look at its very material. For, as information is based on the specific technological and scientific field of computer science, its simplest description could be that of a series of bits, as this science would describe it.

Nicolas Negroponte describes very accurately the nature and the advantages of bits. Moreover he projects them in comparison to atoms representing the previous state of technology and its economy. According to him *“the best way to appreciate the merits and consequences of being digital is to reflect on the difference between bits and atoms.[...] A bit has no color, size, or weight, and it can travel at the speed of light. It is the smallest atomic element in the DNA of information”*. A series of bits, can describe any kind of information, it can be transformed easily to another series and with the use of some other bits it can be decoded to media form conceivable by humans.²⁰

Through their flow bits also transmit information quickly and accurately, being able to challenge and reshape all the previous channels of communication. This specific state of the bits flowing in channels - or networks- between users of computing machines is, I think, one of the most important elements of this new era. The traveling bits spreading the information -they represent- among people and the edit of this information or the creation of new, as a response to the initial one that again is re-put in movement across these channels can be seen as what we call the internet. The above described phenomenon, no matter how simple may seem, has a major impact in our lives. Thus, this new material acquire its real potential in the state of its constant and global flow, namely the internet.

20 Negroponte, Nicholas. 1995. *Being Digital*. Vintage Books. p.11.

The agent of change will be the Internet, both literally and as a model or metaphor. The Internet is interesting not only as a massive and pervasive global network but also as an example of something that has evolved with no apparent designer in charge, keeping its shape very much like the formation of a flock of ducks. Nobody is the boss, and all the pieces are so far scaling admirably.²¹

Common functions like working, socializing, information seeking or entertainment, are more and more associated with our connection to others through the web. What is, however, more important, in order to understand this massive impact, is the new forms that the above function take in their new state.

What really changes their character is the second part of the above description, the response or the action of reinstatement of the bits on move. The importance of this action can be easily understood when trying to make the same description of the medium of television or radio. In this case some other kind basic matter -as the bit- transfers the information to the users of the medium, however though, they cannot response to this information. Or in the case of telephone while we can response to the information we receive, yet this information is transmitted strictly in a personalized way, something that is not happening in the case of television for example.

What we describe, here, is the inherent interaction that the new media have in comparison to the preceding forms of mediation. The basic dipole of the transmitter-receiver, is now diminishing, as the new channels of transmission are now two-way. Communication and entertainment have now obtained a more holistic character permitting everyone to be a potential producer of content and spectator, at the same time.

...in contrast to photography and film, electronic telecommunication can function as two-way communication. Not only can user immediately obtain images of various locations, bringing them together within a single electronic screen, but, via telepresence, she can also be "present" in these locations. In other words, she can affect change on material reality over physical distance in real time.²²

21 Negroponte, Nicholas. 1995. *Being Digital*. Vintage Books. p.181.

22 Manovich, Lev. 2002. *The Language of New Media*. Reprint edition. Cambridge, Mass.: The MIT Press. p.160.

This is a vital idea which describes the omnipresence of information in our everyday life. Since this flow of information is today a two-way channel of communication, of time and space personalization, its consequences transform our relation to this information to levels close to constant and everywhere.

For what, though, we search here, the impact of these phenomena to our reality and to the perception of the world around us, the description of the final form in our daily life is crucial. Hence, apart from the special characteristics these new media have, the simplest depiction of their impact in our lives could be laid in the way we are directly related to them, namely the screens. As the capabilities of devices and information are expanding to more and more aspects of the human activity our perception of reality becomes more and more blended to what screens are rendering. Although the general impact of the digital age could be traced in many aspects of our lives apart from what we see in screens, yet, I think that the digital image or the “digital” in terms of direct experience can be traced firstly in what the screens we encounter every day depict.

Screens tend to spread in presence and minimize in size. It's not, though, without their in between connection (what we call the internet) that they acquire their importance in our life. These devices have become a crucial point for the issue of reality and its perception, as they not only depict what lives online, but also, in a rather blurring direction, they depict at the same time reality itself. In other words, the surface of the screen has acquired an almost catholic function expanding from the cinematic screen, the television and the book to the window of our house and our social image. Little by little screens tend to coincide with reality or at least tend to be its expansion.

All around us are the signs of increasing mobility and the miniaturization of communication devices -mobile telephones and electronic organizers; pagers and laptops; phones and watches which offer Web surfing; Gameboy and similar hand held game units. Eventually VR apparatus may be reduced to a chip implanted in a retina and connected by wireless transmission to the Net. From that moment on, we will carry our prisons with us — not in order to blissfully confuse representations and perceptions (as in cinema), but to always "be in touch," always connected, always "plugged-in." The retina and the screen will merge.²³

23 Manovich, Lev. 2002. *The Language of New Media*. Reprint edition. Cambridge, Mass.: The MIT Press. p.113.

Following the parallel story of modernism, we could note that similarly to the digital revolution, industrialization was expanding from infrastructure and production to clothes and food, which means that as a phenomenon could be described or conceived in different scales ranging from a railroad network to a spoon or shoe. That is also the case of our time, we can describe the digital revolution in different scales ranging from the way people around the globe work together, to the way we are informed about the next bus passing by our street.

The illuminated pixels that constantly change color can be seen, therefore, as the mass produced artifact of our time. Our encounter with this new artifact is though rather complicated since we cannot easily categorize it or describe it. As we become familiar with the digital technology and its omnipresence, we develop new habits and ways of expression that constantly expand the character of this artifact.

For example, while we could describe an image found on the web as a photograph, the same image with the add of some letters could be a meme. This meme, would triggers other memes -always on the same initial photograph- that can aspire more abstract terms such as feelings or states which could be used as a means of expression in an online chat/discussion. Emojis are also a another example of an artifact that cannot be described outside the terms of digital life. Other practices such as hashtags created for specific purposes on the digital ecosystem can expand their use in the everyday life in such a degree that we could not even attribute them their initial digital meaning.

Finally, our continuous contact with applications and sites has created a common experience in terms of the operative systems around the digital means we use. The interfaces, as they are called, are also a rather important part of the digital iconography. Their colors and graphics even presented in fragments can be recognized and they are on their own a part of the digital landscape we live in.

All these new objects are parts of a new reality which cannot be easily separated from the “other reality”, that is, the tangible world around us. Throughout the history of art, the objet trouvé was in someway related to the reality it was belonging to before his incarnation in the frame of the artistic practice. The crucial, however, difference of the case we examine is that, no matter how merged are the tangible and the online reality, they now form a triptych with the reality of art rather than the previous

diptych of the conceived reality and the art. Since, though, we have come to almost overlap the first two parts of the above triptych, we will see that they still fit in the historic parallelism I am attempting here.

The question arising, now, is what is the art's relation not only with this digital revolution but also with this new digital reality shaped and how this reality can find its expression through the use of some new found objects -that are now digital- in the artistic expression.



Ill. 17: Antonellis, Anthony. n.d. *Put It on a Pedestal*. Webpage.

PART II: THE DIGITAL OBJET TROUVE (DOT)

2.1 Art in the ecosystem of the internet

The world of art -as almost all forms of human activity- would be penetrated and deeply affected by the emergence of the digital revolution we already described. Similarly to the description of this technological revolution, the art terms that can reveal the kind and the size of the above affection are also of big variety, remaining partial and ambiguous. What we can generally call digital art is, at the same time, mixing and overlapping with terms like computer art, new media art, virtual art, technological art, interactive art etc.

Following the fact that the recent digital revolution described is not the first nor the only technological innovation throughout history, several moments and movements of the artistic production had already embraced techniques and concepts of newly discovered technologies, long before the digital state would characterize our time. This technologies, though, are, by some aspects, seen as predecessors of the recent technologies permitting this digital revolution to exist. Thus, some artistic practices of the past can be seen as ancestors of the modern digital art.

We can trace the many different origins of what we call today digital art -even if we cannot clearly conceive what digital art is. According to Frank Popper:

Technological art has three principal roots. First, technological art can be traced back to artistic sources such as visual art, photography, cinema, music, and more generally sound as well as architecture and other environmental expressions. A second origin can simply be found among technical sources such as engineering inventions and similar undertakings. And a third important source can be detected in the different areas of the natural and human sciences, in particular physics, biology, and linguistics.²⁴

An important, though, origin that I think it is worth to be mentioned, is that of kinetic art and light art, both emerging in the beginning of the 20th century. These two forms of artistic expression while seem

²⁴ Popper, Frank. 2007. *From Technological to Virtual Art*. Lilburn, Ga.: The MIT Press. p.11

to be connected to the digital art only by the presence of electricity, nevertheless they almost always embrace the concepts of interactivity and fluidity of the form (differently put the dimension of time), which will find them playing a major role in the digital art until today.

Later on, from the decade of 1960s we witness a strong interest on the concepts of media and communication expressed through various practices. Long before the rise of the global network of the internet, many artists turned towards the concepts of cybernetics, organizing events and performances through teleconferences. Nam June Paik's works with television sets as well as Roy Ascott's work on telematics are some example of these tendencies. At that time we can trace the emergence of computer art. Vera Molnar and Manfred Mohr were among the first artists to use the computer and the algorithms to produce mainly abstract compositions.

While, though, we move on technologically and chronologically, the impact of the digital technologies on the arts increases. Techniques and means deriving from digital technologies can be traced almost in any aspect of the artistic practice. Even if we talk about laser cut sculptures and collages or virtual spaces and projections the presence of algorithms and computing machines can be seen everywhere.

Yet, in that short review I think that the practice more relevant to the issue we are examining is the case of Net Art. Even though it is not usually a basic reference for the digital art neither described as a very prominent moment of the later contemporary art, yet, I think it is based very closely to what I try to describe and trace in here.

Since there is not a clearly stated reference in the digital objet trouvé so as to trace its emergence and evolution as I did for the objet trouvé in history of art, I have to search for the conditions and the practice that seem to be mostly relevant to this concept.

Before attempting a possible review, I should note that the most significant characteristic of this practice is its direct relation to a brand new and radical concept, that of the internet. As I believe, the state of the continuous and global connection of the main artifact/product of our days, the information, is the principal factor that brought most of the changes we try to describe along the human activity. For, what it finally gives a live feeling on every application of digital technology is the constant flow of bits

in channels among users as they, in their turn, continue to manipulate and re-canalize them in these channels.

Thus, this very artistic practice it is not only related to a very radical condition of our time but also, is totally part of it, meaning that these works are born and live in total dependency of the web. This is important, in my view, as the method I follow, here, focuses on connecting the emergence of the objet trouvé to the direct reality conceived each time by the artists Thus, in the same way, I trace some rather interesting cases of what I call digital objet trouvé in this exact artistic practice.

Net Art or internet art or, more accurately, net.art is once more an artistic practice difficult to describe or examine chronologically. However, this difficulty sometimes reveals many interesting facts about this practice. I will follow the narration of Frank Popper and Tilman Baumgärtel which despite some deviations, they still keep some basic notions in common.

In both texts, the common fact is the relation of Net Art with the concept of communication. More specifically, Popper relates it with the communication art and the artists Roy Ascott and Fred Forest calling its basic concept neocommunicability.

The Internet became a social communications option at a moment when, as I see it, technological art gave birth to virtual art at the beginning of the 1990s. I call this event, so full of unaccustomed possibilities, neocommunicability. It was an event associated not only with radical technological changes but also with an aesthetic change that concerned artistic intercommunication on a wider and more personal scale.²⁵

Baumgärtel, from his point of view, presents a clear and extensive relationship of Net Art with communication art -or, as he names it, “telecommunication art”.

The “net.art” which has developed in the past few years did not arise in a vacuum. Rather, it is the continuation of a series of artistic practices which have existed for

25 Popper, Frank. 2007. *From Technological to Virtual Art*. Lilburn, Ga.: The MIT Press. p.313

*several decades but have only now found entry to the canon of art history.*²⁶

According to Baumgärtel “the post war avant-garde were excited by the possibilities of telecommunications” and especially “a type or art developed from Fluxus movement which can be considered a (non-technological) precursor of many telecommunications and internet projects: mail art”. Since 1962 artists would create artworks as postcards and distribute them via mail among other artists. Later on, this passion for communication will find its expression through satellite connections, teleconferences and fax or telephone conferences.

Their need to communicate and work collectively will finally find its place in a wider scale with the emergence of the web. If we examine those practices as a distinct phase from the Net Art, we can still attribute many similar practices of the latter to this preceding experimentation.

In the same way as in the decades of 60s and 70s, mailing lists and communication had a vital role in net art. Popper examines along with the artists and their work, the birth and development of these mailing lists and databases that were always a point of reference for the artists inside this practice. Such is the case of Rhizome.org :

*Part community center, part avant-garde art laboratory, Rhizome grew from a simple e-mail list connecting the disparate digital art scene to a sophisticated communications platform linking thousands of users around the world.*²⁷

The growth and expansion of the internet was not only a great opportunity for expanding the possibilities of communication, but also, it was welcomed by notable enthusiasm as a space of freedom for the artistic expression and its propagation.

When artists discovered the internet as a media for their work in the mid-1990s, for many of them it appeared not only as a way out of the art industry and as a newly discovered free space for their own work, but also as almost a type of new Jerusalem

26 Baumgärtel Tilman, Net Art. On History of Artistic Work with Telecommunications Media. p.153 in Weibel Peter, Timothy Druckrey, ed. 2001. *Net_condition Art and Global Media*. 1st edition. MIT Press. p.152-161

27 Popper, Frank. 2007. *From Technological to Virtual Art*. Lilburn, Ga.: The MIT Press. p.317

where that which is impossible in the “real world” should happen: global herrschaft-free communication for all, consumers who become producers, social networking over and through geographical and social borders, direct information exchange beyond economic constraints and without filtration through the mass media. The euphoria of this early era which may appear naive today yet nonetheless is explainable by the enthusiasm for the new media.²⁸

These were more or less the conditions under which Net Art was born and developed. In absolute connection to the web's development, net artists would either sometimes work on the environment as such or would be critical against it. Net Art practice is not to be put under an -ism term has yet a lot of common points in its practice that are directly related to the very characteristics of the internet itself. Yet this direct relation to the reality of the web could give many interesting cases on which we would trace the emergence of the digital objet trouvé.

²⁸ Baumgärtel Tilman, Net Art. On History of Artistic Work with Telecommunications Media. p.152 in Weibel Peter, Timothy Druckrey, ed. 2001. *Net_condition Art and Global Media*. 1st edition. MIT Press. p.152-161

2.2 The objet trouvé in the Net Art practice

I will now examine some works under the prism of the objet trouvé and under the prism of their relation to some of the web's characteristics they are based on. The reason why I choose to examine in parallel artworks and texts on the internet, is my general intention to connect this review to more general conclusions on the digital objet trouvé. I cannot ensure that this review is comprehensible guide through the history of Net Art, but what I really try is to reveal the original relation of Net Art with the digital reality and its products, whose embrace in artworks creates this very feeling of the encounter with a pre-existing object. In some cases I cannot even ensure that an artwork is clearly part of what we call Net Art but in every case it is somehow connected to the internet or more abstractly to the contemporary flow of data.

There are many different approaches when it comes to describe the internet, yet a very common aspect of the web is dealing with its vast and heterogeneous content.

Art in the internet is a practically incomprehensible collection of the most varied data - as is the internet itself.[...] At this time the internet had already developed into a gigantic archive of texts and programs, its beginnings in the late 1960s were as a “text-only” media, which in the following years were supplemented with ever more images, sound and finally also animation sequences and other moving images.²⁹

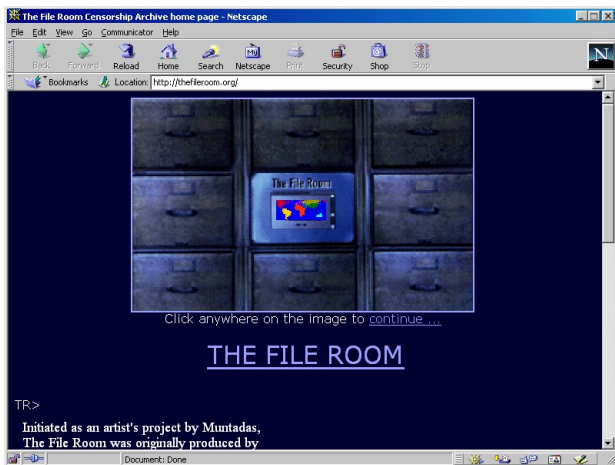
2.2.1 The files we encounter online

This explosive expansion of the web's content inspired works already from the early years of Net Art, where artists used mere files that the users/spectators could either upload as examples of art pieces or dispose as trash.

This was the case of the *Fileroom* (1994) by Antonio Muntadas and *Landfill* (1998) by Mark Napier. In both cases the work takes its final form from the contribution of unexpected data/objects that become part of an artwork even if they were not intended as such. In the first case users are asked to contribute with their own creations in an artistic database. On the second one, on the contrary, users are asked to

²⁹ Baumgärtel Tilman, Net Art. On History of Artistic Work with Telecommunications Media. p.159 in Weibel Peter, Timothy Druckrey, ed. 2001. *Net_condition Art and Global Media*. 1st edition. MIT Press. p.152-161

dispose their unwanted files in a digital junkyard.



Ill. 18: Muntadas, Antonio. 1994. *The File Room*. Webpage.



Ill. 19: Napier, Mark. 1998. *Digital Landfill*. Webpage.

Until today this giant archive continues to expand and is more connected now to terms as data base and big data. Every trace we leave behind, on the web, is now even a matter of economic exploitation or research case.

*the world appears to us as an endless and unstructured collection of images, texts, and other data records, it is only appropriate that we will be moved to model it as a database. But it is also appropriate that we would want to develop poetics, aesthetics, and ethics of this database.*³⁰

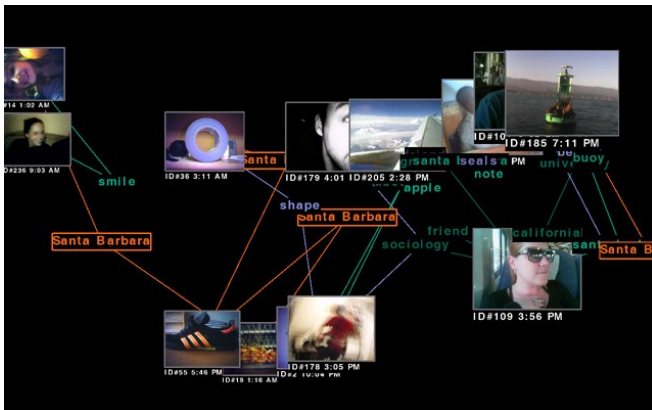
The content of these databases produced daily online has, though, a different form from what the first net artists had experienced through web pages. The boom of the social media, among other, flooded the web with texts and images that even if they are not clearly public -as the web pages- their presence is almost everywhere online and more importantly they shape in a very tense way our collective conscious. These data exchanged mostly through portable devices are also a crucial part of the vast online archive. In this aspect, considering the internet as an archive we can mention two rather articulate works.

The first one is *Cell Tango* (2007) by George Legrady, which is more or less “a dynamically evolving

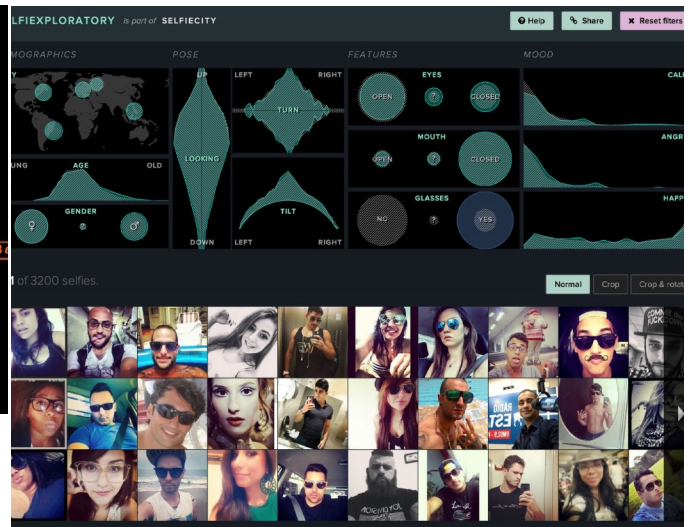
30 Manovich, Lev. 2002. *The Language of New Media*. Reprint edition. Cambridge, Mass.: The MIT Press. p.195

archive of cellphone-transmitted images contributed by participants from anywhere within the reach of cellular transmission and reception”. Legrady worked on the organization rather than the formulation of the project where the final form was dependent on the unforeseen exchange of data between cell phone users. “The received images are visualized within a virtual 3D architectural structure, their organization based on a number of metadata criteria such as cellphones' numbers (original contract locations), carriers, time and date of transmission, and participants' contributed categories and descriptive tags.”

The *Selficity* (2015) is another project in this direction coordinated by Lev Manovich, even if we cannot tell if it is an art project or a research project. Again here, the team organized a procedure of collecting and categorizing images and more specifically selfies from five big Cities. All these data were then analyzed and presented according to different criteria such as the age, the gender or the position of the head. All the results were finally uploaded in a site and the later the project moved his interest to other cities.



Ill. 20: Legrady, George. 2007. *Cell Tango*. Interactive installation.



Ill. 21: Manovich, Lev. 2015. *Selficity*. Webpage/software.

In both cases we have an unpredictable archive of data that has been uploaded which is organized and presented according to the author. Is yet clear that the “material” used for the production of these works is clearly pre-existing and also is not what could be described as potential art material in the practice of digital art.

2.2.2 The hyperlinks

The archival attitude towards the internet can be traced in many other practices used by the Net Art. As we discuss for the use of pre-existing objects of the online ecosystem we unavoidably seem to move around this idea. Yet, apart from the direct reference to the online object, this archive has some basic organizing tools for searching, connecting or navigating through its data.

Nowadays some of these tools seem old-fashioned for their artistic potential. The main reason for this is the personalization of the information, occurring through the social media from where we receive most of the information daily. However, in the old days of the internet concepts like the hyperlink were of high importance and we can understand this if we think of navigating without our Facebook account, receiving most of links by a search engine. The potential link of every document laid online and the enthusiasm for the variety of web-pages appearing online was a rather creative occasion, back in the 1990s. Andreas Broeckmann gives a clear description of this:

The main tool of Net.Art is the hyperlink through which one WWWdocument can be linked to another, no matter where on the Internet that second document is located. This means that all the millions of documents on the WWW are potentially linkable, they belong to the same horizontal surface of material, a felt of singularised objects, on which artists and designers can draw.³¹

This was the case for some artworks that used the hyperlink and the pages it was representing directly either as part of their composition, in terms of form, or narration.

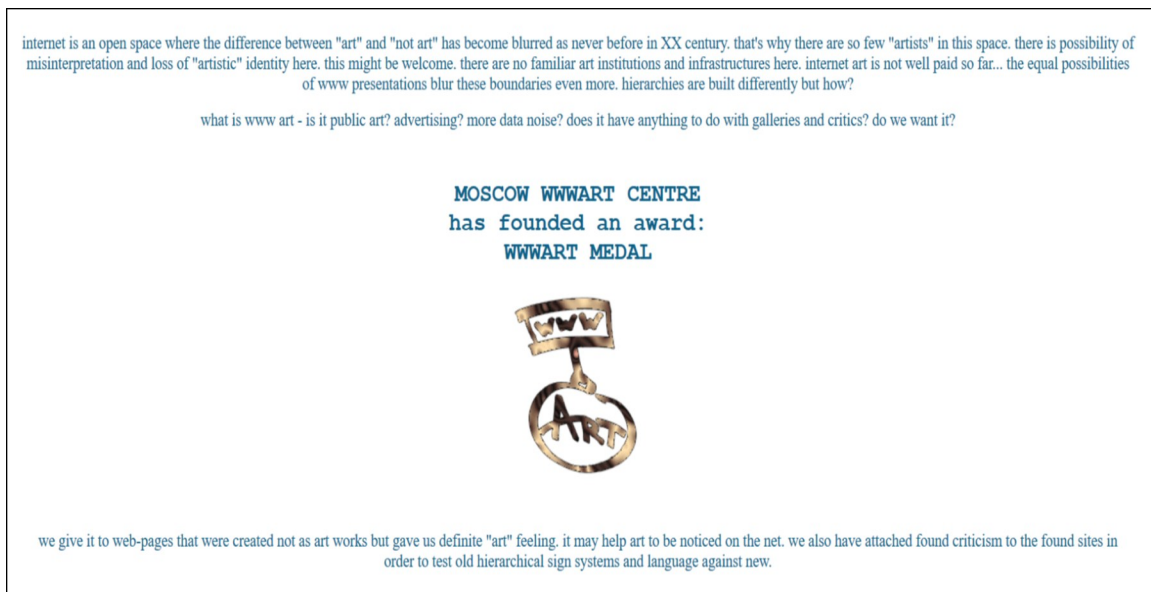
The project WWWArt Medal (1995-1997) by Alexei Shulgin and Tania Detkina was as it is titled an art medal given to web-pages that had an artistic value. The work is nothing more than a web-page presenting the award-winning sites in the form of a list through their hyperlink that when clicked it would present the specific site in a new window framed in a classic/formal style. The rather ironical intentions of the project are clearly stated on the top of the home-page: “*what is www art - is it public art? advertising? more data noise? does it have anything to do with galleries and critics? do we want*

31 Broeckmann Andreas. 1997. Nettime: Net.Art, Machines, and Parasites. Accessed April 6, 2020. <https://nettime.org/Lists-Archives/nettime-l-9703/msg00038.html>.

it?"³²

The link or the hyperlink was a the basic tool in the work of Olia Lialina *Anna Karenina goes to paradise* (1996). In this work the user/spectator builds his own narration on Karenina's story as he chooses different hyperlinks representing different states of the story. The evolution of the story uses results of different search engines attached to the initial three hyperlinks. Olia Lialina directs a lot of attention on the links from different aspects, either seen as tool for creation or as the signature of the net artist:

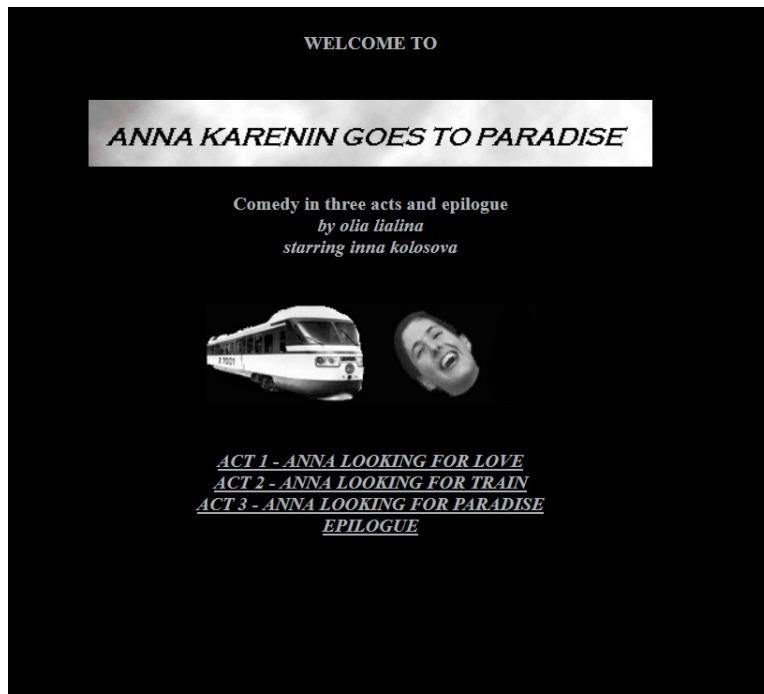
*The address bar is the author's signature. It's where action takes place, and it's the action itself. The real action on the web doesn't happen on the page with its animated GIFs or funny scripts, it's concentrated in the address bar.*³³



Ill. 22: Shulgin, Alexei, and Tania Detkina. 1995. *WWWArt Award*. Webpage.

32 Shulgin Alexei. 1995-1997. *WWWART AWARD*. Accessed April 6, 2020. <http://www.easylife.org/award/>.

33 Lialina Olia. 2017. *All You Need Is Link*. Rhizome. Accessed April 6, 2020. <http://rhizome.org/editorial/2017/feb/21/all-you-need-is-link/>.



Ill. 23: Lialina, Olia. 1996. *Anna Karenina Goes to Paradise*. Webpage.

2.2.3 The infrastructure of the web

Apart from being a signature, though, the hyperlink is a very indicative example for tracing another aspect of the digital objet trouvé we can find in the practice of net artists. This aspect is the strategic use of the organizing tools of the online archive. While the content -being text or images- is what we are primarily interested in while browsing, yet, this content is always encompassed by many different elements such as buttons, symbols and ASCII elements, hyperlinks included.

These elements are the primal material to some of the most recognizable Net Art works, made by Jodi such as the <http://404.jodi.org>, the <http://wwwwwwwwwwww.jodi.org> or the <http://blogspot.jodi.org>. Each of these projects is more or less a web-page that, while is full of known elements that someone can find in every other normal web-page as well as the basic notion of interactivity/navigation is preserved, yet, nothing really makes sense on the users exploration through these sites.

What is, however, clearly stated is the common perception of the symbols used in these web-pages, a fact that can be easily proved through the natural engagement of the user to navigation. Alex Galloway call these elements infrastructure of the web and notes that:

*Jodi's infrastructural modernism, if we can call it that, is interesting because it suspends the distinction between art and technology without making one subservient to the other. Jodi are artists who insist on the importance of seemingly uninteresting technical minutiae, such as character-encoding schemes and other tedious matters.*³⁴

Another work to be mentioned based on the beauty or the reality of the web infrastructure is the *Form Art* (1997) by Alexei Shulgin, where we can see the use of these structural elements in a more abstract direction, forming a two-dimension space from different interface elements.

In these examples we see the use of pre-existing objects of different origin. The character of pre-existing here may seem misleading as it can resemble types of digital art closely related to basic notions of digital technology as coding and algorithms. Yet, I think we can include these practices more closer to the use of the *objet trouvé* we search here, as these elements, although being part of the “infrastructure”, they are its very depiction and, as such, they have a very crucial position to what the web looks like in our collective conscious.

We can state, in other words, that part of the web experience is the content as well as everything else that is included in the word interface. And as interface is a constant mediator between us and the data uploaded it is a rather important factor not only in terms of the conception of the web image but also in terms of the aesthetic impact that internet has on us.

³⁴ Galloway, R. Alexander. 2016. *Jodi's Infrastructure*. E-Flux, no.74. <https://www.e-flux.com/journal/74/59810/jodi-s-infrastructure/>.

<\$BlogMetaData\$>

<\$BLOGTITLE\$>

<\$BLOGDESCRIPTION\$> WORD VERIFICATION:
 <\$BLOGDATEHEADERDATES\$> 8.1.07

Title:<\$Preview\$>

<\$BlogItemBody\$>
 Font Normal Size b i _____
 Save as Draft



POSTED BY AT 02:21 <\$BlogItemControl\$>

Sign Out

<\$BlogItemBody\$>
 This may take a few minutes if you have a large blog

[-- Back to Dashboard](#)
 X

[-- Sign Out](#)

[? Help x Sign Out](#)

POSTED BY AT 02:12 <\$BlogItemControl\$>

blocked_%Deleted

<\$BlogItemBody\$>

Not Found
 The requested URL was not found on this server. Please visit the [blogspot homepage](#) or

LINKS

[a0a0a0.blogspot](#) blocked
[00b00b.blogspot](#) blocked
[11b111.blogspot](#) blocked
[c2c2c2.blogspot](#)
[c3c3c3.blogspot](#)
[d5d5d5.blogspot](#) blocked
[d6d6d6.blogspot](#)
[d7d7d7.blogspot](#)
[d8d8d8.blogspot](#) blocked
[f9f9f9.blogspot](#)
[x9x9x9.blogspot](#)
[555555.blogspot](#) blocked
[666666.blogspot](#) blocked
[5503.blogspot](#)
[5505.blogspot](#)
[4567234.blogspot](#)
[d5fgadsgy.blogspot](#)
[renwetw.blogspot](#)
[zbxmbnht.blogspot](#)
[bormintheusa1234.blogspot](#)

<BLOGPREVIOUSITEMTITLE\$>

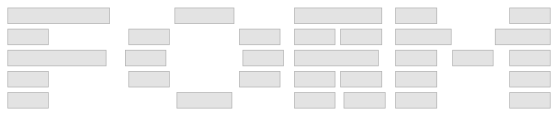
Title: <\$Preview\$>
 Sign Out
 blocked_%Deleted
 S = Publish, D = Draft
 <\$BlogItemTitle\$>

<\$BLOGARCHIVENAMES\$>

10.06
 11.06
 01.07

Ill. 24: Jodi. n.d. *Blogspot.Jodi.Org*. Blogspot.

FORM ART COMPETITION



who: what:

where: browser:

Ill. 25: Shulgin, Alexei. 1997. *Form Art*. Webpage.

2.2.4 The browsers

According to this duality between content and infrastructure/interface we can now trace a third category of artistic practice closely related to the notion of the digital objet trouvé.

In this “category” of works, we find a “bigger scale” approach of the internet and the reality it forms. These works are directed towards the basic tool through which we “enter” the world of internet, the browser -at least for the years before the emergence of online socializing applications. These works combine different aspects of the practices described above and maybe each of them is attempting a different approach on the concept of the web. However, as they are primarily browsers, they are presented here as a distinct practice in terms of form.

Netomat (1999) Maciej Wisniewski, is in my opinion, one of the most clearly stated artistic ideas on the concept of the internet. Netomat is a browser -or a meta-browser- that simply works in a different way than we are used to; oppositely to the idea of the internet as an organized archive, even if this organization remains chaotic. Using Netomat is simple: beginning with an empty blank page, you type your search term in the address bar in the bottom and the browser will find data (text, images or audio) relative to your search term and will display them randomly floating on the previous empty black screen. The words of Ron Wakkary on Netomat are apocalyptic:

Netomat is a meta-browser that engages a different internet, an internet that is an intelligent application and not simply a large database of static files. Netomat dialogues with the net to retrieve information as unmediated and independent in form. It is a browser only by convention. Our current point-and-click navigation, rigid information distribution, and passive browsing of “authored” information in today's interactivity will be of little use when using Netomat.³⁵

35 Wisniewski Maciej, Wakkary Ron, *Netomat*, p.81 in Weibel Peter, Timothy Druckrey, ed. 2001. *Net_condition Art and Global Media*. First Edition edition. MIT Press.



Ill. 26: Wisniewski, Maciej. 1999. *Netomat*. Web browser.

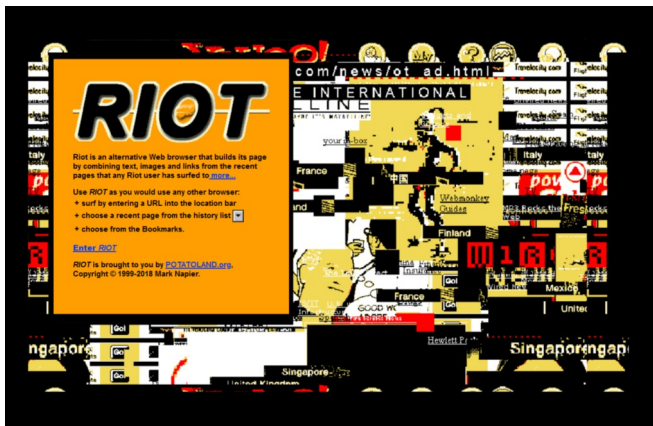
This work incarnates in a simple way a holistic reflection over the web. In this effort, what is crucially important is the constantly changing image/form created every time in the browser that although unpredictable, it is yet an accurate depiction of the web for the word we typed in and for the specific moment we did it. This accuracy is achieved directly through the simple objects constructing this vast archive, but at the same time it is the general idea/the process that ensures this “collage” to be always “up-to-date”. As if the merz collages of Kurt Schwitters could change the piece of the newspaper on them to the new issue of the current date.

Close to Netomat we can see another two browsers created in an artistic intention. The first one, *The Riot* (1999) by Mark Napier was an attempt close to that of Netomat. Riot browser Would mix elements of the last pages that the user had typed in the address bar creating a new mixed-up and chaotic composition. Napier describes its function as “*breaking the software-based rules of Internet domains and blending web pages together as users surf from site to site*”³⁶. In a similar way Napier had created, one year before, the work/browser *Shredder* (1998), which would deconstruct in ASCII elements the

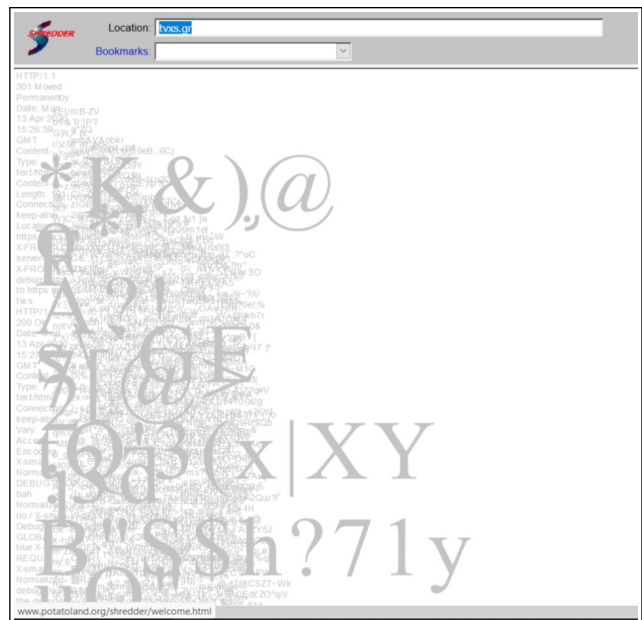
36 Napier Mark. 1999. *RIOT*. Accessed April 6, 2020. <http://www.potatoland.org/riot/>.

site inserted in the address bar. Both works move towards a more abstract direction, in comparison to the *Netomat*, and their final form can be seen as relative to that of the Jodi works.

Another work in browser more recent and less heroic in its statements is the *Glitch Browser* (2005) by Dimitre Lima, Tony Scott and Iman Moradi which “glitches and aberrates all the images on the web pages requested by users”. This browser was creating an abstract composition of what the user would search on the address bar based on the glitch aesthetics.



Ill. 27: Napier, Mark. 1999. *Riot*. Web browser.



Ill. 28: Napier, Mark. 1998. *Shredder*. Web browser.

In this direction we can also see the *Evolving Internet* (2010) by -the very interesting contemporary internet- artist Constant Dullaart. This is a browser-based project that stimulates a fully functional web search, beginning from the homepage of Google, constantly rotating as the user uses navigates. According to Dullaart: “The Revolving Internet is a performative piece, a collage of found material [that] exists within the context and parameters of the internet, which is in continuous evolution”.

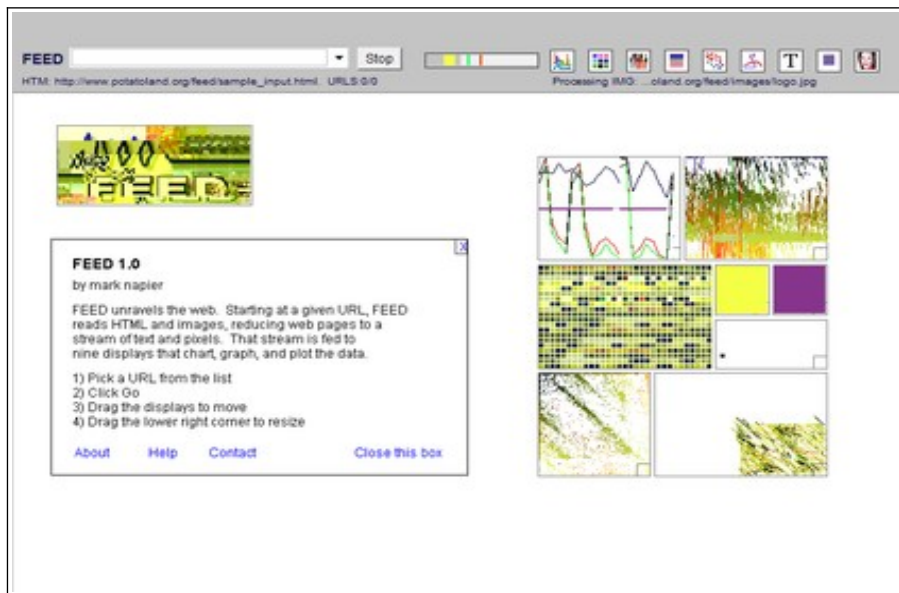


Ill. 29: Lime, Dimitre, Tony Scott, and Moradi Iman. 2005. *Glitch Browser*.
Web browser.

2.2.5 The Data

Finally, we can trace another final instant of the digital objet trouvé, in the more abstract form that of the mere data. Two works in the form of a browser, *Feed* (2001) by Mark Napier and *Web Stalker* (1997) by I/O/D, take their final form from a rational yet abstract and irrelevant to the sites' content process.

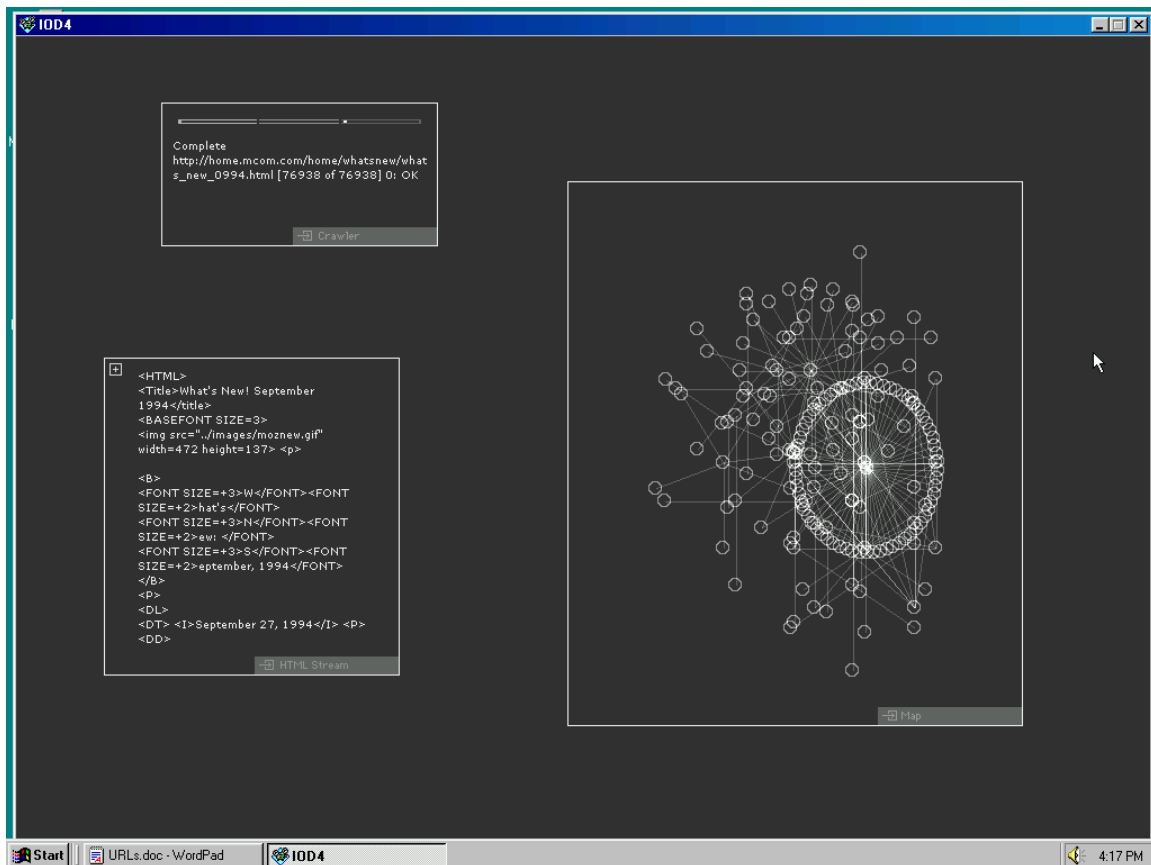
Feed browser will present the site chosen by the user in different forms, relevant to the site's data such as the color of its pixels and the distribution of the RGB channels or other distributional curves referring to the pixels from which the site is presented on the screen.



Ill. 30: Napier, Mark. 2001. *Feed*. Web browser.

Web Stalker is, yet, even more abstract and more deeply based on the data associated to the site chosen. This browser will deconstruct the given site, ignore the text and images and will rather represent the structure of the website through abstract maps consisting of nodes and their connections. Web Stalker was created as “*an engagement with the structure of the web itself. It ignored images and formatting, instead allowing users to move freely among online texts while highlighting the connections among them*”³⁷.

37 I/O/D. 1997. *Web Stalker*. NET ART ANTHOLOGY. Accessed April 6, 2020. <https://anthology.rhizome.org/the-web-stalker>.



III. 31: I/O/D. 1997. *The Web Stalker*. Web browser.

The data that move in flows through networks would be another instance of a pre-existing digital material that artists will include as material in their practice, through software they create in order to represent this data in different -often abstract- forms. Such is the case of the artists Ryoji Ikeda and Kirell Benzi.

2.2.6 Notes: the defend of Net Art under the prism of DOT

Concluding this review of the Net Art examples that give us an idea of the digital objet trouvé I would like to two things that clarify why I examined the digital objet trouvé in this artistic practice as well as why I think that the digital objet trouvé should be searched in its online form.

There are may exist digital works that make use of digital objects which were not “constructed” by the author of the work. An example of that could be Bertrand Dezoteux's *History of France in 3D* (2019) where the artist worked on an animation movie using 3D objects found online, being mostly

downloaded for free and of relevant quality.

However, based exclusively on my point of view, even if these objects are pre-existing of the artwork and even being distributed almost freely online, I think that this practice a bit different to that of the ready-made. The reason why concerns on the one hand the nature of the object used and on the other hand the artistic practice itself.



Ill. 32: Dezoteux, Bertrand. 2019. *Histoire de France En 3D*. Short animation film.

The vast archival notion that the web has in our collective conscious as well as the basic characteristic of digital media to be able to edit further more any state of information has created an idea for the ready-made concept in the digital ecosystem. The famous function/practice of “copy-paste” can conclude very clearly this concept. Many of the creations that we encounter everyday or that we create on our own consist usually from files and data we find online.

By the end of the twentieth century, the problem became no longer how to create a new media object such as an image; the new problem was how to find the object which already exists somewhere. That is, if you want a particular image, chances are it is already exists.³⁸

38 Manovich, Lev. 2002. *The Language of New Media*. Reprint edition. Cambridge, Mass.: The MIT Press. p.55.

Hence, I think that what gives the objet trouvé its very notion is the feeling of its erroneous existence while placed in an artistic context. Simply put, the object chosen by an artist should be a known object to the spectators of the artwork, its use and its existence should also be known. In other words, the objet trouvé should always recall his initial purpose of creation which should be irrelevant to the one we are seeing it to be used.

Pre-existing objects to be used in a digital creation is, yet, a rather common state of the digital object; stock images and 3D asset libraries are some example of this kind.

New media objects are rarely created completely from scratch; usually they are assembled from ready-made parts. Put differently, in computer culture authentic creation has been replaced by selection from a menu. In the process of creating a new media object, the designer selects from libraries of 3D models and texture maps, sounds and behaviors, background images and buttons, filters and transitions.³⁹

Thus, we have to compare this objects to traditional raw materials of artistic practice as their purpose of creation was exactly this. As for the images that can be found online and used in collages for example, again: if the artistic practice is to make them inseparable from their initial context, they should be seen as raw material.

In terms of digital reality, the objects known to us must be objects living primarily online. This also means that these objects are not of a static form, recalling Castells words that “new knowledge applies primarily to generation of knowledge and information processing”, which means that information constantly produces new information. From this basic sentence of Castells above I would like to draw the second part of the reason why I support the Net Art as the practice towards a more eloquent statement of the digital objet trouvé.

This continuous transformation of information and its constant canalization in the networks, is, maybe,

39 Manovich, Lev. 2002. *The Language of New Media*. Reprint edition. Cambridge, Mass.: The MIT Press. p.121

the most vital characteristic of the online ecosystem. In this context, the objet trouvé, even if represented in an image or a text form in a specific moment, this state is just a temporary one as sites, interfaces and protocols are constantly upgrading or disappearing. In this concept of the web Net Art responded naturally with character of its practice. As Andreas Broeckmann states, the works of Net Art are primarily processes.

The aesthetics of such projects is dependent not so much on the intention of a single or collective author, but on the process initiated by and within the complex machine of people, the network infrastructure, desires, technical hardware, design tools, interfaces, behaviors. Machines in the sense in which I am using the word here are not only technical apparatuses, they are assemblages of heterogeneous parts, aggregations which transform forces, articulate and propel their elements, and force them into a continuous state of transformation and becoming. Machinic assemblages are made up of singularities which dynamically transform the environment by which they are being transformed and recomposed.⁴⁰

This is somehow, obvious from the way these projects are presented. I strongly believe part of their artistic value lies, in the way the artists have come to think as machines and networks do. This is of course something that can be applied in many other digital artists' practice but, as far as the digital objet trouvé is concerned, it has a special interest.

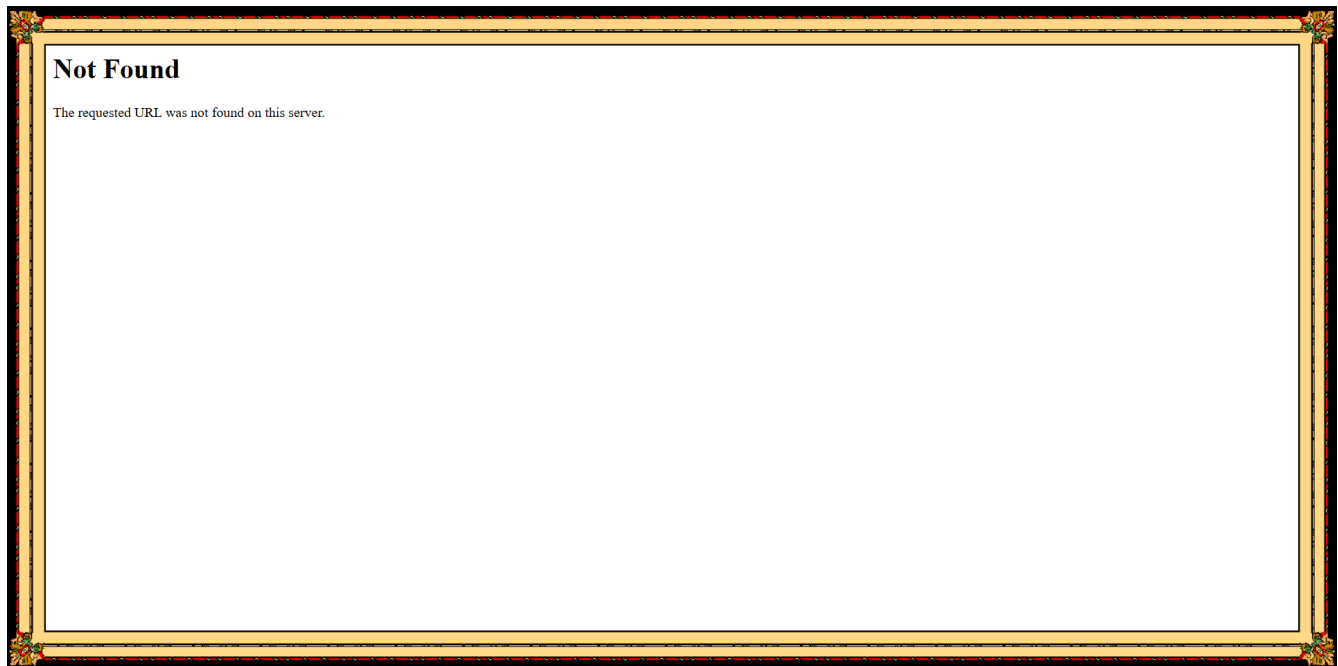
For, the works presented above, they do not just include pre-existing data from other sources. They organized the presentation of this data in way that has an artistic value. Differently put, a collection of web-pages of artistic value, as was the case for the *WWW Art Medal*, can be easily found online in sites trying to inspire potential owners of a web-page or developers, yet is the whole context of an award-giving atmosphere and the ironic frame that gives the project its artistic value, given this, we can also examine the choice of the web-pages as a sign of artistic value.

Or, again, in the case of *Anna Karenin goes to Paradise* of Olia Lialina, the search results forming the

40 Broeckmann Andreas. 1997. Nettime: Net.Art, Machines, and Parasites. Accessed April 6, 2020. <https://nettime.org/Lists-Archives/nettime-l-9703/msg00038.html>.

story of Anna Karenin would be out of any context -although being a distinct objet trouvé- without the interactive response from the user considering them as potential parts of a story.

Thus, the character of the digital objet trouvé as traced so far, seems to be connected, on the one hand, to objects that shape our every day experience of the digital revolution we live in; either being the mere content of what we encounter or parts of the infrastructure/interface that organize this content. On the other hand, the digital objet trouvé cannot be really captured in a static form, if we insist to be related to the very notions of this digital revolution. It is, consequently, closer to the capture of some constant transformation of information and as such, the process from which we retrieve it, in the context of its artistic value, plays a crucial role on what can be finally described as a digital objet trouvé.



Ill. 33: Shulgin, Alexei, and Tania Detkina. 1995. WWWArt Award. Webpage.

2.3 Notes on the DOT and its importance

Most of the works we reviewed and generally the works of Net Art are, in many cases, standing more or less like ruins with their hyperlinks leading the viewer to an error page informing: “Hmm. We’re having trouble finding that site”. Some other projects can be viewed only by virtual machines imitating older versions of software, while other have survived to us only by screenshots and descriptions of them.

Digital archaeology has already appeared and the question -the answer to which is already known- is why do digital creations tend to get older in such a rapid way? The rapidly evolving technologies is the first half of the answer. The second half, which particularly interests me, is the also rapidly evolving and transforming information that circulates over the vast archive of the networks, over the internet.

The digital objet trouvé, as we trace it, is nothing more than some moments of what we already mentioned through the thoughts of Nicolas Negreonte, the bits. The bits, forming the information we handle every day, have this special ability of describing different media states that we receive in the end of more or less communication function between sender and receiver.

2.3.1 The categories

This basic idea of the nature of information will guide us, finally, in shaping a categorization of the digital objet trouvé as we have already encountered it in the above analysis. These categories are penetrated by the line connecting two basic states of the information, from the mere material of the information, the bits to the final organized image of data in a closed/final state. We can also see this line connecting, at the same time, the two poles forming the line between the specificity of the information from a fully readable context to the abstract language of the machines. I will divide this line in four basic parts-categories each one with its different values and importance.

Beginning from the opposite direction of the line described above, we first have what we can call the “framed content”. This is more or less what we finally perceive from the screens we use everyday; images of web-pages or applications presenting a publication of a user, a news article or an uploaded video. More precisely, this phase is the mix of the content with its metadata and the interface framing

all these.

The second part of this line can be called “unframed content”. This phase of information refers to the core of the interest of a specific moment of browsing. It can be an uploaded file, a message sent or the text of an article. In this phase of the information, however, we should distinguish the content used with its metadata and the plain content such as an image or a video without information on its uploader/creator or on the time and place it was uploaded.

In the last two parts we find more abstract phases of the information. In the third place we can place the relatively static information of the infrastructure; graphics used on interfaces of the web or applications such as logos, buttons, dialog windows etc that, while being useful and understandable, yet, they are quite abstract.

Finally, in the last part we can see mere data transmitted through the networks such as numbers and characters which can be potentially retrieved under a thematic section but their representation cannot be clearly understood. We can, for example, use a series of data used to describe a weather forecast in an application and translate them to a sound or an image.

These categories arise mostly out of my personal experience of digital art and they are the result of an effort to understand the importance and the value of the use of the existing information in terms of artistic expression.

I will now try to briefly indicate the special value that each category has, according to the thoughts of different people who have, more or less consciously, supported the artistic value of these concepts.

2.3.2 The framed content

Framed and unframed content in terms of the artistic concept can be generally compared to the use of the found objects in the art history, they can be seen as parts of newspapers, of fabrics or packages. However, the most significant idea behind the use of online content is the new relationship between the creator and the receiver in the new media era. This relationship has now been shaken by a new condition on the new media environment where, as Gerhard Lischka states: “everyone is a mediator”.

The biggest part of what is uploaded and distributed everyday online, is not the creation of a specialized professional such as a photographer or a journalist. Instead, it is the individual user that, more than ever, shapes the image of the internet through his posts, images, videos or more recently through his personal broadcasts.

This new condition of the media to constitute a two-way communication channel, unlikely what it's happening in the case of television for example, not only has shaped the image of the online environment, in terms of who is the sender and who is the receiver, but also, it has developed new forms of communicational habits and new forms of content that overcome the traditional media distinctions.

The fact that traditional media terms such as prime time have been overcome by contemporary content creation had been foreseen and clearly described by Nicolas Negreponte in his chapter called "*prime time is my time*" where starting from the Video on Demand feature, he came to the note that:

In the near future, individuals will be able to run electronic video services in the same way that fifty-seven thousand Americans run computer bulletin boards today. That's a television landscape of the future that is starting to look like the Internet, populated by small information producers. In a few years you can learn how to make couscous from Julia Child or a Moroccan housewife. You can discover wines with Robert Parker or a Burgundian vintner.⁴¹

The new landscape that these individual broadcasts form together with their cultural value can be seen in the movie *Roman National (2018)* by Grégoire Beil, a film made entirely by scenes that had been broadcasted live by users of the Periscope application. While these broadcasts seem to be of no artistic interest, yet they represent a rather contemporary image of the french culture through the aspirations of the users and their seek for social recognition and identity establishment. The videos used here are not separated by their interface frame and, moreover, the reactions of their audiences, posting comments and sending hearts are also included as an inseparable part of these images. We can see this mere

41 Negroponte, Nicholas. 1995. *Being Digital*. Vintage Books. p.176

realism as a new kind of cinéma vérité that cannot separate the reality of the content from the reality of the interface, that comes along with it, in the contemporary state of these private broadcasts.

2.3.3 The unframed content

If this example depicts the importance of the unframed content and especially its importance in the sociocultural sense, then for what we have named as unframed content there is another statement -in written form this time- that defends its importance in one more aspect, that of the political realm. This is the interesting, in my opinion, article of Hito Steyerl “In Defense of the Poor Image”.

Before, though, proceeding in the view of Steyerl, I would like to highlight the nature of this content that overcomes the traditional perception of the image in the social and the artistic context. The content that we exchange among us online in all its forms -even if we approach it now be the part of the two-dimension image- is not exactly what it used to be outside the web environment. Its creation and distribution are expanding their function to communicational and social aspects.

Sounds, emojis, images and ASCII characters enrich our expressional ability. Furthermore, a part of the content we handle -either creating or sharing it- is more connected to social functions of establishing recognition, identity or sexuality. That is the case, for example, of memes or gifs that cannot be approached neither from their artistic value nor from their eloquence. Thus, they are “complex images” that are always to be seen within a context of specific cultures, specific time and specific geographical places. Another state of these complex images can be simple photos of no manipulation where their presence among other files would reveal the meaning and the message of their existence. Such is the case of thumbnails or of collections of random or funny pictures. Gerhard Lischka describes these pictures:

Interestingly, the technical and electronic images of the media are not simply images as used to be, created in an ideological, mythological or religious context.[...] We must acknowledge that the fact that these images are no longer merely images, but images created on the basis of texts, ideas and commands. They are complex images that require image competence to be understood and comprehended.⁴²

42 Lischka Gerhard Johann. *Everyone a Mediator*. p.170 in Weibel Peter, Timothy Druckrey, ed. 2001. *Net_condition Art*

Returning to their cultural/artistic or political value as Steyerl sees them, these images are expressing with their presence and circulation basic notions of the economic and cultural circumstances of the digital era.

*The poor image is a rag or a rip; an AVI or a JPEG, a lumpen proletarian in the class society of appearances, ranked and valued according to its resolution. The poor image has been uploaded, downloaded, shared, reformatted, and reedited. It transforms quality into accessibility, exhibition value into cult value, films into clips, contemplation into distraction. The image is liberated from the vaults of cinemas and archives and thrust into digital uncertainty, at the expense of its own substance.*⁴³

They lay in the margins of the official circulation of images, being edited and copied thousands of times, yet, they express “*all the contradictions of the contemporary crowd: its opportunism, narcissism, desire for autonomy and creation, its inability to focus or make up its mind, its constant readiness for transgression and simultaneous submission*”⁴⁴.

However, the whole defend that Steyerl sets up for these images, is not based only on their popular character which can transform the initial exchange value of the resolution to that of velocity, intensity, and spread. For what finally Steyerl attributes to the poor images, as the most crucial quality against the official circulation of the high quality images, is their relationship with reality.

The poor image is no longer about the real thing—the originary original. Instead, it is about its own real conditions of existence: about swarm circulation, digital dispersion, fractured and flexible temporalities. It is about defiance and appropriation just as it is about conformism and exploitation.

*In short: it is about reality.*⁴⁵

and *Global Media*. First Edition edition. MIT Press. p.168-171.

43 Steyerl, Hito. 2009. *In Defense of the Poor Image*. E-Flux, no.10. <https://www.e-flux.com/journal/10/61362/in-defense-of-the-poor-image/>.

44 Ibid.

45 Steyerl, Hito. 2009. *In Defense of the Poor Image*. E-Flux, no.10. <https://www.e-flux.com/journal/10/61362/in-defense-of-the-poor-image/>.

The poor images -as Steyerl describes them or generally put, in my opinion, the image of the screens we use daily, should not be taken as an ordinary part of the reality, appearing before our eyes with only importance that of the functions that it claims to serve. Instead, their cultural and artistic value should be estimated and researched even more deeply and in a further level than that of their representational value.

2.3.4 The metadata

Along with these files floating in the web, as we saw, an important part of them is what we call metadata. In metadata it is possible to discover extra values of those more or less poor images. As Negroponte states, metadata are “*bits that describe the other bits*”⁴⁶ and these bits form a concept that can be seen as the root of a narrative concept used for an artistic project that would reveal an extra dimension for the files someone is handling. Metadata can reveal accurate and unexpected values of an amount of files /database in a more rational way or even towards abstract directions under the inspiration and the vision of the author/artist. The role of metadata is maybe the underlying answer on this question that Lev Manovich poses:

*The open nature of the Web as medium means that the Web sites never have to be complete; and they rarely are. The sites always grow. New links are being added to what is already there. It is as easy to add new elements to the end of list as it is to insert them anywhere in it. All this further contributes to the anti-narrative logic of the Web. If new elements are being added over time, the result is a collection, not a story. Indeed, how can one keep a coherent narrative or any other development trajectory through the material if it keeps changing?*⁴⁷

As demonstrated, metadata is the crucial element in two previous projects *Selfie City* and *Netomat*. In the first case, information on the geographical origin was the basis of the organization of the new archive that the project was proposing. Furthermore, “new metadata” were created by the authors based on the age, the sex or the position of the person depicted. In *Selfie City* metadata is both the material

of-the-poor-image/..

46 Negroponte, Nicholas. 1995. *Being Digital*. Vintage Books. p.179.

47 Manovich, Lev. 2002. *The Language of New Media*. Reprint edition. Cambridge, Mass.: The MIT Press. p.196.

and the project at the same time, as the authors are basically creating over the procedure of collecting and editing data.

While *Selfie City* had a rational way of producing its speech that could be found in a social research program. On the contrary, *Netomat* used the metadata in order to retrieve “rationally” the amount of data that the project would use to take its final form. This rationality of retrieving is being transformed to an chaotic/anti-narrative result. This transformation from rational to chaotic is the most interesting part of the work, as it is the threshold between the initial intention of the user, trying to search for information, and to the artistic and conceptual outcome that the application returns in the opposite direction of the user's initial intentions.

2.3.5 The interface

As already mentioned, the image of the screens we use is not simply the direct content, namely the pictures and the texts presented on screen. Along with them, many other infrastructural elements frame our content. The role of interfaces in contemporary culture can be undoubtedly outlined by their omnipresence in online and offline software, since they are the main way we communicate and conceive in our senses the abstract nature of machines. They can, furthermore, be perceived as the depiction of the language of machines.

Thus, as an assisting concept that satisfies our need to conceive the abstract language of machines, they are usually left in the margin of their rationality and they are tin the center of attention of software engineers and of developers. Interface, though, has a more complex impact in our culture as it is not just an innocent tool that mediates numbers and results to our eyes. Interface shapes the way we understand machines and, according to Soren Pold, their aesthetic significance is parallel to the significance of canvas for the idea of painting.

*The interface is the basic aesthetic form of digital art. Just as literature has predominantly taken place in and around books, and painting has explored the canvas, the interface is now a central aesthetic form conveying digital information of all kinds.*⁴⁸

48 Pold, Soren. 2005. *Interface Realisms: The Interface as Aesthetic Form*. Postmodern Culture 15 (January).

For Pold the matter of interface in digital art is a matter of realism and, above all, it is a matter of realism far from the naive realism of. of the photographic representation. The type of reality that interface is revealing is stated clearly here:

Realism is ultimately about seeing and reaching reality – a reality that is not something alien 'out there' but that consists of media and to a certain extent is constructed with media. This construction of reality through media is both conceptual as when media functions as models of understanding reality, and directly physical as when media becomes embedded in the infrastructure of postmodern reality.⁴⁹

In the case of this infrastructural concept of interface we find again the idea of reality. As the material used in this occasion is the material on which every software is depending for its basic functionality, the realism here is about the realism of our basic relationship with machines.

The spontaneous interaction that the works of Jodi provoke even if narration and meaning seem to be absent is one of the most important indications of the impact that interface has upon us. However, the concept of the digital objet trouvé becomes more abstract from this point onwards.

The catholic presence and function of the interface seems to resist in the concept of the specific objet trouvé which is, in the same time, specific and representative for its reality. This is a point where the digital technology's very characteristics shake the basic parallelism with the art history. This catholic presence if compared to the canvas could escape from the issue of the ready-made reaching for a more conceptual practice. However, there is an important difference that, I think, keeps the use of interface elements in our basic frame of research.

The infrastructure of software and, especially the infrastructure of the web, is not just the frame where we insert our commands and receive our returns. As it exists everywhere in our online wandering, organizing paths and limits, I would consider it more as structural element of the online reality and I would compare it to the use of such elements in the movements of Nouveau Réalisme and Arte Povera. The torn posters of Raymond Hains and the steel beams of Jannis Kounellis are elements of no

49 Ibid.

specificity that cannot be normally obtained; they derive from the general image of the reality, in terms of the public sphere, yet, their use in the artistic context still recalls their found nature.

2.3.6 The raw data

Finally, the raw data will be defended, here, with less written evidence and more with personal reflections. Raw data, as being a raw material, basically broadens the above problem of the interface - whether if it finally fits in the concept of the digital objet trouvé or not- as we move on to more abstract concepts.

Raw data represent the phase of the information that lies closer to its substantial state, that of the bits. We could approach their use in artistic practice by many different aspects, yet that of the digital objet trouvé seems to be reasonably appropriate for two reasons.

The first one, concerns the retrieval of these data. In this point the characterization raw may be misleading, resembling the raw material, the term used to describe the objects that their encounter is taking place in the same context with that of their purpose of creating. In this case, though, raw data cannot be perceived as raw material, as in the digital reality the production of an amount/series of data is always related to specific purpose⁵⁰. Thus, each series of data used in an artwork, their initial purposes of creation should be seen as irrelevant to the purposes of the specific artwork. In the case that an artist creates its own series of data then their handling cannot be separated of their creation and therefore it's rather complicated to have the case of a digital objet trouvé. That indicates that the data created by computational machines cannot be unintentional (escaping any form of narration), unless they are random.

The second reason is the persistence of artists working in this direction referring strictly to the resource of their data even if the final form of their work could be relying in any data. That indicates, according to the first reason, that there is always an narrational interest in the initial collection. That is the case, for example, of the work *On Time* by Kirell Benzi, where no matter how abstract and solid the final form is, the artist explains the whole process, starting by the origin of the data that is the track of

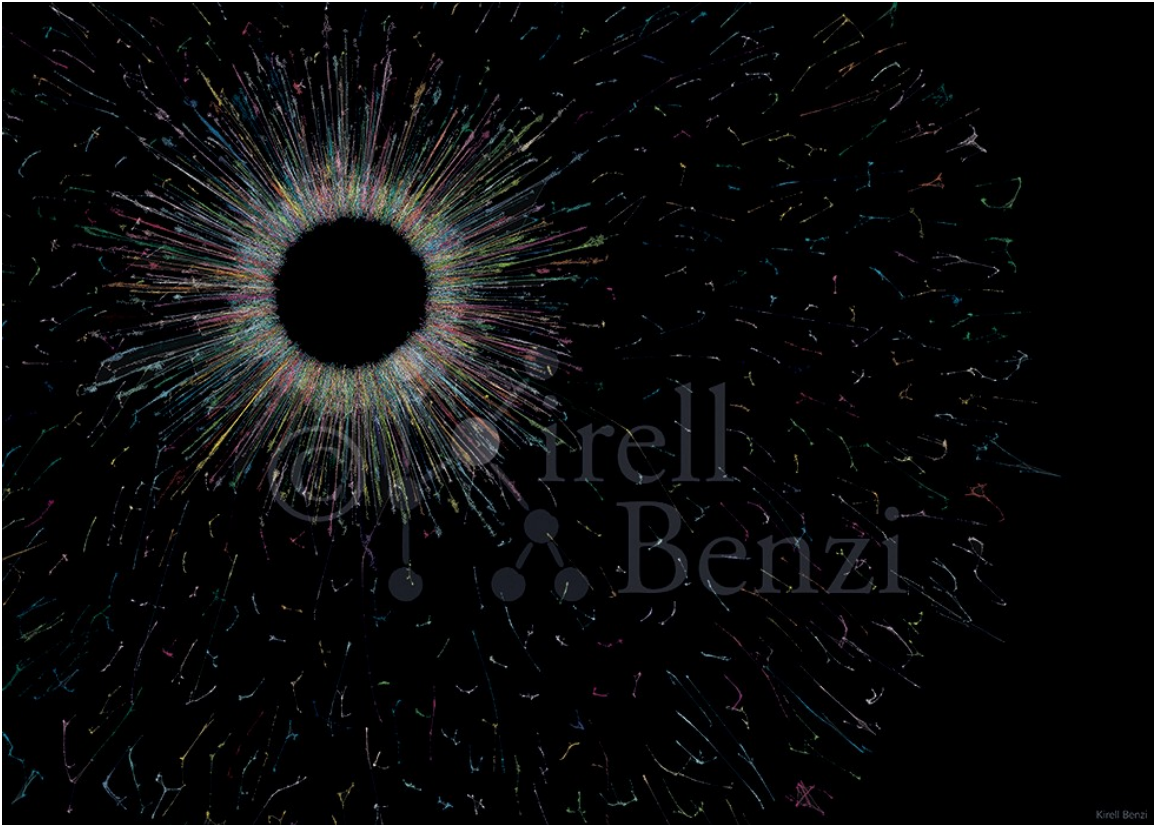
⁵⁰ The only exception here should be the functions returning random numbers, that have in my view a very special interest in the concept of artistic creation.

people walking on the corridors of Lausanne train station.

These works generally seem to be close to scientific work and are often unseparated from a scientific research. Yet, they are very good moments of reflection upon the significance and the power that the flows of data have on our civilization, not only from the aspect of planning and foreseeing as major functions of our economic era but also from the aspect of the power that science seems to have on us even to a sometimes religious level.

The practice based on data is definitely related to the importance of the contemporary concept of Big Data, that tends to be also a source of economic exploitation. The significance of Big Data regarding the economy and policy shaping are well examined in the relative chapter of *Social Theory after the Internet* by Ralph Schroeder. I shall not make any exact reference to that but what comes as a result is the growing importance that this term has in a global scale, regardless, though, of their effectiveness as pools of extracting scientific conclusions, based on the different scientific approaches.

In any case, however, I believe that this very concept of data, and therefore the artistic practice based on this, is directly related to the concept of information as the fundamental raw material of our era; as was energy for the industrial revolution. Hence, we can see the flowing data on this works in a parallel view with the depiction of speed in the works of futurism, celebrating the energy as the very spirit of modernism.



Ill. 34: Benzi, Kirell. 2014. *On Time*. Digital Print.

2.3.7 Conclusion

Concluding the importance and the vital role that the concept of digital objet trouvé has for the digital art I would insist on three basic axes.

The first one is that of the reality. As this technological revolution we experience updates constantly all aspects of its products, the artistic practice related to them, as pre-existing objects of some moment, is a way of associating art to reality and this link should be taken as artistic principle. Thus, considered as a principle the concept of reality extends the intentions and the importance of this artistic practice in sociopolitical aspects of interest and can separate it from states of commercial or elitist art.

In relation to the above, the second axis regards the perception of reality. The perception, here, should also be seen as the function of shaping the reality, as that automatically arises from the reflection on the former. For, I suppose that when one turns his eyes on an object -especially if that was never

considered as an object of interest- at the same time he changes either his reception on that or the object itself. Here lies, more or less, the description of the necessary reflection before action procedure. Simply put, a way of reflecting upon reality is also the first step of changing it.

Finally, the third axis concerns the first change/impact expected from such a practice, on the digital art itself. This is, I think, the separation of digital art from the bonds of representation that seems to be chained to. Realism and especially photo-realism seem to drive all the major discussions around digital art to an extent that digital art tends to coincide with applied art. The digital objet trouvé, as a concept to be embraced by digital art, can work as a liberating escape from representation, in the same way that Marcel Duchamp's practice did in the history of art.



Ill. 35: Personal Digital Collage.

PART III: EXPERIMENTATION

3.2 Basic directions

The final part of this text focuses on the effort made to work on the digital objet trouvé.

Working on something that you have to define is captivating and absorbing due to the fact that practical problems, regarding for example codes and tools, are blended with thoughts about theoretical issues while, in the same time, new problems of this nature appear the solution to which is not evident without this practical experience. I refer to this special experience in order, on the one hand, to support the nature of the work that has been done on the practical level and, on the other hand, to support the potential value that some of the theoretical notes can have on the other hand. This experience is also vital to the this attempt of categorizing the digital objet trouvé.

During my first experiments I was trying to figure out the basic tools that I had available, when I realized the big difference between rendering online content of “framed” and “unframed” type, that is: the way of rendering a browsing function and the way of rendering online files which were technically two different directions. While I was attempting to orientate towards the available tools, I realized how different were these two states of the online content in terms of conception. Overtime, while trying to broaden my skills and range of capabilities, I eventually realized that these elements were types of different presentations of information and from this basic note I managed to draw the categories that I did. This example was presented in order to indicate the way I worked on the digital objet trouvé that, in my opinion, is essential when viewed under the notion of methodology.

Thus, along with reading and watching other projects, the practical part was also developing in a mode of searching and questioning. Basic element of this procedure of working on the digital objet trouvé was the tools I used.

The main software used was Unity for two reasons. Firstly, I was not familiar with the web environment in terms of practice, such as web development other than some basic knowledge of HTML. The second reason was that, apart from being familiar with the Unity software, I was more

confident to consider my works outside of the frame of Net Art as one and only reference. I preferred to work on projects which are directly related to the online environment, that, at the same time, could be considered as works of digital art in a more general context. This had initially many difficulties in the aspect of designing a project, as Unity is not primarily created for such practice. Hence, the directions I followed were strictly guided, on the one hand, by the tools I was able to find and, on the other hand, by the constraints that the software itself was imposing.

One can, moreover, see the projects following, not only as ways of working with the digital objet trouvé, but also as an introduction of what can be done in Unity with tools that relate the basic software with the internet.

The engagement with the specific software also dictated, more or less, the form of the projects. The basic elements of a 3D space and navigation, that almost all of the following projects have, are primarily the impact of the Unity software. This can be rather common while working on Unity, yet, in this case acquires a special interest -as most of the Net Art projects we know tend to have two dimension forms- and creates a practice that even being directly related to the web, it has, at the same time, the general form of the virtual art works or, more generally, that of the video games.

The concept of the digital objet trouvé in the following projects has been also affected by the condition of the software. As the retrieved data were presented in virtual spaces and obtained three dimensions, they are preserving the notion of the objet trouvé in an apparent and basic way. They cannot be seen as implementations of some artistic value, but, since they correspond to the above theoretical reflections, they maintain two basic ideas. These are the notions of temporality and the procedure based function of creating the project, that both of which lead to the final form of the works being rather unpredictable. These two basic ideas have also emerged from the mixing of the practical experience with the theoretical one.

Temporality is retained and preserved in the following projects as an artistic value or as a discipline that would lead to a more original notion of the digital objet trouvé. Temporality is understood, here, in two ways.

The first one is that of the equality of the data used. In cases of a static online archive/database the content is presented horizontally. That means that every part of this archive can be replaced any time by an other one in an effort to indicate the general notion of the archive, rather than the value of a specific part of it. However, this aspect of temporality is rather static, due to technical reasons regarding the possibility of retrieving newly added content.

Thus, in the opposite direction, the second way of achieving the notion of temporality is genuinely temporal, but maybe more specific in terms of its programming. This second way of approaching the temporal character of the digital objet trouvé, is referring to data retrieved according to time as parameter. In this direction the link between the project and its content is directly related to concept of the “latest” which is very common on the online environment. That is the case of using latest posts, uploads or trends according to the project's intentions.

On the other hand the procedural character of the projects is connected to online and offline conditions. The procedural character is connected to the above mentioned notion of temporality. Since, in many cases, the content retrieved cannot be predicted, yet, what is designed are the same basic structures/rules of rendering this content. These structures are sometimes more and sometimes less abstract, however, they always indicate the basic concept of each project. In other words, if we have, primarily, a navigable space as the basic concept, the designing of that space is just some procedures that give abstractly the basic dimensions and the basic shape, but they neither form this space in detail, nor keep it strictly formed.

In cases, though, that the content is more predictable, as is the case of a known archive, the basic concept is focused on the specific character of the archive. The procedures, here, are organizing the data in a loose structure -as they are not important as an individual file, but rather as a whole. The structures, designed here, preserve the horizontal handling of the content mainly through functions of randomly retrieving and presenting data.

As far as the effort of categorizing the digital objet trouvé is concerned, my personal practice is focused on the first two categories I described: the “framed” and the “unframed” content. This is mainly related to the technical issues and the available tools that I had. However, I think that Unity as software may be

is the crucial factor to that.

If we keep the concept of the line -described on the previous chapter- that connects the information states from the more complex to the more raw, we can understand the two first categories as the beginning of experimenting, but also as the main field of the digital objet trouvé practice. In my projects, I tried to investigate the possibilities of using this content, as this condition was completely unknown to me, meaning to say, that my projects -from this point of view- are more related to sketches than to completed projects. And as sketches they do not serve any artistic aspiration, but rather, they are the laboratory experiments that attempt to test and to prove some theoretical thoughts. And as laboratory experiments they tend to be more direct and clear rather than serving the general conceptual character of an artwork.

3.2 Technical overview

The procedure of working with pre-existing objects -that are already uploaded- can be generally known in the environment of digital art. The use of downloaded assets or codes is maybe the most recognizable way of working in the digital framework. What is, however, crucial in this case, is the preservation of the notion of the objet trouvé. This is achieved -as stated in above chapters- by the targeting of the content and the ways it used.

This content should be uploaded data that are not initially created as potential assets in a virtual project. These are actually much more ordinary objects than assets and codes we download for the creation of such projects. From this point of view, the use of this content is also common in the digital life, such is the case of re-posting an information or using images and texts in order to write an article or create a meme. However, in terms of digital art, these data are not usually of any interest and especially in the case of virtual art projects. Thus, the technical aspect of my experimentation would be of little importance, if I was working directly through common online tools in this case, however, it was proved rather crucial, as very few people seemed to be interested in including online files in their immersive spaces.

I refer to “other people” as most of my technical solutions were given through online searching and especially through online conversations on forums. The majority of my cases, though, were rather lonely. This was a fact that could encourage my theoretical reflections, discouraging, at the same time, my aspirations on the practical level. The effort to become familiar with new tools and solve some problems, can be considered as a parallel search to that of the theoretical problems that I have already presented.

3.2.1 The WWW class

The first tool that allowed me to proceed to some first experiments is the WWW class, a native class of Unity Engine. This class is a basic tool for retrieving online data. However, it is rather constrained by the URL that someone uses to access these data.

Basically, WWW class is returning the data that the URL represents. This means that it can return text, images, sounds, etc. but only if that kind of data are exclusively represented in the given URL.

Obviously, this class is mostly created in order to be able to offer basic individual data to remote/online players of a game. This can be also understood by the reference examples: “Use it if you want to get some data from a web server for integration with a game such as high score lists or calling home for some reason”.

Nevertheless, this class can be rather useful when it was used to create a texture from an image accessed online. This was its primal use in many aspects of the experiments I did and it is also the basic way of rendering online content other than text. The code for this function is very simple and it is achieved through a simple Coroutine and the class's property texture (`www.texture`).

```
IEnumerator Start()
{
    using (WWW www = new WWW(url))
    {
        yield return www;
        Renderer renderer = GetComponent<Renderer>();
        renderer.material.mainTexture = www.texture;
    }
}
```

Regardless, the simple way that this tool is rendering online images, its main disadvantage is its dependency from the URL used. Especially when it comes to an abstract/procedural way of handling online content in a project the URLs that can be used are significantly restricted. For example, if you want to render all the images of a website you should know exactly the way this site constructs the URLs of every image that is shown in its pages.

This procedure, though, demands the examination of the URLs describing each image that in many cases is either encrypted, chaotic or random. Thus, to navigate through the database of a site you need to understand the way that the site produces its URLs. Also, while in real browsing conditions the link of an image is easily accessed by a right-click menu, in the remote procedural way of retrieving content that is attempted here, things are getting very complicated.

The issue of procedurally producing URLs will be also encountered in the following tool used. The difficulty, though, of accessing web pages automatically can reveal many interesting facts about the

structure of the web and the ways we navigate through it. This brings us in mind the previous discussion on the hyperlink, although here is more of technical problem and its solution is relevant, mostly, to the security measures of every site. This also draws a first but rather indicative difference between the “framed” and the “unframed” content.

3.2.2 The embedded browsing

The second kind of tools is referring to what we can call “embedded browsers”. These are actually assets for Unity that allow to render a browsing session inside the environment of Unity. The main problem with these tools is that most of them must be purchased through Unity asset store and only few of them are open-source and free. I used two of them, although due to other technical problems and due to the occasions of finding them, I did not manage to elaborate deeply on them.

The first one is Awesomium Unity tool, which is actually a WebKit wrapper which provides means to display HTML interfaces and web content within other applications. The last working version of it is for 32-bit Unity editor that has been discontinued since a couple of years. I worked with it for a small project but since this old version of Unity wasn't compatible with other tools I left it.

A second and rather fresh tool, however, is Simple Unity Browser by Institut XR⁵¹. Unfortunately, since it was published only in November 2019, it wasn't possible for me to find it at that time, when I was experimenting with the embedded browsing. I was informed about it rather lately and I wasn't able to work intensively with it. From a very first look it seems a rather good and useful tool that I would recommend.

Despite, though, the tools, a browsing session embedded in the virtual environment of Unity was rather impressive. The use of browsing as a moving image was my basic use of the embedded browsing. Viewing an image that normally would appear as whole in a distinct computer monitor is really interesting, especially when this image is wrapped on 3D object, floating or found in different positions than the vertical one, in which we normally find it.

Embedded browsing had also some issues that would make its use difficult and significantly restricted.

51 *InstitutXR/SimpleUnityBrowser*. (2019) 2019. C#. Institut XR. <https://github.com/InstytutXR/SimpleUnityBrowser>.

That was again mainly the security measures of some sites and especially that of the more formal/commercial ones. Both tools were offering the basic interaction features through the mouse, but in the case of procedural abstract navigation things were getting complicated. For the experiments I tried to carry out, where the images of the web-pages were independent from the user navigating the space, the main problem was that every time a session was about to begin I had to click all the “accept cookies” buttons and in some cases the automatic access was tracked and I was either blocked or asked to pass through an “I am not a robot” test. The URLs that I could use were also of some difficulty as the automatic redirection and the encoding that some sites such as YouTube are committing weren't allowing much of navigation freedom.

What was, however, interesting were the web-pages that allowed a free access which, I believe reveal a lot for their character regardless of this condition of automatic access. The most freely-accessed pages were those of of 4chan.org type or 9gag.com. This I think is a rather interesting fact, not only because it is revealing their free access policy but also because this policy goes along with its free contribution policy and, above all, their engagement with the internet activity a distinct cultural phenomenon.

3.2.3 The APIs

The last type of tool I experimented with was that of the APIs and especially the Twitter API. My interest for the twitter as a mechanism that responds and reacts constantly to everything happening was the major factor for this choice. I later tried to use Instagram API but there the things were rather complicated as far as the Unity is concerned.

The Twitter API is generally easily accessible from Unity and there are also a couple of open-source tools for that. I used the “Twitter REST API tools for Unity” by Craig Tinney, which was very simply constructed and understood. The API is generally a very useful concept for understanding the online objects as it normally guides you through specific classes/categories of objects that constitute big social media pages/applications. What is also interesting is that APIs are used not only for third-party applications' development, but also for retrieving what we call Big Data and proceeding to various researches. From this point of view, APIs can be seen sometimes as sources of “unframed” content but also as sources of “raw data”.

In my case, I used data from Twitter mainly as “unframed” content and especially, as way to create an essence of the very present as this is expressed through the global trends or the latest tweets. Even if in this case, there are also restrictions and constrains, Twitter API was very easy to use and generally very stable. However, due to security restrictions and, more precisely, due to different methods of authenticating requests of data, I wasn't finally able to make use of all the functions of the API in Unity.

The way I used the API finally was based on two different methods. The first one was to retrieve global and local trends -which are actually the fifty most popular hashtags of Twitter globally or of a specific place- and popular tweets based on a key word. The second way was referring to the archive of the users, from which I retrieved randomly profile data of users based on their twitter id number.

3.3 Attempts on working on the DOT

The outcomes of my attempts on working with the digital objet trouvé can be included in five separate small projects and presented chronologically as this way corresponds to my progress in the technical aspect, in the same way that the later was presented above.

These projects are mostly simple implementations of the tools and the principles I presented in the two previous chapters. Beginning from simpler codes and tools towards bigger scales and towards mixing different tools, these projects indicate the way I approached my subject even before start reading or watching other works based on the search and definition of the digital objet trouvé. Their presentation here is at the same time a report of a progress towards the definition of the objet trouvé, as well as a guide to some basic tools that connect the Unity with online content.

3.3.1 A collection of random pictures

My first attempt to use online data as part of a Unity project was done by exploring the native to Unity Engine WWW class. However, from the technical aspect as well as from the conceptual aspect the content itself is the most important part of this project.

Initially, I wanted to present, without any mediation, a very specific kind of archive of images we find online. This is the case of collections of images that we encounter either under a personal choice or under a collective uploading procedure. This content can be included under thematic titles such as *“funny pictures”*, *“weird pictures”* etc. What is important, in my point of view, is that these pictures as they are usually of low resolution or even of no interest at all, acquire their meaning under a title with the most interest that of the “random images”. To me, it is rather interesting what can really define the idea of random and moreover how this content is of any attention under this title. Thus, random images are part of a new online activity, that of wasting time and, if you have the experience of this content from sites like 4chan.org, you can guess when an image could be included in such a collection and that was what I wanted to do here.

As mentioned, the most critical issue is that of “creating” the correct URLs for retrieving the images. This demands that one should study the way these URLs are formed and write a relevant function. However, the case of 4chan.org was finally rejected as the URLs of the images uploaded were

completely incomprehensible. Instead, I worked on leenks.com which is mainly a webpage with interesting links from other sites. Apart, though, from links this webpage also makes its own collections of images calling them galleries and sometimes it also uploads some collections under the title “random pics of the week (date)”. The images in these collections are connected to URLs in a rather reasonable way which I could reconstruct in a function. So, what I mainly did was to arrange a basic geometry of an amount of planes which would rotate and fall where those planes random pictures from the already uploaded galleries would be rendered. By observing the URLs I understood the way they are formed.

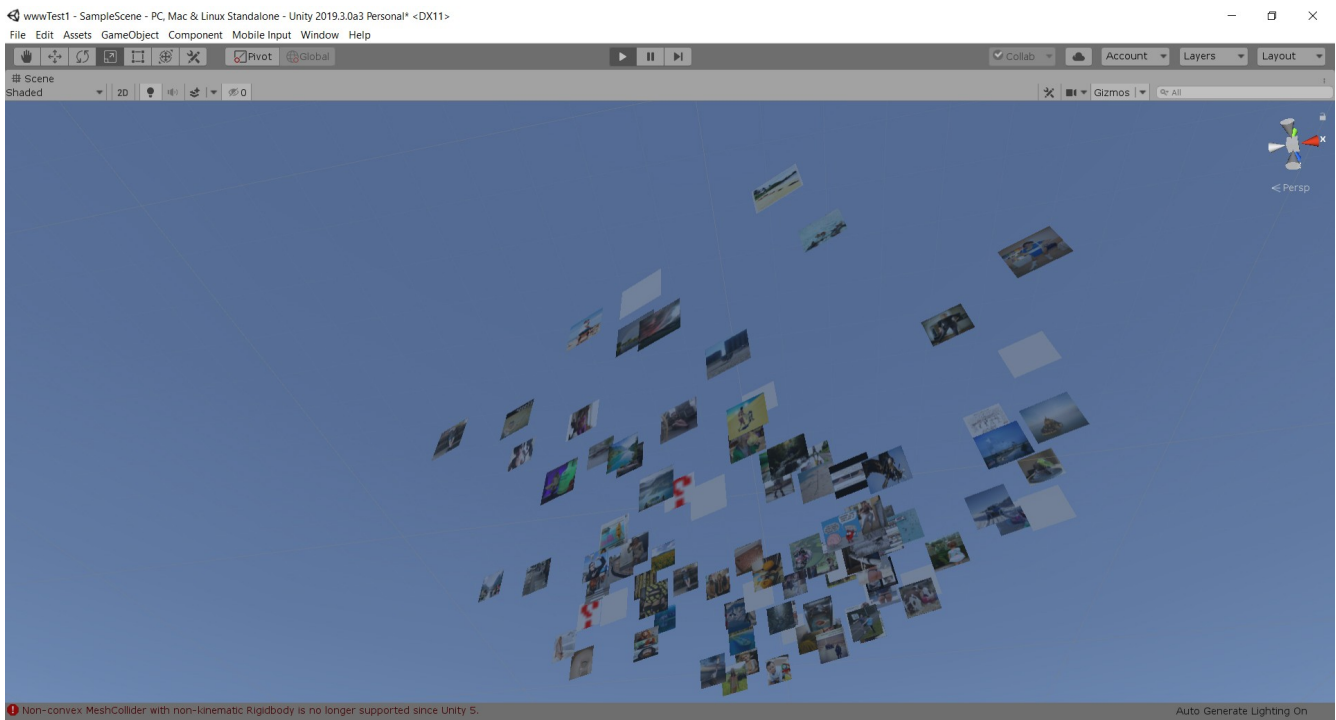
For example, by the URL <http://content.leenks.com/pics/2016/random356/random-14.jpg> the number 2016 is indicating the year of the upload, the number 356 is serial number of the gallery and the number 14 was the number of the image in the specific collection. I found also that the serial numbers between 336 and 421 were referring to collections between 2015 and 2018. According to these, I made the following function which would randomly update the image of every plane.

```
IEnumerator LeenksRandomPics()
{
    serialN = (int)Random.Range(336, 421);
    imageN = (int)Random.Range(0, 44);

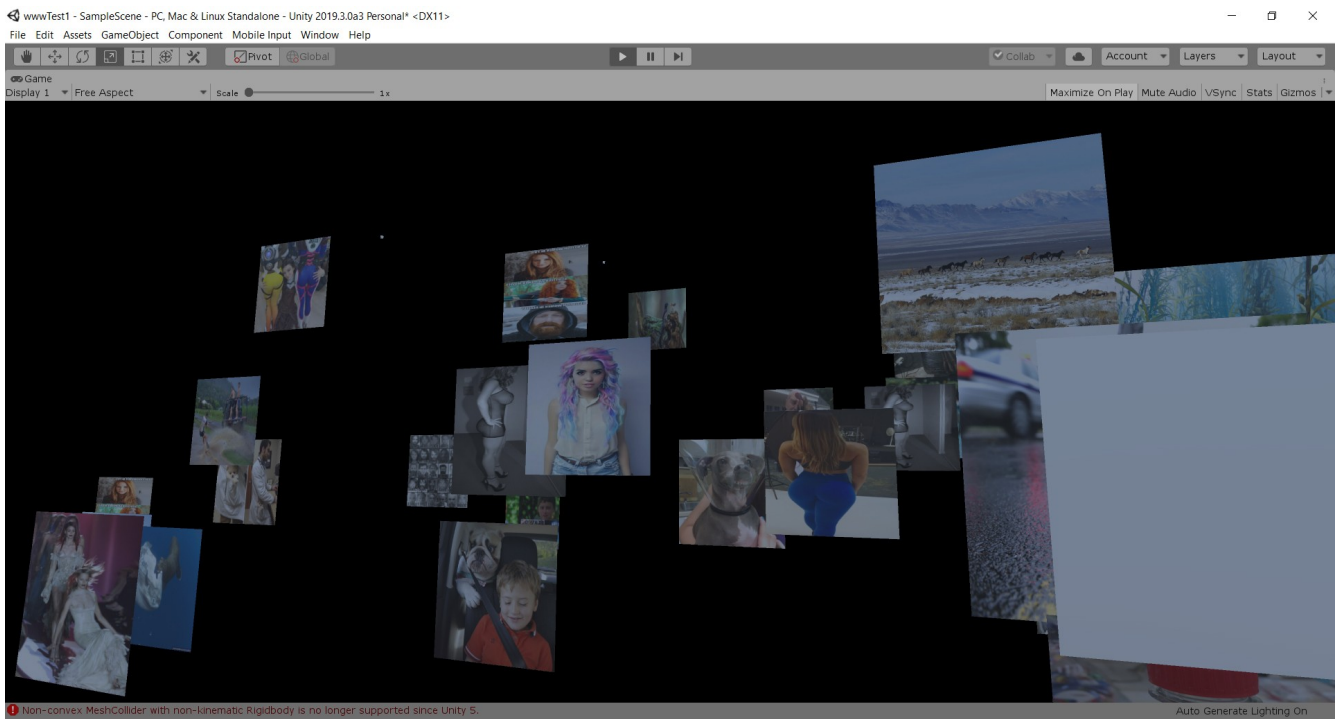
    if ( serialN >= 411) yr = 2018;
    else if ( serialN >= 388) yr = 2017;
    else if ( serialN >= 350) yr = 2016;
    else yr = 2015;

    url=string.Format("http://content.leenks.com/pics/{0}/random{1}/random-{{2}}.jpg", yr,
serialN, imageN);
    on = false;
    using (WWW www = new WWW(url))
        yield return www;

}
```



Ill. 36: Screenshot from the project “A Collection of Random Pictures”; The Instantiated cloud of the pictures



Ill. 37: Screenshot from the project “A Collection of Random Pictures”; View from the user’s position.

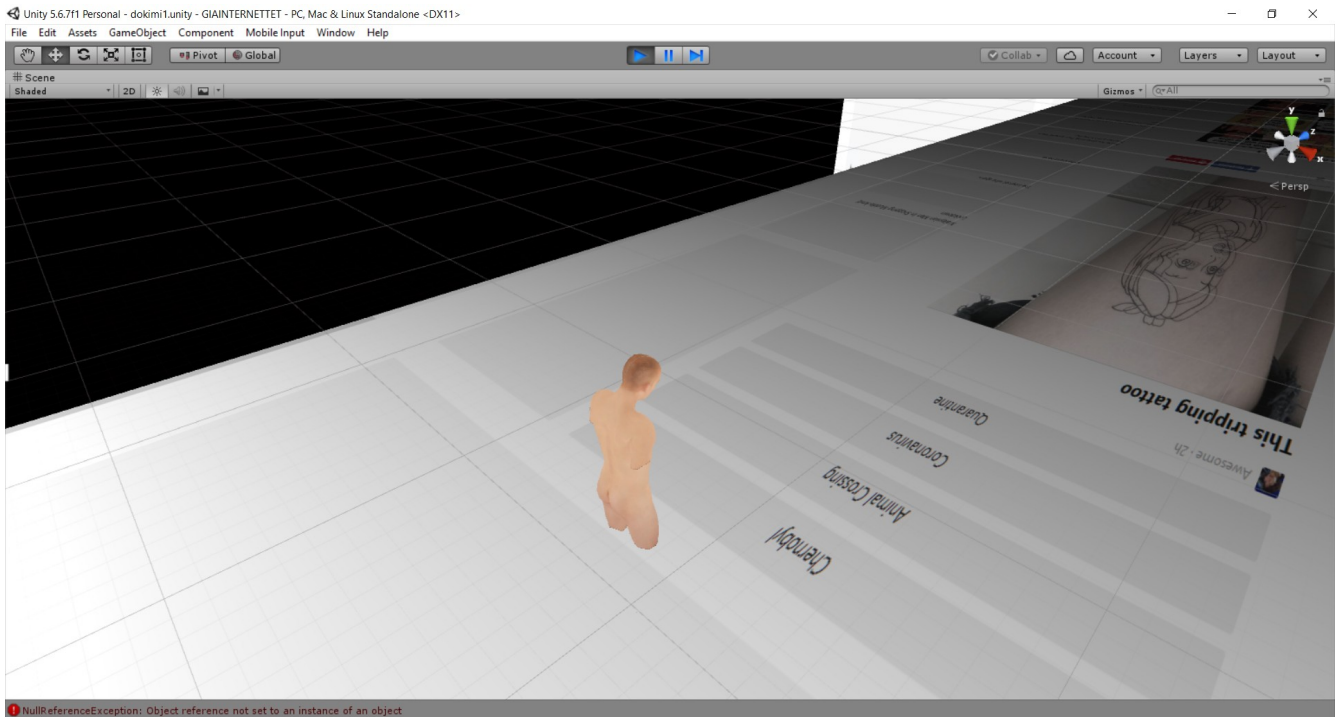
3.3.2 Walking /Scrolling

My second ATTEMPT was to use the image of a browsing session inside the Unity environment with the Awesomium Unity tool. Apart from the difficulties of compatibility my only interference in the code was in the part of an indirect interaction.

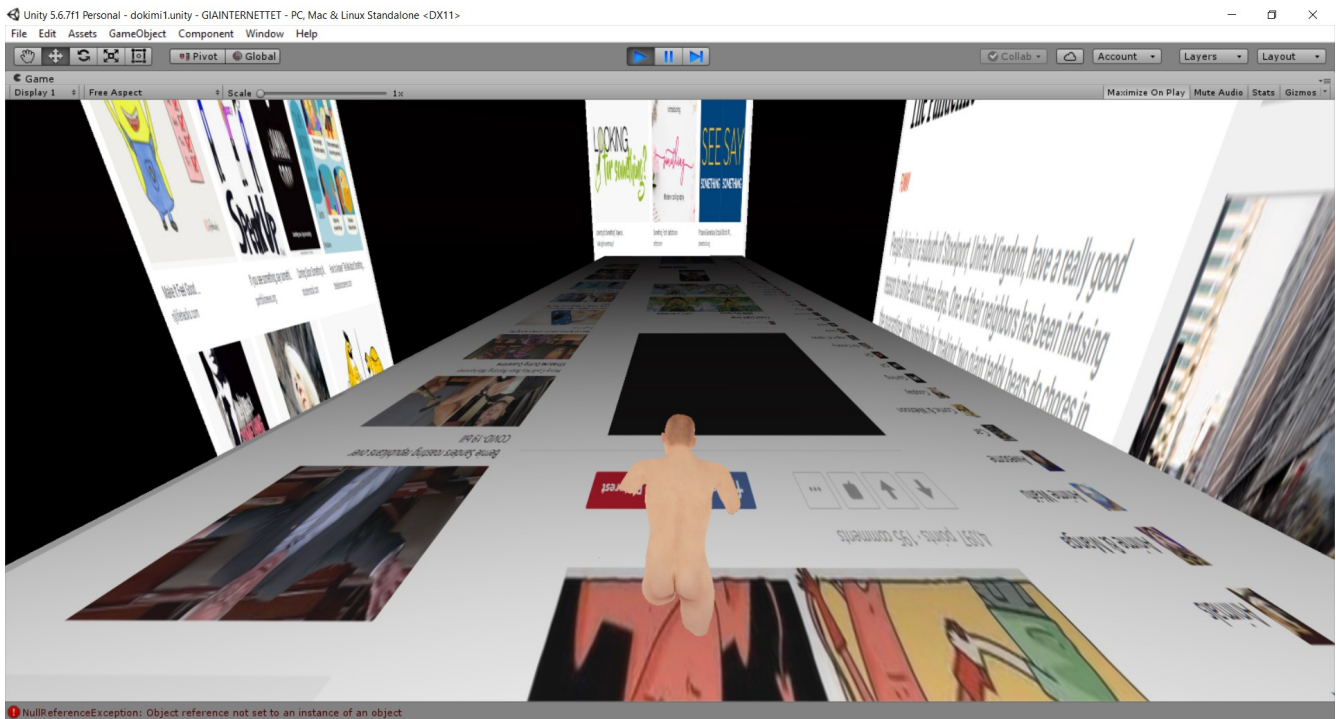
The basic concept I worked on here was that of using the action of scrolling. I rearranged the vertical state of the web pages to a horizontal one and I placed a human whose movement/his action of walking would create the illusion of scrolling. To be able to achieve that I should connect the “w” key with the moving forward of the person as well as to the scrolling of the page. What I also needed was a webpage with the function of infinitive scrolling as well as being enough loose to allow me automatically access it, that was the case of 9gag.com.

In parallel to the long corridor, where the character was walking on, I placed also some other planes scrolling automatically the threads of 4chan.org. As these pages were much shorter, I had to refresh them with new pages. For that I wrote a similar function with that of the first example to produce URLs for the different categories of 4chan.org as they are represented by the encoding two or three letters.

From the technical aspect this project is not of any importance, the final form was also pretty simple, but rather intensive as the character's movement would reveal the home page of 9gag.com. The concept, even though being rather unsophisticated, I think illustrates a very clear notion of the ready-made experience as a home page is used a corridor/street. The conceptual practice here is that of the rearranging of a known object in a new position that would reveal a new aspect of it. As such, I think, is very close to the classic “Duchampian” practice.



Ill. 38: Screenshot from the project “Walking/Scrolling”; View of the setup.



Ill. 39: Screenshot from the project “Walking/Scrolling”; View from the user’s position.

3.3.3 Online Landscapes

The following two projects can be presented together as they are very similar in their concept and their technical requirements. These two projects are basically an open navigable/walkable terrain where, apart from the ground, all the other elements of space take their form from online data retrieved mainly from the twitter API.

Along with the first-person character, some other planes -which seem to wander around- represent other characters as the planes render the profile images of random twitter users. This was done through the native Unity WWW class and the profile data of users that I retrieved through their ids. The twitter id is a simple number between 1 and somewhere over 300 million. Even if this number is produced in a complex way, many of the numbers between those two limits are valid, meaning to say that at least, it's easy to pick random users.

The sides of this terrain are boarded by big planes rendering the global and the local trends of twitter at the specific moment. The word trends refers to the most popular hashtags and as local places Athens and Paris have been chosen. The specific place -for which someone was to retrieve data- is represented in the Twitter API by a number called (Where On Earth Identifier).

Finally, one can observe the slow falling planes rendering tweets that contain the word "internet". This element is the only one that doesn't correspond to a specific element of a landscape, however, along with trends, it is what it attracts most of the users attention as he tries to read them.

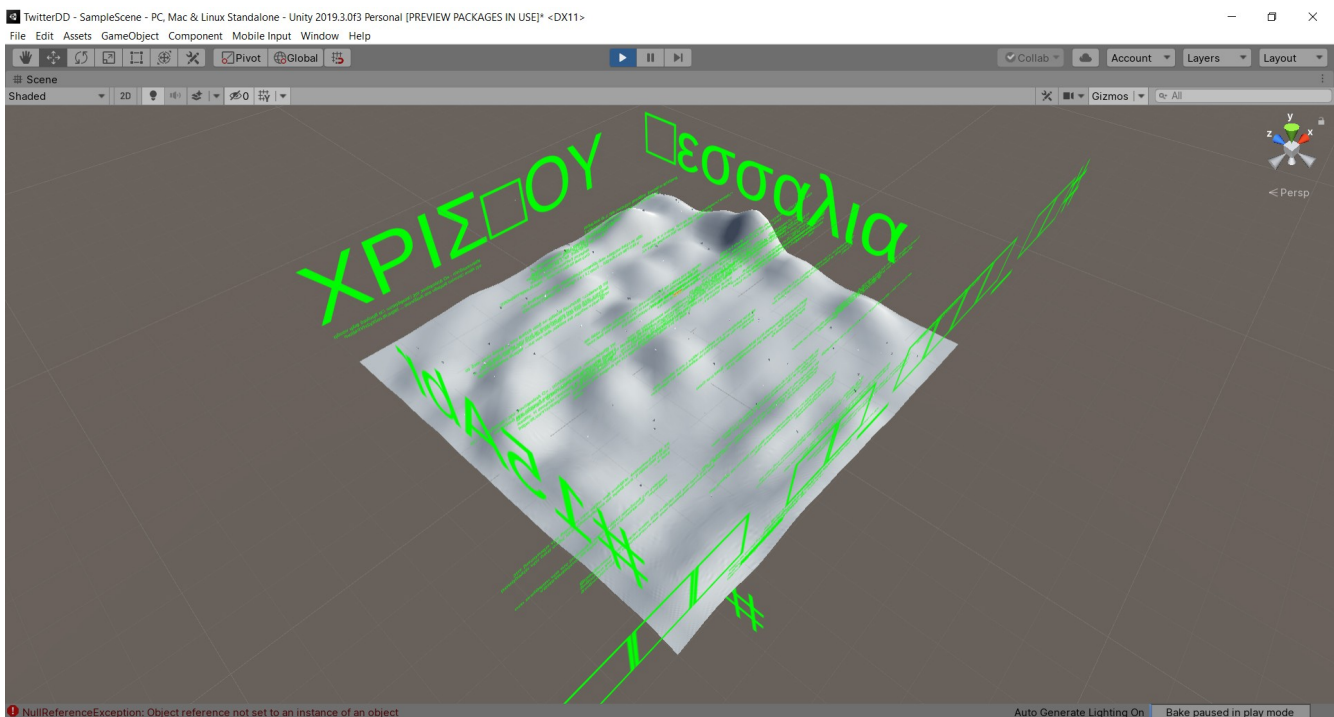
These are the common elements of the two projects. The second version is preserving all the above and has extra elements that are not connected to the twitter API. On the terrain one can find trees whose leaves are images retrieved from the galleries of random pictures from leens.com similarly to the first project. Finally, one side of the terrain is occupied by the formation of a water fall where, in the same concept as with the previous project, the automatically scrolling page of 9gag.com is giving the illusion of falling water.

From the technical aspect my interventions on the initial code were few. However, getting familiar with the API demanded a lot of time as most of its functions were asynchronous, a concept that I wasn't

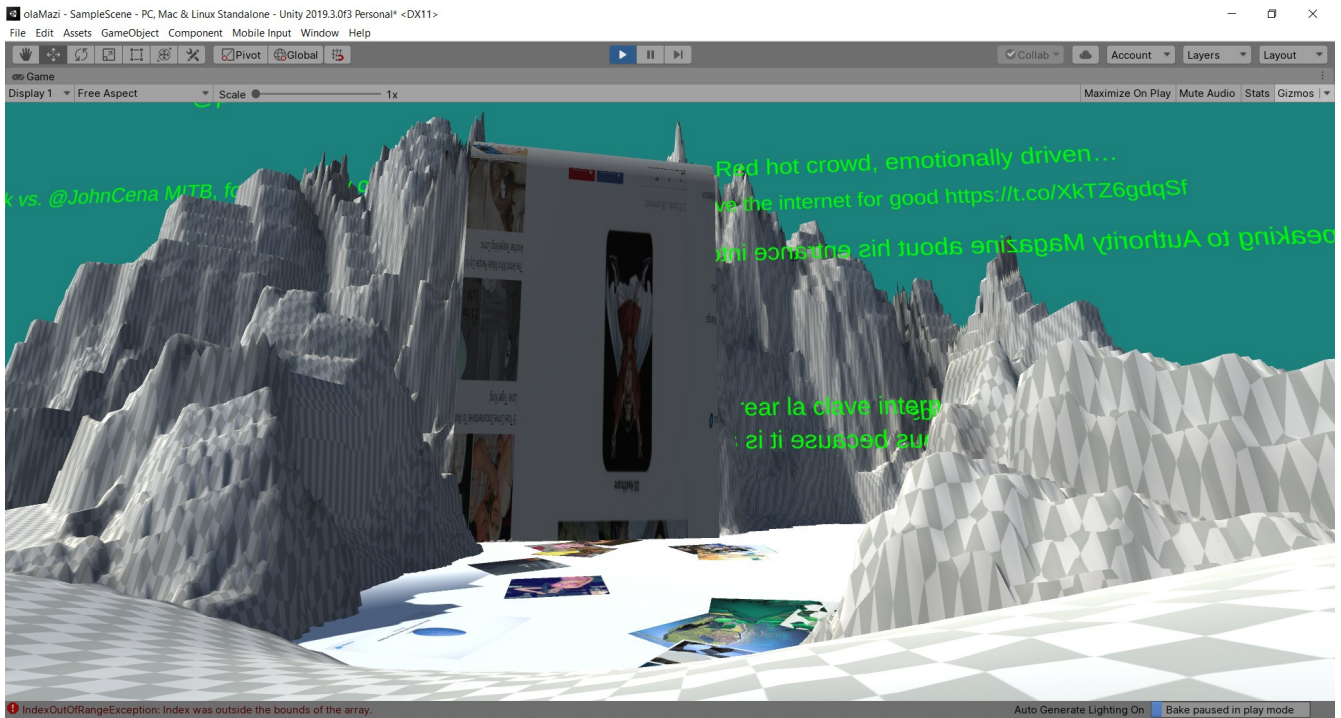
familiar with in the beginning. Apart from the API all the rest of the coding refers to general rules that define the behavior of each type of elements. These two spaces are organized by GameObjects that are “responsible” for instantiating and handling elements of the same kind such as the trends, the users, the tweets etc. Thus, the biggest part of the coding, even being a bit complex sometimes, was referring mostly to the handling of content, as it is the case of the most Unity projects.

These two projects are even more representational, in comparison to the previous, and maybe even simpler in terms of concept. It is true that the final form is rather representational and perhaps of no interest, as experiments, though, these spaces are giving the simpler and more obvious idea of how can someone use the online content in a virtual environment. However, these spaces cannot only be seen as implementations of the objet trouvé for creating alternative assets, but also as spaces of online navigation, since every time someone visits them, they present content from this very moment. One can observe the trends of the specific time as well as read some tweets.

In other words, this is not just a navigable space, but rather a hole from which someone can observe the internet while being outside of it. This the basic concept on which the last project is made.



Ill. 40: Screenshot from the project “Online Landscapes 1.0”; General View of the setup.



Ill. 43: Screenshot from the project “Online Landscapes 2.0”; View from the user’s position.

3.3.4 Laverie Mural

The last project is conceived as a wall projection in the same way as a mural could be and the word *laverie* is the thematic direction of the work. The basic idea of the mural, though, is relevant to the coexistence of the different scales of the objects that shape the composition. The reference, here, comes from Diego Rivera's murals where in one large composition, small stories would take place constructing a multinarrational approach of a general subject. In a like manner, here, different elements of different sizes, each one with a story, form a larger composition under the subject *laverie*. Almost all parts of this composition come from the Twitter API and most of them have a certain relationship with the word *laverie*.

Apart from the large scale hashtags, presenting again the world and the Parisian trends, and, in a way, stamping the temporal identity of the work, every other element is more directly connected to the subject. On the left we see the latest tweets containing the term *laverie* and on the right the latest tweets of users that their name contains the word *laverie* (some of them are *Laverie* or anything else close to the original search term). On the back we see the profile pictures of these users floating freely.

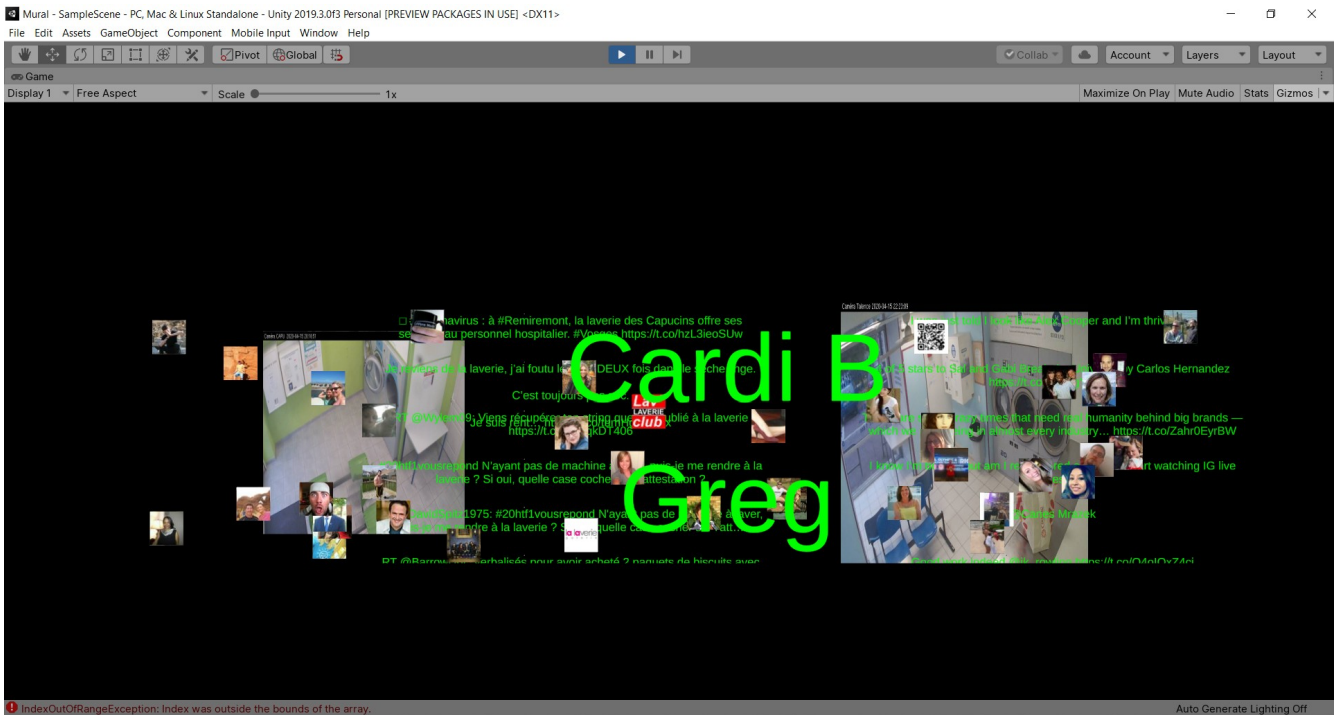
The two large images are the only element that doesn't belong to the Twitter API and they are the streaming image of live cameras installed inside some laiveries in Paris.

From the technical aspect, most of the elements are constructed in the same way as the previous landscapes. The live cameras have been used inside the Unity with the help of the WWWclass, but this was possible mostly thanks to the specific URL that the site of hosting live cameras was providing. That means that not every site was possible to be used, especially sites that use a media player interface. The code for converting the streaming image to texture was found in the Unity forums⁵².

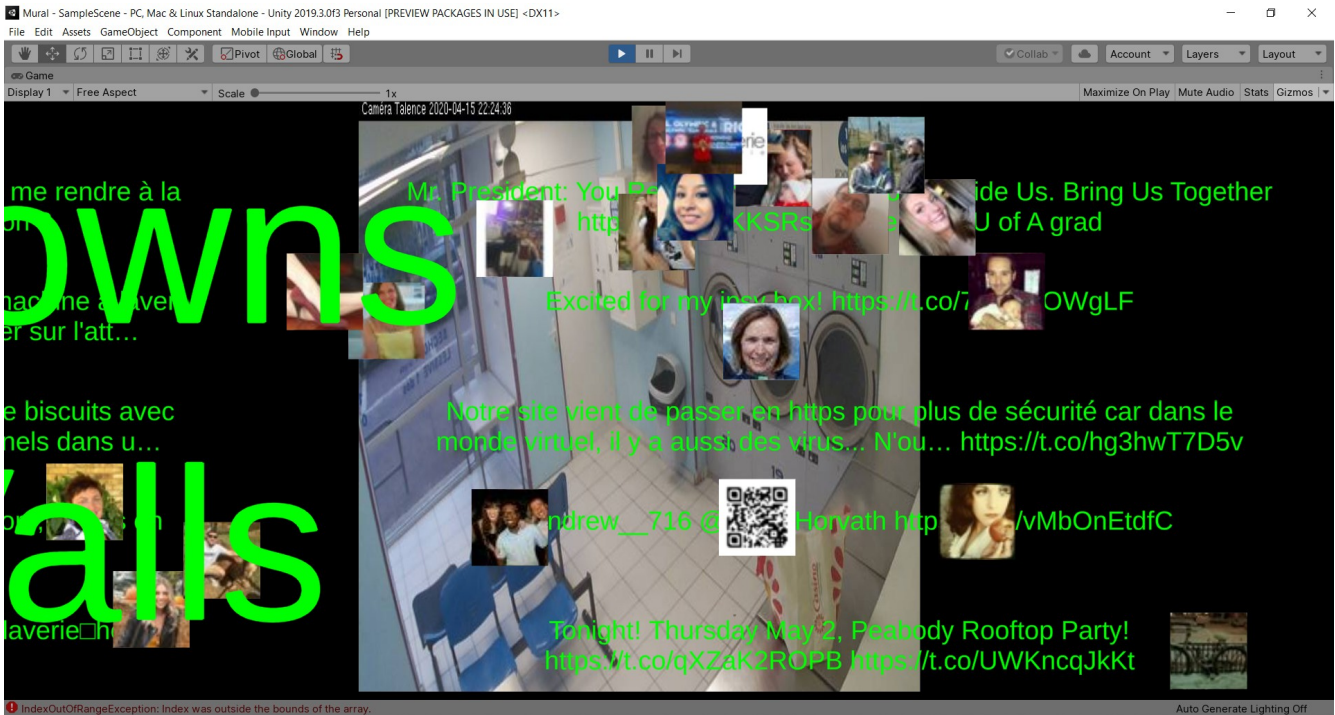
In this version, the user moves the camera -and his eyes- in all three direction in order to see bigger or smaller parts or to read something. That would not be necessary in the case of a projection -as in the case of a real mural- where the spectator could move closer to the wall or stand in a distant position to conceive the whole composition.

This work remains loyal to the two principles of the previous chapters: the temporality and the procedural form. The contradiction with the static wall is obvious from the title and aims at a reflective attitude towards the digital state of our era. The two principles, here, produce a constant oscillation between the permanent subject, described in the title, and its ever-changing representation according to the very moment that someone encounters the work. This composition is formed by pre-existing objects that lie in online ecosystem and, as such, can be constantly captured in a different states. What ensures this condition is the procedures retrieving these objects which, in spite of being uncertain of the object's exact look, they yet know how and where to spot/find them.

52 "Show Video from IP Camera Source. - Unity Answers." n.d. Accessed April 12, 2020. <https://answers.unity.com/questions/1151512/show-video-from-ip-camera-source.html>.



Ill. 44: Screenshot from the project “Laverie Mural”; View of the whole wall.



Ill. 45: Screenshot from the project “Laverie Mural”; Close view of the wall.



Ill. 46: Chauvet Cave. *Three Bears of the Recess*. Cave painting.

Conclusion

The digital objet trouvé as was traced in existing digital artworks, as defined and as applied in my personal practice, seems to be more of a field under further examination rather than a sufficiently defined term. The possible ways of further expanding this term is, in my opinion, the most pleasant outcome of this essay.

As we can conclude from this point, the definition of this term seems to be an adequate field of further study not only from a theoretical aspect but also from the aspect of the artistic practice. The latter seems to be a rather promising field due to the fact that many of the potential tools have not been studied enough and, even in the direction of the real time engines, there are a lot more possibilities.

What I think is also promising, regarding the artistic practice, is the potential that this term can have in the contemporary internet art which gains attention the last years. The social networks are, in my opinion, the most promising field of expanding this term, as they are the primal web field where the channeling content is mainly produced by its users. As such, social networks can be seen as a major pool for retrieving objets trouvés.

Furthermore, this specific kind of the objet trouvé is interesting for one more reason. As products of their time, these objects are not only individually produced, but also highly personalized. The principle of personalization, as a major characteristic of our contemporary “industrial revolution”, acquires its most interesting aspects by its internal contradictions rather than from its grade of uniqueness. Put differently, social media, as pools of personalized objects orientated to personal expression, would be, in my view, a rather interesting field for artistic practice which would seek to present the grade of variety inside this personalization.

In this case, the objet trouvé is a matter not only of practice but, much more, of artistic strategy. The issue of strategy that could be searched above, alternatively as an issue of importance, is maybe the most prominent potential of the digital objet trouvé from a theoretical aspect.

Until this point, I demonstrated and supported the relation of the objet trouvé with reality. However, as

reality is a highly complex term which plays a very crucial role in the history of art, a new extension of the above essay could be a more profound study of the matter of reality under the prism of strategy. For, reality will be always a matter of discussion and the objects that construct this reality before our eyes will always play a vital role in this discussion. Be it as it may, reality and its “real objects” in the human activity of producing art or artifacts can be also traced in many more eras and tendencies other than the one of the modernity, where on this essay focused.

A very interesting observation indicated me that the way a bear is painted in the Chauvet Cave some many thousands years ago, was adapting to the rock's formation to adjust the form of the bear in a rather perspective way. This engagement of the real with the artistic may give grounds for further reflections upon the digital objects that form our reality in a completely new direction, even far from the traditional way of perceiving the objet trouvé from the era of the modernism.

Above all, in order to be able to direct our practice towards more interesting orientations rather than experimenting for the sake of form, we should establish a relation to reality. This relation can be the basis of a general intention of a creator; a stamp, after all, of the character of his actions, of his political identity. Or, simply put, according to Rancière, the artistic practice, in order to express its intentions, should be attached to reality or, at least, to the reality as conceived by each one.

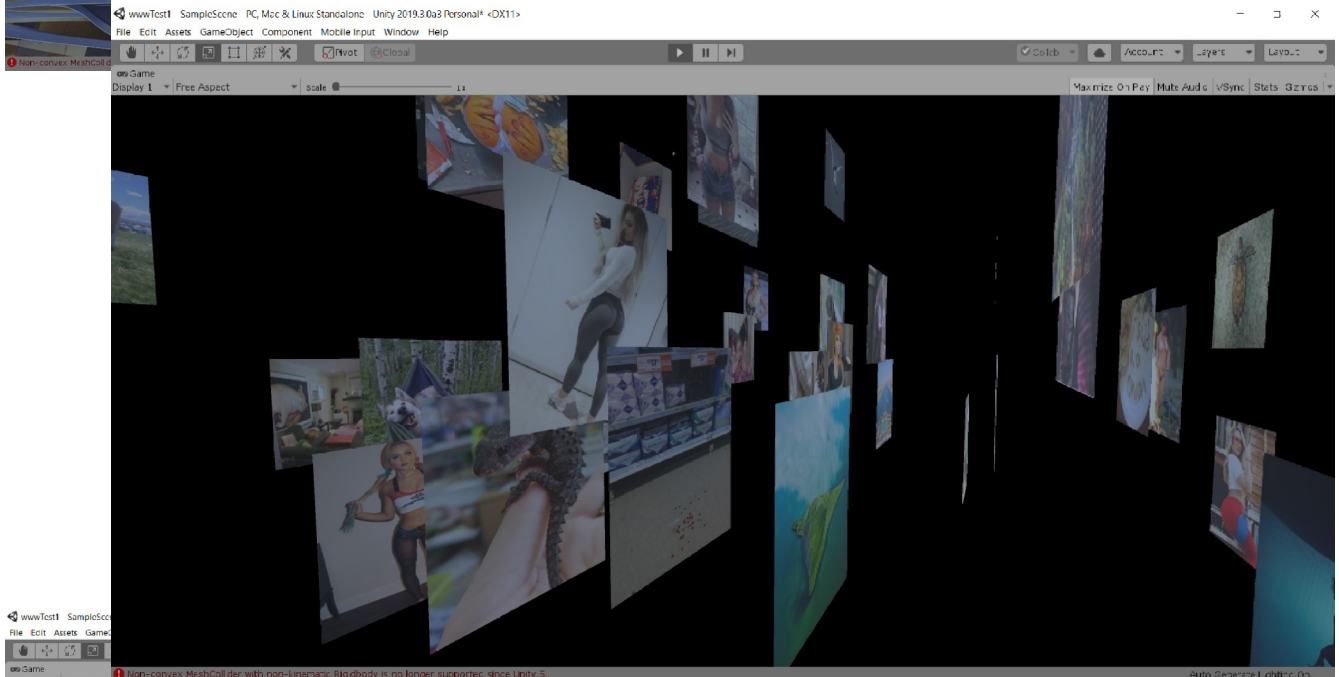
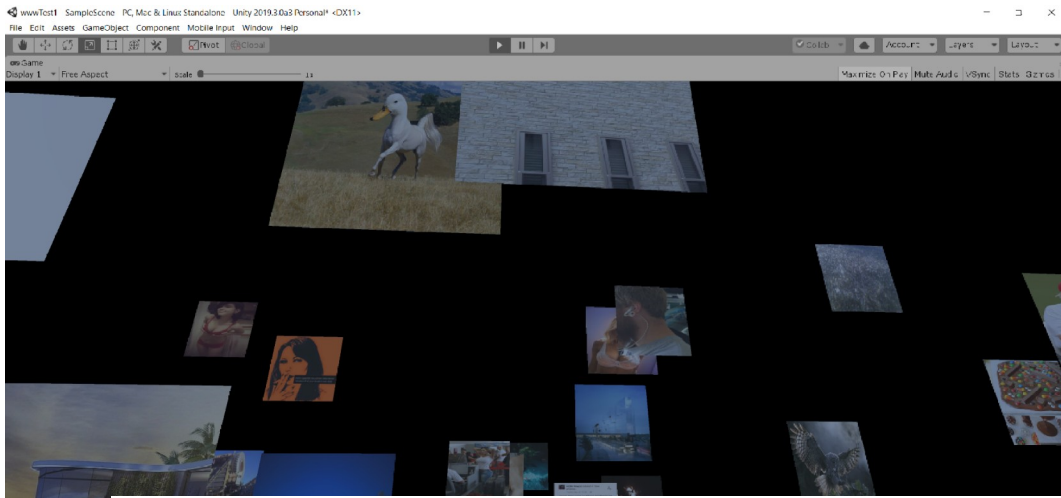
It thus appears that art does not become critical or political by "moving beyond itself", or "departing from itself", and intervening in the "real world". There is no "real world" that functions as the outside of art. Instead, there is a multiplicity of folds in the sensory fabric of the common, folds in which outside and inside take on a multiplicity of shifting forms, in which the topography of what is "in" and what is "out" are continually criss-crossed and displaced by the aesthetics of politics and the politics of aesthetics. There is no "real world". Instead, there are definite configurations of what is given as our real, as the object of our perceptions and the field of our interventions. The real always is a matter of construction, a matter of "fiction".[...] Consensus means precisely that the sensory is given as univocal. Political and artistic fictions introduce dissensus by hollowing out that "real" and multiplying it in a polemical way. The practice of fiction undoes, and then re-articulates, connections between signs and images, images and

*times, and signs and spaces, framing a given sense of reality, a given "commonsense". It is a practice that invents new trajectories between what can be seen, what can be said and what can be done.*⁵³

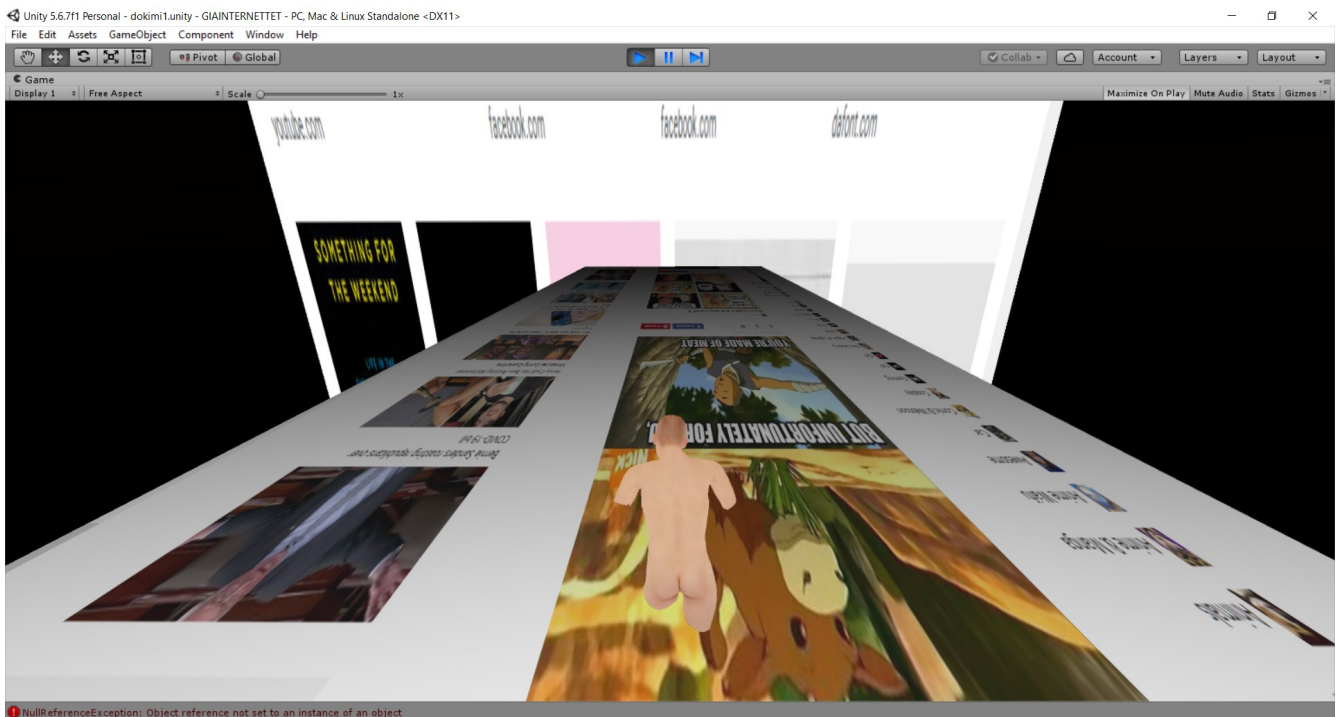
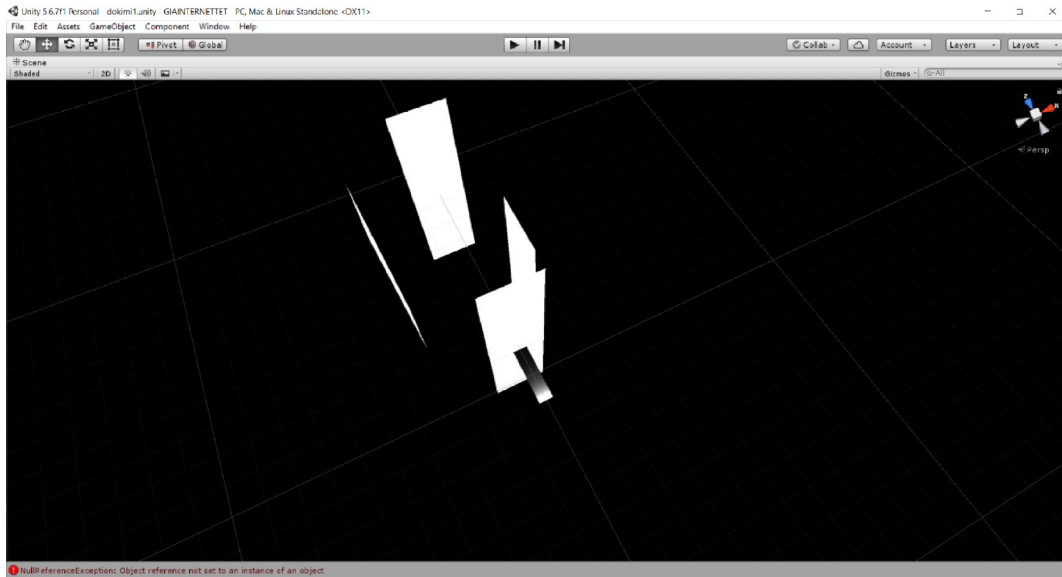
53 Rancière, Jacques. 2015. *Dissensus: On Politics and Aesthetics*. London: Bloomsbury Academic. p. 148.

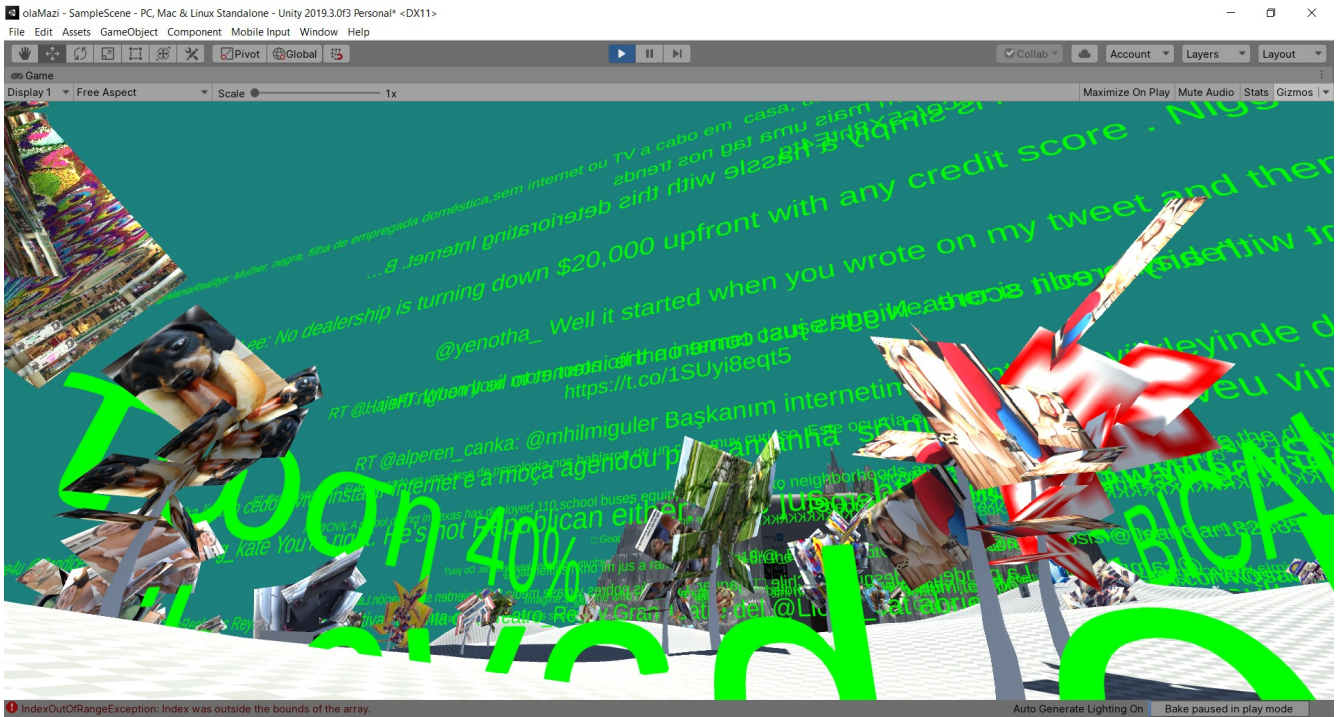
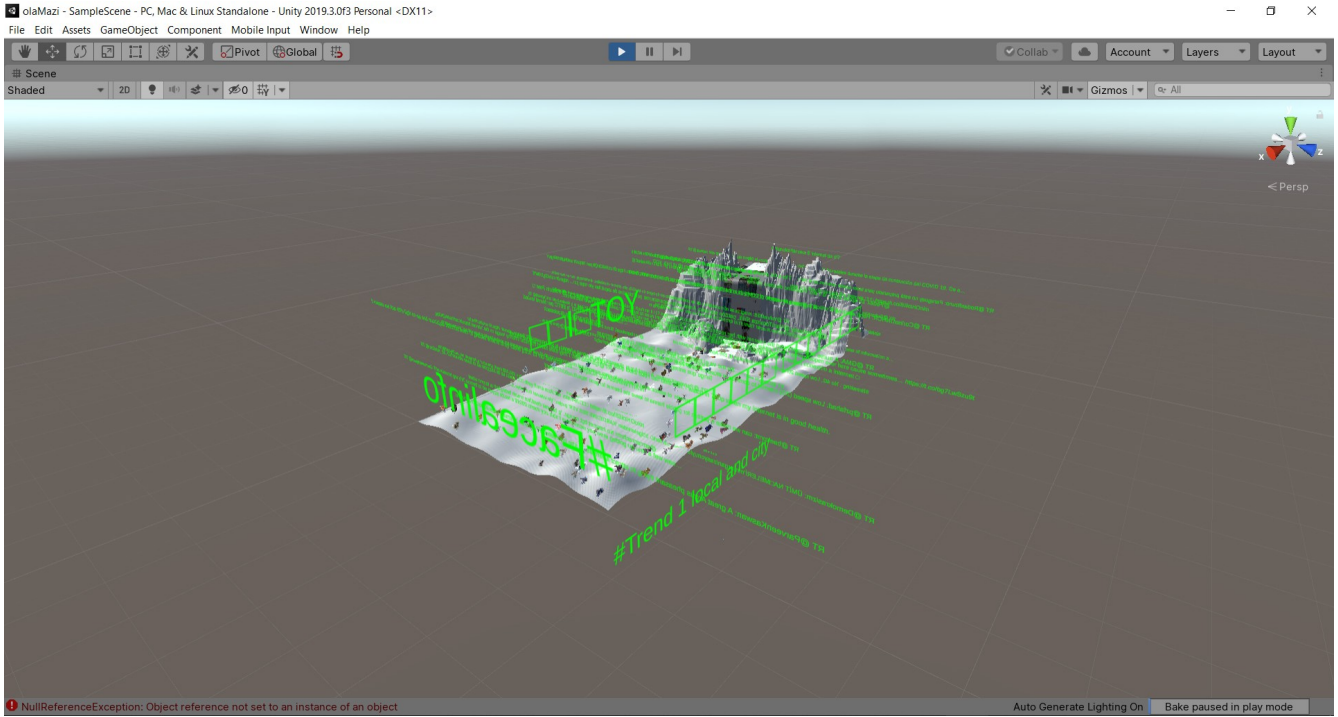
Additional Images from the personal projects

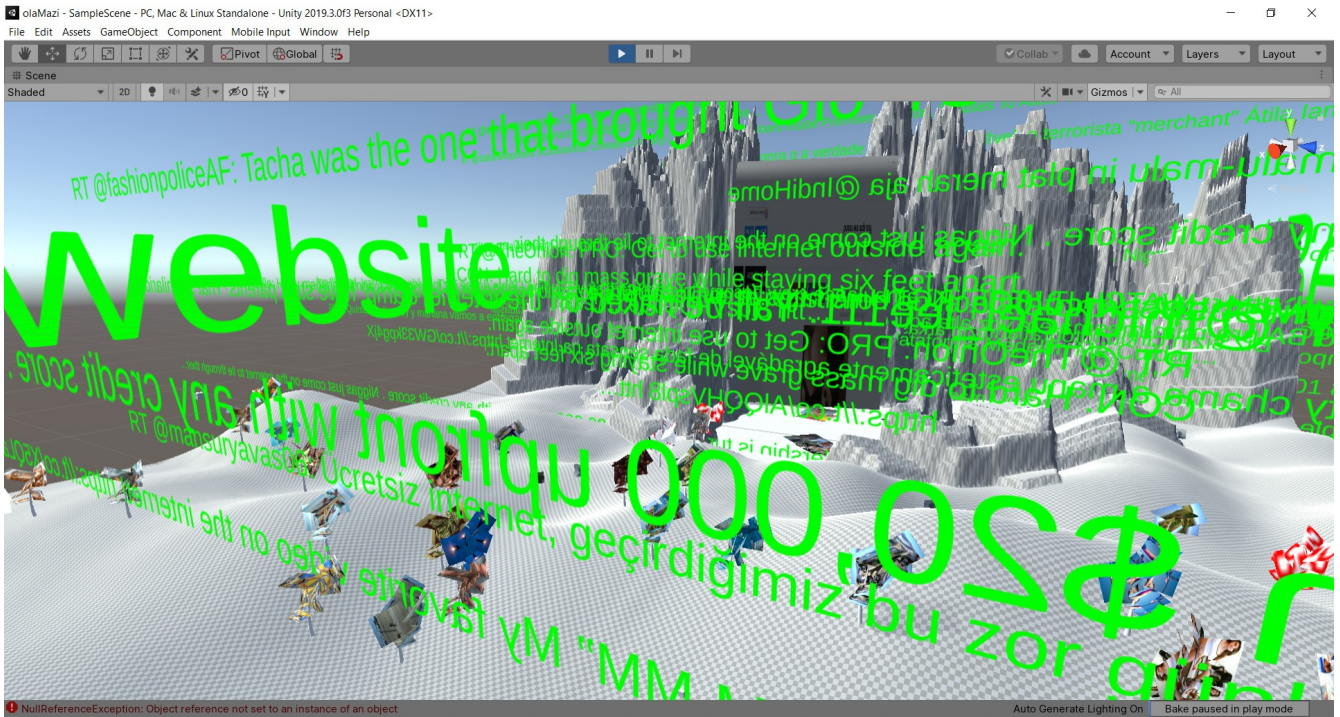
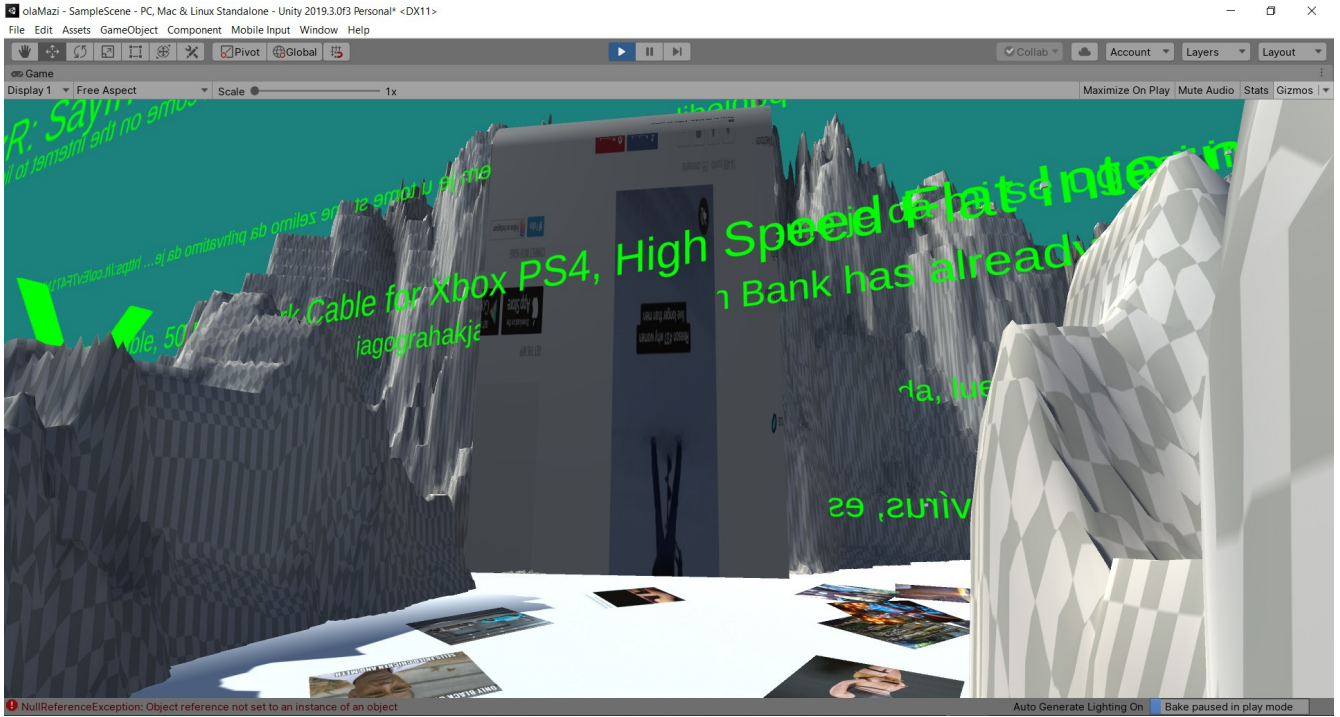
A Random Collection of Pictures



Walking/Scrolling







Bibliography

Books

- Breton, André. 1969. *Manifestoes of Surrealism*. University of Michigan Press.
- Manovich, Lev. 2002. *The Language of New Media*. Reprint edition. Cambridge, Mass.: The MIT Press.
- Negroponte, Nicholas. 1995. *Being Digital*. Vintage Books.
- Nunes, Mark, ed. 2012. *Error: Glitch, Noise, and Jam in New Media Cultures*. New York: Continuum.
- Popper, Frank. 2007. *From Technological to Virtual Art*. Lilburn, Ga.: The MIT Press.
- Rancière, Jacques. 2015. *Dissensus: On Politics and Aesthetics*. Translated by Steven Corcoran. London: Bloomsbury Academic.
- Schroeder, Ralph. 2018. *Social Theory After the Internet: Media, Technology, and Globalization*. 1 edition. London: UCL Press.
- Seitz, William Chapin. 1961. *The Art of Assemblage*. 1st edition. Museum of Modern Art.
- Weibel Peter, Timothy Druckrey, ed. 2001. *Net_condition Art and Global Media*. First Edition edition. MIT Press. Articles form this book:
 - Castells Manuel, *The Net and the Self, Working Notes for a Critical Theory of the Informational Society*. p.30-47
 - Wisniewski Maciej, Wakkary Ron, *Netomat*. p.80-81.
 - Baumgärtel Tilman, *Net Art. On History of Artistic Work with Telecommunications Media*. p.152-161
 - Lischka Gerhard Johann. *Everyone a Mediator*. p.168-171.

Articles

- Broeckmann, Andreas. n.d. “Nettime: Net.Art, Machines, and Parasites.” Accessed April 6, 2020. <https://nettime.org/Lists-Archives/nettime-l-9703/msg00038.html>.
- Gale, Matthew. 2010a. “MoMA | The Collection | Arte Povera.” In .

https://web.archive.org/web/20101124144724/http://www.moma.org/collection/theme.php?theme_id=10454.

- ———. 2010b. “MoMA | The Collection | Assemblage.” In .
https://web.archive.org/web/20101125100859/http://www.moma.org/collection/theme.php?theme_id=10057.
- ———. 2010c. “MoMA | The Collection | Objet Trouvé.” In .
https://web.archive.org/web/20101125115350/http://www.moma.org/collection/theme.php?theme_id=10135.
- ———. 2010d. “MoMA | The Collection | Ready-Made.” In .
https://web.archive.org/web/20101125135631/http://www.moma.org/collection/theme.php?theme_id=10468.
- Galloway, R. Alexander. 2016. “Jodi’s Infrastructure.” *E-Flux*, no. #74 (June). <https://www.e-flux.com/journal/74/59810/jodi-s-infrastructure/>.
- Iversen, Margaret. 2014. “Readymade, Found Object, Photograph.” *Art Journal* 63 (April): 44–57. <https://doi.org/10.1080/00043249.2004.10791125>.
- Lialina, Olia. n.d. “All You Need Is Link.” *Rhizome*. Accessed April 6, 2020. <http://rhizome.org/editorial/2017/feb/21/all-you-need-is-link/>.
- Pold, Soren. 2005. “Interface Realisms: The Interface as Aesthetic Form.” *Postmodern Culture* 15 (January). <https://doi.org/10.1353/pmc.2005.0013>.
- Steyerl, Hito. 2009. “In Defense of the Poor Image.” *E-Flux*, no. #10 (November).
<https://www.e-flux.com/journal/10/61362/in-defense-of-the-poor-image/>

Complementary Books

- Baumgärtel, Tilman, ed. 2005. *Net.Art.2.0: New Materials Towards Net Art*. Nürnberg: Verlag Fur Moderne Kunst Nurnberg.
- Flusser, Vilem. 2011. *Into the Universe of Technical Images*. 59298th edition. Minneapolis: University of Minnesota Press.
- Goodman, Nelson. 1976. *Languages of Art*. 2 edition. Indianapolis, Ind.: Hackett Publishing Company, Inc.
- Kittler, Friederich A. 1999. *Gramophone, Film, Typewriter*. 1 edition. Stanford, Calif: Stanford

University Press.

- Kroker, Arthur, and Michael A. Weinstein. 1994. *Data Trash: The Theory of Virtual Class*. 1st Published in the US in 1994 edition. New York: Palgrave Macmillan.
- Lovink, Geert. 2012. *Networks Without a Cause: A Critique of Social Media*. 1 edition. Cambridge, UK ; Malden, Mass: Polity.
- Ranciere, Jacques. 2011. *The Emancipated Spectator*. Reprint edition. London: Verso.
- Wardrip-Fruin, Noah, and Nick Montfort, eds. 2003. *The New Media Reader*. HAR/CDR edition. Cambridge, Mass: The MIT Press.
- Wark, McKenzie. 2004. *A Hacker Manifesto*. First Edition edition. Cambridge, MA: Harvard University Press.

Webography

<https://nettime.org/>

<https://rhizome.org/>

<https://www.digitalartarchive.at/>

<http://www.medienkunstnetz.de>

<https://www.e-flux.com/>

<https://v2.nl/>

<https://www.potatoland.com/>

<http://www.easylife.org/>

<http://art.teleportacia.org/>

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Hirshhorn Museum and Sculpture Garden, Washington DC.
<https://www.flickr.com/photos/lluisribes/9563180668>.
- Ill. 3: Picasso, Pablo. 1912. *Still Life with Chair-Canin*. Oil and oilcloth stuck on oval canvas, framed with rope. Musee Picasso Paris. https://www.researchgate.net/figure/Pablo-Picasso-Still-Life-with-Chair-Caning-spring-1912-oil-and-oilcloth-stuck-on-oval_fig2_327857035.
- Ill 4: Picasso, Pablo. 1914. *Still Life*. Painted wood and upholstery fringe. Tate, London.
<https://www.tate.org.uk/art/artworks/picasso-still-life-t01136>.
- Ill. 5: Duchamp, Marcel. 1951 (third version, after lost original of 1913). *Bicycle Wheel*. Metal wheel mounted on painted wood stool. MoMA, New York. <https://www.moma.org/collection/works/81631>.
- Ill. 6: Duchamp, Marcel. 1917, replica 1964. *Fountain*. Porcelain Urinal. Tate, London.
<https://www.tate.org.uk/art/artworks/duchamp-fountain-t07573>.
- Ill. 7: Schwitters, Kurt. 1947. *Cigar*. Collage. Private Collection. https://commons.wikimedia.org/wiki/File:Kurt_Schwitters._Cigar.jpg.
- Ill. 8: Schwitters, Kurt. 1937. *Opened by Customs*. Paper, printed paper, oil paint and graphite on paper. Tate, London. <https://www.tate.org.uk/art/artworks/schwitters-opened-by-customs-t00214>.
- Ill. 9: Hirst, Damien. 1990. *A Thousand Years*. Glass, steel, MDF, cow's head, flies, maggots, insect-ocutor, sugar and water. Saatchi Gallery, London.
https://www.saatchigallery.com/artists/artpages/aip_e_damien_hirst_a_thousand_years.htm.
- Ill. 10: Tracey, Emin. 1998. *My Bed*. Box frame, mattress, linens, pillows and various objects. Tate, London. <https://www.tate.org.uk/art/artworks/emin-my-bed-103662>.
- Ill. 11: Beuys, Joseph. 1966. *Infiltration for Piano*. Felt, piano. Georges Pompidou Center, Paris.
<https://www.wikiart.org/en/joseph-beuys/infiltration-for-piano-1966-1>.
- Ill. 12: Gruyaert, Harry. 1975. *Gordon Matta-Clark and Gerry Hovagimyan Working on Conical Intersect*. <http://www.jeudepaume.org/?page=article&idArt=3000>.

- Ill. 13: Raymond, Hains. 1976. *Untitled*. Lacerated posters on sheet metal (diptych). Private Collection. <https://www.christies.com/lotfinder/Lot/raymond-hains-1926-2005-sans-titre-5166714-details.aspx>.
- Ill. 14: Spoerri, Daniel. 1959. *Prose Poems*. Glass, paper, ceramic, metal and plastic on wood. Tate, London. <https://www.tate.org.uk/art/artworks/spoerri-prose-poems-t03382>.
- Ill. 15: Kounellis, Jannis. 1969. *Untitled*. Burlap and beans. Tate, London. <https://www.tate.org.uk/art/artworks/kounellis-untitled-ar00069>.
- Ill. 16: Koons, Jeff. 1980. *New Shop/Vac Wet/Dry*. Vacuum cleaner, acrylic, fluorescent lights, plexiglass. Saatchi Gallery, London. https://www.saatchigallery.com/aipe/jeff_koons.htm.
- Ill. 17: Antonellis, Anthony. n.d. *Put It on a Pedestal*. Webpage. <http://www.putitonapedestal.com/>. Accessed April 15, 2020. <http://www.putitonapedestal.com/>.
- Ill. 18: Muntadas, Antonio. 1994. *The File Room*. Webpage. rhizome.org. <https://anthology.rhizome.org/the-file-room>.
- Ill. 19: Napier, Mark. 1998. *Digital Landfill*. Webpage. [potatoland.org](http://www.potatoland.org). <http://www.potatoland.org/landfill/>.
- Ill. 20: Legrady, George. 2007. *Cell Tango*. Interactive installation. [ucsb.edu](https://www.mat.ucsb.edu). <https://www.mat.ucsb.edu/g.legrady/glWeb/Projects/ctango/cell.html>.
- Ill. 21: Manovich, Lev. 2015. *Selfiecity*. Webpage/software. manovich.net. <http://manovich.net/index.php/exhibitions/selfiecity>.
- Ill. 22: Shulgin, Alexei, and Tania Detkina. 1995. *WWWArt Award*. Webpage. [easylife.org](http://www.easylife.org). <http://www.easylife.org/award/>.
- Ill. 23: Lialina, Olia. 1996. *Anna Karenina Goes to Paradise*. Webpage. [teleportacia.org](http://www.teleportacia.org). <http://www.teleportacia.org/anna/>.
- Ill. 24: Jodi. n.d. *Blogspot.Jodi.Org*. Blogspot. <https://blogspot.jodi.org/>. <https://blogspot.jodi.org/>.
- Ill. 25: Shulgin, Alexei. 1997. *Form Art*. Webpage. [easylife.org](http://www.c3.hu). <http://www.c3.hu/collection/form/>.
- Ill. 26: Wisniewski, Maciej. 1999. *Netomat*. Web browser. [digitalartarchive.at](https://www.digitalartarchive.at). <https://www.digitalartarchive.at/database/general/work/netomat.html>.
- Ill. 27: Napier, Mark. 1999. *Riot*. Web browser. [potatoland.org](http://www.potatoland.org). <http://www.potatoland.org/riot/>.
- Ill. 28: Napier, Mark. 1998. *Shredder*. Web browser. [potatoland.org](http://www.potatoland.org). <http://www.potatoland.org/shredder/>.
- Ill. 29: Lime, Dimitre, Tony Scott, and Moradi Iman. 2005. *Glitch Browser*. Web browser.

<http://www.random-magazine.net/2005/12/glitch-browser/>.

Ill. 30: Napier, Mark. 2001. *Feed*. Web browser. potatoland.org. <http://www.potatoland.org/feed/>.

Ill. 31: I/O/D. 1997. *The Web Stalker*. Web browser. rhizome.org.

<https://sites.rhizome.org/anthology/webstalker.html>.

Ill. 32: Dezoteux, Bertrand. 2019. *Histoire de France En 3D*. Short animation film. Frieze Foundation and Frac Aquitaine. https://www.youtube.com/watch?v=GmxsrEGAlsQ&feature=emb_err_watch_on_yt.

Ill. 33: Shulgin, Alexei, and Tania Detkina. 1995. WWWArt Award. Webpage. easylife.org.

<http://www.easylife.org/award/>.

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