# About the Music in the Internet Art

Alessandro Fiordelmondo

January 2020

## Introduction

Throughout this paper I will explore the music creation on the internet art practice. The internet art is emerged not so long ago, but nevertheless it has a pretty complex history, starting from the pre-internet era, with ever-changing and intersected artistic guidelines. Indeed, the internet art has somehow always failed at establishing a specific aesthetic idea, especially because of its post-medium condition. Furthermore, it seems that the music has never take much space in this practice, even if the internet embraces all the arts. Many sources about the internet art entirely excludes music artworks. Only in the last years, with the new artistic guidelines of the post-internet era, it seems that the music is more aware about the internet.

This paper aims to be an excursion through the history of the internet art, focusing on the role of the music in this practice and trying to explain both the reasons of its exclusion, in the first internet art, and the form of its participation in the post-internet era. With a particular attention will show the artistic orientation of the two main tendencies, the Net.Art and the post-internet art.

## 1 From the pre-internet era to the Net.Art

Before we talk about the history of the internet art we have to take into account certain artistic movements in the pre-internet era, from which coming greatest inspiration. Furthermore we have also to mention some artworks which used telecommunication technologies before the popular use of the personal computer and internet.

From many artistic movements that have contributed to lay the foundation of the internet art, the most important are: The Fluxus movement in the '60s, which is based in the collaboration between artists and audience across every artform and with the use o a large range of media and processes[1]; The Situationist movement between 1957 and 1972, which had the aim to break down the division between artists and consumers and make cultural production a part of everyday life[2]; Obviously the Mail Art which took different forms over the years, such as postcards, packages, faxes, mails and blogs with a lot of political meanings (even the Fluxus movement had used this art); the Neoism with its humour and self-irony.

Concerning the telecommunication and network art before internet (that we can also call it the pre-internet era) there are many meaningful art installations and performances. In a chronological point of view we can mention *Imaginary Landscape no.4* (1951) by John Cage. This piece is an indeterminate composition for twelve transistor radios, performed by twentyfour performers with the instructions to manipulate the frequency, volume and tone-colour of each transistor set [Mil14, p. 10]. Similar work was *Kurzwellen* (1968) by Karlheinz Stockhausen. A composition for six players and live electronics, based on playing short-wave radio broadcast taken in real time. The same is in his three subsequent works with the short-wave radio receivers, *Spiral* (1968) for a soloist, *Pole* (1970) for two, and *Expo* (1969 - 1970) for three performers. Interesting it was also the first networked computer performance by the League of Automatic Composers in the 1977. They have connected together several KIM-1 (*Keyboard Input Monitor* - a single board computer) with which they have created separately different generative composition jointly played by the network[3].

In the '80s, outside the musical field, there were two important installation. The first one was *Hole in the Space* (1980) by Kit Galloway and Sherrie Rabinowitz. It was a public installation, suspended between the broadway Store in Los Angeles and the Lincoln Center in New York. For three consecutive days two screens were linked together via satellite. The people in the two cities could watch and hear the people in the other side of the continent, and they could communicate with each other. A real hole in the space as the live television broadcast but entirely entrusted to the people. Even if it was not advertised it was a really great success, it occurred everything: dating, familiar meeting, flirt, number exchange, music and dance performances and so on. The opening to the social dimension was the goal of this work, indeed, the two artists wanted to leave the progress

---

[1] https://www.tate.org.uk/art/art-terms/f/fluxus
[2] https://www.tate.org.uk/art/art-terms/s/situationist-international
[3] *Ivi, p. 11*

of the installation to the hands of the public[DM03, pp. 21-22].

The other one was *The World in 24 Hours* by Robert Adrian, which was presented in the 3rd edition of the *Ars Electronica Festival* in Linz in the 1982. The work was a networked happening that linked sixteen cities worldwide, with the art festival acting as central node. Each site was given one hour - coinciding with midday local time - in which to generate and transmit content over a wide range of device and networks, including computer terminals, phone, fax and slow-scan TV. Each location was called from Linz at midday (local time) so the project ran from 12:00 noon Central European Time on September 27 and followed the midday sun around the world, ending at 12:00 noon on September 28 [4].

In the late '80s the communication technologies were particularly developed. In the 1987 the HUB group performed in the first dislocated networked concert between two separate venues via a modem over a telephone line, in the now well-known networked event, the Clock Tower concert. The performance was organised by Nick Collins and Phill Niblock [5]. A similar performance was in the 1997 with the name *Points of Presence*. It was a tri-location Internet performance, linking musicians at Mills College, Oakland, The Californian Institute for Arts, Valencia and Arizona State University. With two members of the HUB at each of the three locations, data was sent via the Internet to manipulate software and the algorithmic programs of the HUB laptop-to-laptop network at each end [Mil14, p. 12].

In the meanwhile (during the '90s) the internet became public with the creation of the *HTTP* protocol by the CERN (between 1991 and 1993). In the 1994 the first internet art movement was born and in the 1995 it took the name Net.Art. The main artists of this movements were: Vuk Ćosić, Heath Bunting, the Russians Alexei Shulgin and Olia Lialina and the collective JODI (formed by Joan Heemskerk and Dirk Paesmans - also known with their own web site www.jodi.org). Even if this art is based in the powerful medium of the internet (the post-medium as we will see later), with which every medium can be simulated, it would seem there is no place for the music.

The birth of the term Net.Art came from the internet itself, between the incompatibility of softwares. In the 1995, Vuk Ćosić got a message, sent via anonymous mailer. Because of an unreadable ascii, the only fragment of the message that made any sense looked something like:

$$... \text{J8~\# | \textbackslash;Net. Art \{-\^{}s1 ...}$$

Vuk was very much amased and exited: the net itself gave him a name for activity he was involved in. He immediately started to use this term[DM03, pp. 14-15] (actually, it's a readymade term).

Later a friend of him decoded the message. The text appeared to be pretty controversial and a vague manifesto in which its author blamed traditional art institution in all possible sins and declared freedom of self-expression and independence for an artist on the internet. The fragment above told something like: "....All this becomes possible only with emergence of the Net. Art as a notion becomes obsolete..."[6]

The Net.Art saw its own official beginning in the 1996, with the first international event exclusively dedicated to the web art. The event's name was *Net Art Per Se* and it was organised by Vuk Ćosić in Trieste. In addition to the presentation of the first net artworks the event was focused on the debate about the status of the Net.Art. Thus, the initial Net.Art's foundations were laid. However, many aesthetics details remained unanswered bouncing in the following years of the net culture.

The first Net.Art is based in a conceptual solution and minimal graphics also because of the very young technology. The main goals is to explores the characteristics of the internet and looking for the speciality of the mean. Very usual, almost every time, the Net.Art became a genuine game with the use of the easiest html, and so with the use of hyperlink, pop-up window and so on, and with the use of mails. For Alexei Shulgin "Internet itself is a hobby, a game, everyone can play with Internet. Is like chess."[DM03, p. 27].

The work of Alexei Shulgin is exemplar. *Turn off Your TV Set* was a little game in which the user it was in front of two simple options, change a channel or turn off the TV; In *Remedy for Information Desease* the user could choose a series of movements for an animate image; in *FORM ART* (1997) is used HTML buttons and boxes as the row material for monochromatic composition, in which the user could play with[ant][7].

Always using the game modality and the easiest html, in Olia Lialina's works is possible to find a sort of narration. Indeed, Olia Lialina come from the field of the cinema, for this reason she wanted to explore the narration modality in the web. The most famous works are: *if you want me to clean your screen*[8] in which in the center of the page appear a head with a stamp linked with e-mail address of the author and, in the meanwhile, the user was invited to scroll the page to clean the screen (there is no narration trace in this case); In *My boyfriend came back from the war*[9] e browser screen was divided in several frames with inside peaces of dialogue and monochrome image about a story. Clicking in the images the user will open new frame which they amplify the

---

[4]http://alien.mur.at/rax/24_HOURS/index.html

[5]http://crossfade.walkerart.org/brownbischoff/hub_texts/hub_clocktower_f.html

[6]Alexei Shulgin, March 1997

[7]artwork: https://sites.rhizome.org/anthology/form-art.html

[8]artwork: http://www.entropy8zuper.org/possession/olialia/olialia.htm

[9]artwork: http://www.teleportacia.org/war/war2.htm

story. Here she was exploring the endless possibilities of envelope in the internet narration; *Anna Karenin goes to paradise*[10] there is a narration that is develop thanks to three different search engines (Yahoo, Altervista and Magellan) integrated in the page. The narration was built by searching the words "love", "train" and "paradise" and choosing from time to time the search engines.

Almost the same is the works by the duo collective JODI. Indeed also here it's used the simple html, pop-up windows and a particular use of the hyperlinks. However in JODI is possible to see a distinctive interest in the digital graphics which leads all their net artworks. Fundamental is their web site www.jodi.org a complex endless maze of hyperlink with an ever-changing begin, and characterised by their own graphic style.

Starting with these pioneers, the Net.Art gradually starts to populate during the '90s. Although the internet, and more generally the technologies around this, grew very quickly, the aesthetics state of the Net.Art remained almost motionless. The conceptual ideas stood at the barycentre of the art movement, with a particular interest in the world politics' state, but not only. Like the conceptualism also the graphic element and game modality stood as central interest. However a part of the net.art, especially after the '90's, followed the evolution of the technologies, both on the communication, internet, graphics, device etcetera.

An important step was also the birth of the new internet era, call it *Web 2.0*, in the late '90s. This period is marked by the fast grew of social media and virtual community and then by the declaration of the death of the Net.Art and the beginning of the post-internet status of the web. This step has led to redefinition of the internet art as we will see in the next chapters.

The widest and most interesting history source about the internet art is the web-history-book *Net Art Anthology*. This web site draw a history of the internet art from the 1980s to the 2010s, including different movements, such as the post-internet art, Neen, YouTube art and blog art as well as the Net.Art and some antecedents artworks. Unlike several other sources, here we can find also the reconstruction of several old net artworks (impossible to see for the incompatibility of new browsers), with simulations of old operative system. However, as we have already said, here neither the internet music is mentioned.
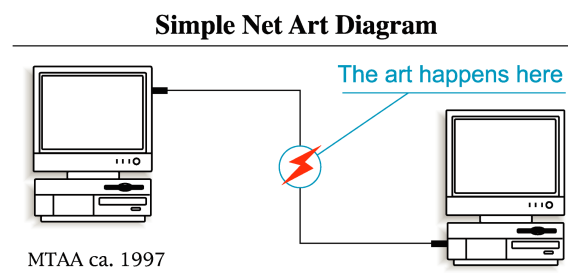
# 2 Guidelines of the Internet Art



Figure 1: *Simple Net.Art Diagram* by MTAA collective duo

It's hard to track an unified aesthetic of the internet art because of many reasons, among which the swift evolution of the internet, the strict separation between the first generation of the internet, the *Web 1.0* era, and the last generation, the *Web 2.0* and the big amount of the internet artists with the huge range of different artistic and non-artistic proveniences. However it's possible to define some guideline especially highlighted in comparison with the others.

Probably, one of the most important images that defines an important aspect of the internet art is the *SNTD* (*Simple Net Art Diagram*) created by the artist duo MTAA in the 1997. Although this image remains a vague description of the internet art, it indirectly outline some of the key aspect in its own aesthetics. This figure illustrates two computer terminal connected by a line and a red lighting bolt labeled "the art happens here", which tell us two important aspects:

1. that it "happens" and therefore can be thought as an action or a performance;

2. that it is defined by in-betweenness;

In an interview (reported in the *Net Art Anthology* web site) the artist duo says chanting[MTA15, pp. 5-6]:

---

[10]artwork: http://www.teleportacia.org/anna/

*...*
*Art as an active site, open to those who care*
*Information as a stance, opposition in the air*
*Participation as the norm, inclusion across the board*
*Time as a fluid state, now to be ignored*
*...*

The importance thing in the *SNAD* is that the "here" can be interpreted in multiple ways as the physical infrastructure of the internet, as a network context from which a work cannot be extracted without altering it fundamentally, and as the space between users, where no clear distinction is drawn between author and audience.

An example of the "here"'s extension can be tasted through the artist Abe Linkoln (Rick Silva) fantasy, in the reimagined *SNAD* as the *Complex Net Art Diagram*[11] (2003)[ant].

Therefore from these representations is possible to highlight one fundamental aspect in the internet art: the aesthetics of the communication. From this point of view the artworks acquire a dynamic and processual feature that it's built from the artists but it's determined only with and after the interaction with an audience.

As Derrick De Kerchove wrote in his *The Aesthetics of Communication: for a Planetary Sensibility of Human Beings* (1999):

> *The aesthetics of communication is not a theory - although someone might be tempted to compare it to this - but a practice. It doesn't produce objects [...]. The revealing fact is that most of the artists of communication often don't have nothing to communicate. For them it's sufficient to built channels and different interactions in order to turn the users itself into the content*[12].

Due of the centrality of audiences in the internet artworks, it takes a fundamental importance the connection between artists and users. Therefore, it is common to build an open, genuine and especially free relationship between the two poles with the aim of reducing the distances. For this reason the internet art, especially in the *Net.Art* era and with the increasing of the internet business in the '90s, acquires an anti-capitalism temper and in general a politic character. These aspects remain another central characteristic of the internet art (even if with the arrival of the *Web 2.0* went indicatively down). However many internet artworks is based on politics theme, converting their author in real activists[13].

Nevertheless, it necessary to consider the big transformations in which the internet leads the medium. In the web the use of several media is no longer discontinuous but happens simultaneously. For this reason the medium in the web is named in different way, such as "hybrid-medium", "super-medium", or "meta-medium", thus stressing its inherent quality of media-multiplicity.

Julian Stallabrass, while he tries to explain why the net.art find it difficult to enter in the art history, in his article *Can Art History Digest Net Art?*, says[Sta09, p. 169]:

> [...] *the Internet is not a medium, as painting is, but rather encompasses simulations of all reproducible media.*

In the same article the author named this internet art's medium condition as *post-medium*. The medium in the net.art is internet itself and its possibilities to simulate all concrete medium, as painting, video, audio and so on. However this post-medium condition can only exist inside the web and we can made use of it only through the web. Still in the same article he mentions Tilman Baumgärtel, that in his book *net.art 2.0* says[Sta09, p. 169]:

> *Net art's material utterly anything having to do with the Internet*

Indeed, as we've already said, the internet artworks can never escape from the internet container and for this reason we can't look at it as a concrete artworks. Even if it's used more or less every medium, and sometime spreading the expressive ability of these, the one which is considered as pure internet art is never going to be in a museum, in a cinema, in a music hall, in a theatre or so on. In this places we would have an indirect and false experience, such as to see a photo of a sculpture. So, the net.art is an internet art, an art to itself. However, as we will see in the post-internet era, this aspect has been partially abandoned and redefined.

Furthermore, we have to take into consideration the artistic proveniences that more than others were channelled in the internet art at the beginning of the internet and that they left an unforgettable mark in this practice. In

---

[11]image: https://d1v7jayx2s9clc.cloudfront.net/user/pages/45.simple-net-art-diagram/1.20c%20cnad.jpg
[12]translation from - Derrick De Kerckhove, L'estetica della comunicazione: per una sensibilità planetaria dell'uomo, in L'estetica della comunicazione, a cura di Mario Costa, Castelvecchi, Roma, 1999
[13]character assimilated also by the Fluxus and Situationist movement

fact, even if the internet embrace the simulation of every medium, the most radical proveniences are of visual nature: cinema, painting, digital graphics etcetera. However there are also a strong provenience from general media studies and also from organisers and curators of art itself. Among the pioneers, Alexei Shulgin, Olia Lialina (from cinema), jodi (both of the members came from photography), Heath Bunting and many others come from the visual art. Proveniences from the literature are less, as well as from the philosophy (like Vuk Ćosić), but in extremely rare case there are proveniences from music. Therefore, especially the visual arts became very deeply engrained in the internet art, so much that sometime it seems that it is a field of the visual art.

Finally, another obvious element and particularly typical in the net.art is the game. Indeed the interactions in many forms, from the communication to the simplest mouse-click/screen-event, is the real news in computers and in internet. And more than some cases in the internet artworks we experience and explore the medium through the rules of a game.

In conclusion we can say that the internet art is an art based in the communication between artists and audiences, and in this communication the artworks happens. For this reason the artists established an honest relationship with the audience, through a communication created above freedom concept and against the capitalism, the mass-media and so on. The internet art is conceptual art. However is not a concrete art because of the post-medium condition and only inside the internet can be such. And then, even if embrace every medium, this art is more influenced by the visual medium because of the most of the artists provenience. Finally, the internet art very often pass through the rules of the interactive game.

# 3  The Internet Music in the Post-Internet Era

Concerning the internet music, it has to be said that before the 2000s, the development of the internet technologies was not focused in the medium of audio. Obviously, the development was centralised first in the communication field and then in the graphical one, because this is the principal interaction between users and computers. Thereby, the audio files reproduction and not much more were the only musical possibility. Some musical internet artworks have been found (produced in the '90s and in the early 2000s and often randomly found in the web) but they are of little interest as regard both the musical and the internet art fields so much that it has been decided to not mention them.

An important breakthrough occurred in the 2008 with the advent of *HTML5* which allowed an extent use of every medium and to the realisation of complex applications, also with the introduction of the APIs (*Application Programming Interface* - tools created to simplify the development both of client and server softwares). In the 2014 with the last version of *HTML5* it also born *Web Audio API*, a powerful object-based *javascript* API created exactly for real-time audio processing in the client-side web. But also with these new possibility we don't see a particularly rise of the musical practice in the net.art (certainly it became more common [14] but nothing of relevant).

However, in the 2000s, there are many artists which begin to produce artworks with a different concept about the internet. Here the internet is used in different manner and in somehow distant from the typical internet art. This different way of internet practice is named post-internet art. In this chapter we will specifically talk about the concept of the *post-internet art* and also about musical artists in this practice.

## 3.1  The post-internet art

With the *Web 2.0* the internet art undergoes a strong breakup. This internet era refers to the wide increasing of users in the web from the 1998, therefore is referred to the emphasis of user-generated content, ease of use and participatory culture.[15]. The *Web 2.0* is the era of social media and virtual community. The communicative pollution in this web era leads to devalue the internet mean. For this reason, some of the net artists (in particular the pioneers and more than anyone Alexei Shulgin) declare the death of the Net.Art. As Alexei Shulgin said about the death of the Net.Art in an interview:

> *In the Web 2.0, with a lot of users on the internet and social media, there is no need of special internet art anymore. Everybody produces something: concepts, pictures, scripts, music and what we see is just a global, huge art project. And whatever statement you make in it, it gets disappears in the flow of that information. And now a new age is coming more or less like a barbarism, no brain stuff is coming...*[16]

---

[14]Many example can be find in www.vispo.com

[15]https://en.wikipedia.org/wiki/Web_2.0

[16]Alexei Shulgin interview - https://www.youtube.com/watch?v=5SjpRuIBe9w

For these ones like Alexei Shulgin the Net.Art's life (which can be considered as the pure internet art) can be inscribed inside the four-year period 1994 - 98. Anyway, after the 1998, because of the *Web 2.0*, many artists begin to produce art around the internet medium. Somebody does it through the old guideline, someone else does it following the always new internet technologies while others definitively turn the tables. From the last ones come from the term post-internet art, which is not shared by many and it's strongly contested.

The term was coined in the 2006 by the digital media critic and artist Marisa Olson. In the 2008 in an interview conducted through the website *We Make Money Not Art*, Marisa Olson said about the post-internet art:

> *I think it's important to address the impacts of the internet on culture at large, and this can be done well on networks but can and should also exist offline. Of course, it's an exciting challenge to explain to someone how this is still internet art... If that really matters...* [17]

Thomas Beard, a new media artist related with Marisa Olson (they collaborated together in the *Nasty Nets* from 2006 to 2012 - collaborative blog with the aim to explore internet), in an interview for the web site *Rhizome* in the 2008, refined the term post-internet art, calling it "Internet Aware Art" and while he was trying to explain the meaning he said:

> *[...] to take the emphasis off the internet and technology, but keep my ideas* (about internet and technology) *intact*[18]

In the same interview he also talk about "Objects that aren't objects...". But let us explain the basic concept of post-internet art and how it's juxtaposed to the pure internet art.

The new media researcher, artist and critic Raivo Kelomees, in his article *From Net Art to Post-Internet Art* (2017), talks about the net-based, non-material telecommunication art practice in the post-internet art:[Kel17, p. 3]

> *it has become more spatial, object-based and physical, it has left the internet, the immaterial has become material, and the non-objectified has become objectified and commercialised*

Indeed the main principle of the post-internet art, in strong conflict with the pure internet art, is that the artworks leave the borders of internet and become an object, a performance, a musical composition and many other things, that we can see inside museums, art galleries, theatres and so on.

As Thomas Beard says about the integrity of the ideas which is born in the internet and technology, the artworks produced in the post-internet era is always the result of that "here" printed in the *SNAD*. The post-internet artwork is always based in that link or relation between artists and the audiences and realised through the only internet. But that "here", instead to remain in the virtual world of internet, is objectified, therefore it's transformed in a finished artwork and shown to an audience in the real world. In some way it's as if the post-medium's virtuality comes alive, is materialised in the reality.

After all it seems that there is a huge confusion around the use of the post-internet art term. The semantic qualities of "post-" in the term, it's referred to art *after* the internet, as Marisa Olson says in article *Postinternet* (2012). The *after* means both "in the style of", "in reaction to" and "following". Like the postmodernism that didn't come at the *end* of modernity, but *after* and with a critical awareness of modernity[Ols12, p. 6]. But what does it means this "regarding internet"? Obviously Internet is not over, as Gene McHugh says in *Post-internet* blog, but it has done a great change[McH11, p. 5]:

> *On some general level, the rise of social networking and the professionalization of web design reduced the technical nature of network computing, shifting the internet from a specialized world for nerds and technological-minded, to a mainstream world for nerds, the technologically-minded and grandmas and sports fans and business people and painters and everyone else. Here comes everybody*

and so:

---

[17]https://we-make-money-not-art.com/how_does_one_become_marisa/
[18]https://rhizome.org/editorial/2008/mar/26/interview-with-guthrie-lonergan/

> *any hope for the internet to make things easier, to reduce the*
> *anxiety of existence, was simply over - it failed - and it was just*
> *another thing to deal with. What we mean when we say "Inter-*
> *net" become not a thing in the world to escape into, but rather the*
> *world one sought escape from...sigh...It became the place where*
> *business was conducted, and bills were paid. It became the place*
> *where people tracked you down*

Following these change in what we mean when we think about internet, there was a change in what we mean when we think about the "art on the internet" and the post-internet art serves as shorthand for this change. The internet art now is not confined anymore in the web, because now its own virtuality is a dominant part of the reality. And this erasure of border often turns into the objectification of the internet artworks. Furthermore, on the other side, also the art that comes from the history art, now pass through the internet. Always Gene McHugh says[McH11, p. 6]:

> *Dissolve the category of 'new media' into art in general by creat-*
> *ing work that has one foot in the history of art and another foot*
> *in the experience of network culture...As the work mutates itself*
> *to become more like the art world art, the work mutates art world*
> *art to become more like the Internet*

The concrete form that a post-internet artworks acquire in this era is something like the jpeg that could exist as a pdf file, a print, or an image object, such as a 3D print of the file's information[Cha14, pp. 107-108]. Although this definition remains very vague.

Jennifer Chan in *Notes on Post-Internet* gives us just some examples of what can be a *post-internet* art-work[Cha14, p. 111]:

> *[...]an installation or a livestream performance. Learn to do bad*
> *well. Appropriate rotating 3D objects, stock photography, transi-*
> *tional HTML, video essays, and fake watermarks to demonstrate*
> *self-reflexive awareness of the medium. Make ends meet by sell-*
> *ing CafePress pillows of Photoshop paintings. Corporate aesthet-*
> *ics and sterile minimalism are fit for docile public installation,*
> *design offices, and apartment lounges. Start a self-contained gif*
> *store with PayPal buttons, or an ironic Etsy account[...]*

However even if the concept of post-internet art seems to be everything on internet, what it's more significant is the "Internet Aware Art" which means the art *about* the internet.

## 3.2   Brigitta Muntendorf and the *Social Composing*

One of the most relevant figure in the internet music is Brigitta Muntendorf, a German-Austrian composer and multimedia and interdisciplinary artist. Even if she is little sceptical about the term post-internet itself[19] she is known for her 'social composing' which we can listen in her series of six pieces under the name *Public Privacy* (2016 - 2017). These pieces brings to light the Muntendorf's interest in the confrontation between reality and virtuality, traing to draw a continuum line between the private and public. Here she combines amateur music videos of Youtubers with musicians acting in real-time on stage. For example in *Flauto Cover* (2013) - the first of the serie - she asked to several youtubers to realise a cover of a popular piece. In these videos, the musicians and amateur professionals replace the melodic part of the cover with a melodic part for solo flauto. The videos follow the normal process of a social-media video presentation. After obtaining the video she made an audio and visual collage and then she realised a flauto solo composition over this. In this way Brigitta Muntendorf brings on the stage the strong contrast between private and public. Indeed each video tell us, more or less, about the player and his living space, about his aesthetics, about the relation with the presentation and its repercussion on the music. In this sense she brings in the stage its opposite.

In her article, *Social composing*[20] (2019), she tells us about this method of composition. As the post-internet art, also Brigitta Muntendorf takes into account our habits of communication which are constantly in change because of the constantly evolution of the digital-reality connection. And for this reason also the art, as social fact, has to be re-imagined. She says that the "social composing" is a method that searches for strategies of

---

[19]https://www.vice.com/en_au/article/qkakzw/so-what-is-post-internet-music-anyway
[20]http://links-series.com/links-serie-3-4/

articulation in order to reflect the phenomena existing at the interface of real-digital communication model. And then she goes on to add[Mun19, p. 56]:

> *Social composing is based on the intention of mediating through music and intermediacy - that is, radically, placing the communicative ability of music in the center, to be able to trigger resources in all those living in the virtuality-reality continuum*

She says also that the creative process, in this composition method, only acts with and within the real-digital communication models. Therefore Brigitta Muntendorf highlights the importance of the relation artist-user, indirectly referring to the SNTD's "here".

Finally she talks also about two different process of "social composing" that arise with the internet and on-line platforms but they are different in their work processes. One approach use social media as compositional material but the composition process take place separately from the source. However it's important that the composition strategy incorporate social media into intrinsic communication models (and for example she mentions her *Flauto cover* piece); In the second approach the composition process take place directly on the social platform and the dialogue become a part of the work. With regarding to this second approach she mentions three indicative works: *Bicycle built for 2000*[21] (2009) is an audio collage of 2088 voice recording, by Aaron Koblin and Daniel Massey. It was make through the crowdsourcing *Amazon Mechanical Turk*. Users were prompted to listen to a short sound clip, then record themselves imitating what they heard (we can listen the melody of *Daisy Bell* song that HAL is singing at the end of *2001: A Space Odyssey*); *Crowdsound*[22] (2015) by Brendon Ferris, a simple music player in which users determine the course of a song or text by voting; *Hatsune Miku* a virtual pop diva, or better a *Vocaloid* software, who is kept alive with her fans' songs and has conquered both social media and real concert halls[Mun19, pp. 56-57].

Among the many "social media opera" of Brigitta Muntendorf we should mention *iScreen, YouScream!* (2016), for ensemble, actress, live video, and electronics performed by Muntendorf's Cologne-based *Ensemble Garage*. The artworks is a unique theatrical experience, composed by music, video and performance. Even this time the video is composed by pre-recordered material coming from social media application like Skype or FaceTime but not only. This time the private environment is brought in the public stage. Eleven performers act inside black boxes in the stage. All of the stage action takes place inside the enclosed boxes and is only revealed to the audience on the screens via a several cameras. In this way the composer wants to rebuild the digital representation and its isolation in a public space. This output-only method of communication from within the physical confines of a box served as a powerful statement on the current condition of in-person human interaction and companionship in the digital age [23].

The music composition, performed by the ensemble - comprised of flute, clarinet, saxophone, synthesizer, percussion, trombone, violin, viola, and cello - mimics, in rhythmic unison with digital samples, the video collage, like in the *Public Privacy* series. However, the music is strictly composed on the basis of YouTube video presentations, in which it is often presented performer skills, played musical covers or realised a tutorial video.

Even if in this composition Brigitta Muntendorf slightly moves away from the internet (in comparison with the *Public Privacy* series), in this multimedia artworks she puts in the stage the fundamental mechanisms of the real-virtual life which strictly define the composition of each medium.

## 3.3 Jennifer Walshe

Another important composer, singer and performer, whom we can inscribe inside the "social composing" of the first kind of process, is Jennifer Walshe from Dublin. An indicative composition is *The Total Mountain* (2014), a performance for voice and video with sound. The video is a collage of Youtube clips, screenshot of wikipedia, post from the social media and so on. The video's contents define the performance's gestures and the voice lyric.

Composed in the same way is *Everything is important* (2016), a performance for string quartet and voice. Even in this piece the musical composition but in particular the textual content of the singing part come from internet world.

Another Jennifer Walshe's work which recalls the Brigitta Muntendorf's *Public Privacy* is *ULTRACHANK* (2018), a performance for voice and live video/audio generator. The video and audio is generated by the software *GRANNMA* (Granular Neural Music and Audio), created for the piece by Memo Akten. Starting by several vocal improvisation video of the composers, filmed with the web cam, the software mimics the key components of the performer's voice and face.

---

[21]http://www.bicyclebuiltfortwothousand.com/
[22]https://crowdsound.net/
[23]https://www.icareifyoulisten.com/2017/06/spor-festival-2017-concludes-iscreen-youscream/

Finally, we have to mention *THMOTES* by the same composer under the name The Milker Corporation. This project is an interactive and open scoring work, realised in Snapchat, a social media messaging platform. The particularity of this social media is the "snap", indeed every sent message disappear in few second. In *THMOTES* every user sends a score or parts of it, which obviously can't be enterally and correctly read it. This project explores the potential of fleeting moments of anonymous interaction made possible by modern technology in the creation of individual musical works. The result will be score fragments realised entirely independently of each other in venues (or living rooms) across the world. It appropriates a medium (instant messaging), the reputation of which is more likely associated with exploitation and the negative side of social media culture, into a medium for creative connections [24].

The sources taken into account until now often mention many other artists in the post-internet music, such as Arca, Lotic, SOPHIA, the exponents of the PC Music (like James Ferraro) and so on. Their music is not strictly *about* the internet. Internet is a starting point, an inspiration subject but it never came in a concrete form unlike the pieces that we have just talk about. And internet is especially a channel of communication with their audiences, opposite to the mainstream channel but with the same functions. As we've already told we won't take in consideration this side of the internet music.

## 3.4   Other examples of Internet Music

Holly Herndon is an artist more like the last ones above. However, she shows a kinship with Brigitta Muntendorf and Jennifer Walshe (with which she is collaborating to the creation of a crowd-sourced database of sound work that explicitly engages with the internet), and some works should be mentioned. Here we will talk about only one song, *Chorus* (2014). Without going into the song's details, we will especially talk about the collaboration with Mathew Dryhurst. Indeed, Holly Herndon composed this song with the use of the Max/MSP patch *net-concrete*, created by Mathew Dryhurst. This patch is designed to create instantaneous compositions while browsing the web. In an interview for the web site *rhizome*, Holly Herndon mentions the intention of Mathew Dryhurst:

> *His argument is that in a time where you are equally likely to make no money from a song, a tweet, or a video, no one online expression should be prioritized over another, and as a result each online expression has equal transformative potential. In that scenario, we need to observe all expressions from an artist over time to get an accurate understanding of their work, which redefines both the construction of online personas and the browsing experience of understanding them as time-based media or exploded compositions.* [25]

This patch can be used also in real-time. Mathew Dryhurs has used it in several performance as we can see also in the *Dispatch lecture* in which he talks about this system and he makes a practical example of this[26].

Connecting with the Youtube video, in particular with Brigitta Muntendorf's *Public Privacy*, and referring to the second approach of the "social composing", it's interesting to mention *B♭ 2.0* (2011), a collaborative music and spoken word project conceived by Darren Solomon. Is an ensemble of 20 youtube videos that can be played alone and together, mixed in a different way to create always different combinations. The video have realised by different youtubers that played many different instruments, such as marimba, electric guitar, clarinet, violin and others, and particular instruments like the toy sax, the korg kaoss pad, the nintendo DS, and there are also a speech and two ambient video with sound. Obviously every tuned instrument had to play in B♭. As the artist wants this composition has to be consider as a tribute to Terry Riley's piece *in C*. Indeed Solomon, like Riley, set up only the rules for key and rhythm, leave much freedom to the performers.
Another web project by Darren Solomon is *marker/music* (2010) a sound map embedded in a custom Google map. The project consist of 12 videos above the city Aberdeen, South Dakota, which can be played by the same mechanism of *B♭ 2.0*. In this case internet is the aim and it's not used as communication mean. In this project Salomon physically interact with the video makers.
There are many artworks based on the use of the maps, like the last one. In the music field, the most known project is *radio aporee ::: maps*, a huge field-recordings sound maps. This project is online since 2006 (while the platform *audio aporee* since about 2000) and it is a global sound map dedicated to field recording, phonography

---

[24]https://cmcireland.wordpress.com/2013/03/27/jennifer-walshes-thmotes/
[25]https://rhizome.org/editorial/2014/jan/22/holly-herndon/
[26]Lecture audio record on SoundCloud

and the art of listening. It contains recordings from numerous urban, rural and natural environments uploaded by many users. Everyone can upload its own record in every part of the world to increase the already huge sound archive of this platform (they have only few rules, but they especially care about the purely phonography and quality - if it is not being complied with, the sound is delated). Within this maps the users can explore the sound of environment from all over the world.

From the same platform there is also *radio aporee ::: miniatures for mobiles*, an augmented reality project in public space. Here many artworks has been realised in several forms, from the sound art to the story-telling, artistic documentation, and hybrid experimental formats. It's possible to listen this artworks while walking, through our telephone and GPS localisation. The sounds continuously change and fade along your path, depending on the piece, and the listener's position, speed and direction.

Another maps based web site is *Radio Grarden* in which we can listen the radio transmission from all over the world in real-time, a connection platform of distant cultures.

A different field of the internet music is the real-time connectivity for the network improvisation. This is connected to the examples mentioned about the pre-internet era. Over the 2000s until now, new technologies are always developed to reduce the connectivity latency. This produced a particularly interest for musicians in the real-rime improvisation at large distances. An example is the Georg Hajdu's piece *Mind Trip* (2000) for 5 laptop performers. It was performed by *Quintet.net* laptop ensemble, which members were spread between the Europe and USA.

After other many works of this kind, the culmination of the network improvisation was with *eJamming*, an on-line collaborative network that enables musicians located anywhere to get together for jam sessions in real-time.

The artworks, web sites and compositions just cited are only few examples of the internet music. However, most of the artworks, which we can find on the internet, remain simple games. Especially those artworks in which the composition process take place directly on the internet, that is when the "here" remains in between the network. Therefore, even if the internet music has taken shape especially in these last years, it seems that the internet medium is still little explored.

The "social composing" method is very interesting, powerful and a strong way to represent the social condition in the musical terms. Furthermore is a perfect example of what it is the post-internet art. However i think it's only a little slice of many musical possibilities offered by the internet medium.

# References

[ant] Net art anthology. `https://anthology.rhizome.org/`. Accessed: 2020-01-28.

[Cha14] J. Chan. Notes on post-internet. *The 'post-internet' condiction*, pages 106–123, 2014.

[DM03] M. Deseriis and G. Marano. *Net.Art - L'arte della connessione*. Shake Edizioni Underground, Truccazzano (MI), 2003.

[Kel17] R. Kelomees. From net art to post-internet art. 2017.

[McH11] R. McHugh. *Post Internet - Notes on the internet and art*. LINK Editions, Brescia, 2011.

[Mil14] R. Mills. *Tele-Improvisation: A Multimodal Analysis of Intercultural Improvisation in Networked Music Performance*. PhD thesis, University of Technology, Faculty of Arts and Social Sciences, Sydney, 2014.

[MTA15] MTAA. The absolutely, positively last and final interview on the subject of mtaa's "simple net art diagram." ever. (aka the never-ending interview). Net Art Anthology, 2015.

[Mun19] B. Muntendorf. Social composing. *LINKs - The Art of Linkin*, pages 56–58, 2019.

[Ols12] M. Olson. Postinternet: art after the internet. *Foam Magazine*, Issue 29:59–63, November 2012.

[Sta09] J. Stallabrass. Can art history digest net art? In D.Daniels and G. Reisinger, editors, *Netpioneers 1.0 - Contextualising Early Net-based Art*, pages 165–179. Strenberg Press, Berlin, 2009.