Assembling traces, or the conservation of net art

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Abstract

Net art is built and distributed through a complex, intricate, and interrelated system of networks that presents an assemblage of art, technology, politics, and social relations – all merged and related to form a variable entity. In the last decade a discussion on how to conserve net art emerged in museums of contemporary art. Nevertheless, many net art projects from the 1990s have long disappeared – their server payments lapsed, software was not kept up-to-date, or artists felt the concept was no longer appropriate in a changed context. The project *mouchette.org* is an exception in that the artist has kept the website up and running since it began. In this article I will show that net artworks are inherently assemblages that evolve over time. These works are distributed and ensured by networks of people; their continuation happens through multiple authors and caretakers. All together these actors signify and give meaning to the works. Therefore, instead of thinking of a 'freeze frame' the presentation and conservation of net art should focus on variability. This opens up different paths and options, making for conservation strategies akin to assembling traces.

Keywords: art, conservation, net art, new media, participation, process, traces

Net art is built and distributed through a complex, intricate, and interrelated system of networks that presents an assemblage of art, technology, politics, and social relations – all merged and related to form a variable entity. In the last decade a discussion on how to conserve net art emerged in museums of contemporary art. Nevertheless, many net art projects from the 1990s have long disappeared – their server payments lapsed, software was not kept up-to-date, or artists felt the concept was no longer appropriate in a changed context. The project *mouchette.org* is an exception in that the

artist has kept the website up and running since it began. In this article I will show that net artworks are inherently assemblages that evolve over time. These works are distributed and ensured by networks of people; their continuation happens through multiple authors and caretakers. All together these actors signify and give meaning to the works. Therefore, instead of thinking of a 'freeze frame' the presentation and conservation of net art should focus on variability. This opens up different paths and options, making for conservation strategies akin to assembling traces.

'Trace' is simultaneously a noun and a verb. In this article I use 'trace' as something that existed and has now passed; a track or a footprint is a marker of a presence, something copied, outlined, or overwritten. I argue that these traces function as the constructive nature of net art. This means that to comprehend net art it is necessary to see what it consists of, how these parts are constructed, and how they behave. Such a trajectory opens and recreates a traditional approach through imagining a process in which various paths are explored, from networks of care to implementing a method of cycling. Inevitably this brings up the question of whether the role of the conservator (or the conservation practice as such) will move from a material one to a 'social collector'. Also, is a conservator still the right person to do this? In the following I argue for a conservation practice that departs from the computational and adopts similar strategies.

Challenges of net art: *mouchette.org*

Created in 1996, *mouchette.org* is an interactive website (initially) by a pseudonymous character who calls herself 'Mouchette'. Over the years the project developed and evolved – additional pages were added and other physical offline projects and events were organised. After many years of well-kept secrecy in 2010 Martine Neddam decided to reveal herself as the author behind the work. However, even today, on the home page the visitor is welcomed by a large bright flower and a small stamp-sized photo in the upper left-hand corner showing a young girl looking down – presumably a picture of Mouchette. Mouchette claims to be almost 13 years old, an artist, and living in Amsterdam. What initially appears to be the personal website of a female teenager evolves into darker themes on subsequent pages.
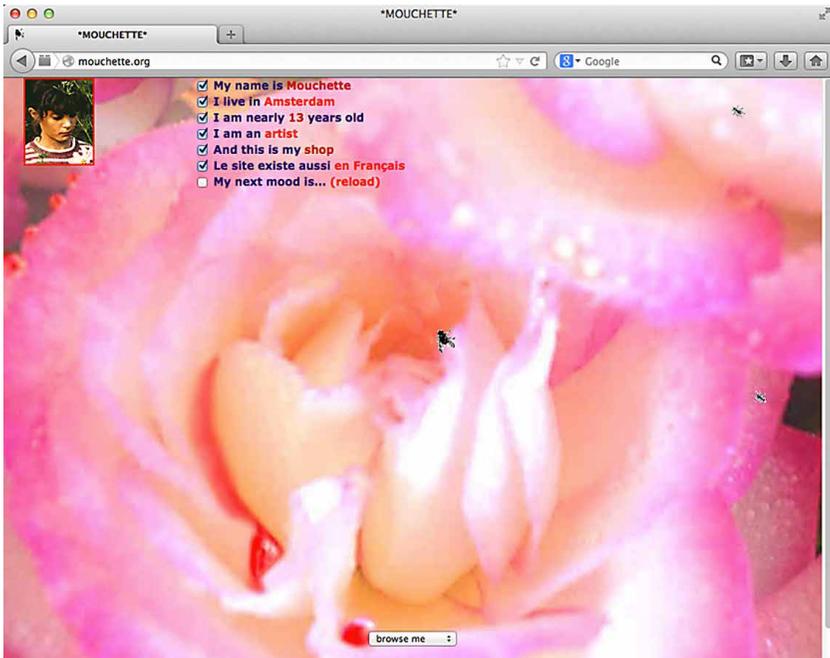
Fig. 1:   *A screenshot of* mouchette.org.

The name Mouchette derives from the novel *Nouvelle histoire de Mouchette* (1937) by the French author Georges Bernanos – also the movie *Mouchette* (1967) by Robert Bresson, a free adaptation of the novel. In both accounts Mouchette is a girl between childhood and adolescence, leading a harsh life: rejected and excluded from society (family, school, and friends), raped by a trusted older man, and experiencing the death of her mother. All the experiences leave her disheartened and although never made explicit the stories end in suicide. *Mouchette.org* takes many of the themes that play out in the book and film and re-performs them in a contemporary setting of an online 'diary' with several project pages. To emphasise the drama and enigma of the story Neddam uses some of the Web's characteristics in intricate ways. For example, hyperlinks create confusing circulation; interactive possibilities and audience participation produce several layers of information; and identity play is performed in various ways. The equivocal use of these characteristics makes it difficult to comprehend and identify the important and the less relevant aspects of the project. Moreover, the way themes like suicide, decay, and incest are employed strengthen the sense of ambiguity.

At the time *mouchette.org* was put online some of the features on the website were unknown and new to many; as time passed they became widely used. However, the speed of software and interface developments quickly made the aesthetic seem old-fashioned and outdated. The two most obvious examples are the checkboxes on the homepage in the typical HyperText Markup Langage (HTML) and the 'blog'-like structure that is used in some of the projects. Whereas in 1996 the website would be referred to as a diary or personal website, now everyone would understand these sections as a blog, even though they are quite different from one. Will people comprehend the meaning of the word 'blog' or for that matter a 'personal website' 30 years from now? Similarly, some of the interactive elements on the website are now antiquated and difficult to explain without becoming overly technical or historical.

It is generally recognised that once technical, cultural, and social contexts become historical it becomes difficult to interpret artists' (ab)use of techniques and systems. These characteristics are not unique to net art and can also be seen in, for example, performance art, land art, conceptual art, installation art, media art, and bio art. As argued by media arts curator Steve Dietz, what all these art forms have in common is that specific knowledge is required to understand, maintain, or recreate these works which have no foundations in tradition and are not always easily referenced. Whereas it may be possible for a conservator to read, understand, and apply the instructions of Sol LeWitt's drawings most people will find it very difficult to read, understand, and work in a meaningful way with the code that is used in a piece of net art. In other words, the newness of net art is embedded in the speed of technical developments.

Furthermore, according to Neddam, the ongoing software updates and changes occurring on the Web require her to spend several hours a day fixing bugs and making small changes to the website's code. Although this may be overstated and would certainly not be the case for every net artwork the question remains if it would be possible to maintain the functionality and concept of this work if Neddam stopped fixing the website when external updates require it. What does this mean for future conservators? What would a conservator have to know about the work, and how would having to continuously care for it affect existing workflows? Would a stable or fixed situation suffice or could it still be interactive, thereby leaving it to the audience to keep the work alive or even let it evolve?

Like many other net artworks *mouchette.org* thrives on audience participation and evolves in various online and offline projects. For example, besides the *mouchette.org* website Neddam has made several objects,

performances, and presentations – from music CDs, postcards, stuffed animals, bracelets, t-shirts, handbags, female underwear, stickers, shopping bags, and buttons to videos, birthday parties, and a Guerrilla Fanshop. Asking Neddam about the *mouchette.org* 'collection' she answered that:

> [i]t's hard to say what constitutes *mouchette.org*. Over the years I've lost track of all the performances, projects and objects that I've made. But for sure, *mouchette.org* is more than just a website.[1]

Although Neddam's loss of memory could be questioned it highlights that the concept of the work is for her the most important aspect of *mouchette.org*, which can be traced through various projects. As such *mouchette.org* can be seen as an identity through which various projects are presented or, as Neddam calls it, a 'brand'. The use of the terms 'brand/branding' is particularly interesting in the reading of sociologist Celia Lury, who argues that 'a brand emerges in parts, as an open system that extends into or implicates social relations, and is identifiable in its doing'.[2] This notion of 'brand' affirms the construction of *mouchette.org* as an assemblage that can vary over time and is composed of different parts and projects. The multiple projects signify and give meaning to Neddam's Mouchette. The idea of an assemblage is reinforced by the many twists and intricate navigation required within the site, which also change with each visit and throughout *mouchette.org*, making variability exemplary of the project. Arguably these characteristics give the site its greatest appeal but may also prove to be the most challenging elements for those wanting to preserve the project.

Scattered and distributed, traces are likely to change and evolve over time, creating not a nicely-narrated story of events amounting to a plot but conjunctures that only attain meaning by their connection. Such a distributed network of projects and events calls to mind what Pip Laurenson, Head of Collection Care Research at Tate, refers to as 'authentic instances' – but instead of departing from one form and presenting slight variations *mouchette.org* is a (still growing) ecology of different projects. Dealing with such a dispersed network of projects is a challenge that is found in other works of art as well, for example the project *No Ghost Just A Shell* (1999-2002) initiated by Philippe Parreno and Pierre Huyghe. This consists of about 25 artworks made by more than a dozen artists, each work revolving around the fictional character Annlee. All the works have been exhibited separately and were brought together in a collective exhibition at Kunsthalle Zurich in 2002.[3] The project was intended to continue for a number of years and it offered the manga character Annlee free of charge to a selection of artists

who were commissioned by the initiators. Unlike *mouchette.org* the artists transferred Annlee's copyright to the Annlee Association, a legal entity that belongs solely to the character. The contract stipulated that artists were not allowed to create any more works with Annlee as a digital model. According to the artists the contract liberated Annlee from circulation and from economic and artistic exploitation;[4] it also cleared the path for museums to acquire the work, because the conditions and the work's components had been set.[5] Nevertheless, as it turned out the work was made into editions and different examples of it now exist in several museum collections. Although this raises interesting questions – for example, what constitutes the work and what is an edition[6] – it would be relatively easy to trace all the works.[7] Finding the different traces in the case of *mouchette.org* might prove to be more challenging because of the lack of contracts, an exhibition where all the separate projects come together, a project end date, or other parameters that would determine the project.

To summarise, similar to other net artworks, the process of creation for *mouchette.org* is heterogeneous, involving incompatibilities, constraints, rules, and a certain amount of improvisation that continually re-negotiates its own structures. Net art poses several challenges for conservation: it can consist of old and often outdated material aesthetics; reading code and software can be difficult; maintenance can be very time-consuming; users participating in the work can change it; and a work can evolve into other projects. It could be argued that these problems are not unique to net art; however, the combination is rarely found in other artworks.[8] Moreover, the mentioned speed of developments and consequently the depth and breadth of different knowledge fields are major concerns. In the next section I will compare *mouchette.org* to a media archaeological reconstruction of *LoveLetters* by David Link to see what these challenges imply, particularly for the functioning of software and the involvement of users.

(Re)constructing software

Over the years Neddam has continuously updated and maintained *mouchette.org*. The website's success shows that her preservation strategies were effective, but would it be possible to rebuild software after decades (or the artist) have passed? Although there are only a few examples of re-created software-based works Link's rebuilding of the *LoveLetters* shows that it is possible to reconstruct even the oldest ones. Link's approach fits the tradition of media archaeology as exemplified by Erkki Huhtamo, Siegfried

Zielinski, and Jussi Parikka, among others. However, Link's work should not merely be seen as an opportunity to reinforce or visualise written theory but rather as practicing media archaeology in its own right.

LoveLetters was programmed in 1952 on the Manchester Mark I by Christopher Strachey, a former fellow student at Cambridge and working colleague of Alan Turing at Manchester University. The Manchester Mark I was one of the earliest electronic, programmable, and universal calculating machines. The machine used Williams tubes as means of volatile storage. Strachey's software used the Ferranti Mark I's built-in random generator to generate over 318 billion different love letters.[9] Although the letters are fun and show the experimental character that can be traced in software programming[10] it is the process of the working, i.e. the context of the generator's processes, that makes it interesting and gives meaning to the data.[11]

DARLING JEWEL

MY LIKING ANXIOUSLY ADORS YOUR ADOUR. MY FELLOW FEELING IMPATIENTLY LONGS FOR YOUR AMOROUS ENTUSIASME. YOU ARE MY BURNING DEVOTION. MY SYMPATHETIC HUNGER. MY DEAR INFATUATION CLINGS TO YOUR APPETITE.

YOURS AFFECTIONATE

MUC.[12]

In 2009 David Link presented his reconstructed *LoveLetters_1.0. MUC=Resurrection. A Memorial* at ZKM in Karlsruhe. To build a functional replica of the Ferranti Mark I, Link worked from two archival photographs and several other documents that he had found on the Internet; he also deciphered the software from Strachey's handwritten notes.[13] Link's installation in Arnolfini in Bristol and MU in Eindhoven in 2010, as part of the *Funware* exhibition, consisted of the Ferranti Mark I replica, some original working components like the heavyweight old teleprinter and the original Williams tubes, the digitised notes by Strachey, and the love letters. Visitors could use the Mark I simply by following the instructions. By toggling the right switches on the reconstructed user interface console the user could execute Strachey's software through its rewritten code. If someone managed to type his or her name in Baudot code on the computer's typewriter the resultant love letter would carry their signature. The new

love letter was then projected at the entrance to the space or somewhere on the outside surface of a public building. At the same time the letter was recited through an old speakerphone that was placed outside of the exhibition space. Stracey's digitised notes were placed on two vertical LCD screens near the installation. The notes revealed Stracey's intricate ways of thinking and sifting through all the information, and deciphering the meaning and code provided the visitor with a unique insight into Link's re-construction process.

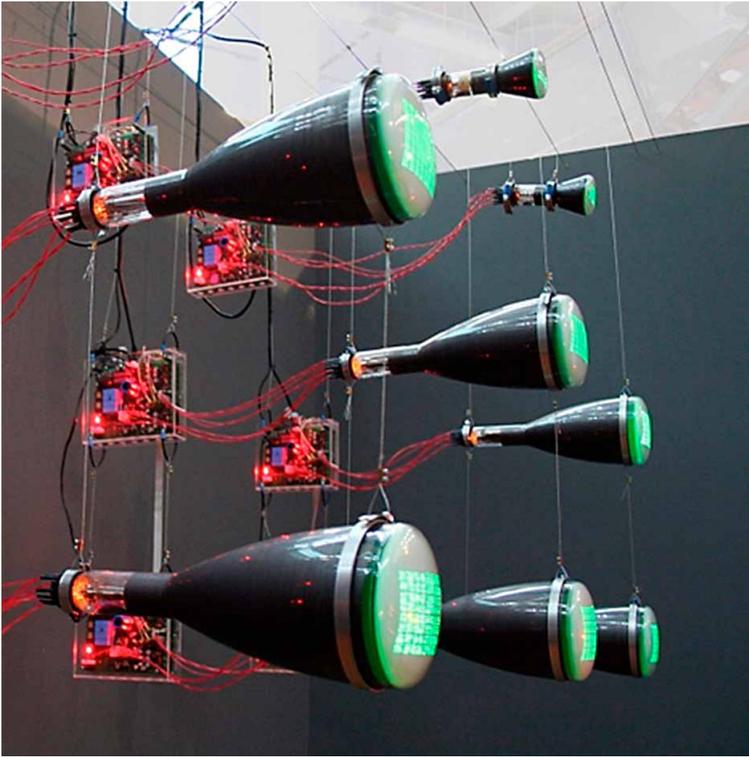*Fig. 2:* LoveLetters_1.0, *MU Eindhoven* (*2010*).

Fig. 3:   LoveLetters_1.0, *Arnolfini, Bristol (2010).*

This is not to say that reconstructing software is an easy undertaking. As Link confirms it took many years of arduous work to reconstruct the details. Tracing the original equipment also turned out to be more difficult than expected. The hardware was often found by accident through university libraries or, in one instance, discovered in a dark corner of a farmer's barn.[14] Because some parts have become extremely rare it was necessary to emulate them. It can be argued that reconstructing and re-executing the software was easier because all the original paper notes could be accessed. This kind of material evidence is easier kept and read than code that is stored on now-obsolete hardware. However, as Matthew Kirschenbaum has shown, information (stored on a hard drive) leaves a trace that can be forensically reconstructed.[15] Similar statements come from people who try to recreate and capture gaming experiences. Next to reconstructing technical parts specialised systems are devised that annotate data during the development process and capture data of user experiences. This enables an 'easy' reconstruction of the code.[16]

   As Neddam also experienced throughout the years, a reconstruction or restoration of software is possible.[17] Nevertheless, the success of a restoration depends very much on the programmer doing it. Whereas most programmers fix problems by replacing or rewriting code in new versions – something Neddam is not in favour of – only a few programmers take the trouble to return to the old code and work from there. For these programmers software is not just a tool that can be adjusted, emulated, or used to make the work easier – for them the fun is in the mental process of coding that influences how they structure and think about information.

   On a practical level an element that no longer works because of changes to browser settings can be made to work again by adding a patch that translates the code into the new settings. By translating the code the language changes and words acquire meaning. Transforming (or reworking) code gives it a different meaning. Furthermore, it follows that code attains meaning in relation to a specific context, i.e. when it is combined with that which lies outside of code, or as Matthew Fuller states,

> [software] gains its power as a social or cultural artefact and process by means of a better and better accommodation to behaviours and bodies which happen on its outside.[18]

It is in the light of these social and machinic relations and rituals that Link's attempts could be said to be less successful. Although he restored the functionality of the work, the historical context and the meaning and function of the love letters is probably lost on most visitors.[19] These can only be traced through written accounts, or in other cases through video documentation. Furthermore, by disconnecting the various components, i.e. by placing the typewriter on a pedestal covered with a protective glass case and shielding off the space around the Williams tubes, a work that was once a whole (different elements that by working together produce a result) is now disconnected. The playful *LoveLetters_1.0* still functions, but by separating and shielding some objects it seems in a state of 'freeze'.[20] Such a presentation does not reveal the working or experience of computers and it could be argued that it fosters a mystification of computation. However, stating that Link's installation was unsuccessful overlooks the importance of a media archaeological approach that tries to open up historical paths that are easily overlooked. Certainly in art, moving away from conventional examples and from endorsing the consensus is an important step.

   As the above exemplifies with regards to conservation, the aging of software is not necessarily a problem that cannot be overcome. As long as

someone understands the susceptibility of the specific code and also knows the old system and the cultures around it, a website can easily survive many years. However, it is important to note that the use of open standards increases the chances of survival. The idea that using open source software in artworks will benefit preservation is acknowledged; however, issues and questions around standardisation will likely be the greatest challenges when dealing with the conservation of software-based art in the (near) future. Another problem that is often overlooked within systems that are developed to retrieve or capture digital data is that these systems often 'assume ideal circumstances and a homogeneous data set, not the messy world of proprietary and mutually incompatible formats one gets from an individual user's hard drive'.[21] Present strategies such as cloud computing or other third party back-up services will further complicate these matters.

Another characteristic of many net artworks, and certainly of *mouchette. org*, is their processual nature; websites change over the years, sometimes as a result of technical changes (ranging from new browsers to screen size adjustments) but also due to input from visitors. The technical variations can be traced in the code but a conservator will need to make a choice about which version to save (either by freezing, restoring, or documenting) or work with (in the sense of keeping the website alive – the point of departure). Furthermore, in the case of *mouchette.org* users are invited to utilise specific elements and create their own version of the website. At a certain point the user is invited to enter Mouchette's network. S/he can obtain a password that will enable her/him to become Mouchette. With this password texts and photographs can be uploaded to the *mouchette.org* website and e-mails sent to Mouchette can be answered by the new inlogee.[22]

Networks of care

This last comment leads to what might be one of the most important elements of *mouchette.org*: its users. For Neddam *mouchette.org* is a tool for communication, a social platform that branches into several directions. It can be seen as a tool, a playful interface, as Neddam explains to express herself about issues that she as a non-native English-speaking person would find difficult to articulate.[23] Her online (anonymous) character also enabled her to abandon intellectual authority while having contact with visitors. Similarly, in an attempt to provoke art discourses Neddam used the website's pink aesthetics to criticise institutional art worlds, which is enhanced by the cheeky comments from an apparently well-educated 13

year old. Also, *mouchette.org* as a social platform is a space where people can communicate or help other people. Finally, it allowed visitors to use the website for their own projects, to build on or re-use in their own space. The latter testifies to the project's success, as several Mouchettes have been created over the years. Moreover, the work was promoted by a close but dispersed community of followers (a fan club – and simultaneously a hate club – formed around the website). This could be one of the solutions for its future conservation.

A community-driven conservation strategy is not unlikely to happen. On 23 July 2002, a few months after Neddam launched a quiz that compared the Mouchette characters from the film and the website, Mouchette received a summons from Bresson's widow to take down any reference to the 'original' film *Mouchette*.[24] Shortly afterwards Neddam announced this on her website and through her e-mail lists and several independent organisations took it upon themselves to mirror the project on other websites.[25] Users not only influence and assume ownership of the work they also take care of it – at least to a certain extent. The extent to which this happens will most likely shift in time and through different networks because like the work itself such a process keeps evolving. This 'social life' of the project is also of concern to conservators and something that they will have to take into account and can benefit from.[26] This means that technical solutions should not predominate in net art conservation; as argued by Kathleen Fitzpatrick a future preservation of digital objects may be less about

> new *tools* than new *socially-organized systems*, systems that take advantage of the number of individuals and institutions facing the same challenges and seeking the same goals.[27]

This adds to the importance of *mouchette.org*; besides the self-reflexivity of its own artificial condition it uses that same condition to set in motion unintended, emergent, and distributed events that add to the work's original ambition.[28]

In this example a network of different people gathers around an initiative and starts working together. It is not uncommon that such networks form around artworks that are not collected by museums, large institutes, or private collectors. This is either to protect the work from censorship or to safeguard it after an artist dies. With different stakeholders and caretakers who do not have a centralised system or organisation to manage archival information the relationship between conservation or documentation practices and knowledge transfer becomes inherently political. In her

article 'The Ethics and Politics of Documentation', Van Saaze examined how collaborative knowledge production takes shape in discussions about the continued existence of an artwork and which role documentation plays in such a process. Analysing the documentation of Robert Smithson's land art project *Spiral Hill/Broken Circle* (1971-present) showed that several stakeholders became involved in the discussions around the project's preservation but that reaching a solution was difficult 'partly due to the fact that the relevant information was distributed over a wide range of archives',[29] complicating the decision-making process. Nevertheless, the most recent restoration (in 2012) was completed as a result of individual and collective efforts by a network of caretakers. Van Saaze concludes that

> in the absence of a common heritage framework, the decision to keep this work for the future cannot be traced to one single moment in time; the history of the work shows that its prolongation had to be negotiated again and again.[30]

The distributed network of caretakers functioned through a combination of experts and non-specialists who brought in knowledge from different fields and backgrounds.[31] As acknowledged by Van Saaze, a thorough investigation of the different roles of the stakeholders – or more precisely, caretakers – might provide a lot of insight into the political dimensions around the artwork as well as in the art world at the time; moreover, I would add that analysing the underlying structures could show how sustainable such a network can be over time.

Although important questions remain – for example, how shifting constellations and power relations will affect future prolongation efforts of the artwork, or who will be leading or even responsible for safekeeping and tracking the documentation that is distributed across several caretakers – it is clear that these networks can operate without the structures of centralised archives and authorised custodians which are present in most museums. In order for a 'network of care' to succeed outside of an institutional framework or to become effective as a tool for transformation it ideally has to consist of several characteristics. These can be traced by looking at how a network gives agency to individuals instead of answering the question of how individuals create networks,[32] some of which have already been mentioned. A 'network of care' is based on a transdisciplinary attitude and a combination of professionals and non-experts who manage or work on a shared project. To enable the creation and administration of a project the transmission of information is helped by a common mode of

sharing where everyone in the group has access to all the documents or archives. Ideally it would be an open system or a dynamic set of tools that is used and cared for where people can add, edit, and manage information and track changes that are made. Such a system can also be monitored by the network. An added bonus is that if someone leaves the project can continue because the content and information is always accessible and part of a larger network. This allows people to take control of a shared project, thus obtaining meaning from their 'investments'. To be able to share information and benefit from experience and insight gained elsewhere (for example in other networks dealing with similar issues) a network should be dynamic, so that individuals can easily move and projects can be merged or split into separate smaller or more specialised groups.

From traces and loss to cycles

The focus on *mouchette.org* in this article has shown that net art's resilience is in being built and distributed through a complex and intricate interrelated system of networks that presents an assemblage of art, technology, politics, and social relations – all merged and related to form a variable entity. In the remainder of the article I focus on variability and process as means to reveal different options. Such trajectories open and reform traditional strategies by imagining a process in which various paths are explored. Inevitably this raises the questions of whether the role of the conservator (and it could be argued the conservation practice as a whole) will change from being a material conservator to a social collector, would s/he still be the right person to do this, and whether we are then still talking about the conservation of a work of art.

Artists and museums are trying to document or conserve net art. In spite of all these efforts the reality is that many net artworks have already been deleted by their creators, are dysfunctional due to out-dated software and network changes, or are unable to perform because of incomplete hardware or hardware that has become obsolete. This is a scenario not unlike the world that Shu Lea Cheang pictures in many of her artworks, in which the subjects of compost and trash are recurring aesthetics. Die-hard open source coders along with circuit benders are scrambling through utterances of code, tracing dead links, building something from scattered parts, and trying out endless emulations while piecing together different parts. This is the scenario of *I.K.U.* (2000), Cheang's movie (which later was cycled into *U.K.I.* [2009]), game, and performance piece depicting an Internet porn

enterprise, GENOM Corp., which introduces orgasm-on-the-go for a mobile phone chip. Dumped into an e-trash environment, coders, Twitterers, and networkers are forced to scavenge through techno-waste to collect old and forgotten human orgasm data. It is also a (future) scenario that may well resemble the work of net art conservators.

If a net artwork breaks down the software might be fixed or adapted to the environment once or twice, or emulated, but in time and after attention wanes it is neglected, thrown away, and replaced by a new version. What remains is waste, digital litter, and hardware junk. It has been argued that garbage and waste belong to the domain of forgetting; archaeology is the prime field that thrives on scattered traces and perpetuates through assemblages. The trope of archaeologists is that they focus on past artefacts, behaviours, attitudes, and beliefs, but according to Shanks et al. 99% of archaeology is based on examining traces in waste or refuse.[33] A condition of waste is common to all things and it is through scrutinising and arranging waste that meaning is created.[34] Although it can be argued that this is also an archaeological trope what is interesting is that both of these notions regard waste as the end state of objects. However, emphasising waste as redundant, a residue, a remainder, obscures a potential on-going and continuous status of the object itself.[35] In other words it denies what objects are yet to become.

Fig. 4:   *Shu Lea Cheang,* UKI – *Trash Mistress* [*Radíe Manssour*] *(2009).*
        Photo by Rocio Campana.

Jill Sterrett, head of conservation at SFMOMA, suggests applying the concept of the 'archaeological find' in reverse by using the mechanism as a method to trace the engagement with an artwork and to reveal its life over time.[36]Instead of rigid solutions or records she advocates 'planting finds' (documents with information value) which account for the variables that are present in the presentation and conservation of many contemporary artworks. This could lead to a new situation where museums would have to re-assess their finds each time from a new context, or as Sterrett says it will adjust

> the burdensome tone of authority museums inherit as sources of objective truth by actively committing to seeing and seeing anew over time, [and it will] cultivate, among other things, ways of manoeuvring with variable speed.[37]

By following such a position re-installation or conservation will be a mode of iteration that is underwritten by absence and loss.[38] It shows an intention to reframe discourses and opens up alternative possibilities. Instead of asking what should be saved, kept, or preserved, the first question becomes what to give up, erase, forget, or abandon. Such an 'art of forgetting' is demonstrated in the work *Composting the Net* (2012), also by Cheang. Whereas most artworks that deal with waste and trash paint a rather negative picture of the present or future[39] *Composting the Net* takes all the content of a website or e-mail list and shreds the words and images into 'compost', turning the archives into forgotten instances of history. However, like seeds from a tree the actions of digital worms generate fresh sprouts that refuse to be trashed and buried. Seemingly dead data is fertile and open to new perspectives. It could be argued that allowing things to be forgotten is not bad. It also highlights an often (deliberately) ignored issue: historical representation, which Boris Groys calls the 'museum taboo'.[40] The modern museum strategy of presenting and collecting prevents repetition because once historicised in a museum collection a work cannot be replicated. As Groys argues,

> [i]f the past is collected and preserved in museums, the replication of old styles, forms, conventions and traditions becomes unnecessary. Further, the repetition of the old and traditional becomes a socially forbidden, or at least unrewarding, practice.[41]
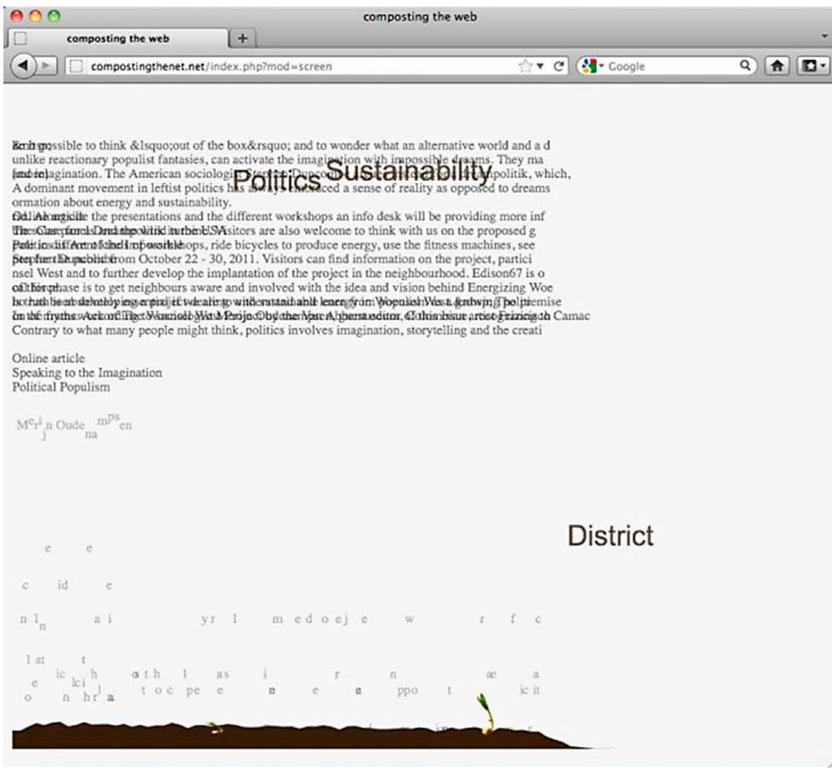
Fig. 5: *Shu Lea Cheang,* Composting the Net *(2012).*

What Cheang proposes is a cycle

> which is durational, generative and repetitive. A cycle is a natural process, while 'recycle' implies 'the making of something else', which inevitably generates more waste.[42]

A cyclical method represents a more natural approach to preserving the past, departing from the assumption that without repetition there is no learning and without learning what remains is a fleeting yet endless desire to get to the next new thing. Similarly, I would like to argue that rather than relying on a past the notion of traces relates to a future, the function of a trace being that of a 'carrier' of information whose significance is more appropriately valued in a 'not yet' context. Such a less permanent and secure approach takes into account a future perspective and works towards a propensity of change and development.

Conclusion

As for *mouchette.org*, I have not been able to trace all the different elements that are part of it, nor will a future conservator, but as the above shows this might not be necessary. Some parts can be physically archived or digitally stored in archives and museums, others will linger and evolve between various networks, and some of it will be automatically cached through crawlers. Another scenario could be that a community takes control of *mouchette.org* and ensures its continuation in different versions. Stories will continue to be told through multiple authors and caretakers and because Neddam does not want to control its growth *mouchette.org* keeps generating more objects, events, and comments. Together with evolving communities that are growing around the website *mouchette.org* is a circulation of traces, experiences, and sharing that started at some point and progresses without a definite plan.

Arguably, dealing with evolving processes, reinvention, or adopting cyclical methods may not be seen as conservation. This is true when treating conservation as a time-related practice, i.e. valuating the past over the present. However, when considering the possibility of conservation as a process in which certain elements become obsolete and others stay the same or mutate into something else signals a conservation of the future that tries to aid production and development. Such a process does not exclude conservation but incorporates future thinking in its practice while guarding or making documentation as traces of a past that can be inserted into art history.

Acknowledgements

Notes

1. Personal conversation with Neddam, Summer 2011.
2. Lury 2004, p. 1. Although the term 'brand' is mostly seen as a market modality and is used in economics, the way a brand mediates through organisation, co-ordination, and integration of information closely connects to the way *mouchette.org* (and other net artworks) operates.

3. Issues around acquisition and conservation of this artwork have been thoroughly analysed and discussed in Van Saaze 2009, pp. 131-162.

4. http://www.mmparis.com/noghost.html (accessed on 22 January 2014). Nevertheless, projects dealing with Annlee's legacy continued. See for example the exhibition *Yes, We're OPEN* (2011) at Netherlands Media Art Institute (Amsterdam) in which curator Petra Heck asked artists to react to Annlee's legacy.

5. The work was subsequently acquired in 2003 by the Van Abbemuseum in Eindhoven, the Netherlands.

6. Van Saaze 2009, p. 159.

7. Van Saaze also raises the issue of competition between museums and the driving force to create unique collections by which museums are branded.

8. Some of these challenges are also encountered in contemporary art like installation art, video art, or gaming. For more information see Depocas et al. 2003, who argue for 'variable artworks'; Van Saaze 2009 describes how installation art influences traditional museum practices of collecting and conservation; the three-year research project Inside Installations (2004-2007, http://www.inside-installations.org) provides practical and theoretical guidelines for the preservation and presentation of installation art; Winget 2008 analyses the conservation of games; and in Richmond & Bracker 2009 the 'principles, dilemmas and uncomfortable truths' of contemporary conservation are examined.

9. Link 2006.

10. The type of fun I am referring to can be found in offices or formal settings, i.e. the fun of exploring or trying things out by playing a joke on fellow developers. See Goriunova 2014.

11. Wardrip-Fruin 2011 provides a detailed analysis of the generator's processes in *LoveLetters* in relation to the meaning of the data.

12. The abbreviation MUC refers to Manchester University Computer.

13. Strachey's notes and papers are preserved in the Special Collections and Western Manuscripts section of the Bodleian Library, Oxford University. The emulator can be found on Link's website at http://alpha60.de/research/muc/ (accessed on 22 January 2014).

14. Link recounts that one of his latest finds was an original switchboard, which he discovered at a chicken farm unused after many years but still in good shape (personal conversation, September 2010).

15. There is still no research on what digital forensics could mean for the specifics of software-based art conservation.

16. See, among others, Winget 2008, Van Mastrigt 2010, and Benford & Giannachi 2011.

17. Neddam 2010.

18. Fuller 2008, p. 5.

19. It is important to note that Link tried to recreate the social parts of the installation. During the production talks he proposed to look for an original setting that could be used in the presentation. However, financial restrictions and exhibition design prevented this.

20. 'Freeze' is a term that is used in conservation to signify a specific state of an object.

21. Kirschenbaum et al. 2009, p. 110.

22. See: http://www.edit.mouchette.org/..

23. Dekker 2011.

24. Bresson's wife did not see the work as an adaptation but rather as a contradiction to the film's narrative. More surprising was that the letter was addressed directly to Mouchette in the assumption that she was a real person. By replacing the quiz (in its French version) with the letter Bresson's wife became part of the experience and the narrative of Mouchette, making her truly alive. For more information see http://www.mouchette.org/film/ (accessed on 22 January 2014).

25. http://copycult.constantvzw.org/home/mouchette.php; http://drivedrive.com/mouchette/censored.html (accessed on 22 January 2014). Similar initiatives are becoming more widespread. Instead of traditional institutions a collection of individuals and small organisations form a foundation that takes care of an artist's legacy. See for example the Nan Hoover Foundation which was founded a few months after her death and is now dedicated to preserving her artistic work and making it accessible to the public. See http://www.nan-hooverfoundation.com (accessed on 22 January 2014).

26. I borrow the term 'social life' from Seely Brown & Duguid 2000. In their publication *The Social Life of Information* they argue for greater emphasis on the context of social networks around information. Information, they argue, only acquires meaning through social context. Similarly, Kirschenbaum 2008 advocates the importance of the social dimension in the preservation of digital media, which is 'at least as important as purely technical considerations' (pp. 240-241). Based on his practice conservator Glenn Wharton describes the importance of community-based conservation (Wharton 2011).

27. Fitzpatrick 2011, p. 126.

28. Such a distribution and dispersion of events is not uncommon in net art and is frequently what it thrives on. Similar older examples are Olia Lialina's *My Boyfriend Came Back From the War* (1996) and *Mission Eternity* by Etoy (thoroughly analysed in Bosma 2011, pp. 173-83), and the more recent way of dealing with memes and virals where the distributive effects are intentional, albeit not foreseeable.

29. Van Saaze 2012, p. 81.

30. Ibid., p. 82.

31. Van Saaze describes the network as consisting of 'temporary and active communities comprised of practitioners, academics and non-experts operating on different, though at times connected, levels: locally (municipal officials, contractors, land owners, cultural entrepreneurs), as well as nationally and internationally (artists, museum directors, curators, governmental officials, collectors, the estate)' (Van Saaze 2012, pp. 82-83).

32. I am following the method proposed by Hui & Halpin 2013 who analysed online collective social networks like Facebook and suggested alternatives that would allow people to work together towards common goals.

33. The connection between archaeology and garbage (archaeologists studying garbage) was made in the 1970s when William Rathje started the science of Garbology at the University of Arizona. For more information see Rathje & Murphy 2001 and Shanks et al. 2004.

34. Shanks et al. 2004.

35. Analysing the installation *Tate Thames Dig* (1999) by Marc Dion, Viney (2010) demonstrates that waste is not a fixed state but that it continuously changes due to the materiality and handling or presentation of the material – a process that is most visible in the accounts of the conservators who worked on the installation.

36. Sterrett 2009, p. 227. An archaeological find does not only communicate aesthetic values, it also has information potential and semantic values (see Berducou 2008, pp. 248-58).

37. Sterrett 2009, p. 227. Similarly, from the position of conservators in anthropological museums and ethnographic studies, Clavir (1996) suggests that 'by accepting that cultural meanings change, conservators are being asked not only to value the less tangible attributes of an object but also to realize the acceptability of continuing process and the validity of a more abstract, shifting context than is usually found in conservation'.

38. When referring to conservation Bosma talks about the importance of 'losing control' over digital objects. Such a loss of control could lead to unpredictable outcomes and involves the engagement and collaboration of audience members who are part of an ever-growing network that enables extending the lifespan and scope of a project (Bosma 2011, p. 164-191).

39. See for example A. Kroker & M. A. Weinstein's publication *DATA TRASH – The theory of the virtual class* (1994) and Mark Napier's project *digital landfill* (1998), which anticipates an exploded digital superhighway that is littered with road kill and taken over by spam.
40. Groys 2002.
41. Ibid.
42. Dekker 2012.

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