Dimensions of the Post-Internet Condition. An Exploration through Post-Internet Art.

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To Haris, Nora, Orfeas and Billie.

Declaration

This thesis has not been submitted in support of an application for another degree at this or any other university. It is the result of my own work and includes nothing that is the outcome of work done in collaboration except where specifically indicated. Many of the ideas in this thesis were the product of discussion with my supervisors Charlie Gere and Mike Hazas.

Excerpts of this thesis have been published in the following conference manuscripts and academic publications:

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Christou E. (2018) Internet Art, Google and Artistic Practice. EVA London 2018: Electronic Visualisation & the Arts. London, UK. BCS: The Chartered Institute for IT, Electronic Workshops in Computing (eWiC).

Christou E. and Hazas M. (2017) It's Just the Internet! Appropriation in Postinternet Art. ARTECH 2017, Proceedings of the 8th International Conference on Digital Arts, Macau, China. ACM, Association for Computing Machinery

Christou E. (2016) Art Exhibition Online: A Condition. Transmediale 2016: APRJA, Volume 5, Issue 1. Berlin, Germany. Digital Aesthetics Research Centre, Aarhus University in collaboration with Transmediale, Liverpool John Moores University and Liverpool Biennial.

Christou E. (2017) The Digital Time of Internet Art. Signal Effects: Digital Ecologies and the Anthropocene, Media Convergence Research Centre, Bath Spa University. Bath, UK.

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Abstract

This thesis introduces post-Internet art as a novel exploratory medium for Internet research. The thesis proposes that post-Internet art as a cultural product of information and communication technologies (ICTs) can operate as an investigating mechanism of the post-Internet condition. Through a rhizomatic methodological approach and the application of a sociotechnical and a technocultural lens, the research work examines post-Internet art's rhizomatic unity to the world. Post-internet art reflects the developments in ICTs and the World Wide Web approximately from 2005 to 2020, like ubiquitous computing and semantic web. The thesis examines a large number of post-Internet artworks and makes connections to discourse from Internet-related research fields like media theory, digital cultures and digital humanities. Five key dimensions of the post-Internet condition are identified; these are appropriation, mediation, spatiotemporality, publics and public spheres, and identity. The concept of dimensions is used to discuss the ways of considering the post-Internet condition. These ways are analysed as interconnected elements that make up a whole within a historical present. The findings offer a new expanded view into how we can better define and understand our contemporary condition through the medium of post-Internet art. The artworks examined in this thesis include works by artists: Oliver Laric, Jennifer Chan, Krystal South, Jon Rafman, Erica Scourti, Evan Roth, James Bridle, Heath Bunting, Benjamin Grosser, Jay Simons, Guido Segni, Zach Blas, Jonas Lund, Filippo Minelli, Cuadalupe Rosales, Natalie Bookchin, Amalia Ulman, Jeremy Bailey, Ed Fornieles, Bogosi Sekhukhuni and Jake Elwes.

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List of Abbreviations and Acronyms

ICTs: Information and Communication Technologies

WWW: World Wide Web

CDT: Centre for Doctoral Training

ML: Machine Learning

VR: Virtual Reality

AI: Artificial Intelligence

CS: Computer Science

IoT: Internet of Things

HE: Higher Education

AR: Augmented Reality

NFTs: Non-fungible Tokens

STS: Socio-technical system

E.A.T: Experiments in art and technology

CAS: Computer arts society

SDS: Scientific data system

HTML: Hypertext markup language

URL: Uniform resource locator

GAN: Generative adversarial network

List of Appendices

1 Introduction

1.1 Introduction

> The world picture does not change from an earlier medieval one into a modern one, but rather the fact that the world becomes a picture at all, is what distinguishes the essence of the modern age (Heidegger, 1976).

Since the creation of the first web servers, web browsers and with the widespread use of the home computer, Internet art has been responding, reflecting, analysing, critiquing and exposing the ways the Internet and the World Wide Web (WWW) are affecting every aspect of our lives. It is with the popularization of the graphical browser in 1993 that Internet art emerged. First as net.art and later as Internet art and Post-internet art.[1] The evolution of Internet art is one that happens in parallel with the evolution of the Internet. As artist and curator Jon Ippolito writes in the *Ten Myths of Internet Art*, "Internet art matured at the same breakneck pace with which digital technology itself has expanded...By 1995, eight percent of all websites were produced by artists, giving

[1] In this thesis the term *Internet art* is used when referring to Internet art in general. Early Internet art is referred to as net.art and contemporary Internet art as Post-internet art (2005-2020).

them an unprecedented opportunity to shape a new medium at its very inception" (Ippolito, 2002).

Since those early days of Internet art, a lot has changed in the way Information and Communication Technologies (ICTs) have transformed our world and consequently Internet art itself. The globalisation of the Internet along with the rise of social media, have re-shaped the way our lives are lived. Today, Internet art raises and explores issues relevant to all aspects of life that are affected by ICTs including culture, sociality, economy, labour, identity, temporality, gender and sexuality amongst others. At the same time, Internet art is directly challenging the traditional systems within which art existed so far. The role of the artist, the curator and the critic are questioned while new networks and platforms for interaction and exhibition are introduced.

These changes are so complex and multifarious while they also happen so fast that the process of trying to identify them and locate them becomes very challenging. Furthermore, trying to analyse them, understand them and draw conclusions is a process of continuous exploration and adjustment of available theoretical and analytical tools and methods. How life is changing with/after/post-Internet is a question that is being addressed by many research disciplines. In its core this is a question that must approach the Internet as a technological medium and it must consider media theory; the Internet is the medium of mediums after all. The Internet not only allows for access, production and circulation of vast amounts of information, it also alters the meaning of geographical distance, making communication instant, interactive and interconnected. At the same time, the structures, systems and layers of the Internet itself, the computer networks, the Internet protocols and the domain name systems all define the politics of

the Internet's *networked culture*. That is a culture that is defined by both the limitations and the possibilities of the Internet as a technology and a medium in constant development.

This thesis focuses on the post-Web 2.0 and Semantic Web periods of the World Wide Web. This is a period that coincides with the shift from net.art to post-Internet art. Post-Internet is defined as a result of the contemporary moment: "inherently informed by ubiquitous authorship, the development of attention as currency, the collapse of physical space in networked culture, and the infinite reproducibility and mutability of digital materials" (Vierkant, 2010). The thesis argues that post-Internet art is an art form in direct relation with a world shaped by Internet technology and as such, it offers unique opportunities into analysing and understanding our experiences within the post-Internet condition. In this thesis, Internet art is approached as a unique cultural product of contemporary life with the Internet that responds to the need for new forms of expression and new artistic practices to address the most urgent questions of our time.

The aim of this thesis is to introduce post-Internet art as a novel subject for Internet research and reveal its potential as a rich research subject by providing findings from an extensive analysis of Internet artworks in relation to contemporary theory and discourse. This thesis suggests that the post-Internet discourse and practice can promote critical thinking on the ways in which ICTs affect the conceptualisations of contemporary life practices, experiences and phenomena.

The research identifies five major areas of change in life post-Internet as expressed through post-Internet artworks. To avoid attributing pre-assigned concepts in post-

Internet artworks, the research work reviews the wider field of post-Internet artistic production. The themes and patterns that emerge are then analysed in relation to contemporary theory and discourse and organised as dimensions of the post-Internet condition. The thesis presents an outlook of post-Internet art from the outside in. This serves as a *mapping* of the subjects that post-Internet is addressing while the richness of the findings also reveals the sophistication and complexity behind contemporary artistic practice.

1.2 Life post-Internet – Beyond the digital condition

Post-Internet's critical enquiries showed the Internet to be far from an autonomous site of user-agency. The term post-Internet incorporates many histories. Following the particularities of a highly heterogeneous set of art practices the term has become more nebulous, referring adjectively to a broad 'cultural condition' (Clark, 2018). Throughout this dissertation, post-Internet is used to describe a conceptual condition where the Internet is present in so many aspects of everyday life to the point that its presence becomes invisible. The post-Internet condition is used to describe a period in human history where Internet technology became so influential and necessary, and most importantly ubiquitous and integrated, that it reached a point where everything exists in relation to it and/or through it. It is not life *after* the Internet in the way that a historian would characterise life after ICTs became part of people's lives. This is because the Internet as a technological medium is unique in its ubiquitousness, and its value and influence to peoples' lives is of great importance. The *Internet* of the post-Internet is understood here to be a combination of ICTs including protocols, networks, software

and devices, data mining, machine learning (ML), virtual reality (VR) and artificial intelligence (AI), blockchain and the WWW including everything that exists and is communicated online, platforms, social media, images, videos, websites and games.

The post-Internet concept reflects the developments in ICTs and the WWW since the mid 2000s, such us ubiquitous computing, ambient intelligence and semantic web and the relevant discourse in media theory such us networked culture and hyper-reality. Many post-Internet artists, acting as creative users of digital technologies (Søndergaard, 2017), have been examining these continuous developments of experiencing life post-Internet. Experiences of performativity on social media, experiences of news manipulation by bots and algorithms, experiences of appropriation of culture, images, texts, videos, ideas and anything that exists online have become opportunities for artistic exploration and expression. The post-Internet condition is viewed as a state of being and a state of producing meaning.

Through this research work, I claim that post-Internet art ultimately helps describe a condition that is defining our historical present as a state of *being post-Internet*. The concept of the term post-Internet shifting from describing art practice to describing the contemporary condition has also been discussed by artist, writer and media theorist Marisa Olson, who first conceived the term. Olson has recently called for a focus on the post-Internet condition as reflective of the symptoms of networked culture (Olson, 2017).

Approaching post-Internet as a condition is also motivated by work on the digital and contemporary condition. Felix Stalder's *The Digital Condition* (2018) positions Internet

culture and its practices at the epicentre of its analysis. *The Contemporary Condition: Key Concepts* by Lund et al. (2017), recognises technology and art as the structural elements of the contemporary condition. In this thesis, the post-Internet condition is approached as a state where mutually-defined realities are created both by humans and non-humans in a technologically-mediated state of being. The expressions and implications of those realities are explored thematically through the five dimensions of the post-Internet condition (appropriation, mediation, spatiotemporality, publics and public spheres, and identity) in Chapter 4. The identification of the five dimensions that are presented in this thesis is the result of applying a rhizomatic methodological approach and a sociotechnical and technocultural lens discussed in more detail in Chapter 2. The methodological choice of applying a rhizomatic approach aims to propose a rhizomatic unity of post-Internet art to the world.

1.3 Connection to Internet research

This thesis is the result of inter-/cross- and trans-disciplinary study. The theoretical work upon which the research is conducted relates to media studies, art, Internet studies, computer science (CS) and Internet research. In terms of contributions, the inter-/cross-/trans-disciplinary character of the research relates to research fields like digital humanities, communication and culture, digital aesthetics but the thesis' main contribution is aimed towards the field and practice of Internet research or Internet studies as it is also often used to describe the study of the Internet and its phenomena.

Internet research deals with a number of dimensions relating to the Internet and its technologies, networks and structures. These can be social, economic, technical, cultural and artistic, political, environmental and pedagogical. In the first *International Handbook of Internet Research*, Hunsinger (2010) describes Internet studies as "the study of the Internet as a complicated assemblage of people, institutions, technics, and technologies designed to allow for the transmission of information between devices" (Hunsinger et al., 2010). The study of the Internet is often very complex as the interactions within Internet environments are studied by combining a few or many approaches or topics in order to synthesize new understandings. "This relationality makes for a massively complex and broad field of study" (Hunsinger, 2010). A lot has changed since the early days of Internet research. "The Internet requires a continuous conscious shift of focus and method in order to grasp the Internet's essential changeability" (Jones, 1999). As Internet research responds to the multifarious ways ICTs affect all aspects of life, it becomes more and more inter-/cross-/multi- and trans-disciplinary, cutting across many disciplines and allowing for research practices and methods that engage with a diverse set of theories, schools of thought, methodological approaches and research practices.

Internet research today can investigate social perspectives on the technology of the Internet, its role in everyday life and work and its implications for communication, as well as the governance and regulation of the Internet (Zalnieriute, 2013) by examining and analysing practices, phenomena and information processes that use Internet and WWW technologies, resources, networks and applications. Examples are web history, digital activism, big social data, social networks, networked media, online field theory,

online politics and many more. Inter-/cross-/trans- and multi-disciplinary approaches and methodologies are not uncommon in this field. In Vincent Mosco's *Becoming Digital: Toward a Post-Internet Society* (2017), the post-Internet world is a world transformed by the convergence of ICTs, specifically of cloud computing, big data analytics and the Internet of things (IoT) where the human/computer divide has become an anachronism and where the integration of humans and machines is steadily progressing. Mosco turns to political economy for the power relations that shape the digital world, and to cultural studies as a way to make sense of it.

The thesis's rhizomatic methodological approach allows for inter-/cross- and trans-disciplinary conceptual tools to be used in order to create a *new way of seeing*. Positioned primarily within the field of Internet research but also relating to many other research fields, the thesis aims to introduce post-Internet art as an exploratory vehicle for understanding key ICT-related developments within contemporary culture and society.

1.4 Contribution and impact to Internet research

The choices made throughout the duration of this PhD in relation to subject, approach and methodology, presentation of findings and research dissemination, were strategically designed to contribute across Internet-related research fields. However, the thesis' contributions are aimed primarily towards the field of Internet research. Internet art has not yet been recognised as a research subject that can contribute to Internet research and Internet studies despite the fact that Internet artworks are often discussed

and examined within the Internet research/Internet studies scope by scholars, theorists and artists. Internet research/Internet studies handbooks of the last 20 years rarely include Internet art as a research topic or subject in their scope. This is paradoxical as Internet and culture is a big part of Internet research and Internet studies but also because Internet art is an art form that is a direct product of the Internet and exists in relation to the larger ICTs ecology.

In seminal Internet research/Internet studies handbooks, Internet culture research topics are presented through the lens of popular culture such as in *The Oxford Handbook of Internet Studies* (Dutton (ed), 2013). In *The Handbook of Internet Studies* (Consalvo and Ess (eds), 2011) there is a section on Internet and culture where the focus is on games, social networks and virtual worlds. In the *First International Handbook of Internet Research* (Hunsinger et al., 2010) however, there is a chapter contribution on Internet aesthetics (Cubitt, 2010) amongst other Internet and culture-related chapters such us virtual worlds (Bartle, 2010) and YouTube and remix culture' (Fagerjord, 2010). In the *Second International Handbook of Internet Research* (Hunsigner et al., 2019) there is a chapter contribution by me 'Lessons from Internet Art about Life with the Internet' (Christou, 2019) along with a contribution on digital folklore (de Seta, 2019). The limited representation of Internet art as a phenomenon, topic, subject or methodological and theoretical vehicle for Internet research and Internet studies, indicates that there is space for research propositions to take place where Internet art is strategically examined in relation to Internet research topics.

The future of Internet research and Internet studies is often viewed as wide-open. This is because of the transformative nature of the Internet (Rainie and Wellman, 2012) due to

its implications to the social, economic, cultural and environmental spheres. Additionally, the research ecology of Internet research fields is also constantly changing as new research subjects are introduced, new methodologies are developed, new cross-/trans-/inter-/multi-disciplinary approaches are applied and new researchers from various academic and professional backgrounds and disciplines enter the workforce. It is in this wide-open landscape that this thesis aims to contribute by positioning its research subject and its research context within the future Internet research scope.

1.5 Research outputs

Through the duration of the PhD the following research outputs and dissemination activities took place:

Publications

Christou E. (2021) Spatiotemporality and the Post-Internet. ISEA 2022: 27th International Symposium on Electronic Art. (under review as of the time of submission)

Christou E. (2019) Lessons from Internet Art about Life with the Internet. In: Hunsinger J., Klastrup L., Allen M. (eds) Second International Handbook of Internet Research. Springer.

Book Chapter

Christou E. (2018) Internet Art, Google and Artistic Practice. EVA London 2018: Electronic Visualisation & the Arts. London, UK. BCS: The Chartered Institute for IT, Electronic Workshops in Computing (eWiC).
Conference Proceedings

Christou E. and Hazas M. (2017) It's Just the Internet! Appropriation in Postinternet Art. ARTECH 2017, Proceedings of the 8th International Conference on Digital Arts, Macau, China. ACM, Association for Computing Machinery
Conference Proceedings

Christou E. (2016) Art Exhibition Online: A Condition. Transmediale 2016: APRJA, Volume 5, Issue 1. Berlin, Germany. Digital Aesthetics Research Centre, Aarhus University in collaboration with Transmediale, Liverpool John Moores University and Liverpool Biennial.
Article

Presentations

Christou E. (2017) The Digital Time of Internet Art. Signal Effects: Digital Ecologies and the Anthropocene, Media Convergence Research Centre, Bath Spa University. Bath, UK
Conference Paper

EMoTICON (2015): Empathy, Trust and Digital Technologies Postgraduate Workshop, Leeds University. Leeds, UK.

Poster

This thesis has been developed in relation to these research outputs and a great part of the research has been motivated by engaging in conference and workshop settings with other academics and researchers from around the world.

2 Methodology

> Any point of the rhizome can be connected to anything other,
> and must be (Deleuze and Guattari, 1987, p.7).

2.1 Introduction

This thesis draws connections between post-Internet art discourse and a variety of other disciplinary research and practice fields that are often overlapping depending on their respective research and scholarship-related framing. For example, the field of 'digital cultures' is framed and organised differently depending on the country, Higher Education (HE) institution and school of thought. The following list of research and practice fields summarises the areas of research and practice that the research work draws from:

- Art: Contemporary Art Practice; History of Art; Digital Aesthetics.
- Media Studies: Communication and Culture.
- Computer Science (CS): Human Computer Interaction (HCI); Computer Graphics and Video Games; Humanities Computing; Artificial Intelligence (AI) and Machine Learning (ML), Virtual Reality (VR) and Augmented Reality (AR).

- Social Sciences: Cultures and Society; Digital Humanities; Digital Social Research.
- Internet Studies: Internet Research; Digital Cultures; Digital Knowledge and Culture; Philosophy of Information; Philosophy of Technology; Digital Ethics.

The following list summarises the ICT-related practices that are examined/discussed/presented in the thesis as indicative of the inter-/cross-/trans-disciplinary nature of the research's topic:

- Glitching; Hacking
- Remixing; Appropriation; Memes
- Internet Mapping, Sound-mapping
- Surfing; Archiving; Web collecting; Documenting; Preserving; Emulating
- Performing; Exhibiting; Blogging; Vlogging;
- Datafying; Quantifying; Lifelogging;
- Queering; Databending; Datamoshing;

The following list summarises the ICT-related topics and concepts that are examined/discussed/presented in this thesis as indicative of the inter-/cross-/trans-disciplinary nature of the research's topic:

- Algorithms; Artificial Intelligence (AI); Machine Learning (ML); Algorithmicity
- Bitcoin; Non-fungible tokens (NFTs)
- Virtual Reality; Hyper-reality; Mixed reality
- Cybernetics; Computer Aesthetics
- Social media; Chat rooms; Online games; Smartphone applications; Search engines; Platforms
- Mediation; Living media; Biomediation; Mediated publicness; Mediated self; Mediated trust
- Disinformation; Misinformation; Online privacy
- Platform capitalism; Internet hegemonies
- Spacetimes, Lifestreams; Ongoing present; Anticipatory futures
- Public sphere; Publics; Networked publics; Community aesthetics; Unconscious communities; Cultural engagement
- Virtual identities; Networked individualism; Online performativity; Online voyeurism

The research work for this thesis has been understood, conducted and communicated as inter-disciplinary, cross-disciplinary and trans-disciplinary at different times of the PhD's timeframe. Originally, and because the HighWire Centre for Doctoral Training (CDT), was framed as inter-disciplinary, the research work was also framed as inter-disciplinary research in contemporary arts and computing. Later on, and as it was becoming evident that the research topic was both relevant to and drawing from a

variety of disciplinary fields, the research work was framed as cross-disciplinary in the sense that it was relating to and linking together a variety of research fields. Finally, during the later stages of the research, the research work has been framed as transdisciplinary, meaning that it transcends disciplinary boundaries by merging conceptually knowledge from a variety of research fields.

The artworks examined in this thesis are analysed considering their contemporary contexts and as such the research work can be also viewed from an art history lens. However, the focus of the analysis is to draw connections between the artworks and wider sociotechnical and technocultural developments associated with what is described as the post-Internet condition. As a result, the inter/cross and multidisciplinary considerations become a focal point for the methodological approach of this research work, where discourse within and across a number of disciplines regarding relevant sociotechnical and technocultural developments shapes the framework within which decisions are made to connect artworks to relevant discourse. As a result, the rhizomatic methodological approach employed for this work, where connections with multiple entry and exit points are drawn can be viewed also as a curatorial approach where decisions are made that lead to connections that can result in both discourse and artworks being looked upon afresh or in a different way.

The research of this thesis followed multiple rounds of literature review and search, artistic review and search, data collection and review and thematic analysis and analysis of findings. The literature review and literature search for the thesis is embedded in the thesis's chapters instead of being organised in one literature review chapter. This was

decided due to the nature of the research work which was constantly revealing of new sources – and as a result informing the research - both from a variety of research and practice fields, and as literature search being a continuously important part of the research work itself. An initial literature review on the topic of net.art, Internet art and post-Internet art was conducted at the early stages of the research which is reflected on Chapter 3, but a great part of literature review and literature search is permeating Chapter 4.

The research work collects data through the WWW in the form of blogs, articles, interviews, videos, performances and digital archives. It also collects data from books, academic publications, art publications and documentations of artworks and exhibitions. The aim is to contribute new knowledge about the post-Internet as a condition. Focusing only on the artworks themselves would not be beneficial for this type of research as it is positioned mainly, but not only, within the inter-/cross-/trans-disciplinary world of Internet research, nor would focusing only on the artworks be possible, as post-Internet art is a cultural and technological product of the Internet and relates to a number of *Internet materials*, practices, concepts and processes that need to be examined through various lenses like developments in ICT and their social, economic, environmental and cultural implications. Additionally, the thesis reflects on a period in time where societies and cultures were/are undergoing major changes in relation to novel ICTs and this is being particularly reflected in the complex and challenging ICT-related research landscape where new practices, theories, methods and methodologies are introduced at a fast pace.

The methodological approach used for the research work, appropriates work on the application of rhizomatic thought to research subjects, and proposes a rhizomatic methodological approach inspired by Deleuze and Guattari's philosophical work applied to the field of Internet research. The use of the verb 'appropriate' instead of 'adopt', when describing how a rhizomatic methodological approach is applied in the thesis's context is due to the nature of rhizomatic thinking itself which encourages the application of theory and knowledge from one research field to another, for different purposes and for making selective choices of what is useful and what isn't. In other words, the thesis's methodological approach is adapted to serve the needs of this particular research work. As a result, the thesis's rhizomatic methodological approach is applied within a sociotechnical and technocultural lens which greatly informs the choice of Internet-related works and phenomena that are examined/discussed/presented in Chapter 3 and Chapter 4 of the thesis.

2.2 A rhizomatic methodological approach

The motivation for appropriating a rhizomatic methodology is based on the important role that multiplicities in thinking and practice play in Internet research and on the need to move away from binary thinking and modernist linear thought models. Moving away from dualisms, the object and the subject, or even pluralisms like the object, the subject, the machine, the network and its actors, the thesis is looking at the rhizome instead, as a non-hierarchical acentric process of drawing connections with multiple entry and exit points. Deleuze and Guattari, describe rhizomatic thinking as a process of making ceaseless and ongoing connections (Deleuze & Guattari, 1987).

> A rhizome ceaselessly establishes connections between semiotic chains, organisations of power, and circumstances relative to the arts, social sciences, and social struggles (Deleuze and Guattari, 1987, p.7)

Post-Internet art is used as the medium for examining the post-Internet condition and its dimensions. The methodological choice of applying a rhizomatic approach aims to propose a rhizomatic unity of post-Internet art to the world. This world is a world of users, followers, lurkers, players and hackers, youtubers, influencers, politicians, artists and celebrities; a world of myriad communities, mailing lists and blogs, social media, online repositories and chat rooms; a world of gifs, memes, emojis, screenshots, selfies and Google street view; a world of business, commerce and material exchange; a world of news, discourse, information and disinformation; a world of solitude and of constant connection; a world to see the world, to observe, to rate, to share, to take action, to protest, to trust and to fear. It is this process of heterogeneous connection that becomes the point-of-view of this research, as post-Internet art's rhizomatic unity to the world offers opportunities for examining the make-up of the post-Internet condition.

In that sense, this thesis is an *assemblage* of 'lines of flight', another figuration used by Deleuze and Guattari, that connect concepts and ideas, cultural moments and technical structures. Similarly, this thesis is also considered an assemblage of other research work that crosses disciplines and subjects and itself links in a rhizomatic fashion to the continuously broadening research field that is Internet research.

The methodological approach is motivated and built upon a growing body of work on rhizomatic methodological applications in fields such as educational research (O'Grady, 2018; Semetsky, 2004; Honan and Sellers, 2006; Irwin et al., 2006), artistic practice (Collins, 2019), literature (Barrows, 2019), politics and religion (Vandiver, 2020), digital archives (Duff & Haskell, 2015) and urban studies (Daskalaki and Mould, 2012).

Applying a rhizomatic approach to this thesis' methodology aims to:

- Analyse how discourse in relation to the Internet, Internet art, developments in ICTs, culture and society, operates across fields and disciplines. The connectivity between discursive systems – online and offline – is not linear or separate but operates in a rhizomatic fashion. The research is conducted in a way that allows for discourse analysis to follow the lines of flight that connect these different systems through the medium of post-Internet art.
- Analyse data collected from diverse and often seemingly disconnected sources in a rhizomatic way and draw new connections between blogs, websites, social media accounts, online repositories, interviews and articles.
- Present the research in a rhizomatic way, meaning that the thesis contributes towards understanding and analysing the post-Internet condition by proposing a number of dimensions under a rhizomatic lens that highlights their interconnectedness.
- Provide new insights into the relationships between artworks, societies, technologies and cultures, and assist researchers to develop new understandings

> of the complex ways in which a multitude of ICT-mediated domains of activity are interconnected.

The lines of flight between the dimensions of the post-Internet conditions as discussed in Chapter 4, are not hard or bounded. They can overlap, break off and reconnect and they represent *moments* in time and space that can exist as multiples. The aspect of multiplicity of connections is reflected in all the dimensions that are identified as part of the post-Internet condition which are presented and discussed in detail in Chapter 4.

At the same time, the sociotechnical and technocultural systems of these moments in time and space are particularly important when considering how these connections and interrelations are shaped and understood.

2.3 Sociotechnical and technocultural lens

Applying a sociotechnical and technocultural lens throughout the research has been particularly important for this type of inter-/cross-/trans-disciplinary PhD. The sociotechnical lens has been a point of reference in terms of considering and acknowledging the sociotechnical systems underlying the various ICT-related phenomena and developments. A sociotechnical lens allows for a specific perspective into approaching these topics which has to do with identifying the relevant actors and networks like the physical infrastructures, the virtual environments, the various groups and individuals and the systems and powers within which all of the above operate. In that sense, understanding both how networks and protocols work, and what their

challenges and limitations are, is equally important as understanding how platform capitalism is shaped and how people learn to perform on social media. The sociotechnical lens is something that has been present in many disciplines and research fields that deal with sociotechnical systems. Sociotechnical approaches to methodology and thinking have been providing researchers with robust analytical tools to consider both the social and the technical elements of their research subjects for decades (Pasmore et al., 2019).

However, this research work required a lens that could provide a better understanding of the Internet as a technology - understood here as a constellation of ICTs – that is used in the mediated construction of culture. As a result, in addition to the 'basis' of the sociotechnical lens, the technocultural lens has also been examined and adopted as a means to support the framing of the research itself and its analysis.

> To be technocultural, the technology concerned must facilitate cultural communication across space and/or time and should, in some way, raise issues of place and time (Green, 2001).

The term 'technoculture' has had different interpretations in different times that have to do with concepts of extended media ecologies (Fuller, 2005) or methodologies to avoid technological determinism (Shaw, 2008). Here, technoculture is best understood as what Lelia Green describes (Green, 2001; Green, 2002a; Green, 2002b) as the technological tools through which cultural material is created and circulated using technologically mediated communication. This means that "the fridge, the car and electricity would not be technocultural, but language, the phone, the book, films, television and the Internet

are technocultural" (Green, 2001). The term 'technocultural' is not examined in the thesis as a 'fixed' term with one clear definition, but it is rather used throughout the research work (art and literature review, data collection and analysis) as a basis for considering both the cultural and technological range of contexts associated with the Internet and as an important reminder that the Internet facilitates communication through which culture is constructed. If the Internet is the "equivalent of the first invention of written language" (Porush, 1998), then understanding the Internet as a technoculture as well as a socio-technical system (STS) is important to highlight. The sociotechnical and technocultural lens acts as a point of reference, a framework, an analytic outlook within this thesis' research work.

2.4 Data collection

The data collection process for this thesis was organically centred around desktop research. This is due to the nature of post-Internet artworks – most Internet artworks 'live' online – but also due to the importance of literature review and academic literature search around Internet-related phenomena. The choice to be broad when deciding on inclusion criteria was made in order to capture the spectrum of the Internet-related practices, concepts and phenomena associated with the post-Internet and organise and relate them around the concept of a condition and its dimensions. This was in keeping with the exploratory intent of the research work and the inter-/cross-/trans-disciplinary nature of the research topic.

Initially, research on both artworks and literature was focused on the terms of net.art, Internet art and post-Internet art and their associated concepts. This round of literature search formed the basis for better positioning the thesis' research in the time-period of post-Internet art and also formed the basis for Chapter 3 of the thesis 'From net.art to post-Internet art'. Instead of looking into the whole history of Internet art, the research was now focused on approximately the last 15-20 years (from Web2.0 until 2020). Web 2.0 (or participatory web and social web) is considered as the starting point of the post-Internet condition and the semantic web is considered as the time that the post-Internet condition was established. However, identifying this time period, although important, is not used in this thesis to draw lines and define borders but it is rather understood as a historical placement of the research topic. As a result, there are instances in this thesis where artworks or Internet phenomena outside the period of 2004-5 – 2020 are examined in order to highlight a point and support the research process. This first phase collected data from digital sources such as:

Academic literature	Including the terms post-Internet; Internet art; net.art; online performance; digital art; computational art; tactical art; network art; cybernetics; new media art;
Archives, collections, art centres and online exhibition spaces	Rhizome.org; Rhizome's ArtBase and Rhizome's Net Art Anthology; ZKM Center for Art and Media; ICA Institute of Contemporary Arts; Artangel; Institute of Network Cultures; The Wrong Biennale; Link Art Center; Furtherfield; Ubu Web; äda web; thespace.org;

Art market platforms	Artnet.com; Artbasel.com; Art Market Guru; Art.Art; Catawiki.com; Artsy.net; ArtSpace.com; Saatchi Art; ArtFinder.com; creativecapital.org; ocula.com; Frieze.com; a-n.co.uk; Artribune.com; AgoraDigital.art
Art news websites and art-related digital publishing websites	Hyperallergic.com; the-digital-reader.com; artnet.news; ArtReview.com; fader.com; studiointernational.com; Artforum.com; arshake.com; e-flux.com; Digicult.it; Neural.it;
Artists' websites (See Apendix)	Individual sites are not listed here due to length.
Social media art-related accounts and Art Community sites	Tumblr; Facebook; Youtube; Instagram; Vimeo; Twitter; Flickr.com; DeviantArt; Pinterest;

The second phase of data collection expanded on other fields of research and practice that have emerged from observing patterns on both the subject matter of post-Internet artworks and the issues raised around the topic of post-Internet art such as appropriation, online archives, online communities, Internet aesthetics and performativity. This was the phase in the data collection process that allowed for patterns in post-Internet artworks and the broader post-Internet discourse to emerge and connections between post-Internet art and other Internet-related research and practice fields to be made. This second phase collected data from digital sources such as:

Academic literature	Including the terms appropriation; remixing; avatars; memes; networked publics; cybersecurity; misinformation; spatiotemporality; digital condition; online communities; archivization; Internet research; post-digital; Internet studies; post-Internet cities; public sphere; network culture; digital age; mediation; biomediation; mediated publicness; mediated trust; algorithmicity; algorithmic identity; technoculture; virtual identity; Internet mapping; Cyberspace mapping; digital preservation; web collecting; emulating strategies; drag identities; digital drag; algorithmic bias; quantified self
Archives, collections, art centres and online exhibition spaces	*In addition to the data sources from the first phase.* NewMuseum.org; OAR Oxford Artistic and Practice Based Research Platform; visualartists.ie; tate.org.uk; digitalartarchive.siggraph.org; EAI Electronic Arts Intermix; V2_ Lab for the Unstable Media; Google Arts & Culture; Ars Electronica; monoskop.org;
Art news websites and art-related digital publishing websites	*In addition to the data sources from the first phase.* Aparture.org; we-make-money-not-art.com; Medium.com; Corridor8; OutOfInk; Boooooooom.com; Artrabbit.com; TankMagazine.com; artviewer.org
Artists' websites (See Apendix)	Individual sites are not listed here due to length.

Social media art-related accounts and Art Community sites	*In addition to the data sources from the first phase.* Ello.co; ArtStation; nettime.org; isthisitisthisit.com; shapeplatform.eu; letterboxd.com

The rhizomatic methodology is manifested at these stages in the way data has been collected in relation to the desktop research method which followed a number of directions as new connections and patterns were made apparent. Post-Internet artworks were pointing into new directions for research literature and research literature was pointing into new directions for post-Internet artworks. Following this flow of connections while identifying and expanding on the data sources allowed for the rhizomatic methodological approach to manifest in the research work in an *organic* matter where *lines of flight* betweens points of connection were becoming possible. These *lines of flight* allowed for the points of connection to be seen as in more than one dimensions, as understood for example outside the scope of one disciplinary framework, and to contribute towards the creation of this research work as a rhizome, meaning a non-linear network that allows its points to be connected to any other point within the network.

The second phase of data collection expanded on other fields of research and practice that have emerged from observing patterns on both the subject matter of post-Internet artworks and the issues raised around the topic of post-Internet art like appropriation, online archives, online communities, Internet aesthetics and performativity.

2.5 Analysis

Approximately 400 artworks were reviewed during the research work for this thesis. The artworks were collected within a period of four years and were analytically reviewed in relation to literature and discourse review. The artworks' reviews allowed for themes to emerge based on subject/topic motifs such as trust, misinformation, privacy, archivization and emulation. Additional inter-/cross-/trans-disciplinary research into contemporary discourse and academic research around these topics was conducted throughout the process of identifying and organising the themes.

From this process five key dimensions of the post-Internet condition were identified and representative artworks were attached to each of these dimensions: appropriation; mediation; spatiotemporality; publics and public spheres; and identity. The trope of *dimensions* was used to discuss *the ways of considering* the post-Internet condition. These ways are analysed as interconnected and as elements that make up a whole within a historical present (or a very recent past). The analysis and discussion of these conditions which takes place in Chapter 4 forms the main body of the research work. The rhizomatic methodological approach along with the adoption of a sociotechnical and technocultural lense is what allows for this type of analysis to take place and offer a new or expanded view into how we can better define and understand our contemporary condition through the medium of post-Internet art.

The thesis itself is shaped, formed and seen as a rhizome, where readers can freely draw *lines of flight* between the various points that make up the dimensions of the post-Internet condition. For example, points in the dimension of Mediation are connected to

points in the dimension of Publics and Public Spheres, points in the dimension of Appropriation are connected to points in the dimension of Identity and so on. The points within the five dimensions that identify the post-Internet condition are intended to be seen as a rhizomatic whole within which each point can be understood in relation to another.

In this thesis, the following five dimensions are discussed:

- 4.2 Appropriation: As a critical element of Internet-mediated cultural practices, appropriation is discussed as an organic behaviour within the wider context of contemporary cultural practices. This section is based on a study which identifies two main contemporary appropriation practices, appropriation of Internet technologies and appropriation of web content.
- 4.3 Mediation: Mediation examines the shift from ideas of connected media and media life that examine a metaphysical 'living' condition as a result of the connectivity of the object to the world via the medium, to a living condition that both exists within and drives the mediatisation processes. Mediation is examined as a precondition for most areas of social activity such as mediated publicness, mediated self and mediated trust.
- 4.4 Spatiotemporality: Spatiotemporality is examined as the bringing together of different co-existing space-time manifestations. Evolving post-Internet spatiotemporal conceptions as affected by ICTs and relevant socio-cultural developments are discussed through a variety of cultural practices such as Internet mapping and Internet art preservation strategies.

- 4.5 Publics and Public Spheres: The role of publics in the shaping of public spheres is the main focus of this section. Connections between the fragility of post-Internet public spheres along with challenges and dangers associated with control and manipulation of public opinion, democratic processes and culture production, and the sociability of publics are drawn.
- 4.6 Identity: Identity is examined as a fluid concept where a number of identity manifestations constitute a whole, an amalgamation of identity expressions operating within a larger and fluid cultural environment. The massively expansive arena of culture creation, production, participation and consumption along with the increasing levels of engagement of the individual with the public domain and the subsequent sense-perception of the individual within a universal dimension rather than a personal dimension are discussed as a key driver for identity formation and expression.

3 From net.art to post-Internet art

3.1 Introduction

Internet art is a relatively new art form with a brief history in comparison to other media-based art forms such as video art and photography. The drastic changes that took place because of ICTs in the last twenty-five years, are so massive and have happened so rapidly that Internet art's development can be compared to no other art form from the past. At the same time, Internet art is still a relatively new research topic in academia, in the arts and especially in Internet-related research fields, thus positioning Internet art within a historical context becomes particularly important for this thesis.

Before the invention of the WWW, a rich history of artistic involvement with computers and networks had already taken place. In the 1970s and early 1980s, artists employed satellite connections, algorithms and graphics hardware and software to explore the connections between art and technology, science, networks and information. In that sense, Internet art is not a break, it is rather a continuity with earlier great thinking. We can trace Internet art's origins in various new media art forms such as computer art, cybernetic art and telematic art, but since the mid 90s a broader spectrum of artists entered the field, often completely independent from art institutions and art traditions. It is important to remember that today, many of the artists who produce work within the

contemporary Internet art field have no direct links to media art/digital art/computer art traditions and movements.

To examine the shifting conditions of life post-Internet as expressed through the medium of post-Internet artworks, understanding what Internet art means today, who are the people involved in this new art field and finally, how traditional art world institutions respond to it, is needed. This chapter offers an overview of Internet art's brief history focusing mainly on contemporary Internet art (post-Internet art). It presents important artworks, exhibitions, networks, historical developments and important cultural and critical discourse around Internet art that form the basis for the following chapters.

3.2 Internet art - A brief history of a brief history

> In the name of 'tactical media', a new generation of artistic and political media activists came together in the middle of the 1990s. They combined the 'camcorder revolution', which in the late 1980s had made video equipment available to broader swaths of society, stirring visions of democratic media production, with the newly arrived medium of the Internet. Despite still struggling with numerous technical difficulties, they remained constant in their belief that the Internet would solve the hitherto intractable problem of distributing content (Stalder, 2018, p. 47).

3.2.1 Net.art

Early Internet art ‘net.art’ often refers to a period of Internet art approximately from 1993/94 to early 2000s. The term net.art is the result of a software glitch on an anonymous email received by artist Vuk Ćosić. “The only thing Ćosić could read from the alphanumeric gibberish-like content of the email was “net.art”” (Shulgin and Bookchin, 1997). Ćosić started to use the term and since then there have been many discussions about the term itself, as well as, about what it represents.

> No matter how much the artists hated the term and no matter how much they refused to use it, others would still do so. The reason for this probably was that at the time when the term net.art appeared there was no common terminology for art created with or within the Internet yet, even though art projects on the internet already existed long before. Art created with the Internet would simply be called media art, or electronic art, terms which don’t cover specific network issues as well as net.art does, with or without the dot (Bosma, 2003).

Net.art existed in direct relation to the Internet technology and culture of its time and many artworks from that period used a variety of media such as emails, websites, coding, glitches and games. These media in turn defined the subject matter and the nature of these works. This is art that cannot be experienced in any other way. The Internet defines both the place and time of the work as well as the reason for its

existence. It is often political in the sense that it aims to reveal the structures behind the medium, to manipulate its 'glitches' or to expose its commercial interests. Hacking, copying, appropriating and sharing are common artistic practices linked to the open-source movement's principles of transparent and copyright-free distribution of software (Bretthauer, 2001). Net.art, exploited the characteristics of the Internet of mid to late 90s such as immediacy and immateriality. Starting with text-based projects and criticism through e-mail and continuing with appropriating web interfaces and images, net artists have developed and issued some of the most important critiques of media and net culture (Greene, 2004).

> To write about art on the Internet is to try to fix in words a highly unstable and protean phenomenon. This art is bound inextricably to the development of the Internet itself, riding the torrent of furious technological progress that brings back into illumination antique visions of modernism, torn from matter and hurled into the ether, and so made suddenly and curiously new. "Art " itself is a term of dispute - rejected by some of those who have been called "net artists" - and it is only used here tentatively, as a term of convenience under which a number of phenomena can be examined. Its coherence can only be judged later. " Net.art " is a term that has become associated with a small group of early practitioners and a particular style, and it cannot be applied to online art as a whole (Stallabrass, 2003).

These creative, radical and political ideas and experiments with art and the Internet introduced a novel, unique and 'dangerous' for the traditional art world, art form, that

was public and immaterial. An exploration of the new hypertext markup language (HTML) networked social habitat, net.art was and still is one of the 'purest' forms of experimenting with the Internet. Olia Lialina's 1996 artwork *My Boyfriend Came Back from the War* (Figure 7), is an example of interactive hypertext storytelling and is considered as one of the most influential net.art pieces of the mid-nineties. "Through hypertext, black-and-white bitmap images and the frames of a web browser, the work tells the story of an awkward reunion between a young woman and her boyfriend" (Connor, 2016).

> *"My Boyfriend Came Back from the War* quickly earned critical attention and today is one of the most widely cited examples of the artistic use of HTML on the early web. Despite the novelty of its approach and the euphoria surrounding its then-futuristic medium, it evokes a somber, melancholic mood. The medium of the web promised connection, but the story the work tells is one of estrangement, of the impossibility of relationships under conditions of geopolitical conflict. Nevertheless, the melancholic tone of *My Boyfriend Came Back from the War,* reflects a core function of net.language, as articulated in Lialina's body of work as a whole: the elaboration of memory" (Connor, 2016).

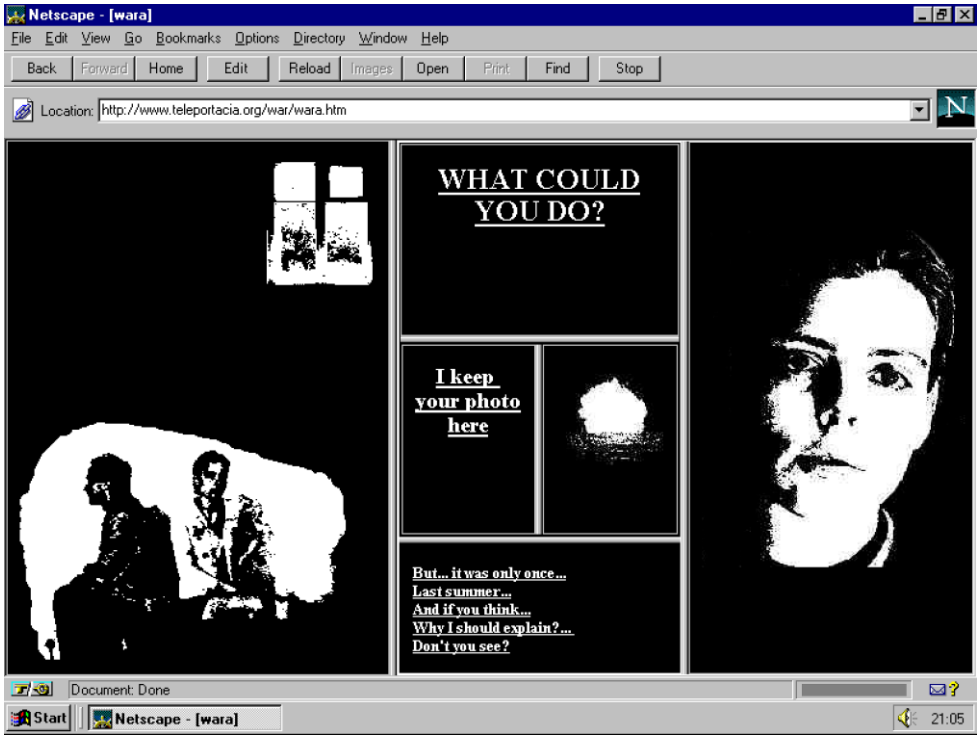

Figure 7: *My Boyfriend Came Back from the War*, Olia Lialina, 1996. Available at: https://artbase.rhizome.org/wiki/Q3933

3.2.1.1 Net.art at a Glance

What follows is Alexei Shulgin and Natalie Bookchin's manifesto for the net.art scene of the 90's. The work, called *Introduction to net.art (1994-1999)*, serves as a self-aware, tongue-in-cheek manifesto. "The central component of the work is its text – a simplified beginners guide to net.art, followed by DIY instructions on how one can become a net artist. In 1999, this text was exhibited engraved in stone. This piece effectively embodies the transgressive, and humorously self-aware style of the 90's net.art scene" (Rhizome's ArtBase). *Introduction to net.art (1994-1999),* is being purposely copied here in full, as it serves as an important summary of net.art's key theoretical ideas described in net.art's characteristic self-reflexive humorous manner.

Introduction to net.art

1. net.art at a Glance

A. The Ultimate Modernism

1. Definition

a. net.art is a self-defining term created by a malfunctioning piece of software, originally used to describe an art and communications activity on the internet.

b. net.artists sought to break down autonomous disciplines and outmoded classifications imposed upon various activist practices.

2. 0% Compromise

a. By maintaining independence from institutional bureaucracies

b. By working without marginalization and achieving substantial audience, communication, dialogue and fun

c. By realizing ways out of entrenched values arising from structured system of theories and ideologies

d. T.A.Z. (temporary autonomous zone) of the late 90s: Anarchy and spontaneity

3. Realization over Theorization

a. The utopian aim of closing the ever widening gap between art and everyday life, perhaps, for the first time, was achieved and became a real, everyday and even routine practice.

b. Beyond institutional critique: whereby an artist/individual could be equal to and on the same level as any institution or corporation.

c. The practical death of the author

B. Specific Features of net.art

1. Formation of communities of artists across nations and disciplines

2. Investment without material interest

3. Collaboration without consideration of appropriation of ideas

4. Privileging communication over representation

5. Immediacy

6. Immateriality

7. Temporality

8. Process based action

9. Play and performance without concern or fear of historical consequences

10. Parasitism as Strategy

a. Movement from initial feeding ground of the net

b. Expansion into real life networked infrastructures

11. Vanishing boundaries between private and public

12. All in One:

a. Internet as a medium for production, publication, distribution, promotion, dialogue, consumption and critique

b. Disintegration and mutation of artist, curator, pen-pal, audience, gallery, theorist, art collector, and museum

2. Short Guide to DIY net.art

A. Preparing Your Environment

1. Obtain access to a computer with the following configuration:

a. Macintosh with 68040 processor or higher (or PC with 486 processor or higher)

b. At least 8 MB RAM

c. Modem or other internet connection

2. Software Requirements

a. Text Editor

b. Image processor

c. At least one of the following internet clients: Netscape, Eudora, Fetch, etc.

d. Sound and video editor (optional)

B. Chose Mode

1. Content based

2. Formal

3. Ironic

4. Poetic

5. Activist

C. Chose Genre

1. Subversion

2. Net as Object

3. Interaction

4. Streaming

5. Travel Log

6. Telepresent Collaboration

7. Search Engine

8. Sex

9. Storytelling

10. Pranks and Fake Identity Construction

11. Interface Production and/or Deconstruction

12. ASCII Art

13. Browser Art, On-line Software Art

14. Form Art

15. Multi-User Interactive Environments

16. CUSeeMe, IRC, Email , ICQ, Mailing List Art

D. Production

3. What You Should Know

A. Current Status

1. net.art is undertaking major transformations as a result of its newfound status and institutional recognition.

2. Thus, net.art is metamorphisizing into an autonomous discipline with all its accouterments: theorists, curators, museum departments, specialists, and boards of directors.

B. Materialization and Demise

1. Movement from impermanence, immateriality and immediacy to materialization

a. The production of objects, display in a gallery

b. Archiving and preservation

2. Interface with Institutions: The Cultural Loop

a. Work outside the institution

b. Claim that the institution is evil

c. Challenge the institution

d. Subvert the institution

e. Make yourself into an institution

f. Attract the attention of the institution

g. Rethink the institution

h. Work inside the institution

3. Interface with Corporations: Upgrade

a. The demand to follow in the trail of corporate production in order to remain up-to-date and visible

b. The utilization of radical artistic strategies for product promotion

4. Critical Tips and Tricks for the Successful Modern net.artist

A. Promotional Techniques

1. Attend and participate in major media art festivals, conferences and exhibitions.

a. Physical

b. Virtual

2. Do not under any circumstances admit to paying entry fees, travel expenses or hotel accommodations.

3. Avoid traditional forms of publicity. e.g. business cards.

4. Do not readily admit to any institutional affiliation.

5. Create and control your own mythology.

6. Contradict yourself periodically in email, articles, interviews and in informal off-the-record conversation.

7. Be sincere.

8. Shock.

9. Subvert (self and others).

10. Maintain consistency in image and work.

B. Success Indicators: Upgrade 2

1. Bandwidth

2. Girl or boy friends

3. Hits on search engines

4. Hits on your sites

5. Links to your site

6. Invitations

7. E-mail

8. Airplane tickets

9. Money

5. Utopian Appendix (After net.art)

A. Whereby individual creative activities, rather than affiliation to any hyped art movement becomes most valued.

1. Largely resulting from the horizontal rather than vertical distribution of information on the internet.

2. Thus disallowing one dominant voice to rise above multiple, simultaneous and diverse expressions.

B. The Rise of an Artisan

1. The formation of organizations avoiding the promotion of proper names

2. The bypassing of art institutions and the direct targeting of corporate products, mainstream media, creative sensibilities and hegemonic ideologies

a. Unannounced

b. Uninvited

c. Unexpected

3. No longer needing the terms "art" or "politics" to legitimize, justify or excuse one's activities

C. The Internet after net.art

1. A mall, a porn shop and a museum

2. A useful resource, tool, site and gathering point for an artisan

a. Who mutates and transforms as quickly and cleverly as that which seeks to consume her

b. Who does not fear or accept labeling or unlabeling

c. Who works freely in completely new forms together with older more traditional forms

d. Who understands the continued urgency of free two-way and many-to-many communication over representation (Shulgin and Bookchin, 1997).

3.2.2 Post-Internet art

After the dot.com bubble and with the increasing use of centralised services that emerged along Web 2.0 in 2000s, Internet art introduced several new experiences for creating, disseminating, communicating and experiencing art. Internet art of that period makes use of chat rooms, social media, online games, smartphone applications and search engines and responds to a time where the Internet starts having a more ubiquitous presence in society. It is then when the term *post-Internet art* emerges.

> On the one hand, a technology implicated in the social collapse of distances, the imperialist homogenization of times, and the reduction of the heterogeneity of the world to the one dimension

> of communication; on the other hand, a type of dynamical physical system characterized by a specific topological distribution, whose laws must be discovered and formalized. In between these different visions of the network lies the sprawl of Internet culture – with its vast digital archives, its mutating landscape of search engines and corporate pages, networked home pages, mailing lists, electronic newsletters, blogs and wikis, news sites and newsletters, spam and porn, peer-to-peer networking, bulletin board, chatlines and ICQ (Terranova, 2004).

During this period, many net artists began to revisit the notion of net.art which included a very specific group of artists and a specific approach to the use of technology and the anti-institutional politics of their work. Net.art seemed to have failed to overturn the art world but Internet art was very much alive and more people, both artists and audiences, started to get involved.

3.2.2.1 What is post-Internet?

There are references to post-net culture as early as 2001 with examples like Lev Manovich's *Post-Media Aesthetics* (Manovich, 2001). The term Post-internet was coined by artist Marisa Olson and developed further by writer Gene McHugh in the critical blog 'Post Internet' during its activity between December 2009 and September 2010 (McHugh, 2011).

> Post-Internet is a term I heard Marisa Olson talk about somewhere between 2007 and 2009. The Internet, of course, was not over. That

> wasn't the point. Rather, let's say this: what we mean when we say "Internet" changed, and "post Internet" served as shorthand for this change… 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 the technologically-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 (McHugh, 2010).

Post-Internet art continues to resist a definitive definition and it is both embraced and rejected within the contemporary Internet art community. However, as artist Artie Vierkant describes in his 2010 essay *The Image Object Post-Internet*, "Being post-internet is a distinction which carries ramifications beyond the art context as a societal condition at large, and it would be antithetical to attempt to pinpoint any discrete moment at which the post-internet period begins. Therefore, we can try to characterise this shift from internet art to post-internet art as the time when artists are acting less as interpreters, transcribers, narrators, curators and architects and more as fully-implicated participants" (Vierkant, 2010).

> Post-Internet is a movement that's confusing because it's moving so quickly, along with the technology that drives it. Part of the nature of the Internet is that it changes very quickly; new developments are made constantly, websites are updated and old web pages disappear. Consequently, art that relates to the Internet has evolved at a similarly fast pace, as has the conversation surrounding it. It's important to note

> initially that although the movement is called “post-Internet”, that is not to say that anyone thinks the Internet is over. On the contrary, it looks like the Internet is only just beginning (Souter, 2017).

For Marisa Olson, post-internet has a specific meaning, referring to a mode of artistic activity drawing on raw materials and ideas found or developed online. For artist Grace Miceli, post-Internet is about escaping the traditional art world by creating an alternate one. She explains “I am just bored of it. It doesn’t feel relevant to me. I don’t know if I am interested in assimilating into that fancy art world as it exists currently” (Miceli, 2015). Artist Orr Amran says “I began noticing an unorthodox pattern in the way I was attending to visual content – a pattern of visualisation that only made sense with association to the Internet” (Amran, 2016). Google Earth for example reflects the state of the world captured as a snapshot (Shamma et al., 2004) and the Google search engine reflects a reality tailored by what internet publishers and users deem popular, interesting and important. The web is the most complete and extended archive of our culture that has ever existed while being a storehouse of cultural connections at the same time. Most importantly the web is the only place that popular culture can exist as popular culture today. Ben Huh, founder of The Cheeseburger Network points out how quickly Internet culture has become a part of everyone’s content diet. He says “Back in 2008, we predicted that internet culture would merge with pop culture. The idea was that memes, viral videos, and remixed content will move from the fringes to an integral part of everyone’s content diet” (Huh, 2013).

At this point, the Internet becomes so much more than Internet art’s tool, medium and inspiration. It becomes a conceptual condition where art accepts and comments upon the

Internet as a ubiquitous presence in society and embraces a post-medium understanding of fluidity between materiality and immateriality. Marisa Olson describes in an interview in 2006, “What I make is less art “on” the Internet than it is art “after” the internet. It is the yield of my compulsive surfing and downloading. I create performances, songs, photos, texts, or installations directly derived from materials on the Internet or my activity there” (Olson, 2006). Reflecting back in 2017, Olson says:

> “As I feel I’ve now had to repeat endless times over the last decade, only to constantly read that post-Internet art has yet to be defined, or to endlessly see people compelled to place the words “so-called” before the term, I was simply doing two things in using the word “Postinternet":
>
> 1. Describing my own work, which was a combination of art made online and art made offline, “after the Internet,” i.e. immediately after logging off and in the style of the Internet, both celebrating and critiquing it—much as I also did online, independently and in my “pro-surfer” work as a founding member of the collective Nasty Nets;
>
> 2. Working at Rhizome, an organization then about to celebrate its tenth anniversary of supporting Internet art, I wanted to expand the mission statement to address Internet-engaged art that could be offline or online. At the time, it seemed radical to propose that a painter, photographer, or textile artist could be an Internet artist and that these underdogs could use our support.

> Who knew postinternet was about to be the most common submission theme at the Frieze fair? (Olson, 2017).

3.2.2.2 I'm Google

I'm Google by artist Dina Kelberman is an ongoing project that exists as a Tumblr blog consisting of images found on Google Image Search and videos found on YouTube. The images and videos correspond with one another in form, subject matter, or theme and are arranged in a grid that expands as the user scrolls (Figure 8). It is described by the artist as a stream of consciousness and it portrays the artist's experience wandering online hunting for obscure information and encountering unexpected results. The blog serves as a visual representation of this phenomenon.

> Smoke becomes fibbers and fibbers become wood and wood, wood package and packages packed packages which become buckets which sit on bleachers which surround stadiums which call to grass which calls to painted lawns of chemical colours and turn romantic in the night. Things become other things and for a short while echo themselves as if trying to 'get it right'…Kelberman's piece suggests that everything is a reference to everything else and the reference and reverence of such obsession is our modern appetite for both documentation and endless checking in on other's documentation (Barber and Kelberman, 2014).

Figure 8: *I'm Google*, Dina Kelberman, 2011-ongoing. Available at: https://dinakelberman.tumblr.com/

3.2.2.3 Excellences & perfections

Amalia Ulman's social media performance from April 2014 to September 2014, *Excellences & Perfections,* is a scripted online performance via her Instagram and Facebook profiles (Figure 9). During this period, she appears to undergo an extreme,

semi-fictionalized makeover. She pretended to have a breast augmentation, she followed a strict diet and went to pole-dancing lessons among other activities. Through careful use of sets, props and locations, her performance evokes a consumerist fantasy lifestyle (newmuseum.org). By the final post of the project Ulman had amassed 88,906 followers.

> The influence of social media has turned the camera toward the self and social media such as Instagram provide a platform to build a shrine to images that can place ourselves at the centre of the world. Ulman's work is both fascinating and terrifying because she exposes remarkable layers of hyper reality. Ulman demonstrates the ability to not only place herself in the public eye, but to construct a false identity for an audience whom she has never met (Halsey, 2016).

Figure 9: *Excellences & Perfections*, Amalia Ulman, 2014. Available at: https://rhizome.org/editorial/2014/oct/20/first-look-amalia-ulmanexcellences-perfections/

3.3 The art world and Internet art

The Internet is rapidly transforming the relationships and interactions of art world actors. “Artists are using social media platforms to reach out to a global public, directly and in real time, bypassing traditional institutions and gatekeepers of the art establishment. Old hierarchies are shaken and new ones arise as the role of the galleries and the curators is radically questioned” (Clusterduck Collective, 2017). At the same time, a big part of the art world, up until the late 2010s, has been unaware of the Internet’s transformational effects not only in how art is consumed, bought and sold, but of Internet art itself (Richert and Laylin, 2015). Claire Bishop’s article on Artforum’s Digital Divide column (Bishop, 2012), starts by asking “Whatever happened to digital art?”. This highlights how traditional art world actors such as museums and art institutions often failed to incorporate and respond to Internet art and even failed to recognise it as art or be aware of its existence. Bishop’s essay provoked much criticism over its narrow view of digital art. However, recently there are many examples of a shift in the visibility and recognition Internet art receives from the art world/market, mainly because of Post-internet art’s popularity. Yet, if we look at the mainstream art world, until very recently, Internet art remained almost entirely absent from an otherwise booming international art market of massive Biennale events and blockbuster exhibitions.

Very often Internet art is meant to live online. Although there are many examples of Internet art existing in both virtual and physical spaces either as part of the artwork or as part of the exhibition process, most Internet art remains ‘immaterial’. Internet art can be websites, gifs, pictures, videos, animations, online performances and web applications.

The immaterial nature of Internet art has always been a huge challenge for an art world that has been relying on the limits of object-based work like paintings, prints, sculptures and installations amongst others, both for exhibition and sales purposes. How can you exhibit a Facebook performance and how can you sell art that you can not own?

Karen Verschooren's 2007 thesis, *Situating Internet Art in the Traditional Institution for Contemporary Art* notes that "thirteen years after its inception as an art form, the Internet art world finds itself in a developmental stage and its relation to the traditional institution for contemporary art is accordingly" (Verschooren, 2007). As Internet art started to gain more popularity and as more artists started to experiment with the Internet, the art world started to respond. At the same time, issues around authorship, ownership, accessibility, conservation and preservation started to emerge. Artist Aram Bartholl's 2013 essay "Ready For Upgrade! Net art in the commercial art market?" (Bartholl, 2013) observes a change in how the art world responds to Internet art but still, in 2013, the artist notices that answers and solutions to the art world's problems with Internet art are still to come.

> "Currently, digital art is sold by delivering the work along with a signed paper certificate on a medium like a DVD, hard disk or USB thumb drive. This makes sense and seems fine for now. But wouldn't it be great to establish a universal system in order to be able to market Internet based-art directly and online? The big art market players have already built an online art market platform for analog works. I would love to see them sell Internet

> art as well…It is time to come up with smart solutions and different systems. Artists like Rafael Rozendaal sell unique website pieces bound to a URL, while Petra Cortright offers Youtube video editions with prices based on view counts…Locking down online content is very difficult and not the way to go. Trying to adapt the Internet to the needs of the old system will kill it. A very fundamental shift on how goods, objects and their values are defined is taking place at the moment. Economic and political systems will need to adapt to more changes. The art world and its market are going to discover unknown terrains" (Bartholl, 2013).

Richert and Laylin (Richert and Laylin, 2015), observe that although there is progress in how Internet art becomes part of the contemporary art landscape, mainly because of the switching between both physical and material worlds of many post-internet artworks, for Internet art to really gain a place in the market will require a shift in art world's collecting mentality: understanding that openness and access are not antithetical to ownership and provenance.

> "There are growing numbers of primarily young collectors who have already embraced digital art, emboldened by the low price point and the desire to support artists working in more experimental media. What artists, gallerists, and collectors are now tasked with, is experimenting and discovering new working models for exhibiting and selling art in the post-Internet era" (Richert and Laylin, 2015).

There are many examples of ‘solutions’ to the art world’s problems with Internet art. Most successfully, and perhaps indicative of Internet artists’ versatility and adjustability skills, is Internet artists making physical versions of their online works, allowing collectors, museums and galleries to approach Internet art in a more traditional way. NFTs (non-fungible tokens) are a very popular and very recent (NFTs were popularised in 2020/2021) example of art world’s ‘solution’ to the authorship and ownership ‘problems’ of pre-NFTs Internet art. NFT’s contrary to bitcoins are non-fungible meaning that they are unique and can’t be replaced (non-interchangeable). These tokens are assigned to digital artworks and registered, bought, and sold via cryptocurrency blockchains. “For example a bitcoin is fungible - trade one for another bitcoin, and you’ll have exactly the same thing. A one-of-kind trading card, however, is non-fungible. If you traded it for a different card, you would have something completely different” (Clark, 2021). Although NFTs for digital art have become very popular, very fast in 2020/2021, “practitioners from distinct artistic scenes - including illustration, fan art, and creative code - have been sharing their work on NFT platforms for several years, developing their own shared values and aesthetic languages” (Rhizome.org). Although NFTs have been viewed by some as a way to help artists sustain their work there are a number of problem associated with them, such as NFTs energy costs and carbon footprint, NFTs as a way for the ‘super rich’ to ‘hide’ money, and NFT spammers ‘hijacking’ artworks and monetizing them as NFTs without permission (Dash, 2021). Within this hyped and confusing NFT landscape, the larger implications that NFTs hold for our understanding of art and culture is yet to be examined.

3.3.1 New digital art organisations and platforms

There are many cultural institutions, new and old that embraced, supported and even driven Internet art. Some of them operate within the traditional art world while others operate outside of it. Ars Electronica in Linz, operating since 1979, is a festival, arts center, Futurelab and art competition (Prix Ars Electronica) that continues to be one of the best established digital arts organisations that actively supports and exhibits Internet art.[2] Transmediale, the Berlin-based festival and cultural organisation for art and digital culture, operating since 1988, presents exhibitions, conferences, screenings, performances and publications that facilitate critical reflection on and interventions into processes of cultural transformation from a post-digital perspective. V2_Centre for the Unstable Media in Rotterdam, operating since 1981, is an interdisciplinary institute for art and media technology. It presents, produces, publishes and archives digital art and offers a platform for artists, designers, scientists, researchers, theorists and developers from various disciplines to discuss their work and share their findings. HMKV (Hartware MedienKunstVerein) in Dortmund, founded in 1996, is an association for production, presentation and communication of experimental media art. HeK (House of Electronic Arts Basel), founded in 2009, is a museum and an interdisciplinary event space in Basel dedicated to digital culture and the new art forms of the information age. Rhizome.org has played an integral role in the history of Internet art. Created by artist and curator Mark Tribe in 1996 first as an email list and later that year as a website. Since then Rhizome established an online digital art archive called ArtBase that is today one of the largest Internet art and computer-based art archives. In 2003 Rhizome

[2] Ars Electronica provides a physical and online archive of digital art, a museum and a Futurelab. It has been one of the first cultural organisations clearly focused on art, technology and society since 1979.

became affiliated with the New Museum of Contemporary Art in New York. Rhizome's activities include commissions of artworks, digital art preservation, exhibitions and events.

There are also other more recent experimental organisations in the field of digital arts that focus on Internet art but don't necessarily operate within the traditional art world structures. For example, *The Wrong Biennale*, founded by curator David Quiles Guilló. The Wrong is the largest biennale of digital art that happens both online and offline. Since 2013, more than 3.000 artists and curators have participated in The Wrong. It presents a democratic alternative to the traditional art world system of fairs.

> Though intended as an alternative to the often elitist system of biennials and fairs, The Wrong seemingly operates by the tenets of older internet culture: It's decentralized, accessible and democratic — anyone who wants to participate, as artist or curator, can apply (The New York Times).
>
> Online initiatives are often based on low production costs, quick communication within networks of friends and followers, and a strong motivation that makes artists participative and makes them believe in your project (Kard, 2018).

Another example is the Link Art Center, founded in 2011 by Lucio Chiappa, Fabio Paris and Domenico Quaranta. It is a curatorial platform promoting contemporary artistic research and critical reflections on the core issues of the information age. Without physical premises, it uses temporary spaces and it's very active online. It

organises events, publishes books and runs Link Editions (a print on demand publishing initiative) and Link Cabinet (an online exhibition space). There are also examples of new business models for selling and collecting digital art online that provide ‘solutions’ to the problems the art world has been having with digital art, like how to commodify and collect the immaterial and how to trade digital artworks online.

Daata Edition, operating since 2015, is a digital platform for digital art. It is designed specifically to be a ‘native’ platform to a new generation of artists who work with moving image and sound. Daata Editions commissions artist video, sound, poetry and web. Limited edition artworks can be viewed and acquired as digital downloads. It also has a dedicated section on the platform called ‘Curated’, through which guest curators introduce new artists’ works.

> People often don’t bring it (Internet-based art) to art fairs as it doesn’t sell well, so I tried to bring it to life. We wanted to encourage galleries into programming exceptional moving image artists as they’re part of the fabric of the contemporary art world; but it was never made a priority. We’re not trying to be purveyors of the future but we’re saying “this is a system we’re believing in and it’s working well” (Gryn, 2016).

Sedition, operating since 2011, is an online platform for collecting and trading contemporary art in digital format. The artworks are presented as digital limited editions of stills and videos, members can buy limited editions and later sell the work to other collectors using the Sedition Trading platform. In 2013, Sedition launched an open platform initiative allowing artists whose work is native to digital media to submit their

own digital artworks to the Sedition marketplace. Ownership of artworks is guaranteed by a certificate of authenticity rather than the digital image.

3.3.2 The Internet artist online

Apart from participating in the consumption and production cycle of the Internet as part of their artistic practice, many Internet artists use the Internet to take control over their work and how it is exhibited, communicated, sold and managed. Internet artists create their own websites and archives of their work, they use social media to communicate their work and engage with audiences and other artists, they collaborate with online platforms that commission, exhibit and sell digital art like Daata Editions[3], they engage in online communities for Internet art and they participate in online exhibitions like The Wrong Biennale. However, many Internet artists don't feel like they have a choice. The compulsory characteristics of exhibiting one's work, actions and value by constantly sharing and participating, in an effort to stay relevant, become formal measurements of effectiveness. Internet artists are aware of search engines and platforms' algorithms and many adapt accordingly by posting bite-sized content as frequently as possible to manipulate the algorithms that choose what their followers see (Ables, 2019). Others, choose to create their own curated websites, image blogs and online exhibition spaces outside of social media platforms. Examples are VVork.com by artists Oliver Laric, Aleksandra Domanovic, Christoph Priglinger and Georg Schnitzer that features

[3] Daata Editions commissions artist video, sound, poetry and web. It is designed specifically to be a native platform to a new generation of artists who work with moving image and sound. Limited edition artworks can be viewed and acquired as digital downloads.

artworks in an archive/stream of consciousness manner[4] and the Panthermodern.org which is a file-based exhibition space designed by artist LaTurbo Avedon that hosts work by other artists in a three-dimensional form.

Internet art, from net.art to post-Internet art involves many different generations of artists. From net.art and cyberfeminism pioneer Cornelia Sollfrank born in 1960 to post-Internet artist Orr Amran born in 1995. Artists with different life experiences with the Internet and the Web operate in different ways online.

3.3.3 Online Communities

Online art communities have come a long way since the Electronic Café International in 1984. The net.art era artists organised around mailing lists, bulletin board systems, social bookmarking sites and websites such as Rhizome, DeviantArt, Syndicate, TheThing, Del.icio.us and Nettime, and surfclubs such as Spirit Surfers, Nasty Nets and Supercentral, thus taking control over the forming of net.art communities, the means of art circulation and the development of critical discourse and theory around net.cart. Net artists forged communities based on communal, open-source ideals and in the spirit of collaboration, learning and freedom of expression. This was the first time that an art community took control over processes that were until very recently controlled by the traditional art world establishment. At the same time, the traditional art world establishment of galleries, museums and higher education institutions did not seem to

[4] VVork.com ran between 2006-2012. It is an archive and all the projects produced during that period by the artists that are still available online.

be interested in net.art, not only they did not recognise it as art but they were often unaware of its existence.

However, many post-Internet artists operating within a very different ‘expanded’ Web environment of user-generated content, apps and multimedia platforms traded online art communities for major visually-oriented social networks such as Fecebook, Twitter, Instagram, Tumblr and Youtube. Post-Internet art communities still exist but many things have changed. The scale of online communities and audiences grew exponentially, avatars became carefully curated profiles based on true identities, and conversation-based interactions became “likes”, “reactions” and “shares”. As audiences and participants’ numbers increased so did connectivity. *Follower culture* makes audience-reaching easier and interaction between artists and audiences instant. Internet artist Molly Soda says, “Tumblr was really the first space that allowed me to connect with other people who were thinking about similar things artistically.”

> Soda began “obsessively” posting them on Tumblr in 2009 and submitting to Tumblr zines, like Beth Siveyer’s Girls Get Busy. She connected with other artists like Signe Pierce, Maisie Cousins, and Grace Miceli through the platform, and even met Arvida Byström, her co-editor on the 2017 book Pics or It Didn’t Happen: Images Banned From Instagram, on Tumblr (Albes, 2019).

The forming of art communities keeps changing in response to the sociotechnical and technocultural characteristics of cultural production. This affects the nature and character of art communities and the ‘quality’ of interactions amongst participants.

Artists make strategic choices on how to operate within new community environments, how to present themselves, their work and engage with others.

3.4 Conclusions

New media art, digital art and within it computer art, continued to receive little recognition from the traditional art establishment even though there was a continuously growing number of artists dealing with digital media. This is thought to be for three reasons. First, digital art did not fit into the traditional fine art categories of painting, drawing and sculpture and curators and art historians did not know how to approach and evaluate it (Wands, 2017). Second, there were difficulties in documenting and preserving this kind of work as some of it was time-based or performance-based and most of it was using software and hardware, which as computer technologies advanced, became obsolete.[5] With no knowledge or a strategic plan as to how to document and preserve this kind of work, many artworks of that period have been lost forever. Third, the traditional art world could not find a way to sell digital art, again because of the time-based or ephemeral nature of the works or because of the technical characteristics of their production and exhibition, and so it continued to focus on promoting and selling object-based art. Many digital artists were forced to move in different directions due to the lack of mainstream institutional support. Working with an 'outsider' art, digital

[5] Many works of that period have been 'saved' thanks to the efforts of dedicated individuals who collected and preserved digital artworks. An example is Patric Prince, an American art historian who followed and documented computer art since its early days. Prince's collection consists of around 200 original artworks and an archive charting the rise of computer-generated arts. It includes correspondence with artists, conference papers, exhibitions cards and catalogues, and a library of books on the field of computer art and computer graphics. (Victoria and Albert Museum)

artists, many of whom were rebelling against the traditional fine art hierarchies, started to form their own communities with formal and informal networks, spaces of creation, experimentation and exhibition and played a central role in connecting technology and culture. Similar informal networks of artists, technologists and activists will later form the basis for the development of early Internet art, net.art.

In recent years, there has been an effort to fill in this missing chapter in contemporary art history, especially with computer-based art in Britain[6]. Today we have a better understanding as to why that period of approximately twenty years between 1968 and 1989 was critical for expanding our sense of what we can do with new technologies and how it has paved the way for early Internet artists to experiment with and position their artistic practice at the centre of technologically-mediated cultural production. As digital technologies started to play a major role in cultural production processes mainly through ICTs, a new era emerged for digital arts, that of net.art.

Today, Internet art is at a place where the ubiquity of the Internet is challenging its own existence. As Internet cultures, aesthetics and politics merge into the cultures, aesthetics and politics of everyday life, many artists who produce Internet art, simply position themselves within the contemporary landscape of art. On the one hand, the Internet is undoubtedly a defining component of cultural production and self-determination in art,

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[6] Examples are the 2006 book *A Computer in the Art Room: The Origins of British Computer Arts 1950-1980* by Catherine Mason, the 2009 book *White Heat Cold Logic: British Computer Art 1960-1980* edited by Paul Brown, Catherine Mason, Charlie Gere and Nicholas Lambert, and the 2014 book *When the Machine Made Art. The Troubled History of Computer Art* by Grand D. Taylor. The 2009-2010 Computer Art and Technocultures project based jointly at Birkbeck and the Victoria and Albert Museum which ran a symposium, Ideas Before their Time at the British Computer Society and a two-day conference Decoding the Digital at the V&A in 2010.

and on the other hand, the Internet is a defining component of everything and as such the distinction between art that relates to the Internet or not becomes less and less obvious. As the curator of the *Electronic Superhighway* exhibition at the Whitechapel in 2016, Omar Kholeif said: “the Internet has evolved from passive browsers on large desktop computers, into much more holistic connective interfaces that span numerous personal devices, wired into every aspect of human life and experience” (Souter, 2017). It is this level of ubiquity that makes the Internet part of our presence. As Google’s CEO Eric Schmidt put it in the 2015 World Economic Forum in Davos, “There will be so many IP addresses, so many devices, sensors, things that you are wearing, things that you are interacting with that you won’t even sense it...it will be part of your presence all the time” (Tamblyn, 2015). However, it is because the Internet is ‘disappearing’ due to its ubiquitousness, that many post-Internet artists today are interested in making the Internet visible again. Today we observe an interesting development in Internet and art, on the one hand the Internet is becoming part of contemporary artistic production simply because it is part of most cultural production processes and on the other hand many artists make strategic and political choices about making the Internet the focus of their artistic enquiry in an attempt to expose its ‘invisible’ systems, networks, power structures and social implications.

4 Dimensions of the post-Internet condition

4.1 Introduction

The cultural transformations that have taken place since the mid 1990s are numerous and deal with issues relating to the technological, social, economic, ethical, political, environmental and aesthetic domains. These transformations are often happening at the intersections of individuals and organisational structures, where for example, the roles of users and producers have become increasingly difficult to differentiate,[7] or the role of cultural institutions and art in general has been constantly challenged and re-considered. At the same time, cultural spaces and practices – how and where culture takes place/is produced/is formed – have changed dramatically. All the above are the direct result of a world changed by ICTs along with significant events and changes in the economic and political spheres of geographies around the world. The results of this transformation are full of complexity and contradiction. By being a cultural product of life *with* and *after* the Internet, Internet art symbolises the drastic changes that took place on and to the Internet. Post-Internet refers to the new processes and conceptual dialogues that arose due to these social changes. It is a critical shift from discussing the Internet as a contained entity governing merely our digital interactions to saying something more

[7] Roland Barthes' seminal essay *The Death of the Author* is a great example of foreseeing the shift of power between cultural elites and everyday users/readers.

about its ubiquitous presence and the reconfiguration of all culture by the Internet (Connor 2013).

This thesis, aims to examine the post-Internet condition and its dimensions through the post-Internet art medium, in an effort to produce new knowledge and understanding around the changing nature of life *post* Internet and very importantly, to encourage researchers at the intersections of sociotechnical and technocultural research, to consider the ubiquitous medium of Internet art as a rich and useful tool for their work. In the *Posthuman Glossary*, Clark is writes about post-Internet:

> This rebirth of a condition defines a quantitative shift in the ontological treatment of digital-non-digital technological hybrids on both sides of the posthuman ambivalence. This includes interleaving with, and de-centring, difference through connections to previously out of reach global otherness on the one hand, and the use and reproduction of dominant, standardised distribution, production platforms and protocols which redefine much of the space formerly known as offline, on the other (Clark, 2018).

The concept of a 'condition' has been key for this research as on the one hand it creates an understanding of exploring the historical present, and on the other hand it provides a framework for exploring its elements which in this case, is used as the basis of the thesis' methodology. Conditions are shaped by changing conceptions of time, space,

cultures and societies and the technological mediums that enable them and thus are fluid and need to be constantly re-examined and explored through new theoretical lenses and analytical tools. As discussed in the thesis introduction, different conceptualisations have been used to describe the historical present since the popularisation of the Internet and the WWW. The digital and post-digital, contemporary conditions have been explored as conditions and their *forms* (Stadler, 2018), *states* (Cramer, 2014), and *structural elements* (Cox & Lund, 2017). Here, the inter/cross/trans-disciplinary nature of the research, the rhizomatic methodology and the application of a sociotechnical and technocultural lens, has led to the use of *dimensions*, which can be best described as *ways of considering* the post-Internet condition. These ways of considering the post-Internet condition are presented in this chapter as five dimensions: appropriation; mediation; spatiotemporality; publics and public spheres, and identity. Their configuration as interconnected elements that make up a whole takes place through presenting the findings from the analysis process.

Appropriation is the first dimension examined as a *dimension* for this thesis and a choice was made to use case studies for collecting and analysing data and evidence. The case studies are the Rhizome case study discussed in more detail in section 4.2.4 and the Google case study discussed in more detail in section 4.2.5. The Rhizome case study in particular, where I conducted a systematic review of the artworks added to its ArtBase archive between 2010-2015, has formed the basis for the artworks that have been examined as part of this research work, although many other artworks not associated with Rhizome's ArtBase have been also examined. This case

studies method has been successful in serving the purpose of this section where appropriation post-Internet is understood as appropriation of Internet technology and appropriation of web content and where a large number of artworks is needed in order to support this section's thesis. However, this method is not used when examining the other dimensions discussed in chapter 4. Instead the choice is made to use individual artworks as case studies to highlight the connections between post-Internet art and discourse on ICTs, culture and society. This choice reflects my growing understanding - during the PhD years - of how the rhizomatic methodological approach serves this particular research work which is that post-Internet artworks are treated as *moments in time* highlighting the connections that can be drawn between practical sociotechnical and technocultural developments and more nuanced and theoretical sociotechnical and technocultural developments and understandings.

4.2 Appropriation

4.2.1 Introduction

Appropriation in post-Internet art is seen as a critical element of Internet-affected/defined cultural practices and as a dimension of the post-Internet condition. Post-Internet art reflects our cultural reality through the ubiquity and fluidity of ICTs. This results in novel artistic practices that draw on the cultural connections made online by appropriating found web content and Internet technology. Appropriating web content

and Internet technology has become an organic behaviour within the wider context of contemporary cultural practices and this is also reflected in post-Internet art practice.

> Whether a work of post-Internet art is online or offline, in any medium or duration whatsoever, part of its distinction as such is its participation in conveying, critiquing, existing under or during the conditions of network culture. The work itself is somehow part and parcel of those conditions, and one likely would not have to look hard to see those symptoms. This ability to appropriate at a sort of constitutive, DNA-level blows open the shutters on discourses of relationality, binarism, perspectivalism, and either/or states of being. This is where post-Internet meets sci-fi meets 17D-modelling (Olson, 2017).

Post-Internet artworks are not simply made online or for online use, instead they reflect the state of the world today by borrowing and exploiting every aspect that makes the Internet what it is. This can be its applications, services, cultures, networks, communities, technical innovations, limitations and data. This section examines the ways post-Internet art appropriates the Internet and presents findings from two studies conducted on this topic. First, a case study of Rhizome's digital archive, ArtBase, and second, a study on post-Internet artworks that use Google platforms and services as a key element of their practice.

To appropriate is to adopt, borrow, recycle, sample or simply use pre-existing material in ways that form the concept, structure and nature of the end-result. Tate Gallery traces the practice of appropriation in art back to Cubism and Dadaism, by continuing into the 1940s Surrealism and 1950s Pop art and returning to prominence in the 1980s with the appropriation artists. Historically, the use of appropriation in art responds to relevant issues of the time, such as artistic representation, ownership and plagiarism, art standards and originality. It is often a deliberate, political choice that pushes boundaries and challenges established art conceptions. When Marcel Duchamp over one hundred years ago, submitted his later famous readymade Fountain - a porcelain urinal that was propped atop a pedestal and signed "R. Mutt 1917" - into the Society of Independent Artists exhibition - which was committed to accept all of the submissions - only to be rejected by the exhibition committee, he was challenging originality, ownership and plagiarism in art. Similarly, when Andy Warhol appropriated images from commercial art and popular culture and mass production techniques in the 1960s, he was intentionally distancing himself from the evidence of an artist's hand and was embracing expendability and the ephemera of his time as the subject matter for his work. Today however, the concept of appropriation is multifarious and unclear. The introduction of commercial Internet services and the mass availability of personal computers ignited massive cultural shifts that challenged previous understandings of appropriation in art.

Since the popularisation of the Internet and web, net.art in the mid 1990s and Internet art in the 2000s, have explored the cultural shifts in which Internet technology played a significant role. Net.art introduced works that used the Internet as their medium which

in turn defined the subject matter and the nature of these works. Artist duo Eva and Franco Mattes who operate under the pseudonym 0100101110101101, created *Life Sharing* and turned their private lives into public artwork. The artists made each and every file on their computer, from texts and photos to bank statements and emails, available to anyone at any time through their website between 2001-2003. In a time where social media did not exist yet, the work's focus was sharing. Anything on their computer was available to search, read and freely copy, including the system itself, since they were using only free software.

With the increasing use of centralised services that emerged along Web 2.0 in 2000s, Internet art introduced several new experiences for creating, disseminating, communicating and experiencing art. Web 2.0 describes World Wide Web websites that emphasise user-generated content, ease of use and cross-platforms devices experiences. With Web 2.0, online games, chat rooms and social media have become the stage upon which artists can unfold their works. The Internet is not simply a performative space for Internet artists, it is also a space for interaction and connectivity to multiple social and economic cultures. Net.art and Internet art cannot of course be defined simply by the technical changes in Internet technology throughout time. Art is part of social structure and as Internet art keeps changing, its historical context is continually re-evaluated. Since the mid-2000s, the internet is less of a novelty and the variety of methods of presentation and dissemination online is vast.

Internet memes are a great example of how web content is appropriated through remixing techniques online. Memes can include images, gifs, videos and catch-phrases

that through appropriation and remixing processes within an online participatory culture context, re-signify their subject matter. We can argue that appropriating the Internet - its technology and its content (web content) - is a form of *cultural tactics*.

The use of appropriation in Internet art today comes organically as a *natural* practice of experiencing life "with" the Internet. We as Internet users can easily relate to that. Generations that have experienced living with the Internet share a common understanding of what it feels like spending numerous hours online following one link after the other, ending up consuming content without knowing how you ended up there. We know what it means to "google" something and form an opinion about what it is based on the search engine's results and images. We know what it feels like to share an inside joke that it is not truly "inside" but rather refers to popular Internet culture references and memes that have gone globally viral. As Internet users we reproduce, copy, repeat, quote, and remix existing content, being creative on platforms that are already there. We also learn to use Internet applications and technology to advertise, promote, connect, manage and organise our lives. However, we as users, visitors and consumers don't necessarily appropriate Internet content and technology consciously. These behaviours happen so naturally in our everyday lives that making a distinction between simply using and appropriating is often hard. The quantity of acts of appropriation in all social and cultural areas makes the concept of appropriation unclear. Then what does it mean to appropriate web content and Internet technology?

Artist Oliver Laric's *Versions*, is a series of videos on the ubiquity of appropriation in post-Internet times. Below, I submit the text of the third video of the series created in

2012, as an example of the nature of appropriation practices in the post-Internet condition. The video consists of a female narrator reading the text over a series of examples of appropriation practices in art and culture (Figure 10). The last couple of lines of the text read: “A new area of negotiation of meaning and representation. It’s the real thing. Hybridize, or disappear.”

Figure 10: *Versions*, Oliver Laric, 2012. Available at: http://oliverlaric.com/versions2012.htm

> This story is one being retold with small variation, using the same sentence to make a different point.
> The more and the less always leads to a further point. It is a matter of different and divergent narratives. As though to each point of view that corresponds an absolutely distinct landscape.

One of the ways to get around the confines of identity is to work at someone's words, working with language that belongs to many others. This, after all, is one of the seductions of translating. It is a simple miming of the responsibility to the trace of the other in the self.

Writing commentary or notes upon imaginary books, instead of explaining in five hundred pages an idea whose full verbal exploration takes only a few minutes. Acting as if a book had already been written by an author from another language circle, and as if wanting to plagiarise, and review the hypothetical book. Interpreting the problems of other disciplines in terms of one zone. Combining the set of variables of a situation, renouncing all order of preference of all organisations.

A ship that returns to its port of destination after decades, after having all its parts exchanged throughout continuous repairs. An axe that has its handle replaced five times and head replaced four times. A gown in which there is no large piece of the same cloth but an aggregate in various rags.

Upon those who step into the same rivers, different and again different waters flow. If you put water into a cup, it becomes the cup. You put water into a bottle and it becomes the bottle. That water can flow, or it can crash.

Scaffolding is a symbol of something being built or destroyed. Ruin sometimes suggests the sublimity which the complete,

intact building has not attained. House numbers are changed daily, so no one can find his way home.

For each sculpture that becomes physical, there are many variations that remain un-realised. The set of possible books, outnumbers the set of actual books.

Dialogue extends in both directions and the previous work is as altered by dialogue as the present one is. Every word has a history of usage to which it responds and anticipates a future response.

It is the wolf itself, the horse and the child that cease to be subjects to become events, in assemblages that are inseparable from an hour, a season, an atmosphere, an air. The street enters into composition with the horse, just as the rat enters into composition with the air.

I've only seen paintings of this painting. It depleted itself of meaning to act as a generative space of inscription. The more it is known, the more it is inscribed, like co-production, format adaptations help reduce risk and uncertainty. In this case by working with a format with demonstrated success. The most successful impersonators and double agents are those we don't know of.

There is no there, there. Aesthetics and linguistic practice move beyond mere dichotomies to order state in which the conditions

> of a word as a phonetic particle and a semantic wave exist at the same time.
>
> Dynamic attributes are not a property of either the object or measuring device taken separately, but are property of the joint relationship between object and device.
>
> The hyphen is a silence made audible, that marked or unmarked space that both binds and divides. It prevents identities at either end from settling into primordial polarities, giving rise to something different, something unrecognisable. A new area of negotiation of meaning and representation. It's the real thing. Hybridise, or disappear.

4.2.2 Appropriating Internet technology

> Everything in and of the Internet is a stimulus package for the endlessly derivative, in the same way that a mirror image is a derivative of an original. Not a copy, but a mirror (Metahaven, 2013).

Internet technology does not simply refer to software and hardware. Part of Internet technology can be anything from domain names, web hosting, routing, protocols, the web and its applications, HTML and CSS, embedded technologies, web advertising and online shopping, email, chat, social media, search engines, online games and all the information resources, services and devices that are linked through computer networks

using the Internet protocol suite. Appropriation of Internet technology here refers to all the above as tools and devices of representation. Artworks that appropriate Internet technology are adopting, borrowing, recycling, sampling or simply using the Internet in ways that form the concept, structure and nature of the artwork. In other words, an artist who creates a painting and chooses to share their creation online via social media does not appropriate Internet technology. Instead, they use Internet technology to communicate with audiences and promote their work. However, an artist who performs on and manipulates social media like Jennifer Chan does on her work factum/mirage, appropriates Internet technology. Chan uses one-off pre-recorded performances on the popular online chat website Chatroulette applying edited and looped videos that are piped into the site. Chatroulette is a website that pairs random users together for webcam-based conversations. As the artist starts chatting with users, she uses these edited and looped videos to manipulate the user's impression and expose the *true* nature of online chats interactions in chat platforms (Figure, 11). Her work has been noted as reflecting a condition described by Slavoj Zizek and Rober Pfaller[8] as 'interpassivity' (Garret, 2013).

[8] "The concept of interpassivity is opposed to that of interactivity. Interactivity in the arts means that observers must not only indulge in observation (passivity), but also have to contribute creative 'activity' for the completion of the artwork. The interactive artwork is a work that is not yet finished, but 'waits' for some creative work that has to be added to it by the observer. What could be the inverse structure of that? The artwork would be an artwork that observes itself" (Pfaller, 2003).

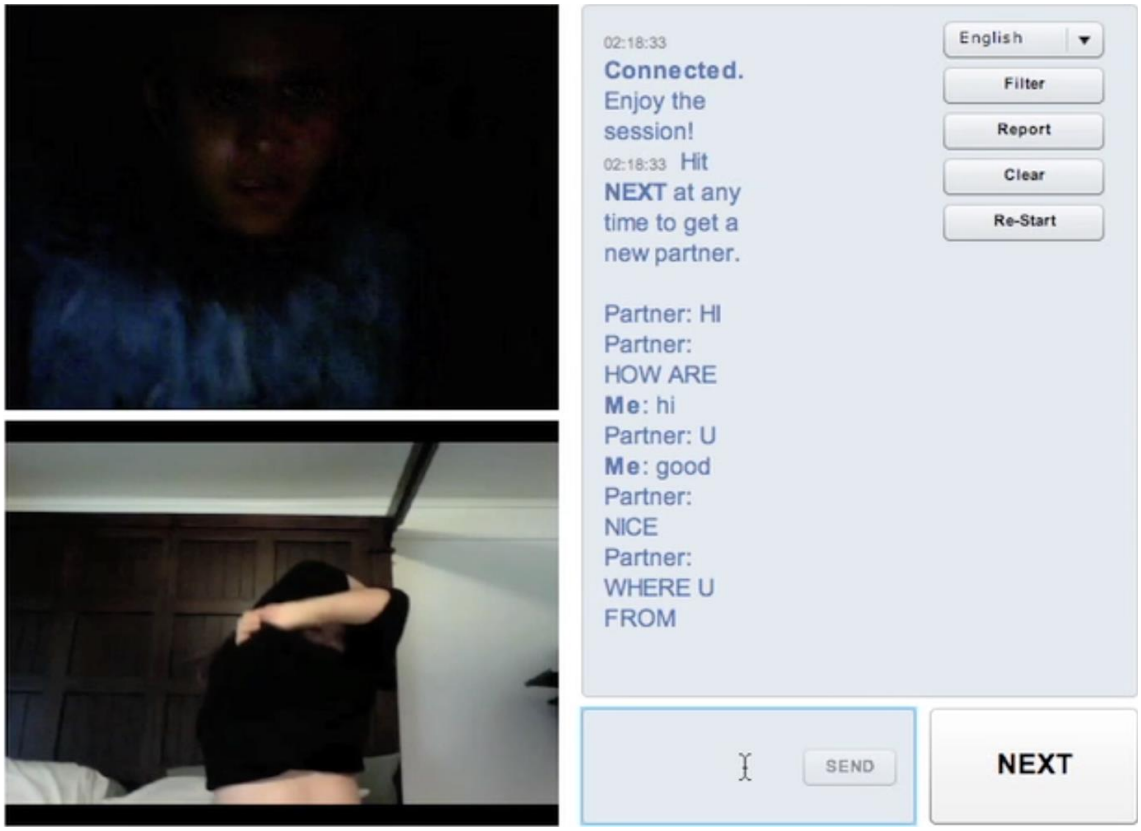

Figure 11: *Factum/Mirage*, Jennifer Chan, 2010. Available at: https://vimeo.com/15116352

Appropriating technology doesn't stop at online performances. Artist Mushon Zer-Aviv introduced the 'spiritual' browser plugin *Good Listeners*, under open-source license in 2011 (Figure 12). The plugin exposes the secret ways in which our browsing habits are shared with and mined by third party web trackers (such as Google Analytics and Facebook), without our consent or knowledge. "Whenever a site exposes the visitor's data to a third-party service, a confessional booth window is opened and the priest in the window offers words of invisible wisdom and spiritual guidance pertaining to matters of web browsing, social networking, e-commerce and digital identity" (turbulence.org).

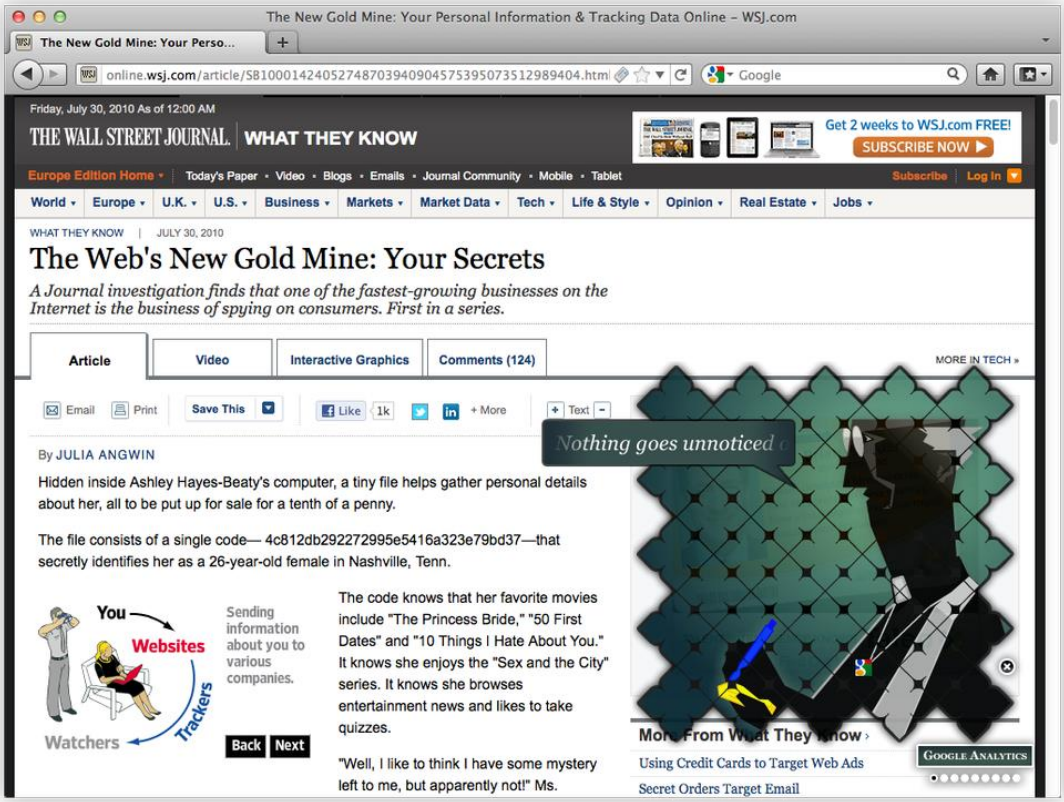

Figure 12: *Good Listeners*, Mushon Zer-Aviv, 2011. Available at: https://artbase.rhizome.org/wiki/Q3475

In the 190 works reviewed for the Rhizome case study that is presented in this section, 144 (75%) of them were identified as appropriating Internet technology. These 144 works demonstrate the variety and diversity of ways for appropriating Internet technology and a tendency of producing ICT-based - not just ICT-related - artworks. The variation of Internet technology appropriations in this study reveals to what extent Internet technology has become a defining component of cultural production.

4.2.3 Appropriating web content

Web content is any form of content that is encountered as part of the user's experience on the WWW. This may include texts, images, videos, sounds, animations, activities performed and/or recorded online such as chat conversations and interactions and video calls accessible through Internet services. In general, web content can be anything that exists online. Artworks that appropriate web content are adopting, borrowing, recycling, remixing or sampling web content in ways that form the concept, structure and nature of the artwork.

There are artworks that focus on the appropriated content like *I'm Google* by Dina Kelberman (discussed in Chapter 3), and others that use web content simply because they are referring to it like *The Best Is Yet To Come* by Silvio Lorusso, 2012. Lorusso's *The Best Is Yet To Come* is a website where found preloaders (animated gifs that frequently appear online while pages are loading) follow one another randomly and endlessly. The work's focus is the circular movement that allows the waiting moment to become a contemplation experience. The gifs could have been original animations created by the artist referring to the ones that users come across online but the artist chose to appropriate gifs found online. *The Best Is Yet To Come* refers to a time where waiting for content to load was part of surfing the Internet. Since then, network access speeds have increased, especially for wireless technologies, content delivery latency has significantly reduced due to new Internet services while page design and the underlying transport protocols have improved content-loading significantly.

In the 190 artworks reviewed for the Rhizome case study, 49 (26%) of them, appropriate found content online. These 49 works demonstrate the heterogeneity of material sources used, as well as, the effortless quality of appropriating web content. By appropriating material that by default relates to most Internet users' experiences, artists create an emotional relationship with the world of associations this content evokes. They also often draw our attention to the repetitious, iterative and anticipated aspects of the web while other times they focus on the unexpected aspects of online connections.

4.2.4 Rhizome case study

The choice to use data from Rhizome's ArtBase archive was made due the consistency of the organisation's efforts to archive and preserve new media art. Rhizome is an organization affiliated with the New Museum of Contemporary Art in New York. Its programs include events, exhibitions, commissions of artworks, an active website and an archive of more than 2000 new media artworks. One of the main and most well-known operations of Rhizome is its digital preservation program. ArtBase, which is Rhizome's archive of digital art and is freely accessible to the public online, was founded in 1999 to preserve works of net.art that were deemed to be "of potential historical significance". Until 2008, ArtBase accepted open submissions for consideration but after 2008 works were added to the collection by curatorial invitation and through Rhizome's commissioning and exhibition programs. ArtBase has been regularly adding works to its archive until 2015. Rhizome's ArtBase is considered to be one of the largest and longest-running online collections of Internet-based artworks. Since this study focuses on appropriation in post-Internet art, a decision was made to review all ArtBase artworks between 2010-2015. Although post-Internet art does not

begin or stop at a specific time, for this study the period of 2010-2015 was viewed as a moment in time when important developments in ICTs occurred that affected how art is made, how artists deal with art-making, and how audiences interact with art.

Around this time crowdfunding platforms like Kickstaster were introduced as an alternative way to bring creative projects to life; Google's Art Project online platform for art featuring today more than 32,000 artworks from 46 museums was launched; motion and voice-sensing control systems were introduced to the market paving the way to a new area for virtual reality; Apple's iPad entered the market in 2010 while iPhone sales doubled that same year, and the first 3D printed clothes and shoes were introduced. At the same time, it was a time when the term post-Internet art was discussed as a response to what it means to experience life within an *Internet state of mind*.

All of the 190 artworks reviewed for this study were organised based on what appropriation of Internet technology and appropriation of web content can be considered, described in sections 4.2.2 and 4.2.3. First, what can be considered as Internet technology and web content within the given timeframe, was specified, and then, what can be considered to be appropriation of Internet technology and web content, was specified. Based on the above, the works were divided into two groups accompanied by short descriptions about how each work appropriates Internet technology and/or web content. During the review process, it was often necessary to re-examine and re-evaluate the two categories' specifications based on new findings emerging.

Many of the archive's links to the artworks were broken. Unreachable sites, 404 errors and forbidden page messages would often appear. From the total of 190 works reviewed, 40 (21%) links were broken. Some artworks didn't have links to the original work or an archived version of the work. Whenever a link was broken or missing, the artwork was reached through online searches. Often artworks would be available on the artist's website or there would be a link from an interview the artist gave or an exhibition press release. On all occasions, a path to reach the artwork was found. The many broken, expired and missing links to the artworks highlight an issue that has been already identified by the art world, that of digital life, obsolescence of the digital art archive and conservation of Internet works.

From the total of 190 artworks reviewed, 154 (81%) fit into the two groups. The findings indicate extensive use of appropriation of Internet technology (93%) and significant use of appropriation of web content (32%). From the 154 artworks, 49 (32%) fit in both groups. The large number of artworks that has been reviewed for this study also reveals that the applications of Internet technology and web content are many and variable and that there is no specific technique that characterises this behaviour. Instead, the artworks' reviews show that often artists appropriate the Internet in ways that relate to their own experiences online. Artists can appropriate content and technology that relates to activities like image searching, social networking, online gaming, and messaging. The reviews suggest that appropriation in contemporary Internet art comes as a natural behaviour of living with the Internet. Additionally, there is an evident lack

of consideration for copyright or attempting to trace or acknowledge the source of the appropriated material.

Artist Johannes Osterhoff's one-year performance *iPhone live*, documents the activities performed by the artist on his mobile phone. Screenshots are uploaded automatically to the artwork's website as a live stream of the phone's everyday activity whenever the artist presses the "home" button (Figure 13).

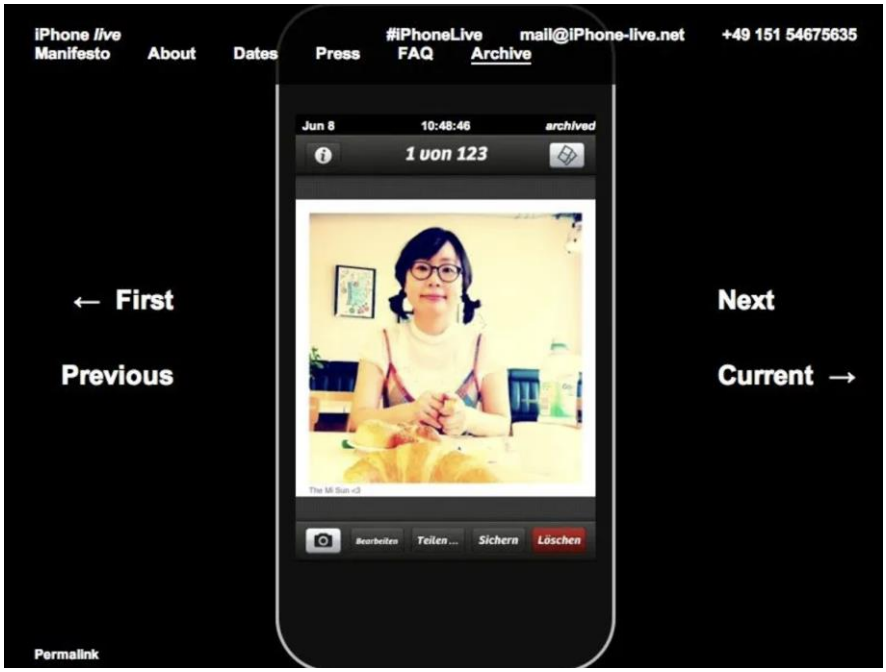

Figure 13: *iPhone live*, Johannes P Osterhoff, 2012. Available at: https://www.cultofmac.com/250124/privacy-vs-lifecasters/

> The performance will start on June 29, 2012 and shall end on June 29, 2013. I shall not use other mobile phones during this year. For this performance, I additionally installed two shell scripts on my jailbroken iPhone. The first one duplicates each screenshot so that the files cannot be overwritten the next time

> the app is minimised. And the second one uploads these screens automatically to this site and publishes them (Osterhoff, 2012).

Artist Krystal South began collecting images of mirrors from Craigslist with no specific purpose in mind. Sorting through the hundreds of photos that she collected, she found herself confronted with developing a system of organisation to contextualise these images. This resulted in the artwork *A Mirror Unto Itself*, where taxonomies of these images along with an essay written as part of the artwork are available to download on the artist's website.

Figure 14: *A Mirror Unto Itself*, Krystal South, 2011. Available at: http://www.krystalsouth.com/mirror/

> As I began collecting, I ventured out into the craigslists of other cities, looking for patterns in their objects and modes of depiction. Brighter cities had a harder time, Vegas had the gaudiest mirrors, and I began to notice that I could see a reflection of the people of various locales in their mirrors.

> What also became clear is the domestic setting most of these mirrors came from. Often, interiors are reflected, giving us a reversed view of the environment of the object and providing insight into their owner's habitat. The mirror photographs become then, to me, unintentional self portraits that occlude the self or represent it fractured into pieces (South, 2011).

All the above indicate that the use of appropriation in art today is significantly different to that of previous art movements or even of early Internet art, net.art. The findings also indicate that appropriation of Internet technology does not presuppose appropriation of web content, as the majority (61%) of the artworks that appropriate Internet technology do not also appropriate web content. However, appropriation of web content presupposes appropriation of Internet technology as only 1% of the artworks fit only the appropriation of web content category. In other words, the artists in the study who appropriate web content almost always appropriate Internet technology in their artworks. However, this is not the case for the artists in the study who appropriate Internet technology. More than half of them do not appropriate web content too. The only two occasions where web content was appropriated without appropriating Internet technology at the same time, was when images found online were used for a print on demand paperback for Sebastian Schmieg and Silvio Lorusso's 56 *Broken Kindle Screens*, 2012, and when images found online were used to create photographs for Andrew Norman Wilson's *ScanOps*, 2012. The above suggest that more research could be conducted on the conditions of web content appropriation. Artists do not simply use found web content and leave the Internet to create their work offline. Those who

appropriate web content stay online and appropriate Internet technology in diverse and multifarious ways.

4.2.5 Google case study

This study focuses on the ways Google – through its technologies, services and platforms – is influencing contemporary artistic production. Google as a monopoly platform, holds a strategic position in the digital economy and massively influences how people use the Internet. Many artists who deal with the Internet are finding inspiration and material online using Google's services and platforms (Muir 2014). Google technologies and services are not new, however their potential for artistic practice and artistic intervention keeps growing along with every new Google service, technology and platform (see *I'm Google* by Dina Kelberman discussed in Chapter 3). As Google is moving into the consumer Internet of Things (IoT) services, it becomes a ubiquitous platform across a global economy and as a result, more and more artists are using Google to expose, reflect on and examine life post-Internet. Artists who use Google technologies and services are not simply revealing/commenting on our contemporary experiences with the Internet, they are also providing us with scenarios for Internet futures.

Jon Rafman's ongoing project *The Nine Eyes of Google Street View* (Figure 15), reflects the tension between the human gaze and that of the automatic camera. The "nine eyes" in the title refers to the number of cameras on the pole attached to the top of a Google Street View car; the number has since increased to 15 (Rowland and Ingraham, 2017). The artist does long 'marathon runs' of exploring Google Street View collecting on a

Tumblr account images that fall under four categories: 1. Street photography, 2. Photos of natural beauty, 3. Surreal Images and 4. People responding to the Google camera. The project emerged by the practice of surfing the Internet for inspirational finds. The artist views surfing the Internet as an inherent, intrinsic part of his artistic practice.

Figure 15: *The Nine Eyes of Google Street View*, Jon Rafman, 2008-ongoing. Available at: https://9-eyes.com/

Artist Erica Scourti wrote a diary page using Gmail and then sent it out to herself every day for a year. Using her webcam, she filmed the series of suggested keywords and the links to groups of relevant ads. By creating a Gmail diary, Scourti is aware that Google will 'read' her private pages and she tries to present the connection between the human and the algorithmic diaries and therefore between two possible self-narratives. The artwork, called *Life in AdWords* (Figure 16), is a 70-minute video where the artist recites strings of adwords. The artist exposes the workings of Google's

codification/algorithmic system by highlighting the language produced by Google AdWords.

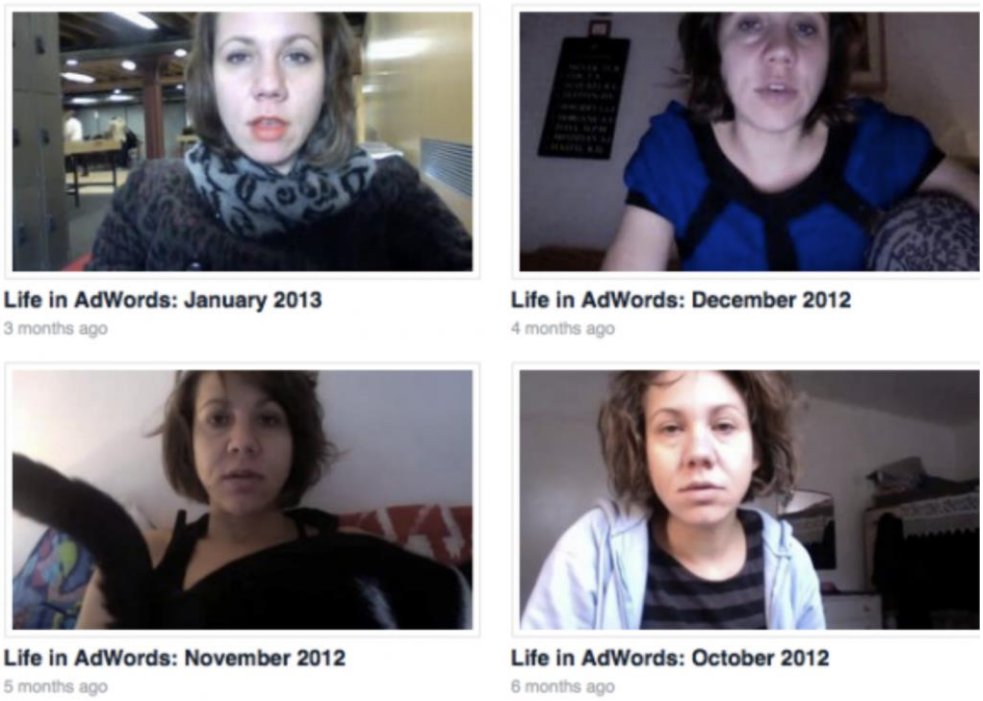

Figure 16: *Life in AdWords*, Erica Scourti, 2013. Available at: https://www.furtherfield.org/a-life-in-adwords-algorithms-data-exhaust-an-interview-with-erica-scourti/

Adam Overton's *Recipe for a Google Party* (Figure 17) invites people to follow his instructions and throw their own 'Google party'. A Google party is a costume party where the attendees dress up like people they have located while googling their own names. The instructions read: "Go to <www.google.com> and search for instances of your full name…After searching for a bit, choose the alter-ego who seems the most interesting and try to figure out how this person might dress…Be sure to keep your eyes open for clues that might indicate a time period or location, especially if your source is a news article, historical document or obituary…Finally, dress to impress at your next Google Party and live up as your alter-ego" (Overton, 2007). Created in 2007, *Google*

Party is an early exploration of identity based on online data and search engine algorithms.

Figure 17: *Recipe for a Google Party*, Adam Overton, 2007. Available at: https://muse.jhu.edu/article/209715/pdf

The extended use of Google services and platforms in contemporary Internet artworks reveals new information about how Google is massively affecting our online experiences and thus becomes a fertile ground and an important factor in contemporary technocultural practices.

4.2.6 Conclusions

This section of the thesis examines the practice of appropriation in post-Internet art. It discusses what can be considered appropriation of Internet technology and web content. It collects data from post-Internet artworks and reviews their use of appropriation practices. The analysis of the data indicates two main appropriation practices in relation to contemporary post-Internet art and the Internet. One is appropriation of Internet technology and the other is appropriation of web content. Information about the nature and processes of appropriation of the internet by post-Internet art is revealed during the Rhizome case study. Appropriating the Internet becomes an organic behaviour within

the wider context of experiencing life online. Artists no longer adopt a position on the outside, instead they operate within a new cultural reality that is mediated by the Internet and reflected across the web. The variety and diversity of ways for appropriating Internet technology and web content indicates that Internet-related appropriation practices are constantly evolving. Artists draw on their personal experiences with the Internet which reflects on their art-making. Today, appropriation practices are undoubtedly a defining component of cultural production and consumption and an important dimension of the post-Internet condition.

4.3 Mediation

4.3.1 Introduction

The main point of mediation in the post-Internet condition has to do with viewing the mediated experience on the same level as primary experience. Mediation in the post-Internet condition moves further than the digital cultural heritage (Zschocke et al., 2004), or the physical as digital through digital reproduction processes (Manovich, 2001). In the post-Internet condition, the shift from analogue to digital is not a point of friction anymore while mediation through digital technologies does not rely on reality representation but rather on acceptance of mediated realities as reality. Post-Internet mediatisation processes bring together the physical, imagined, virtual and the hybrid (Manovich, 2013). Viewing the mediated experience on the same level as primary experience has been associated with the work of many post-Internet artists including Parker Ito, Oliver Laric and Artie Vierkant (Quaranta, 2015).

Mediation post-Internet is shaped by participatory cultures within network societies (Castells, 2004; Castells, 2012), where socio-cultural processes operate within an overabundance of information and contribute towards a constant process of creation, distribution, usage, manipulation and integration of information in all its forms. Mediation in the post-Internet context can be understood as a complex and hybrid process of “understanding and articulating our being in, and becoming with, the technological world, our emergence and ways of intra-acting with it, as well as the acts and processes of temporarily stabilising the world into media, agents, relations, and networks" (Kember and Zylinska, 2012). A key concept discussed by Kember and

Zylinska is that mediation entails recognising our locatedness within media as being always already mediated. This allows for a meta-level of mediation where engagement with the world happens within conditions of mediation that can be measurable and identifiable but they can also be un-measurable and non-identifiable. The un-measurable and non-identifiable aspects of mediation in the post-Internet condition, hint towards the unprecedented, unexpected, unformed and unruled products of mediation where the networks and infrastructures of ICTs exist together with an infinite production of both human and non-human-produced knowledge, communication, experience, politics and culture. Human and non-human actors, humans and machines, networks, algorithms and technologies, co-create conditions of life in a hybrid and *liquid* state. In this mediated state, the human and non-human exist in a state of mutualistic symbiotic intra-action, meaning that human and non-human actors are attached by constantly exchanging and diffracting, influencing and working inseparably (Barad, 2007). Considering non-human actors also presents opportunities of promoting *new ethics of care* that might better encourage respect for various forms of animate and inanimate things (Cameron, 2015).

To examine and understand this level of mediated life post-Internet requires a view of the Internet as more than its technical elements, systems, protocols and networks. The various processes of mediation that involve ICTs have definitely a lot to do with their technical elements, however, their biological elements are equally important in producing and driving these processes of mediation. Together, the biological and the technical elements are capable of generating new forms, unprecedented connections and unexpected events within what Zylinka calls ‘living media’ and ‘biomediations’ (Zylinska, 2020). This shift from ideas of connected media and media life that examine

a metaphysical ‘living’ condition as a result of the connectivity of the object to the world via the medium, to a living condition that both exists within and drives the mediatisation processes is a key element of how mediation in the post-Internet condition could be approached and understood. Mediation post-Internet can even be described as *multidimensional* and post-Internet artworks can be understood as art in the post-Internet condition instead of technologically-mediated art.

Any aspect of sociocultural production affected by the Internet can be considered as mediated based on its mediatisation processes, like mediated sociality, mediated entertainment and mediated consumerism. The dimensions that characterise the post-Internet condition discussed in this thesis are presented in a way that exhibits the interconnectivity of mediated themes and processes. For this section of the thesis, three main areas of mediatisation are discussed as highlights and indicators of the hybrid and multifaceted character of mediation in the post-Internet condition. These are mediated publicness, mediated self and mediated trust.

4.3.2 Mediated Publicness

Publicness is one of the aspects of life that has been discussed in the last two decades as an increasingly mediated process. More specifically the mediation of publicness is linked to the rise of social media and how public engagement has been shaped by ICTs. The link between publicness and technologies has been extensively examined from the lens of public and the media. Communities have always used media such as newspapers, radio and television to create new publics, and form new connections

amongst actors/users and the public (Dayan, 2001; Harrison & Barthel, 2009). To the extent they could, people have always used media to create public identities for themselves, others, and groups (Baym & Boyd, 2012). The scale, pervasiveness, ubiquitousness and connectivity of the Internet and more specifically of social media, are what makes the level of widespread publicness post-Internet unprecedented. This increased level of mediated publicness depends on practices of appropriation – as discussed in section 4.2 – of both Internet technology and web content within the context of participatory cultures. As described by Jenkins et al. the 4 C's of participation in participatory culture are: connect, circulate, create, and collaborate (Jenkins, 2009).

The socio-cultural practices of mediated publicness are dependent on the appropriation of networked media tools, ICTs and web content. Smartphones, cameras, editing applications and software are what people use to take photos and videos to document their lives or to simply create content for Instagram, Facebook, Twitter and YouTube. Social media is where people can post their content, engage with the public, consume content and participate in online social interactions. Platforms for social news aggregation and discussion and chat software such as Reddit, Discord and Twitch, are where people can engage with specialised topics and form niche yet global communities. Countless sites dedicated to online news and content aggregation such as Digg, Pocket and Fark, are where curation of the massive everyday social activity online along with community engagement and participation based on interests and topics takes place. All of the above and much more, enable activity by mediated connection to take place as part of a new form of mediated publicness.

Internet artists have been using these mediated public spaces to directly connect with global audiences without necessarily targeting art audiences. Online performances through social media are a great example of how an art experience can be designed for mediated public spaces. Amalia Ulman's scripted performances designed entirely for circulation in Instagram and Facebook: *Excellences and Perfections* (2014) (see Figure 9), and *Privilege* (2016), are notable examples of this practice. Both works are premised on appropriating and acting out the expectations of the social media audience by "...turning a mirror back onto the fantasies of this public in order to expose their effects on how women perceive themselves" (Smith, 2017). The performative nature of both Facebook and Instagram platforms, where identities and experiences are carefully constructed and curated for public consumption and approval (like, share and comment functions), guide the nature of these online performances where artificial situations are presented as real. These situations include plastic surgery and fake locations (staged photos) such as cities and hotel rooms.

The *Red Lines* artwork (Figure 18) by Evan Roth is a peer-to-peer network performance. The *Red Lines* network connected users with servers in geographically specific locations to participate in the sharing and viewing of 82 individual pieces from the artist's *Landscape* video series. Over the course of two years (2018-2020), 120,000 people in 166 countries connected to the *Red Lines* network. The work was commissioned via the arts organisation Artangel's open call for proposals to produce a major project that could be experienced anywhere in the world. The artist has travelled to coastal sites around the world where Internet cables emerge from the sea to record the

work's videos (artangel.org). Red Lines investigates the physicality of the Internet through a public performance that any viewer could stream at home but also become an active participant to the work's network. This is because of the Red Lines's decentralised peer-to-peer network where a viewer becomes part of the network, streaming from other viewers who simultaneously stream the feed from them, anywhere in the world.

> Red Lines is a network containing infrared videos of coastal landscapes that can be streamed to a smartphone, tablet, or computer by anyone, anywhere. By setting a device in your home or workplace to display this artwork, you share a synchronized viewing experience with people around the world. Filmed in infrared, the spectrum by which data is transmitted through fiber optic cables, 82 slowly moving videos are stored on servers located in the same territories in which they were filmed. When you view a network located video made in Hong Kong, for example, it activates the submarine cable route between Hong Kong and you. You then become part of the peer-to-peer network which enables this work to be experienced by people around you. These located videos were shot at fiber optic cable landing locations in Australia, Argentina, France, Hong Kong, India, New Zealand, Portugal, South Africa, Sweden, the United Kingdom and the United States. During the following

year, more trips will be made and the network will expand

(Roth, 2020)

Figure 18: *Red Lines*, Evan Roth, 2018-2020. Available at: https://www.artangel.org.uk/project/red-lines/

4.3.3 Mediated self

The reality of the mediated self – a concept that is not new or born through the mediated processes of ICTs and digital media – becomes extended in the post-Internet condition. As with appropriation or mediated publicness, the mediated self, moves further than the virtual image-body represented as a proxy or a stand-in for a 'virtual' world. The self in a state of mediation is what becomes the state of the self, post-Internet. Earlier technologically mediated representations of the self like mirrors, photographs and videos have allowed for new understandings of how the self can be seen by ourselves or others, in different representational mediums and different times and spaces. The number of interactions that ourselves can have online along with the abundance of

spacetimes within which ourselves exists online, and the ability to willingly or unwillingly control/archive/trace/manipulate/curate and exploit the image and activities of said selves, is what allows the post-Internet mediation of the self to operate within a previously impossible level of mediation. The extent of the mediation of the self, post-Internet is constantly expanding and with it expand implications relating to privacy, freedom and control.

The transformative possibilities of the self, online, whether that is in visual appearance, behaviour or action (Cleland, 2010), allow for unlimited versions of the self. At the same time, the level of control or lack of control over these versions of the self, allows for new levels of embodied identities. The self as data, the self as avatar, the self as image, are all extensions of the self, contributing to new ways of seeing the self. The self, post-Internet is mediated and extended and with it are our ways of seeing and understanding the self itself.

James Bridle's 2015 artwork *Citizen EX* (Figure 19), examines the concept of *algorithmic citizenship*. The concept of algorithmic citizenship is based on the work of John Cheney-Lippold, first outlined in the 2011 journal paper 'A New Algorithmic Identity: Soft Biopolitics and the Modulation of Control' which discusses the capacity of computer algorithms to infer categories of identity upon users based largely on their web-surfing activities (Cheney-Lippold, 2011). Bridle's algorithmic citizenship is described as a new form of citizenship which is not assigned at birth, or through complex legal documents, but through data. "By downloading a browser extension, you can see where on the web you really are and what that means. As one moves around the

web, the Citizen Ex extension looks up the location of every website visit. Then by clicking the Citizen Ex icon on the browser's menu bar, one can see a map showing where the website is, and one can also see their algorithmic citizenship, and how it changes over time with the websites they use" (citizen-ex.com).

> Citizen Ex calculates your algorithmic citizenship based on where you go online. Every site you visit is counted as evidence of your affiliation to a particular place, and added to your constantly revised algorithmic citizenship. Because the Internet is everywhere, you can go anywhere - but because the Internet is real, this also has consequences... Like other computerised processes, it can happen at the speed of light, and it can happen over and over again, constantly revising and recalculating. It can split a single citizenship into an infinite number of sub-citizenships, and count and weight them over time to produce combinations of affiliations to different states (Bridle, 2015).

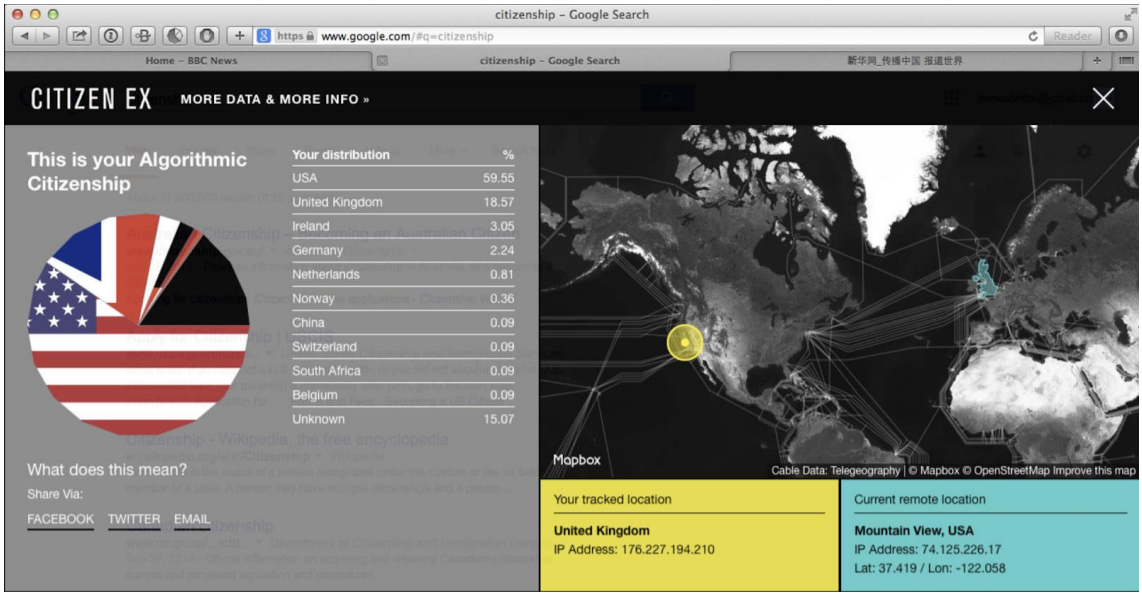

Figure 19: *Citizen Ex*, James Bridle, 2015. Available at: *http://citizen-ex.com/*

Heath Bunting's ongoing artwork *The Status Project* (Figure 20), exposes how easily and comprehensively our movements and activities may be tracked when we provide personal information such as our name, e-mail, postal address or credit card details for even the simplest of Internet transactions (www.tate.org.uk). *The Status Project*, surveys a class system of human being management and is producing maps of influence, flow charts of integrated logic and personal portraits for both comprehension and mobility. The class system has three layers, human being, natural person (objectified human being) and artificial person (generally objectified collectives of natural persons). Human beings can possess one or more natural persons and control one or more artificial persons and they are categorised in three different classes. Lower class human beings possess one severely reduced natural person and do not control any artificial persons. Middle class human beings possess one natural person and perhaps control one artificial person. Upper class human beings possess multiple natural persons and control numerous artificial persons with skillful separation and interplay. Some

people have used the Status Project as a way to gain access to services, others use it to talk about identity issues and hackers see it as a source code to the system (Bunting, 2008).

Figure 20: *The Status Project*, Heath Bunting, 2007-ongoing. Available at: http://status.irational.org/anonymous_corporation/

> The Status Project, is a study of the construction of our 'official identities' and creates what Bunting describes as "…an expert system for identity mutation". The work explores how information supplied by the public in their interactions with organisations and institutions is logged. The project draws on his direct encounters with specific database collection processes and the information he was obliged to supply in his life as a public citizen in order to access specific services; this includes

> data collected from the Internet and information found on governmental databases. This data is then used to map and illustrate how we behave, relate, choose things, travel and move around in social spaces. The project surveys individuals on a local, national and international level producing maps of "influence and personal portraits for both comprehension and social mobility" (Garrett, 2012).

4.3.4 Mediated trust

Trust in persons, institutions and systems is to a considerable extent, the outcome of mediated processes (Endress, 2002). Specifically, communication of information which is inherently a mediated process, is a determinate factor to how trust is built and developed. As the Internet has increasingly become the main space for communication, circulation and retrieval of information, a trust intermediary (Schäfer, 2016), it has also presented important new developments on how trust is determined and affected by the heterogeneity of online and digital media. Information is embedded in a flurry of heuristic cues such as 'likes', 'shares' and 'comments' which may influence how trust indicators are taken up (Anderson et al., 2014). At the same time, the platforms where information is communicated and circulated are themselves *objects* that people can trust or distrust.

Since the birth of the Internet, there has been a constant state of tension between digital freedoms of expression and association, authoritarian restrictions on information and communication access and the development of Internet framing policies and national

and international web and Internet public and private regulations. This level of tension is telling of the importance of continuing to expand our understanding of how trust in persons, institutions and systems is affected by Internet-related mediated processes. Acts and movements of critical practice and resistance such as hacking, building of free software and open-source communities, digital resistance techniques and training sessions and circumvention devices and techniques, are all indicators of the complex trust/distrust issues that keep emerging. Early Internet art, net.art, is a great example of how artworks were directed towards exposing and by-passing the economic, juridical and technical obstacles restricting free data and information exchange and free development of software (Dreher, 2015), demonstrating who how and which interests determine net conditions of the time. Post-Internet art has also been dealing with contemporary issues around control, power, trust and their processes of mediation. Subjects and themes associated with post-Internet artworks are trust in technologies and platforms, interpersonal trust/authenticity, trust in systems and governance and trust in information/fake news. Some of the methods post-Internet artists use to approach trust today are as follows: identity play, audience manipulation, critical interventions/hacktivism, algorithmic play, network mapping and social media propaganda.

Benjamin Grosser's 2018 artwork *Safebook* (Figure 21), is a browser extension that makes Facebook "safe". The artist asks "Given the harms that Facebook has wrought on mental health, privacy, and democracy, what would it take to make Facebook "safe?" Is it possible to defuse Facebook's amplification of anxiety, division, and disinformation while still allowing users to post a status, leave a comment, or confirm a friend? With

Safebook, the answer is yes!" (https://bengrosser.com). The *Safebook* browser extension is Facebook without content where all images, text, video and audio on the site are hidden. What is left behind are the empty boxes, columns, pop-ups and drop-downs that allow for the 'like' and 'react' features. The user can still post, scroll through an empty news feed and do everything that they would normally do on Facebook. Grosser asks "With the content hidden, can you still find your way around Facebook? If so, what does this reveal about just how ingrained the site's interface has become? And finally, is complete removal of all content the only way a social media network can be "safe?" Maybe the only way to keep Facebook – a platform that has been criticised for being complicit in and a space for spreading hoaxes and misinformation - from harming us is to hide everything (Ohlheiser, 2018)

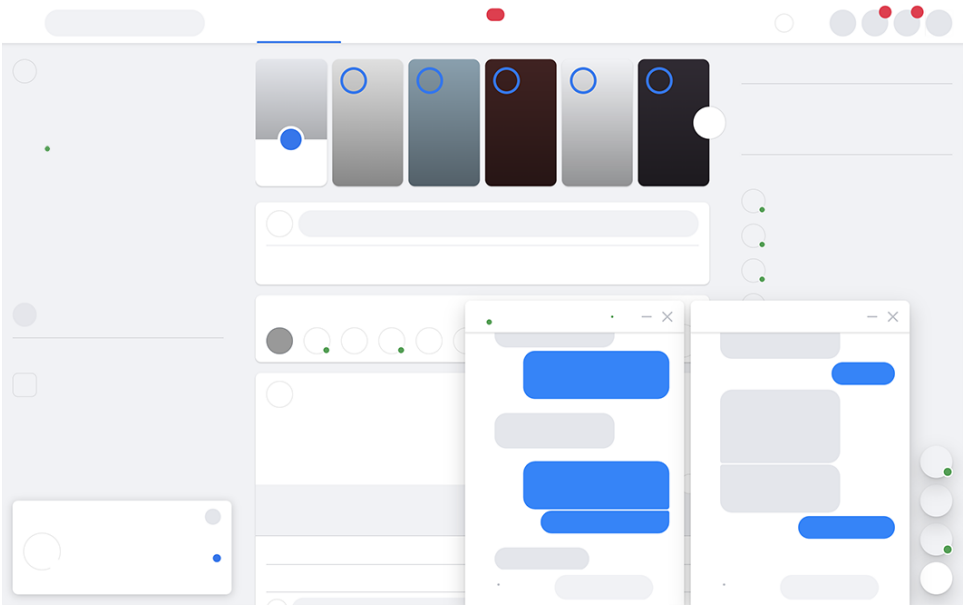

Figure 21: *Safebook*, Benjamin Grosser, 2018. Available at: https://bengrosser.com/projects/safebook/

Grosser has been developing several tools that allow social media users to experiment on them and learn more about how social media experiment on their users. *Twitter Demetricator*, is another browser extension by Grosser that hides all metrics on Twitter such as followers, likes and retweets.

> Those who engage in propaganda and disinformation campaigns understand, at least intuitively, that follower and other metrics on Twitter create new opportunities to manipulate public opinion...Bot armies and humans alike are used to inflate follower metrics, to elevate specific hashtags, or to like and retweet posts with a specific viewpoint. These disinformation tactics work because we're focused on the metrics and let them stand as an authority, as meaningful in and of themselves. We give up agency to the numbers, letting them tell us whether someone is worth listening to rather than reading and evaluating their posts on our own...When we consider the effects of visible metrics on Twitter or elsewhere, it's important to remember that software systems are designed. Which metrics we see—and which metrics the corporation keeps to itself—are design decisions driven by a need for growing user engagement...With Twitter Demetricator, I aim to get in-between the user and the corporation, enabling a renewed agency over the effects of visible metrics. With it, we can see for ourselves how the metrics affect our everyday experience of the site (https://bengrosser.com).

Twitter Demetricator, 2018*,* is used as a tool that allows users to think critically about social media. It is up to the user to reflect on how visible metrics affect the way we behave and interact on social media. Visible metrics are designed to draw our attention, they can influence and even guide the how, what and when of our posts as users learn what works best in terms of approval and engagement by the users. “Indeed, it’s almost impossible to comprehend just how central metrics are to the Twitter experience until you install *Demetricator*. Only when I tried it, did I realize that my eyes were instinctively flicking to a tweet’s retweet and favorite counters before I even processed the tweet itself. Only when I tried Demetricator did I understand how much I relied on those signals to evaluate a tweet—not only its popularity or reach, but its value” (Oremus, 2018).

4.3.5 Conclusions

Both the level and nature of mediatisation processes have changed as a result of the social, economic, cultural and political developments in relation to the Internet. How the physical becomes digital through digital reproduction processes or how physical reality is represented in digital space has been an important area of scholarship during the first wave of widespread Internet use and adoption of digital technologies. In post-Internet times however, mediation is considered a precondition for most areas of social activity. Analysing the complex and hybrid processes of mediation in the post-Internet condition requires a broad examination of the myriad of intra-actions between human and non-

human actors which operate by constantly exchanging and diffracting, influencing and working inseparably (Barad, 2007).

As mediation is an important dimension of the post-Internet condition it is also a common theme in post-Internet artworks. The three main areas of mediatisation as observed by the processes of reviewing Internet artworks and discourse around the post-Internet, are mediated publicness, mediated self and mediated trust. The artworks discussed in this section help illuminate the processes, dynamics, tensions and experiences of mediation in the post-Internet condition. Performing for social media audiences' expectations, critically manipulating social media applications, engaging Internet users globally in peer-to-peer networks, developing new methods that examine identity as defined by algorithmic processes and developing a platform that attempts to manipulate public opinion, are all perfect examples of how important the role of mediation is for our understanding of the world and of ourselves and how vital it is to continue to explore and critically engage with its processes.

4.4 Spatiotemporality

4.4.1 Introduction

Our understanding of space and time has long been connected to both advances to scientific knowledge regarding laws of physics and our physical environment and advances to our understanding of ourselves in relation to our environments (physical or otherwise), meaning in relation to social organisation. Our knowledge and understanding of space and time has evolved from understanding space and time as two separate entities to understanding space-time as a union of both (Minkowski; Einstein; Harvey; and Lorentz), to exploring technologically-mediated hybrid spatialities and multiple temporalities (Bloch; Koselleck; Foucault; and Poulantzas). Formalist, linear conceptions of historical time can serve the purpose of narrating history in its simplest abstraction but they have been proven to lead to misconceptions as to the complex nature of unfolding social, political, and economic landscapes (Kavanaugh, 2010).

> Increasingly, theoretical models have been developing in order to come to grips with this complexity. These models are variously termed, “networks”, “meshworks”, “non-contemporaneity”, space-time problematics, “globalized spatial/temporal fix”, “spatial and temporal metrics”, etc., in an attempt to understand the operations of cultures, whether western or non-western, beyond an isolationist or rigid paradigm (Kavanaugh, 2010).

One key argument that is being made in this section of the thesis, is that ICTs have played a crucial role in shaping perceptions of space-time that move beyond the disciplinary silos of mathematics and theoretical physics and closer to socio-technical and techno-cultural fields of study. The use of the term *spatiotemporality* instead of space-time is used here to emphasize the dimensional element of a condition. This is not a concept or a notion, but is centred around processes that exist as activities of living life post-Internet. According to Lund et al., when examining the contemporary of any time – in this case the post-Internet contemporary – we need to understand the contemporary condition as being one of con-temporaneity. “Contemporaneity is the bringing together of a multitude of different co-existing temporalities in the same historical present; it is an intensified planetary interconnectedness of different times and experiences of time… across different scales, and in different localities...” (Lund et al., 2017).

This section argues that ICTs, the Internet and its socio-cultural systems of relations, have caused significant changes on both our perception of the world – our view of the world - and the spacetimes within which we experience life. In that sense the examples used in this section can deal with both individual and global interpretations of the lived experience and its spatiotemporal manifestations. Through the case studies and examples used here to examine the spatiotemporal dimension of the post-Internet condition, the aim is to explore new conceptions of space-time made possible by ICTs.

4.4.2 A new view of the world

As a technology that has managed to achieve global scope due to its extension into the social and human environment (Ekman, 2016), the Internet has presented us with new opportunities to imagine the world as a whole and to immerse ourselves in the particularities of specific instances and locales. This relates to spatiotemporal elements that have to do with accessibility to different localities and temporal rhythms. Attempts to propose spaceless virtual time standards have been proposed – for example the Swatch time, where time was divided by ‘swatch beats’, each beat corresponding to a little more than a minute. However, seeing the Internet as just a new stage in the constitution of a global culture where distance and locality are annihilated does not do justice to the informational dynamics that underpin it (Terranova, 2004).

An important observation that has been made around ICTs and space-times, is that our view of the world has now been trained to organise space-time around events (Virilio, 2002) that take place in a hybrid local/global and physical/virtual environment. From major events such as terrorist attacks and natural disasters, to minor events such as a

friend's birthday or a local concert, our lives are structured to make sense through 'what happens', 'what happened', 'what will happen' and less about 'when' and 'where' these events are taking place. The 'when' and 'where', the time and place, the spatiotemporal elements of the event, especially when we discuss events of the present, are characterised by the simultaneous accessibility to the event's evidence (through data) from people and machines from different times and localities around the globe, that can become witnesses and engage with events - global or local - in 'real time'.

The level of engagement is perhaps another important observation one can make as to how spatiotemporal perceptions can be shaped/altered around events. Henri Bergson describes this as the *virtuality of duration*, the qualitative change that happens when movement takes place within a space-time that leads to us experiencing duration as fluid and multiple. By movement, in the case of the Internet, we could understand the volume and level of engagement and activity by people centred around events that can often be treated as critical junctures. The more people engage with an event, the greater the level of their engagement, the greater our impression of space-time that the event occupies. This can relate to a fundamental characteristic of the network effect which defines almost every networked entity on the Internet, where the value and utility a user derives from a service/product increases the more users are able to access, connect to and use the service/product (for example social networks). This concept is similar to what David Gelernter describes as the *lifestream*, the organising principle of the web (Gelernter, 2010). Gelernter points out the difference between global and individual lifestreams. On an individual lifestream, things move slower because individual objects are added less frequently than when looking at the aggregate, the worldstream (Gelernter, 2011).

Through the pervasive presence of digital media and especially social media, the Internet seems to operate in an everlasting present made of a rich texture of situations, events, and scenarios (Picon, 2010). The concept of the *ongoing present* of the Internet, and the impression that everything that is not 'here' is inaccessible and everything that is not 'now' has disappeared (Stalder, 2018), fails to take into account the 'liquid' state of post-Internet space-times where past, present and future are often getting blurred into a non-linear trace-line of series of events and activities. I would argue that although events happening in the *present* are indeed prioritised in Internet applications and networks, events of the past as well as events of the future, are extending their reach to our lives in a way that was never thought possible before. For example, comments on social media made years ago can come to *haunt* celebrities, public figures and virtually everyone who uses the Internet, who might see their lives change in a matter of seconds. Photos pop-up to remind us of what happened on that same day, ten years ago. Similarly, our future plans take life and form, as wedding websites, adoption blogs and all sorts of future projects/events in what we could call a form of *anticipatory future*. And then there is our digital afterlife, with social media accounts remaining active and gaining followers after one's death and several other online activities that extend post-death, *beyond the grave*.

4.4.3 Internet Mapping

This altering of our spatiotemporal understanding around engagement/activity, can also be observed in virtual metaphors of Internet-mediated or Internet-produced activity in

the form of live map visualisations or Internet mapping. Internet mapping can be described as the study of physical connectivity on the Internet in Computer Science (CS). But as a broader practice that involves artists, designers, scientists, researchers and the public, Internet mapping can be understood as a visualisation practice that is seeking to map and make sense of what is often described as *cyberspace*, using cartographic techniques and designs (Dodge and Kitchin, 2002). These maps of the Internet highlight points of increased activity as occupying more space and more dimensions (3D), points of connectivity, flow of information and data, traffic and network mapping, and intensity of activity through brighter and bolder colours. For example, *The Internet Map* (internet-map.net) (Figure 22), is a two-dimensional presentation of links between websites on the Internet as of the end of 2011. It is described as a 'photo-shot of the global web'. "Every site is a circle on the map, and its size is determined by website traffic, the larger the amount of traffic, the bigger the circle. Users' switching between websites form links, and the stronger the link, the closer the websites tend to arrange themselves to each other". Perhaps one of the most popular Internet-mapping projects, *The Internet Mapping Project* by Bell Labs, has been collecting and preserving traceroute-style paths to some hundreds of thousands of networks almost daily since 1998.

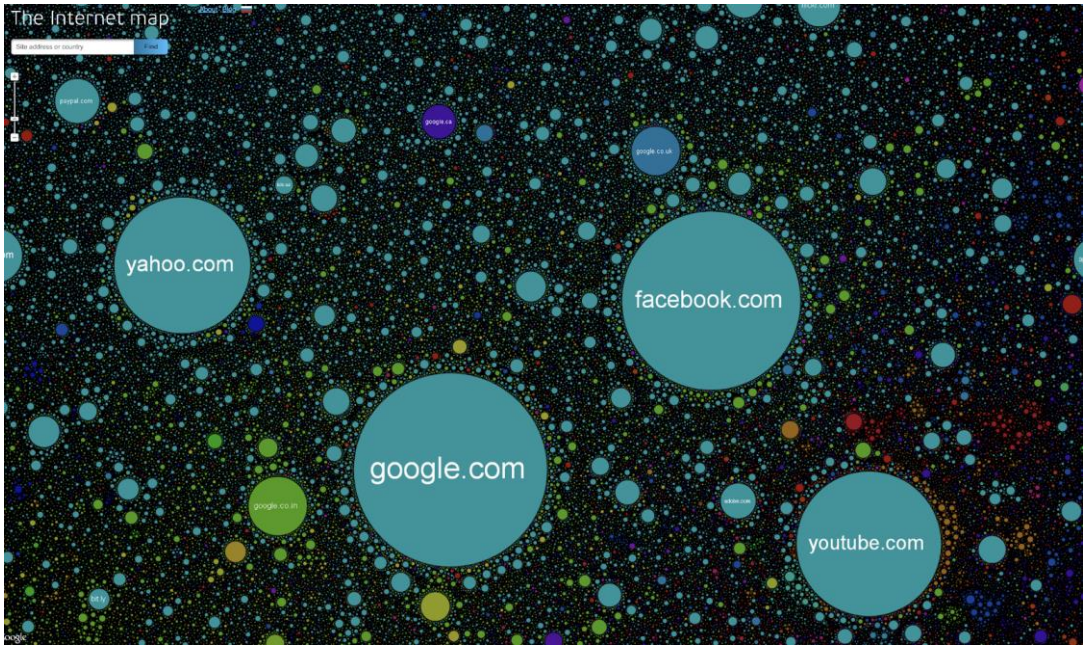

Figure 22: *The Internet Map*, Ruslan Enikeev. Available at: http://internet-map.net

Points of view and new ways of imagining or projecting ideas of space-times, via the aid of networked abstractions represented in those maps, are worth exploring. Internet maps very often use a 2D/3D globe visualisation as a point of reference. In a sense, Internet maps can be also understood as world/earth maps post-Internet. There are real-time interactive maps that show when and where people tweet about sunrise in different languages; there is the well-known *Kaspersky cybermap* which shows the cyberthreats that are registered around the world as they take place; the *Submarine Cable Map* which maps the underwater cables that connect the global Internet; the *Stuff in Space* map, which tracks the satellites, spent rockets and debris as they orbit the Earth in real-time, and many more. In these interactive maps, zooming in and out of subsets of information, one cannot fail to observe the different 'lifestream paces' as Gelernter describes them. It is also worth noting, that the Internet as a relatively static network of data nodes can no longer represent the post-Internet state of the Internet, where –

especially due to cloud technologies and ubiquitous computing – continuously mutating networks of data clouds occur (McHugh, 2010).

Artist Jay Simons, who posts his work on the online art community DeviantArt, creates maps of the world, or Internet maps. His work includes a 'full' map of the Internet according to websites and software (Figure 23), maps of the world according to the 'most popular social network', the 'level of Internet surveillance and censorship', the 'Internet speed by country', a 'list of Alexa Top 500 websites', a 'timeline of fame from 2004-2015 according to Google Trends' and many more. Internet maps are extremely effective visual methods for capturing and presenting the historical past, present and future of life during/with/after/post-Internet, while they are also great methods for visualising possible futures. The *Earth 2050* project by Kaspersky lab presents the visitor with an interactive 3D visualisation of planet Earth full of scenarios and predictions of the future up to the year 2050, by futurologists, scientists, and Internet users from all corners of the globe about what our lives will be like, what jobs we will have, what we will eat and what our cities and countries will look like.

Figure 23: *Map of the Internet*, Jay Simons, 2014. Available at: https://www.deviantart.com/jaysimons/art/Map-of-the-Internet-1-0-427143215

Escoitar.org is a collective art project by a group of artists, web developers, composers, anthropologists, and historians. The project, active from 2006 until 2016, is a form of representation and archivization of Galicia – an autonomous community of Spain - as a soundmap.

> The first step that was taken, was the creation of a geolocated sound file in cartography format, based on a Google Maps API as well as a semantic web focused on the idea of participation that allows, whoever wishes, to incorporate sounds in the coordinates where these have been recorded (escoitar.org).

Escoitar.org is a novel and very different type of Internet mapping practice, both due to the use of sounds as a mapping/cartography technique and the use of ICTs as the enabler for the soundmap's creation, experience and public participation. The project

reflects on the relationship between four basic concepts: sound, identity, memory and place.

The practice of Internet mapping, balancing between great abstraction and extreme detail, manages to capture important moments of our historical past, present and future. Internet-mapping presents new views of the world, often as they happen, that are built around human or human-driven activity. Set on their ‘global’ view, a myriad of interactions and movements give meaning to specific localities. At the same time, when tactical or political choices are made as to how the world can be represented according to particular subjects, the world is put into new perspectives. This a world being attacked, being connected, a world without borders, a world divided, a world with inequalities and a world of endless associations.

4.4.4 Life and death of post-Internet art

On the Internet, content changes, webpages get relocated, their traces getting lost, accounts get deleted while at the same time, massive amounts of content, events and activities are documented, shared and stored online with 3.2 billion images and 720,000 hours of video shared online daily (Thompson, et al., 2020). It is fair to say that the Internet has become by far the most intensive (in terms of level of activity), extensive (in terms of breadth of activity), dispersive (in terms of quantity and plurality of locations) and ubiquitous (in terms of presence and accessibility), archive of both human and non-human activity and experience in the world. These four characteristics of the *Internet archive*, directly dependent and defined by the socio-technical and techno-cultural characteristics of ICTs, bring together multiple space-time possibilities

that involve different intersecting levels of observation and interaction, more so than ever before. Whether the space-times that exist and are made possible by ICTs are able to capture the abundance of complexity of life is something that is yet to be explored.

As cultural production processes change along with technology, ICTs have massively affected the way we go about experiencing art, the processes of art-making, and the processes of art archivization and preservation. Since the mid-nineties, there have been important developments regarding the spatiotemporal conditions of artworks and particularly Internet artworks. Object-based artworks depend on their materials and preservation techniques and tactics for continuing to exist in their artist-intended form. Non-object-based artworks such as performances and happenings' physical lives depend on the artist's intentions, as well as, the documenting and archiving techniques of each period. The physical life of post-Internet art that is primarily created to exist online transcends notions of material deterioration and instead enters a codependent relationship with the medium's capacity for self-preservation. Post-Internet artworks can have various and multifarious forms. They can be online performances, websites, videos and images meant to be experienced online, chat conversations and interactions and video calls amongst others. In particular, post-Internet artworks can exist in both physical and virtual forms at the same time, or they can even exist as physical objects to be exhibited in physical spaces. Even in cases where a post-Internet artwork exists as a physical object in a physical space, there are almost certainly instances where the work has been circulated online, via social media posts, images and videos, where the work has its own presence online via a website or a dedicated channel or account, or where

the work has been mentioned in interviews with the artist and has been published/circulated online.

Artist and activist Guido Segni's 2015 work about the post and the past Internet condition, is a "truistic URL and a glittering web-based statement" that simply states: "After Post Internet there will be only, and always, Past Internet". Ironically, the work's link is no longer working, however stills and descriptions of the work can be found *all around the Internet* (Figure 24).

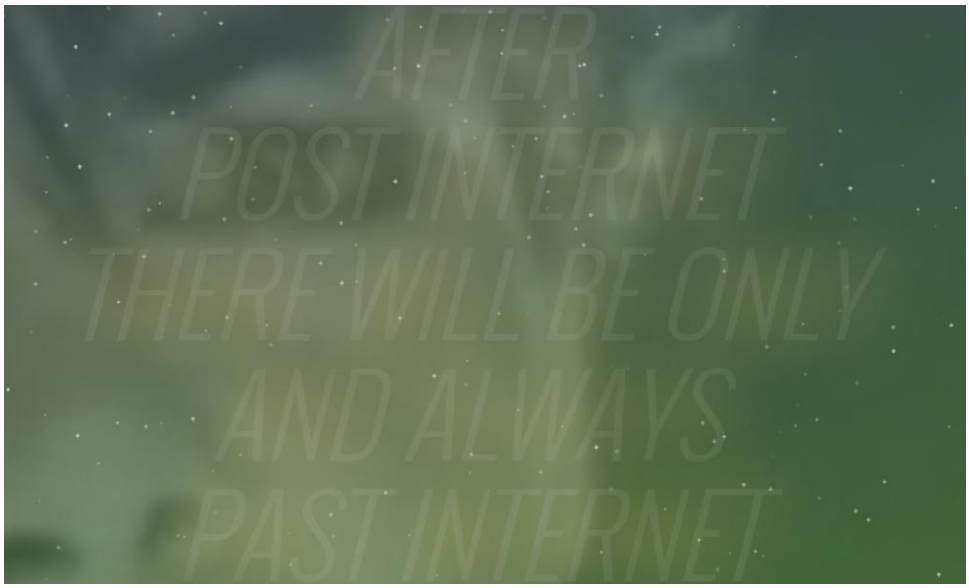

Figure 24: *After post Internet there will be only, and always past Internet'*, Guido Segni, 2015. Available at: https://old.guidosegni.com/work/after-post-internet-there-will-be-only-and-always-past-internet

Even if an artwork's web links are broken or they are intentionally removed from the web by their creators, it is impossible to delete every trace of online information. In

post-Internet times, ensuring that there are no traces of an artwork's documentation is a political choice. In Tino Sehgal's installation *This is Propaganda*, 2002/2006, the artist did not allow for any form of documentation to happen (photographs, videos or text) to avoid that these might, in the future, come to stand-in for the work. Instead, Sehgal chooses to teach the owners of his works how to install them. This way the work lives on the memory of the relevant participants until the next time that it will be installed.

Pieces of data exist on various servers and computers and even if someone tried to delete all relevant information from all websites and services that might host data about an artwork, there is no guarantee that these websites and services have not already communicated that information to third parties. Finally, once an artwork has been communicated online, it enters the public sphere and comments and references relevant to it will likely come up in searches. This means that what we understand as the physical life of an artwork takes a new meaning when talking about art post-Internet and more specifically when we talk about post-Internet art.

Escoitar.org, the soundmap example discussed earlier in this section of the thesis, is also a great example of an artwork that is no longer active online, yet its website along with a history of its death are still *alive and well*. On the website's main page, one can find a link to an article titled 'Who killed Escoitar?'. The article details the struggles Escoitar.org faced to remain active as a project as years went by, and the collective's ultimate decision to control *the killing* of their project by deleting its archive of more than 1200 field recordings, one listen at a time. Escoitar.org, invited the visitors of their website to listen to one of the recordings. After that, the recording would permanently

be deleted from their database which is described as a free and public archive of Galicia. “It will disappear as the sound it is. It will be again more than just a file; it will be an event. Thank you very much to all of you who have devoted time to feed ideas and recordings to Escoitar.org and happy listening! (edcoitar.org)”. There are no more files of the soundmap on Escoitar.org, all 1200 files have been deleted by 1200 individual listeners. However, everything else about the project is still there, its conception, the process of its creation and development, a detailed documentation of its activities in terms of workshops, exhibitions and discussions, and of course a detailed history of its death.

Post-Internet art does not simply uses technology, it appropriates the Internet in the sense that it appropriates ICTs and web content. This means that although it can be considered to be time-based art in the sense that duration is a dimension of the work, time itself has a different meaning. Since internet artworks can exist online – in one way or the other, the time-based element of Internet art as something that evolves and unfolds over time enters the reality of *Internet time* which means that it is unfolding and evolving through spatiotemporalities that are being redefined by online interconnections. Traces of an artwork’s location online and information that has been shared and circulated about it will always filter the work’s historical context since search engines reflect an often-tailored reality.

> Fragrmentary orphan online images make up the paint box of a contemporary artist – to infuse with purpose and meaning, to recombine and root to a specific place and time. There is documentation of anything waiting to be found. An endless

> archive of images awaits the artist. To create from it is to remember, not to just recall (McNeil, 2011).

A great deal of post-Internet artworks exist in an infinite state of constant access, replay and playback and often *uncontrollable* trace. However, it is important to notice that there have also been many artworks, especially early (net.art) and mid-Internet artworks, whose traces are very hard to find as links expire or file formats and software become obsolete and network structures change.

Artist duo JODI's artwork called *Untitled Game*, has been particularly noted for its emulation strategy (Adang, 2013). Emulation is a process that is popular amongst gamers who wish to continue playing games that have become technologically obsolete (Anderson et al., 2010; Guttenbrunner et al., 2010). Emulation techniques are based on operating systems (OSs) and software that can reproduce the behaviour of another system (Rothenberg, 2000). The aim is to recreate the environment in which the digital object can be rendered in its authentic form (Van Der Hoeven and Van Wijngaarden, 2005). There are numerous open-source-developed software tools and applications that are designed to emulate technically obsolete digital environments such as Basilik, DosBox, vMac, PearPC and Sheepshaver. "These tools are dexterous and diverse, and have in recent years been appropriated into archival and conservation practices" (Adang, 2013). For *Untitled Game*, an emulation application needs to be downloaded that emulates the operating system of the time of the artwork, the year 2001 and allows for the work to be accessed in its 'playable' form.

> Downloading, configuring and launching the emulator, along with sharing files between OSs, and experiencing the occasional "crash" of the emulator all become part of *Untitled Game* in the contemporary technological environment (Adang, 2013).

Along with important web and Internet archive initiatives like *the Internet Archive* and its *Wayback Machine* (archive.org), there are several interesting and important examples of contemporary preservation, documentation and archival initiatives and programmes of digital media-based art or Internet-based art. These can teach us a lot about strategies for web content preservation but also about what it means for something to be regarded as active or archived (Wagner, 2007). These practices can vary greatly in their scope, resources and methodologies. There are examples of public art institutions making strategic decisions about collecting and preserving Internet artworks of cultural value as an attempt to build public memory, and there are examples of amateur collectors being aware of the *dangers* of the Internet-based nature of Internet artworks, that are collecting Internet artworks as a practice of collecting and preserving social memory and culture. "What artists are doing with amateur and commercial content available online, curators and "amateur collectors" can effectively do with art" (Quaranta, 2014). Digital theorist Rick Prelinger has famously claimed that "archiving is the new folk art, something that is widely practiced and has unconsciously become integrated into a great many people's lives, potentially transforming a necessity into a work of art" (Goldsmith, 2011).

> What if I care for my appropriated artwork more than the collector who bought it for some bucks, more than the gallery

> who sold it, and more than the artist itself? What if, in thirty years, my downloaded file will be the only remains of an artwork that nobody else cared about for decades, but that is now being considered relevant? Shall we say that this artwork has been saved by copying? (Quaranta, 2014)

From Kenneth Goldsmith's very popular Ubu Web, äda web, Rhizome's ArtBase and Net Art Anthology to the Internet Archive, issues of web preservation have been a big part of Internet art discourse.[9]

As artworks that are the result of and relate to the post-Internet conditions of cultural production, post-Internet artworks defy physical spatiotemporal limitations, *fight* their own extinction, and continuously redefine their world of associations. Internet art in general, has been challenging the ways of experiencing, making and evaluating art, and has been suggesting that we should reinvent how we think about art altogether. At the same time, by examining the life conditions of contemporary Internet art from a technocultural and sociotechnical lens, we can reveal more about how our understanding of space-times changes along with the various developments in ICTs.

4.4.5 Conclusions

Understanding how spatiotemporal conceptions are affected and defined by ICTs is directly linked with the various socio-cultural developments that have taken and are

[9] Scholars like Domenico Quaranta, Geert Lovink, Josephine Bosma, Joanne McNeil and Gene McHugh have thoroughly examined this topic.

taking place within these evolving spatiotemporalities. What was once understood as cyberspace, a conceptual spatiotemporal digital/virtual environment that was distinct to most of its part from real life, can no longer describe the complexity that surrounds experiencing life post-Internet. The increasing level of integration, pervasiveness and ubiquity of ICTs into all aspects of life along with a continuous increase and evolvement of social and cultural practices within these environments, create new spatiotemporal possibilities. The possibility of experiencing a multitude of different co-existing temporalities across a multitude of different co-existing localities expands our understanding of the world,and of ourselves and our communities in it.

Cultural practices embedded into these systems can present opportunities to examine how understandings of space-time are formed, how they are manifested through cultural products, and what challenges are presented along the way. The practice of Internet mapping is used as an example of how spatiotemporal conceptions can be materialised through visualisations of the world and the richness of its activity often through simultaneous instances of great abstraction and great detail. Post-Internet artworks are used as examples of the possibilities and limitations of the Internet to capture and conserve the extent of both human and non-human activity. While it might seem impossible to delete every single trace of online activity, it is also impossible to preserve it. These tensions and uncertainties surrounding space-times are also characteristic of the post-Internet condition, as they indicate a state of complex transformation.

4.5 Publics and Public Spheres

4.5.1 Introduction

Philosopher Jürgen Habermas, who defined the term public sphere, described the ability of information communication networks to operate in terms where citizens were able to express their points of view and where discourse and democratic deliberation could take place, as a key element of the public sphere concept (Habermas, 1989; Habermas, 1996). Since the emergence of the Internet and especially since the Web2.0 social media-defined era, new notions and conceptions of what a public sphere is, how it is defined and by whom have continued to emerge. As more and more communities and publics have begun to operate within a 'digital' or an 'Internet' public sphere where new levels of engagement, participation and interactivity were available, these same publics started to become increasingly influential in defining and expanding the meaning of the public sphere itself. What constitutes a public sphere within a post-Internet condition, has a lot to do with the technocultural features of the Internet and everything to do with the communities and publics that constitute it and how they evolve and transform through time.

Through the technocultural lens of Internet-related processes, a public sphere is also a conceptual space where culture processes are defined by the communities of people or publics that operate within it. Culture creation itself is a system involving collaboration, opposition and negotiation (Green, 2001). Early studies about this new digital public

sphere that has been the Internet, have attempted to identify reasons why communities and publics have been so eager to engage in new modes of sociality, communality and public discourse allowed and also defined by ICTs. Holmes drew a link between partial and fractured communities due to the atomising effects of broadcasting and the longing of interactive, round-the-clock communities (Green, 2001; Holmes, 1997). Others have made connections between increasing virtual social experiences and growing virtual reality (VR) marketplaces. Points about 'cellularisation' or 'fragmentation' of contemporary social activity were made, distinctions of user interactivity from consumption to production to *prosumption* and from public, to small group and private spheres were also made.

This first wave of research around publics and communities' interactions online, characterised a shift in how public spheres could be understood and analysed. It put the emphasis on the sociotechnical aspect of ICTs but it was also often bounded within the boundaries of technological determinism. Means of production, consumption and interaction were produced to fit this new *digital public sphere*. Public and private life binaries were now seen as being merged to operate into a new hybrid social space, partly mediated by technologies. As historical distance began forming between the early days of wide-spread Internet access and the first shock of life with social media, there have been new approaches to understanding and analysing public sphere conceptions and operations post-Internet. In post-Internet times, it is understood that there can be a multitude of diverse and overlapping public spheres operating at the same time, driving both fragmentation and unity. It is understood that political processes have been transformed forever, that the technological is an extension of the socio-cultural, and that

there is no fixed notion of what a public sphere is as new public sphere conceptions keep emerging faster than ever before in human history. There is also better understanding around the challenges and dangers associated with control and manipulation of public opinion, democratic processes and cultural production. Public spheres post-Internet are recognised as being far from ideal and topics such as platform capitalism, surveillance capitali[10]sm, misinformation and public service Internet, keep being discussed as part of a growing discourse around Internet, democracy and equality that surpasses past binary views of the Internet as utopia/dystopia.

4.5.2 A transformed public sphere

During the last 25 years a lot has changed in the ways political actors, publics, communities and individuals engage with political processes such as mobilisation, deliberation and public dialogue. Public dialogue, engagement, participation and mobilisation around political issues have all been transformed by social media and other social engagement platforms such as online petitions and online campaigning. Examples of successful real-world action and attention to causes through publics' mobilisation via the Internet has often given the impression of the Internet as a new democratic public sphere. However, same as with any other pre-Internet technologies, democracy is not inherent in ICTs, and ICTs are far from neutral.

[10] Particularly the process of surveillance by companies like Facebook and Google as Shoshana Zuboff and Karin Schwandt examine in the book *The Age of Surveillance Capitalism* (Zuboff and Schwandt, 2019).

> ...technology does not stand apart as an external force that impacts society and culture. Rather, technologies are embodiments of social and cultural structures that in turn get taken up in new ways by existing social groups and cultural categories (Varnelis and Friedberg, 2008).

From early examples of the battle of Seattle in 1999[11] and the anti-globalisation movement in early 2000s, to the Arab Spring in early 2010s and the #MeToo and Black Lives Matter protests in late 2020s, numerous movements around the globe, and often international movements such as the Occupy movement and the Global Climate Strike, are organised and mobilised through online platforms. At the same time, there are many far-right anti-democratic examples of political mobilisation such as the 2021 United States Capitol attack or the various conspiracy theory-based movements such as QAnon, that are operating mainly through social media. There are also many examples of manipulation of public opinion for political purposes through misinformation, again mainly through social media, such as the 2016 US presidential election and the 2017 French presidential election. There is no denying that political – in the broadest sense – engagement and participation has been transformed through ICTs and that through this process a world of plurality of identities and issues became more visible.

> Difference is here to stay and no longer needs to legitimize itself against higher authorities such as the Party, the Union or the

[11] The battle of Seattle is a series of protests and demonstrations associated with the World Trade Organisation (WTO) Ministerial Conference in Seattle, Washington on November 30, 1999.

> Media. This is the biggest gain compared to previous decades. The 'multitudes' are not a dream or some theoretical construct but a reality (Lovink and Schneider, 2003).

As the Internet has become a major influence and enabler of contemporary public spheres, there is growing concern and interest on how it can become more democratic itself and more resilient against anti-democratic manipulation. The fragility of the post-Internet public sphere along with declining levels of trust in institutions and experts (Morgan, 2018), requires suggestions for democratic resilience in post-Internet times. As hate speech and misinformation become part of public spheres, issues of media regulation and public control become pressing. The *Public Service Internet Manifesto* launched in June 2021 online, as an open-ended public debate process that wants to inspire envisioning democratic futures of society, the Internet, the public sphere and the media landscape.[12] The manifesto calls for the creation of public service media and public service Internet platforms based on principles that promote fairness, democracy, participation, civic dialogue and engagement. It is a call to save and advance democratic communications by renewing Public Service Media and creating a Public Service Internet (Fuchs and Unterberger, 2021). The project reflects a lot of the anxieties related to the COVID-19 global pandemic, the climate emergency, infodemic crisis, increasing political polarisation across the globe and persistent and deep social inequalities. The manifesto includes signatures by Jürgen Habermas, Noam Chomsky and several

[12] The *Public Service Internet Manifesto*, is an idea generated by Christian Fuchs and Klaus Unterberger and was developed as part of the activities of the InnoPSM: Innovation in Public Service Media Policies research network led by Alessandro D'Arma and Minna Horowitz.

international press and research associations and federations amongst many others. Projects and initiatives like the *Public Service Internet Manifesto* are indicative of the post-Internet discourse regarding the Internet and the public sphere, and point to more realistic – in comparison to similar initiatives of the past – post-Internet futures that are democratic, accessible and fair.

Artist Zach Blas, produced the *Contra-Internet* series as a critique of the Internet as a hegemonic descriptor for digital networking and premier arena of political control (themovingmuseum.com). *Contra-Internet* works are the result of plagiarising, appropriating, remixing, copying and pasting text snippets from queer, critical and radical theory. On *Inversion Practice #1: The End of the Internet (As We Knew It)* (Figure 25), Blas is using text snippets from Paul B. Preciado's *Manifiesto Contrasexual*, Fredric Jameson's *The Cultural Turn*, J.K. Gibson-Graham's *The End of Capitalism (As We Knew It)*, and the writings of Subcomandante Marcos, leader of the Zapatista movement, and alters them using the 'find and replace' function to replace 'contra-sexual' with 'contra-Internet', 'capital' with 'Internet', 'economy' with 'network' and so on. The alteration process is documented on video via screen-capture with different songs playing in a separate iTunes window such as Le Tigre's "Get Off the Internet", and a computer-generated voice reciting the altered text. Blas repurposes texts that initially argued against economic and sexual hegemonies to offer possible strategies to resist Internet hegemonies and speculate on Internet futures and network alternatives.

> In our dreams we have seen another network, an honest network, a network decidedly more fair than the one in which we now live (Zach Blas after Subcomandante Marcos).

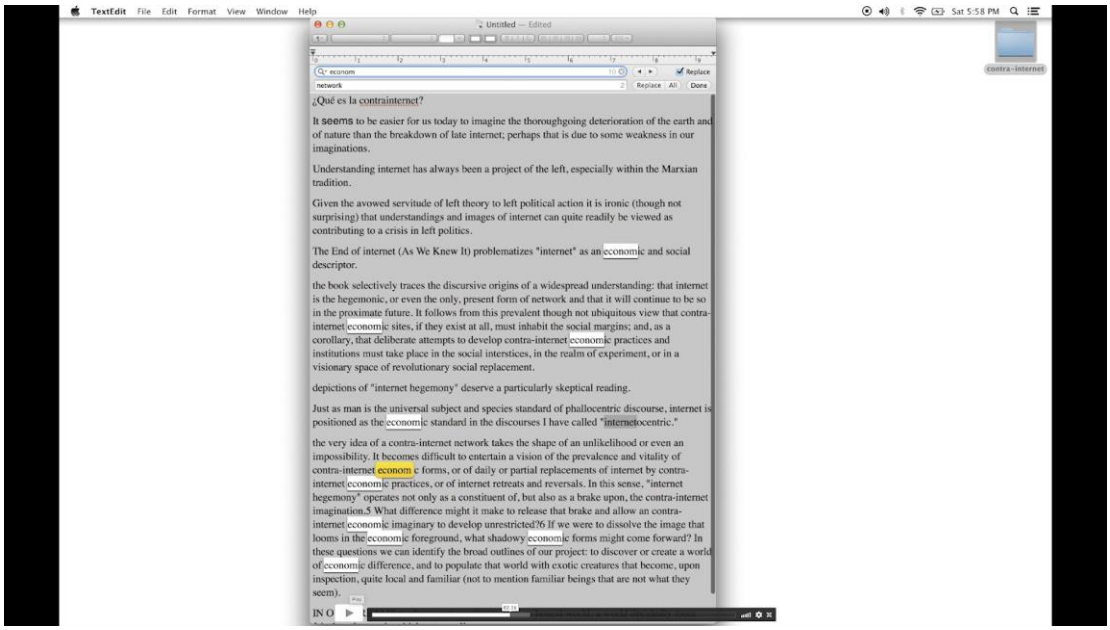

Figure 25: *Inversion Practice #1: The End of the Internet (As We Knew It)*, Zach Blas, 2015. Available at: https://zachblas.info/works/contra-internet/

The fragility of post-Internet public sphere contexts is addressed by artist Jonas Lund's performance/installation titled *Operation Earnest Voice.* This is a performative office installation that uses social media to disrupt, influence and manipulate public opinion and discourse. "The performance takes place both online and offline, with a group of performers set up in troll farm fashion and given control over numerous social media accounts. The work aims to make visible how social media are used to distort the political discourse and during the performance the offline audience can look over the performers shoulders as they perform their duties as part of the operations office staff" (jonaslund.com). In 2019, *Operation Earnest Voice: Brexit Division*,

performance/installation, brought together a team of 12 performers from marketing experts, meme makers and photographers to copywriters, programmers and strategists to develop a media campaign designed to mimic the methods employed by propaganda strategists (Hutchinson, 2019). The performance took place over the course of four days in the same week as the vote on then PM Theresa May's Brexit deal in January 2019 and included talks like 'Can the Left Win the Battle of the Bots?' and 'Brexit, Data and Computational Propaganda'.

> It is a framework to have new types of conversations about what it means to have agencies and systems, and whether you are being manipulated or not. But also, to question how you can reclaim some of this agency for different types of systems. This is a platform to explore that (Lund, 2019).

Figure 26: *Operation Earnest Voice*, Jonas Lund, 2019. Available at: *https://jonaslund.com/works/operation-earnest-voice/*

4.5.3 Publics' Spheres

Publics, as alliances of people sharing interests in social, cultural and political issues, have been key drivers of the transformation that has been taking place since the early days of the Internet. This has to do with publics' constant involvement in re-structuring contemporary issues and areas of interest, along with the growing development of creative uses of ICTs and their manifestations. Characteristics of subjectivity, expressiveness, communication and connection (Stadler, 2018) are defining publics' sociability in the post-Internet condition.

> This need to express one's desires and passions in order to enter into a sociability that creates one's identity slowly but surely erodes the distinction between the inner and outer world, so central to the modern subjectivity, forged in the Gutenberg Galaxy. Subjectivity is being based on interaction, rather than introspection (Stadler, 2018).

Along with sociability of publics operating in the more *public* domains of post-Internet public spheres, social interactions become more *visible* by reaching larger and wider audiences or by simply being available for reach for smaller, niche audiences. The sharing of experiences in public spaces - a precondition for the public sphere - does not necessarily mean that these experiences are public as they can be extremely private and esoteric. Groups and forums dedicated on specific topics historically-considered as

private or taboo, attract large audiences from every corner of the world and often communities are built around them, with people engaging and participating in group discussions, everyday social interactions or exchanges of private messages.

Artist Filippo Minelli, created a blog called *Chemotherapy Update* where he would post updates about his chemotherapy progress as he was fighting Non-Hodgkin Lymphoma, a type of blood cancer for a period of two years.

> Day after day, *Chemotherapy Update* offered to its followers an account, brutal and ironic at the same time, of the small things of his daily life, turned into events by the prospect of a possible unhappy end: jabs, drugs, good and bad news, hopes and disappointments, hair loss and the need to shave again, the meetings with other patients, the priest coming to comfort him (filippominelli.com).

The artist managed to survive cancer and used the hundreds of posts and photographs he created for his blog as part of the Chemotherapy Update installation, exhibited at the Link Art Center.

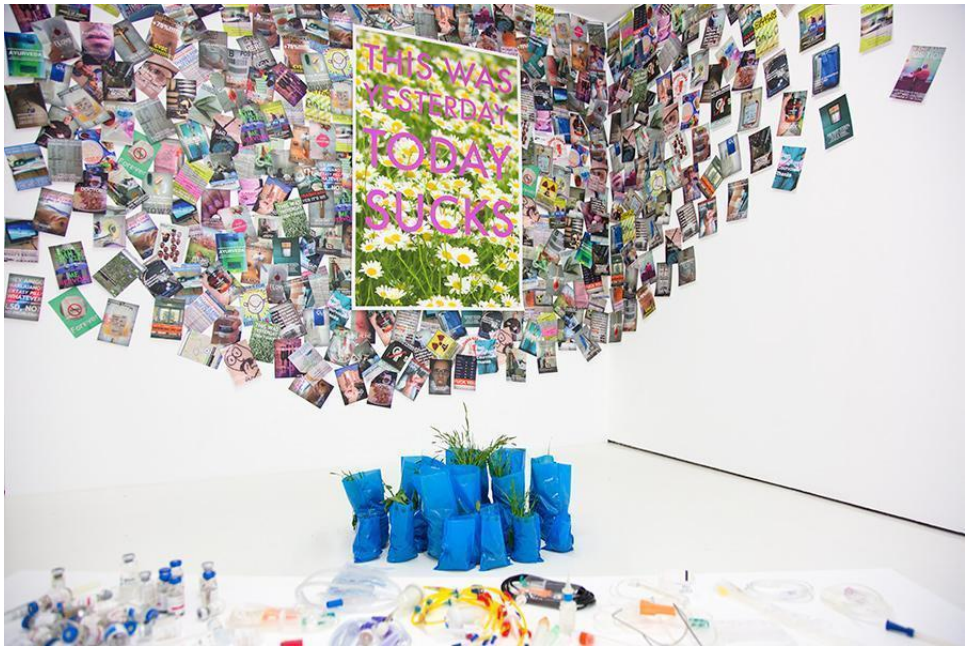

Figure 27: *Chemotherapy Update*, Filippo Minelli, 2010-12. Available at: *http://www.filippominelli.com/project/chemotherapy-update/*

The sharing of experiences in public spheres creates a common social reality for the people involved by means of collective participation. Understanding of publics as a "collection of people who share a common understanding of the world, a shared identity, a claim to inclusiveness, a consensus regarding the collective interest" (Livingstone, 2005) is not enough to describe post-Internet publics operating in post-Internet public spheres. The concept of *networked publics* (Ito; Varnelis; Boyd), has been considering the socio-technical and techno-cultural systems associated with publics' formation in post-Internet times. Networked publics "reference a linked set of social, cultural, and technological developments that have accompanied the growing engagement with digitally networked media" (Ito, 2008). Varnelis (2008), points out that as networks expand, the dynamic tension between the broader network and individualised niches becomes more pronounced and that this dynamic undergoes a fundamental shift. In post-Internet times, we could argue that the constantly evolving

process of publics' participation in public sphere formations is absorbing such tensions. As there can be a multitude of diverse and overlapping public spheres, operating at the same time, driving both fragmentation and unity, the same can happen with publics. Tensions can rise or recede depending on a number of factors, but the growing plurality of publics is what is currently driving the formation of public spheres and sociality in post-Internet times.

This is a direct shift from views of sociality being limited in public spheres, that have dominated *public sphere* discourse for over three decades. As public spheres are dominated and driven by publics in post-Internet times, *Publics' Spheres* becomes a play of words that gives meaning to this transformation of the public sphere from a *place* common to all where social and technological systems defined the modes and terms of sociability and sociality, to a *multidimensional conceptual space* defined by publics operating in conditions where ICTs have become fully integrated into every expression of sociability and sociality. In publics' spheres, publics are characterised by processes of culture creation in a variety of forms such as engagement with cultural artifacts (e.g., movies, music, literature and pop culture), development and participation in community aesthetics (e.g., cottagecore, minimalist, vaporwave and softcore aesthetic), discourse around culture (e.g., through forums, social news sites, fansites, memes and social media) and building of communities of interest (e.g., around culture, health, parenting, travelling, politics and profession). Publics are driving social processes of collaboration, opposition and negotiation within these spaces of culture creation in diverse ways that are constantly evolving and transforming.

4.5.4 Publics and communities

Post-Internet publics are also transformed from alliances of people sharing interests to alliances of people sharing interests that are developed around sociality and communal formations. As Jon Ippolito describes in *Ten Myths of Internet Art*, “The internet may be a valuable tool for individual use, but it is far more important as a social mechanism” (Ippolito, 2002).

Cuadalupe Rosales’ 2015 - ongoing artwork *Veteranas and Rucas* (Figure 28), is an Instagram account that documents the Southern California Chicano party crew scene in the 90s, largely through photographs and videos submitted by followers.

> The fact that this community was so tight-knit has made the Instagram project a growing archive of family histories and a site for the activation of memory and culture. In fact, many users have renewed ties with family and friends in the comments surrounding each post. It is significant that an archive of this community’s rich cultural life was not created by any formal memory institution. By highlighting this lack, Veteranas and Ruccas raises broader questions about how memory is created and valued, and how the internet might help reshape these processes (Rhizome.com).

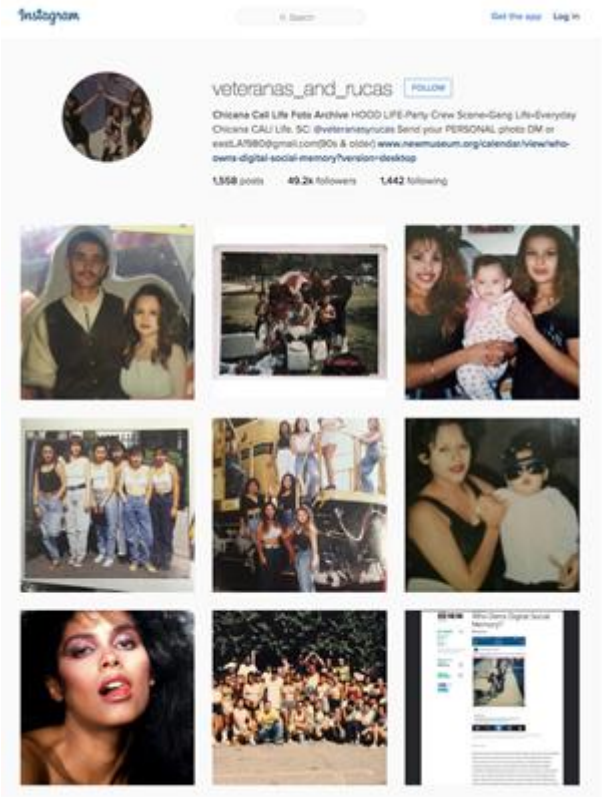

Figure 28: *Veteranas and Rucas*, Cuadalupe Rosales, 2015-ongoing. Available at: *https://www.instagram.com/veteranas_and_rucas/?hl=en*

Apart from the account becoming a living history book, *Veteranas and Rucas* is a great example of publics engaging in community building by sharing their cultural and social bonds. These bonds however, for a public to be a public, have to be built on some level of conscious referentiality, consciousness being perhaps the one constant characteristic of publics' identity formation.

Natalie Bookchin's *Mass Ornament* is a study in *unconscious communities* (Chun, 2016) by bringing together individual *public* expressions into communal formations. The work is a video installation that choreographs hundreds of YouTube dance videos of individuals dancing at home into one communal dance performance to the soundtracks from two 1935 films, Busby Berkeley's *Gold Diggers* and Leni

Riefenstahl's *Triumph of the Will*. The title is a reference to Siegfried Kracauer's influential essay of the same name. In *Mass Ornament*, Kracauer "...wrote about the mass choreography of the Tiller Girls, a dance troupe that created geometric forms through the movement of their body parts. Kracauer saw this choreography as symptom of the capitalist order, arguing that the mass ornament embodied the Taylorist logic of the factory, transforming human beings into a set of moving parts in the service of a larger pattern – a set of lines – which none of lines – which none of the participating performers could themselves see" (Baron, 2011).

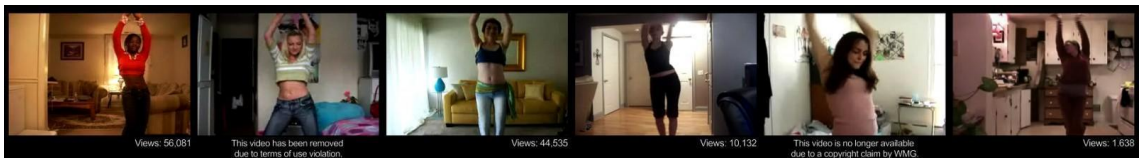

Figure 29: *Mass Ornament*, Natalie Bookchin, 2009. Available at: https://bookchin.net/projects/mass-ornament/

Bookchin's Mass Ornament, is a great example of observing unconscious referentiality in publicly available individual performances online. These performances have so many conceptual and contextual elements in common, like the movement, the setting (home) and the public medium (YouTube, WWW) but still are not consciously connected in other ways.

The Internet as an open place for community, collaboration and creation has been massively influential in the ways digital media and Internet art communities have been developing their own community spaces for art exhibition and engagement in a self-organising manner. Numerous online art communities have been created over the years, from early net.art mailing lists to dedicated websites/social networks such as

DeviantArt, Ello and Art Station to numerous art-related Instagram, Tumblr and Pinterest accounts. *The Wrong* (mentioned also in 3.4.1 section of the thesis), is the largest and most comprehensive digital art biennale today and a great example of art communities developing their own public space and means of exhibition. Happening both online and offline, *The Wrong* started in 2013 and each year presents works from more than 1000 artists. It is funded by Indiegogo, an international crowdfunding website. According to its mission statement "The Wrong aims to create, promote and push positive forward-thinking contemporary digital art to a wider audience worldwide through a biennial online event that gathers the best of the best, while embracing the young talents of today's digital art scene". Its latest addition has been thewrong.tv a live tv station online where artworks and concepts can be showcased as a linear TV experience.

> The Wrong Biennale is a disruptive site of cultural engagement in a social milieu complaining of malaise and cynicism. It's time to consider what media art is; how our communities interact; how we operate as a community; and what it means to be a media artist in a mediated culture (Lichty, 2016).

Communal communities are becoming the social basis for culture production, with publics – alliances of interest – being the driving force behind new public sphere formations. Past views around such communities criticised the quality of their social bonds which was often viewed as ephemeral and based on virtual proximity (Bauman, 2003). However, communal communities have been proving to be structural features in

publics' spheres formations and understanding the processes that drive their social behaviours requires a fresh mind and the willingness to examine the full set of dimensions (social, technological, cultural, ethical, economic and environmental) that constitute the post-Internet condition.

4.5.5 Conclusions

Publics have become increasingly influential in defining and expanding the meaning of public spheres, especially since the Web2.0 social-media-defined era. The ways communities and publics have been engaging in new modes of sociality, communality and public discourse are now understood as important elements in the processes of understanding and analysing public sphere conceptions in the post-Internet condition. The possibility of multiple, diverse and overlapping public spheres operating at the same time is a crucial step in understanding the ways public spheres are evolving within an increasingly technologically mediated environment.

Political processes like public dialogue, engagement, participation and mobilisation around political issues have been transformed by social media and social engagement platforms. Positive and negative examples of successful real-world action have revealed the fragility of public spheres in the post-Internet condition, with many voices raising concern around the dangers of misinformation and manipulation of public opinion and proposing that the Internet should be treated as public service media.

Post-internet artists have been reflecting and responding to these changing dynamics of public spheres and publics with works that investigate how political action is changing,

how manipulation of public opinion operates, how the personal becomes public, how publics are driving cultural production, and how individuals are connected through cultural performance across a fragmented public sphere landscape. Contemporary Internet art is revealing a rich and diverse world of associations between individuals, communities and public sphere domains.

4.6 Identity

4.6.1 Introduction

The shaping of identities in Internet times has been a great area for exploration as different domains of the self are massively affected by ICT developments. The growing level of fluidity around the concept of identity is indicative of the plurality and diversity of such influences and factors. Internet studies in particular, as a new promising research field for Internet phenomena, has been driving research on the effects of social media, Internet cultures, online communities and ICTs themselves in the shaping and influencing of identity domains (Agius & Keep, 2018; Atay, 2015; Cover, 2019; Trottier, 2012).

Political views, ideologies, work, fashion, culture, place, age, gender, language, nationality, sexuality, communities and all the other domains where identity is shaped and influenced have been gradually entering increased levels of mediation through ICTs (Saunders, 2010; Seargeant & Tagg, 2014). All these domains have been affected at

different levels and at different speeds by the Internet, either by starting to operate online or by being influenced by Internet trends and Internet phenomena or both.

Identity in Internet times has been extensively discussed in terms of the virtual and its possibilities. Virtual identities where anonymity through avatars was possible, seemed to allow for a newfound freedom in identity construction and expression. Early Internet artists have also seen this as an opportunity for transcending social divisions including the perception of difference as seen through living spaces, personal appearance and spoken dialect (Troemel, 2011). Concepts like mixed-reality where the merging of virtual and real environments provides opportunities for co-existing, offered an important shift in our understanding of how identities have been affected by the popularisation of the Internet. Mark Hansen describes in his book *Bodies in Code*, that "all reality is mixed reality, which means that instead of thinking of our online and offline identity as two separate things, today we understand our identity as a fluid construct of both virtual and physical states" (Hansen, 2006). However, the virtual as different from the real or the physical is no longer the case, as it has been discussed in the 4.3.1 section of this thesis. In the post-Internet condition identity exists in a number of manifestations and at various different spaces constantly mediated through ICTs. Clustered identities based on different versions (such as profiles) on different platforms, constitute a whole, an amalgamation of identity expressions operating within a larger and fluid cultural environment.

The term 'networked individualism' (Wellman; Castells; Rainie), has been introduced in the early 2000s to describe the shift from individuals defining their identity in

relation to stable collectives such as family and profession to personal social networks, meaning the communal formations in which they are active as individuals and in which they are perceived as singular people (Stalder, 2018). The concept of networked individualism, has been very useful in terms of understanding and describing important changes in social relationships and identity formation in relation to ICTs and more specifically networks, that have been challenging traditional/classical models of sociality and the individual. Relevant concepts have been developed around this topic such as 'networked sociality', 'networked publics' and 'networked society' that attempt to define and describe a series of new social operating systems in relation to culture and network structures. However, as developments in cultures, network structures and systems continue to take place, recognising and taking into account broader socio-technical and techno-cultural contexts of complexity and heterogeneity is becoming increasingly important.

The processes of culture production in post-Internet times, in terms of their elusiveness, volatility, ephemerality, diversity, ubiquitousness and expansiveness, are a very important topic for exploration when it comes to identity formations and influences. Culture has always been a crucial domain where identities are shaped and influenced and today, the massively expansive arena of culture creation, production, participation and consumption – processed through technocultural apparatuses, with all of its popularities and niches, is growing into a key driver for identity formation and expression. At the same time, the role of publics and communities as drivers of cultural processes is also of great importance when examining identity in the post-Internet condition.

Socio-technical units of identity like identity with data, identity with masses and identity with markets formulated as relational traits of the individual through ICTs, have also become important topics of research and exploration (Terranova, 2004). All these areas of research in relation to identity have been approached within both the self-referent (individual influences) and the other-referent (collective/community influences) contexts. However, it is worth pointing out that similar to many other pre-Internet/early-Internet dichotomies, the self-referent and the other-referent contexts have also been undergoing a significant transformation in terms of the fluid blending of the two together. This has to do with the increasing importance of social interactions through networks along with the increasing levels of engagement of the individual with the public domain and the subsequent sense-perception of the individual within a 'universal' dimension rather than a personal one (Chrysochou, 2020).

The level of complexity in the processes of identity formation and influences along with the fast-pace and constant state of change and transformation that they operate in, make identity a particularly intricate dimension of the post-Internet condition. The diversity of works presented in this chapter are indicative of the above and offer opportunities for nuanced observations and articulations of identity in the post-Internet condition.

4.6.2 Performativity and identity expressions

As the idea of the autonomous, self-referent individual has shifted towards the individual *in process* and *in context*, the spaces within which these processes are taking place and where these contexts are formed are becoming particularly important. The

Internet as a ‘space’ of social interaction is offering a canvas for identity expression that is unprecedented when considering other important technocultures such as the press or the telephone. Social media in particular, have allowed for an explosion of performative behaviours to emerge as identity expressions.

> This particular cultural moment is defined by digital identity formation that vacillates between two extremes: careful self-curation and indiscriminate over-sharing (Easwar, 2013).

From carefully curated social media accounts and stylised selfies to dedicated blogs on extremely personal experiences, platforms such as Facebook, Instagram, YouTube, Twitter, TikTok and Tumblr are social media examples where construction of identity and identity performance are feeding into the model of self and user-generated content that drives such platforms.

Ryan Trecartin’s 2004 *A Family Finds Entertainment* (Figure 30), can be seen as an early study experimentation with performative expressions of identity on media. This video artwork, which launched Tracartin’s career, “is a film with cheesy video special effects, dress-up costumes, desperate scripts, and “after school special” melodrama combined in the fluency of youth-culture lingo, reflecting a generation both damaged and affirmed by media consumption” (saatchigallery.com).

> Trecartin’s characters, like the modern-day technophiles they satirise, are umbilically linked to their Blackberries. They also play to camera constantly, anxiously aware that their

performances are being filmed, recorded, broadcast: self-awareness always leads to self-promotion. The 'real' world of people in space in time is secondary to the virtual afterlife of these acts. Trecartin's characters aspire to be images…His artwork animates the ongoing dialogue between identity and technology. The love/hate nature of this relationship arises from the mix of liberty and alienation that it affords (our world is getting faster, brighter, better; our world can feel disorientating, overloaded with information) and which, with the invention of the Internet, entered an era of unparalleled anxiety and opportunity... Identity is presented as a form of fancy dress: try a new self, and as soon as it gets boring try another (Langley, 2012).

Figure 30: *A Family Finds Entertainment*, Ryan Trecartin, 2004. Available at: https://www.eai.org/titles/a-family-finds-entertainment

Self-proclaimed ‘Famous New Media Artist’ Jeremy Bailey has been producing content in the form of artworks on his social media accounts like his YouTube channel (Figure 31), which acts as an art platform for his work. His videos are performances of his character ‘Jeremy Bailey, the Famous Media Artist’, “a person who kind of exists inside of me and also outside of me”. In his work, Bailey explores the uncomfortable moments of online performativity where people are branding themselves and adjusting their personality to what they think other people will want to see of them or to what is considered in that moment in time as ‘appropriate behaviour online’. In those uncomfortable moments Bailey finds humour and allows himself to appear foolish and ignorant.

> Then I got obsessed with the idea of how the computers during the performance affected my inability to be sincere about this important moment. I felt there was no way to use technology which would express my emotions, without interfering with them. Then I got interested in the concept of the layers between the real me, my emotions and what people are seeing on the screen and developed the idea of the performance with the camera, where the camera is now the computer and the Internet is now the camera (Bailey, 2012).

Figure 31: *The Web I Want*, Jeremy Bailey, 2015. Available at: https://www.youtube.com/c/jeremybailey

The self and its identity performativity through social media have been seen as operating within new/extra layers of mediation and thus becoming 'clunky' and humorous at times. However, as it has been the case with other mediated expressions of the self (through photography, film, writing), it is often the process of mediation itself that offers opportunities for the *absurdity* of reality to emerge and to be noticed. This is an example of the shift between technological determinism to social constructionism which took place since the early days of the Internet until today and which helps inform our understanding of the post-Internet condition where humans as seen to be driving the values and principles within which technologies function (Trottier, 2012).

Ed Fornieles is an artist whose work has been exploring the role of the Internet, social media and digital economies in the forming of identities. His 2019 artwork *CEL* (Figure 32) and *CEL-Debrief*, is a Live Action Role Play (LARP) scenario initiated by the artist

that explores the toxic, violent and aggressive expressions of masculinity. The *CEL* film documents a seventy-two-hour immersive performance in which "ten participants navigate a fictional, embodied simulation of an extremist online community, largely populated by white men. In the *CEL-Debrief* film, the participants are filmed as they reflect on their experience and their emotional responses to it" (newmuseum.com). The hyper-aggressive patriarchal characters and archetypes that the participants were invited to adopt for the LARP, were drawn from personality profiles scraped from 4chan and Reddit. The work is particularly timely as it addresses the performative identity rituals of online (and offline) communities. The title itself refers to *Incels* and prison cells. Incels 'involuntary celibates' are members of an online subculture infamous for its extreme misogyny and belief in conspiracy theories. The work highlights another important topic on contemporary identities and their expressions through socialising and organising online which has to do with their transcendence to real life. In other words, the Internet might be the space where such phenomena like the popularisation of extreme social behaviours can be expressed but they are built on pre-existing dominant ideologies – in this case the patriarchy – and as a result, they shape individual and group identities which results to their expressions being manifested in all social spaces, 'online' or 'offline'.

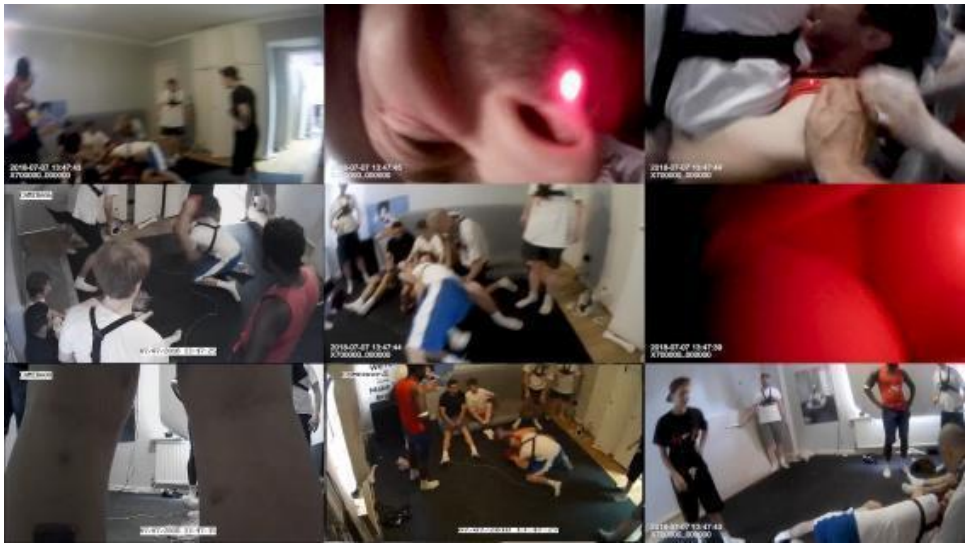

Figure 32: *CEL*, Ed Fornieles, 2019. Available at: *https://vimeo.com/326837135*

4.6.3 Selves in data

The many levels and types of mediation of identity expressions allow for an unprecedented amount of one's data on texts, messages, photographs, voice recordings and videos to keep accumulating. Along with data from search engine searches, shopping habits, viewing preferences, online dating and travel histories, our data as a record of our everyday interactions, make up for both a great projection of our identities and a resource for exploring who we are. Concepts around *datafied bodies* and identities (this is also relevant to the *quantified self* and *lifelogging* practices) either through self-monitoring (wearable technologies) or through processes of aggregating one's data from websites and platforms (Lupton, 2016; Ruckenstein & Pantzar, 2017; Pedersen, 2020; Reviglio & Alunge, 2020), have been exploring our relationships to ourselves through data.

Since early net.art several artworks have been raising questions regarding what does our data reveal about who we are but also about how technologies learn to recognise our behaviours, decode our data, measure and classify us and create new semantics and meanings (artificial intelligence and machine learning). See also *Life in AdWords* by Erica Scourti in section 4.2.5 of the thesis.

The *Apply Magic Sauce* project by the Psychometrics Centre at the University of Cambridge, is a demo that predicts your psycho-demographic profile from digital footprints of online behaviour.

> "It reveals how you might be perceived by others online and provides academically robust insights on your personality, intelligence, leadership, life satisfaction and more. We think every citizen has a right to understand their data, but most big tech companies would rather not reveal what is predictable (or profitable) about you. Fortunately, you can now download your social media data and analyse it directly using our tool" (applymagicsauce.com).

The *Apply Magic Sauce* project's Application Programming Interface (API) is freely available for non-profit academic or educational projects and it is notable that is has been used in a number of art projects such as *Data Selfie,* 2017 by Hang Do Thi Duc and Regina Flores; *Alternate Realities,* 2019 by artists Bill Posters and Daniel Howe;

Social Shot, 2015 by artists Nina Eberhard, Max Eschenbach, Simon Frambach and Jörn Röder and finally, *Raised by Google*, 2019 by artist Sarah Selby.

Martine Syms's *EverythigIveEverWantedtoKnow.com* is a site with a drop-down menu that features all of the artist's Google searches from a three-year period (Figure 33). "It is a diary without a voice, an impoverished record of the artist's life, but an evocative study of her relationship with an increasingly powerful corporate platform" (rhizome.org). The artist states that it was the language of search that was the focus of this work instead of the content of her queries. The artist's searches are presented without any comment and the visitor is called to explore the artist's life by piecing together bits of information. The work also relates to practices of *online stalking* and *deep searching* where one person is investigating another person's online activity through data trails and then pieces together information about their lives.

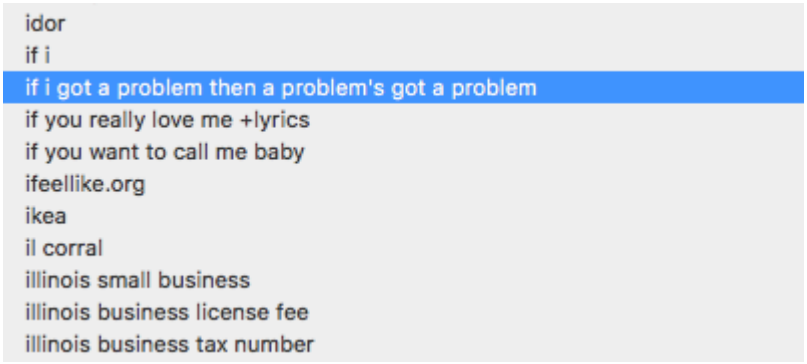

Figure 33: *EverythingIveEverWantedtoKnow.com*, Martine Syms, 2007. Available at: *https://anthology.rhizome.org/everythingiveeverwantedtoknow-com*

I'm Here and There, 2011, by Jonas Lund is another example of a work that explores online voyeurism by inviting others to watch the artist's activities online in real time by sharing their browser. "It works a bit like a mirror to my browser and life—you can now

see what I see" (rhizome.org). Visitors of http://imhereandthere.com see whatever site Lund visits as the site automatically refreshes to display every new URL at any given moment while they can also access the artist's browsing history through the site's browsing history archive. The work explores what happens when private behaviours like web browsing become open and public, what can a visitor learn about the artist from their browsing habits and also very importantly, what are the issues around privacy and trust when being online.

Bogosi Sekhukhuni's *Consciousness Engine 2: absentblackfatherbot* (Figure 34), examines human consciousness in a digitally networked age with the help of Facebook chat. The artist creates a technological simulation through bots that replaces his relationship with his estranged father. Both the artist and his father's animated heads converse in a robotic text-to-speech voice reciting a conversation from Facebook chat that took place when Sekhukhuni was eighteen years old. "The avatars give voice to messages exchanged between the artist and his father through a correspondence that took place between late 2009 and spring 2013. Although it is presented in this work as a continuous conversation, there were often months-long gaps between replies. Eventually, Sekhukhuni's father blocked him" (rhizome.org). The work uses the chat exchange via Facebook as the basis for exploring where conscious experiences originate from.

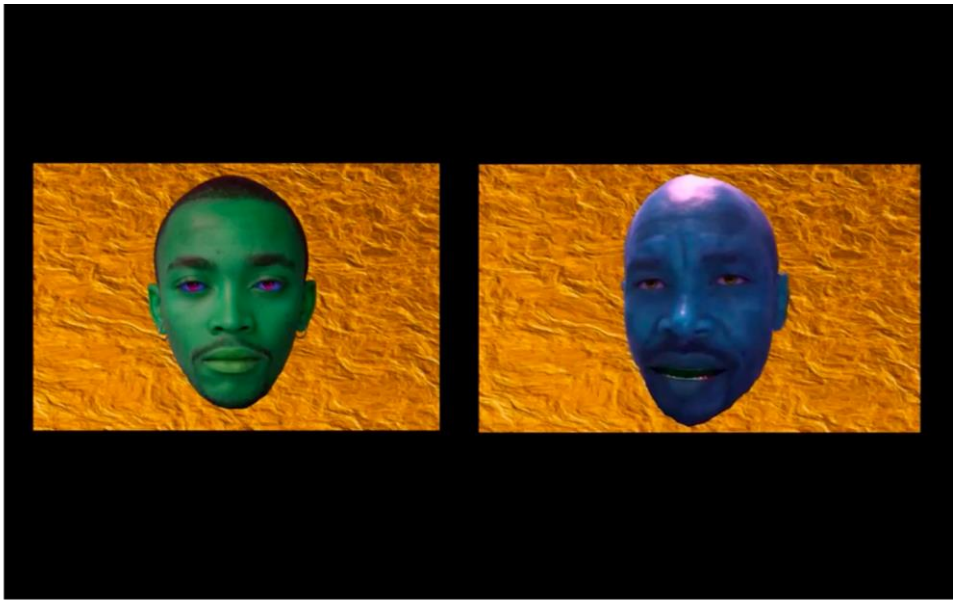

Figure 34: *Consciousness Engine 2: AbsentBlackFatherBot*, Bogosi Sekhukhuni, 2013. Available at: *https://anthology.rhizome.org/consciousness-engine-2-absentfatherbot*

4.6.4 Humans, glitches and algorithms

Our everyday Internet-mediated/related activities are both driven and arranged by algorithms that transform the vast quantities of data and information of our activities into manageable scales and formats that are designed to generate value within the current economic system. Algorithmicity, as described by Felix Stalder in *The Post-Digital Condition* (Stalder, 2018a), is understood as an expression of algorithmic culture in the sense that recognises "algorithms as products of culture that embody values and assumptions about what is important and what is irrelevant (social constructionism), they themselves are creating culture, in so far as they shape the way we see the world and how we act in it, and finally, they constitute a new source of power, because they unequally enable agency under the condition of large-scale information flows" (Stalder, 2018b). The advances in algorithms like dynamic

algorithms and evolutionary algorithms allow for algorithmic processes to be tailored to every individual user. “The world is no longer represented; it is generated uniquely for every user and then presented” (Stadler, 2018b). The politics of algorithms have been a very important and popular research topic for a number of Internet and ICT-related disciplines which only reflects the importance of algorithmic processes for technologies, cultures, societies and individuals, and for algorithmic ways of relating to reality/ies.[13]

Algorithmic ways of relating to reality/ies and the practice of inviting others to explore and question how algorithms and AI applications recognise data and information, what data and information are recognisable, how algorithms are engineered to operate and how we can create instances of exposing their underlying power structures and assumptions and resulting inequalities and discriminations, have all been important topics for post-Internet artists. Algorithmic ways of recognising, understanding, categorising and creating identities are particularly challenging due to the way identities function. For example, while images, videos, sounds and texts are subject to constant remixing and appropriation that enable different and multiple meanings, identities in general are expected to remain stable and verifiable in most corporate platforms (Kornstein, 2019). This however, has not been the case and all different types of avatars used on the Internet throughout Internet’s history are proof of users’ attitudes towards appropriating, manipulating and generally expanding normative identity into multi-normative identities. However, it is important to point out that online platforms still

[13] See *Enfoldment and Infinity* by Laura Marks, 2010; *Transparency in Social Media* by Sorin Adam Matei, Martha G. Russel, Elisa Bertino, 2015; *Consent of the networked: the worldwide struggle for Internet freedom* by Rebecca MacKinnon, 2012; *The Democratization of Artificial Intelligence: Net Politics in the Era of Learning Algorithms* by Andreas Sudmann, 2020; *Google and the Culture of Search* by Ken Hills, Michael Petit and Kylie Jarrett, 2013.

operate within normative and stable identity assumptions and that there are many examples of identity verification policies being imposed and failing, or being protested against, or even being seen as a much-needed quality measure. Notable examples include Facebook's controversial real-name policy in 2014, Twitter's verification status symbol and Instagram's government ID requirements for 'suspicious' accounts.

Drag identities, as performing identities that are highly visible, constantly changing, and engage complex forms of authenticity through modes of *camp* and *realness*, are seen as disruptive of the common understandings about users and uses of popular technologies (Kornstein, 2019). The phenomenon of facial recognition algorithms incorrectly recognising and classifying non-Caucasian, non-heteronormative and disabled peoples' identities has been extensively noted and is indicative of technology makers and developers' failures, limitations and bias in designing technologies to reflect and recognise the diversity of their users (Cavazos et al., 2021; Drozdowski et al., 2020; Taati et al., 2019).

The Zizi Show, 2020, is a *deep fake* interactive online cabaret performance on a virtual stage performed by a neural network. The work is part of *The Zizi Project*'s ongoing collection of works by artist Jake Elwes who uses cabaret and musical theatre to challenge narratives surrounding AI and society. The neural network (Zizi), learns to perform by a training dataset of a community of drag artists' filmed cabaret performances that have been created specifically for *The Zizi Show*. The performance breaks down when the AI fails to combine multiple different drag identities, often revealing the skeleton-tracking that the deep fake is built on. The technology used for

this series of works is a Generative Adversarial Network (GAN) which is a machine-learning system with two neural networks, the first is trained on a given training-dataset to recognise something (for example what a human face looks like), and the second is trained in learning to generate new data with the same statistics as the training set. “In a normal GAN, the result is *fakes* that look increasingly realistic; here, the faces have been ‘queered’, making them less fixed and realistic as they break down into abstraction” (newreal.cc).

> Drag challenges gender and explores otherness, while AI is often mystified as a concept and tool, and is complicit in reproducing social bias. Zizi combines these themes through a deep fake, synthesised drag identity created using machine learning. The project explores what AI can teach us about drag, and what drag can teach us about AI (jakeelwes.com).

Figure 35: *The Zizi Show,* Jake Elwes, 2020. Available at: *https://www.jakeelwes.com/project-zizi-show.html*

Queer-Alt-Delete, 2018, is a series of self-image manipulation – situated by artist Andie Shabbar in the space of *glitch art* – that uses the 'databending' technique known also as 'datamoshing' or 'glitching'. The artist employs the practice of "damaging digital image files by (re)moving, adding, and duplicating the file's code to corrupt them" (Shabbar, 2018). The added code also includes the word 'queer' typed into the dataset. The work is considered as a response to biometric recognition technologies, identity categories, structures and limitations.

> Queer-Alt-Delete works against biometric failure. It plays with error to unsettle the computational categorization of bodies and protest binary forms of control. I create intentional errors to produce unintentional results that make portraits unrecognizable to facial recognition technology. However, the political importance of the project is not found in the images it renders but the potentials it creates. Like gender-bending, databending has the capacity to disrupt rigid cis-stems through unexpected nonbinary performances that *queer* the (gender) code (Shabbar, 2018).

4.6.5 Conclusions

The changes and transformations of identities in the post-Internet condition reflect a new landscape of identity concepts full of plurality, fluidity and diversity. This has to do with the increasingly important factor of communal formations within which

individuals are being socially active and the increasingly expansive cultural expressions of Internet-mediated social domains. These social domains where identities are influenced, produced and expressed are becoming particularly diverse including domains such as the arts, fashion, entertainment, politics, religion, education, nationality, work, gender and sexuality, and hobbies and interests such as travelling, writing, crafting and cooking. The increased social activity within domains which might be important for an individual is driven and built around publics and communities which in turn are becoming drivers for cultural creation, production, participation, consumption and expression. These are constantly evolving processes that are shaped by both human and non-human actors within sociotechnical and technocultural systems.

Behaviours like identity performance - a concept that has been historically associated with a person's conscious efforts to present themselves in a certain way in social interactions (see also *gender performativity*) - have become particularly important in post-Internet times where social media invite users to 'perform' their identities on their platforms and 'feed' their models of self and user-generated content. At the same time, the unprecedented amount of available data on individuals' Internet-mediated activities and interactions have presented new opportunities for us to reflect on and explore who we are but they have also allowed for ICTs to learn to recognise our behaviours and create new semantics and meanings. The algorithms that transform the vast quantities of data and information of our activities into manageable scales and formats are themselves producers of culture in the sense that they shape the way we see ourselves and the world, and how we act in it. Algorithms have their own underlying power structures that are often based on assumptions, generalisations and bias. As a result,

algorithms, AI and ML and have become rich topics to explore how technologies are failing to reflect the increasingly fluid, diverse and unstable landscape of identity expressions and conceptions.

5 Conclusions

5.1 Conclusions

Post-Internet art as a medium for exploring the contemporary condition offers unique possibilities for nuanced observations of the many emerging ICTs-related behaviours and phenomena along with their related challenges and implications. As a unique cultural product of life post-Internet, post-Internet art has been encapsulating the various tensions, uncertainties, instabilities and friction points that characterise a period of transition from hybridity of the physical and the technological (physical to virtual or online to offline) to *complete* integration of the two in a way that alters the whole make-up of the connection, resulting in new conceptually integrated understandings of life with ICTs.

In what is described in this thesis as *post-Internet times* - the period from WEB2.0 to approximately 2020 - important changes in the processes of artistic production and consumption took place. Many of these changes are best observed within the post-Internet art space. Artists who operate within that space have been using the Internet as a vital part of their artistic process that could be manifested in many different ways. Artists could use the Internet as inspiration, as a space to draw materials and ideas from, a space to explore and manipulate, a space for performance or a space to exhibit their work, a space to connect with audiences and market themselves. What makes, however, post-Internet art a truly unique cultural product of life post-Internet, is that it reflects at its core, the various complex and diverse ways in which cultural processes have been changing during that period. This means that post-Internet artists have been noticing and exploring the many nuanced ways in which our perception of the world and our relationship with it has been changing. New patterns of visualisation, organisation, social engagement and participation that only make sense in association with the Internet have continued to emerge. Post-Internet art processes from artistic production to engagement and consumption, have been fully immersed in the various sociotechnical and technocultural shifts and transformations associated with ICT developments. This thesis presents, explores and proposes a number of dimensions that can characterise and define the period between Web2.0 and pre-pandemic times. To do so, the thesis employs a rhizomatic methodology that allows for a number of flexible connections to be made across and between ICT-related social, cultural, economic and technological developments in practice and in theory. An extensive number of Internet artworks are examined and a selection of them is used as an exploratory medium where

the aforementioned connections are manifested, explored and examined by the artists and their communities.

The focus of Chapter 3 is Internet art, from early Internet art, net.art, to contemporary Internet art, post-Internet art. The aim of the chapter is to provide an understanding of the various developments that took place in Internet art since approximately the mid-1990s and the various challenges that both Internet artists and the art world have been facing. Most importantly however, this chapter aims to provide a better understanding on the unique characteristics of post-Internet art in the sense that it is an artform which carries ramifications beyond the art context as a societal condition at large. Post-Internet art is discussed as a movement that has been evolving at a uniquely fast pace, in relation and in response to ICT-related developments. During its brief history, post-Internet is understood as a mode of artistic activity drawing on raw materials and ideas found and developed online; as a method to escape the traditional art world by creating an alternate one; as a merging of art with popular culture, and as a conceptual condition where art comments upon the Internet as a ubiquitous presence in society and embraces a post-medium understanding of fluidity between materiality and immateriality. During this time, the art world went from being mostly unaware of the Internet's transformational effects in how art is consumed, bought and sold, but also of Internet art itself, to fully embracing it in the late 2010s with NFTs for digital art being the most recent example of an Internet-art-related hype.

During this period, we have also moved from talking about users as producers and procumers to understanding that production in the social, cultural, economic, technological and environmental domains is the result of mutualistic co-creation processes between what is understood as human and non-human actors or *more-than-*

human actors. The extent and transformative nature of ICTs-mediated processes have allowed for deep conceptual changes in our understanding of life post-Internet to emerge. Some of the observations that took place during this research work, have to do with changes in sociocultural behaviours such as appropriating, mapping and collecting, and others have to do with deep conceptual shifts relating to concepts of time, space, publicness and identity. The adoption of a rhizomatic methodological approach along with the application of a sociotechnical and technocultural lens discussed in Chapter 2 of the thesis, have allowed for the organisation and discussion of findings to take place in a way that promotes a more *structural* understanding of the post-Internet condition while at the same time proposing a rhizomatic unity of post-Internet art to the world. The use of dimensions that characterise the post-Internet condition is employed as an organisational and analytical tool for the various themes that kept emerging during the data review process. However, the five dimensions presented in this thesis are discussed in such a way that allows for various overlaps, multiplicities and interconnections that already exist, to remain present. For example, the dimension of mediation is discussed as a domain where key conceptual changes have taken place in terms of how mediation could be understood today. Discourse around mediation as a living condition is connected to post-Internet artworks that explore this theme and presented under three main areas of mediatisation which are mediated publicness, mediated self and mediated trust. However, the topics of publicness, self and trust are also discussed as parts of the other four conditions. This is indicative of the level of integration of ICTs in all aspects of life and the resulting complex interconnectedness within evolving ecosystems of ICTs and more-than-human actors.

Notions of expansiveness, multitudes, interconnectedness, fluidity, complexity and diversity keep emerging throughout Chapter 4. These characterise a departure from ideas of technological determinism, linear thought, binary views of social, cultural, technological and environmental forms and even concepts of hybridity. The role of cultures is observed as central within these processes of complex interconnectedness and fluid multiplicity. The centrality of cultures and of cultural processes like procedures relating to structures, norms, values, ideas and knowledge, is bound to its processes of communication through ICTs. Cultural communication across space and time - a key characteristic of technocultures - is driven and empowered by publics and communities expressing new - ever-changing - forms of sociality. Socialities, in turn, are also expanding to involve more-than-human actors in the form of data, AI, ML and VR, to other species and geographies (Tsing, 2013). The post-Internet condition as examined in this thesis, is defined by the shifting processes of cultures, publics and communities in relation to ICT developments during a period of approximately fifteen years (2005-2020). Consequently, the important changes that have been taking place due to the COVID-19 global pandemic in domains such as public health, environment, economy, technology, culture and sociality, could point towards a change/shift in the contemporary condition.

The post-Internet condition is explored via the five dimensions that have emerged as themes and patterns through the analysis process. These five conditions are appropriation, mediation, spatiotemporality, publics and public spheres and finally, identity. The dimension of appropriation is focusing on the changing behaviours of appropriating as a result of increasingly Internet-related mediated socio-cultural processes. The way cultural connections are developed in relation to appropriation of

found web content and Internet technologies is the primary focus of this section. The two case studies (Rhizome and Google) used to examine appropriation in the post-Internet condition are revealing of a number of new appropriative behaviours that have progressed *organically* to becoming part of the *natural* practice of experiencing life "with" the Internet.

The dimension of mediation is focusing on the important conceptual shift that took place during the post-Internet condition where the mediated experience is viewed and understood on the same level as primary experience. Recognising that a great part of our experiences is already mediated allows for a meta-level of mediation where we are able to observe and explore the various interconnections and relationships of human and non-human actors - and their technical and biological elements - that form various *multidimensional* conditions of mediation. Notions of mediated publicness, self and trust, are recognised as important subjects within the post-Internet art discourse and the artworks discussed in this section help illuminate the processes, dynamics, tensions and experiences of mediation in the post-Internet condition.

The dimension of spatiotemporality is focusing on new understandings of spacetimes where the characteristics of integration, pervasiveness and ubiquity of ICTs are recognised as important drivers that enable new social and cultural practices to create new spatiotemporal possibilities. These possibilities have to do with new understandings of our relationship with the present, past and future, our position in the world, our relationship with historicity and with systems and structures of documentation and preservation of history and memory.

Publics and Public spheres are examined together as one of the dimensions of the post-Internet condition and this aims to highlight the increasingly important role of publics in the configuration of new public spheres. The tensions and uncertainties that publics are exhibiting through social expressions are driving both fragmentation and unity within multiple and diverse public spheres. The various important challenges and dangers associated especially with expressions of fragmentation like anti-democratic manipulation, have become important topics for post-Internet artists to explore and raise awareness on. Again, processes of culture, from creation to appropriation, are central within expressions of sociality in publics which in turn drive the development of public spheres.

Identity, the final dimension examined in this thesis as part of the post-Internet condition, is approached in a way that takes into account the broader socio-technical and techno-cultural contexts of complexity and heterogeneity. These contexts allow for the increasing levels of engagement of individuals with public domains to be recognised as particularly important factors in the process of sense-perception of individuals within a ‘universal’ dimension. Algorithmicity, datafication and performativity are identified as central topics within the post-Internet-related processes of identity construction and perception.

5.2 Limitations

The choice to use a rhizomatic methodological approach where post-Internet artworks are connected to developments in ICTs and society expressed through a diverse

disciplinary spectrum has served the purpose of this research work which was to propose a new approach for examining the post-Internet *contemporary* condition. However, this methodological approach also presents a number of limitations. These have to do with the flexibility with which connections have been drawn which while intentional, results in outcomes that can be subjective and unmeasurable. The format used in Chapter 4 for presenting and discussing the dimensions of the post-Internet condition leaves ample space for subjectivity on how these can be interpreted. Subjective views of how these conditions can be understood can relate to theoretical and practical points of views, personal life experiences, disciplinary biases, and cultural and political contexts. Although the artwork as connector is an inherently subjective research medium, we also need to recognise that when applied within a rhizomatic methodological approach, it allows for extra levels of subjectivity as it no longer constitutes an entity within a context/s but instead it constitutes a series of meanings within a series of contexts and as such, the level of subjectivity increases.

Another limitation of the rhizomatic methodological approach is presenting findings that are unmeasurable. In this case the outcomes are the proposed dimensions that can characterise the post-Internet conditions are the appropriation, mediation, spatiotemporality, publics and public spheres and identity. The dimensions are presented and discussed in a manner that allows for broad and extended understandings of what constitutes them. However, it would be possible to extend these to cover areas of aesthetics and cultures for example, and potentially even more. At the same time, the five dimensions could also be defined within specific boundaries or extended across boundaries. More time collecting and analysing data would potentially result in a more extensive presentation of what the post-Internet condition is made of. As a result, what

is included in this thesis is the result of research work within a specific period of time and to an extent reflects the subjectivity of me as a researcher.

5.3 Future work

Examining ICT developments through a sociotechnical and technocultural lens as expressed via post-Internet artworks, provides space for recognising ICTs as an expression of societies and cultures. However, the new mediated domains within which cultures and societies operate, bear with them many important challenges, tensions and uncertainties that are often related to issues of control in relation to technologies. In the post-Internet condition, ‘social control’ in the broadest possible sense has not been possible given the structures and elites that have been driving technological creation and innovation and organisation (related to ICTs). New circumstances and developments such as NFTs and the COVID-19 global pandemic, present various examples of sociotechnical and technocultural restructuring processes taking place around the world. These might indicate a point of departure from the post-Internet condition. During post-Internet times, cultural and creative processes operating within wider informational processes and within them artistic processes, have been providing unique opportunities for exploration, observation and analysis of our world. Building on this body of work and its related knowledge developments can prove extremely valuable as we navigate new social, cultural, economic and environmental landscapes.

Blockchain technology has created opportunities for artists to create limited editions of digital art and protect their work from misuse and appropriation. However, what can be

seen as an opportunity from art markets to solve digital art-related problems can often ignore the risks and limitations of the technology itself. Blockchain art and NFTs and their popularity raise many important questions around ownership, necessity and consistency. These questions are currently gaining great interest within the digital art, Internet art and Internet research fields and they potentially point towards a new era for art and the Internet.

At the same time, there is a growing interest in the inter/cross/multi and transdisciplinary future of research on the topics of ICTs, culture, art, media and society. This can also point towards a direction where disciplinary boundaries will be overcome and more and better methodologies on how this can be achieved will be developed. Connecting and analysing Internet artworks with social, cultural, economic and technological ICT-related developments from a multitude of disciplinary perspectives will potentially be a more common practice. As a result, learnings and findings arriving from such research endeavours will be easier to share and communicate across disciplinary sectors.

At the same time, research practices are evolving to overcome a number of other boundaries, outside of strictly academic disciplinary perspectives. These currently relate to socio-cultural boundaries including gender, sex and class boundaries and have to do with an increasing adoption of theoretical perspectives of feminism, interscectionality and decolonisation in research practice. Along with a growing interest in inter/cross/multi and transdisciplinary research, research practices that transcend socio-cultural boundaries have the potential to inform a growing number of research works that utilise Internet artworks as a research vehicle across a number of disciplines and sectors. As a researcher, I intend to examine in the future, the learnings that we can

draw from contemporary Internet art in relation to social tactics for online democratic resilience. It is my view that this type of research would not be possible five or ten years ago, and that it is the increasing interest and realisation that there is a lot more to discover from the interconnectivity of our world today, that allows for such research ideas to even be conceived as possible today.

I choose to end this section of the thesis with an extract from Marisa Olson's 2017 keynote speech at the Post-Internet Cities International Conference:

But above it all I try to keep an open mind. I remember that those speculative forecasts about unregulated growth, the ones that would pitch our dwellings and computer brains into an endless scroll, are just speculation. It's not like we wouldn't be there to keep up with it. It's not like we wouldn't be participating in the design and appropriation, going along for the cruise. And it's not like I'm describing the status quo and not a future, right? (Olson, 2017).

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Appendix

Artworks examined and mentioned in the thesis.

Many artworks have been examined as part of the data collection and analysis work during my PhD that are not being mentioned in this thesis. The following artworks are the ones that have been examined and are also mentioned in the thesis. Many artworks do not have direct urls to the artist's or the artwork's website. Access to these artworks was possible through other links to other websites that present or discuss the works such as social media, gallery websites and online newspapers/magazines/news sites. In the case that no direct url to the artist's or the artwork's website was found, a url to a social media/gallery website/online newspaper/magazine/news site is listed here.

56 Broken Kindle Screens - Sebastian Schmieg and Silvio Lorusso, 2012.

https://silviolorusso.com/work/56-broken-kindle-screens/

A Family Finds Entertainment - Ryan Trecartin, 2004.

https://www.youtube.com/watch?v=aTzcMlNuMXI

A Mirror Unto Itself - Krystal South, 201. http://krystalsouth.com/mirror/

After post Internet there will be online, and always past Internet - Guido Segni, 2015.

https://www.arshake.com/en/interview-guido-segni/

Alternate Realities - Bill Posters and Daniel Howe, 2019. http://billposters.ch/blog-news/

CEL - Ed Fornieles, 2019. https://www.newmuseum.org/calendar/view/1607/cel-a-screening-and-conversation-with-artist-ed-fornieles-1

Chatroulette - Jennifer Chan, 2010. https://vimeo.com/15116352

Chemotherapy Update, Filippo Minelli, 2010-2012.
https://www.filippominelli.com/project/chemotherapy-update/

Citizen EX - James Bridle, 2015. https://jamesbridle.com/works/citizen-ex

Consciousness Engine 2: absentblackfatherbot, Bogosi Sekhukhuni, 2013.
https://anthology.rhizome.org/consciousness-engine-2-absentfatherbot

Contra-Internet - Zach Blas, 2015. https://zachblas.info/works/contra-internet/

Data Selfie - Hang Do Thi Duc and Regina Flores, 2017. https://dataselfie.it/#/about

Escoitar.org - Escoitar, 2006-2016.
https://www.unruidosecreto.net/2016/01/20/escoitar-org-2006-2016/

EverythingIveEverWantedtoKnow.com - Martine Syms, 2007.
https://anthology.rhizome.org/everythingiveeverwantedtoknow-com

Excellences and Perfections - Amalia Ulman, 2014.
https://www.newmuseum.org/exhibitions/view/amalia-ulman-excellences-perfections

Fountain - Marcel Duchamp, 1917. https://www.tate.org.uk/art/artworks/duchamp-fountain-t07573

Good Listeners - Mushon Zer-Aviv, 2011.
https://mushon.com/blog/2011/11/17/introducing-good-listeners/

I’m Google - Dina Kelberman, 2011-ongoing.
https://dinakelberman.com/imgoogle/imgoogle.html

I’m Here and There - Jonas Lund, 2011. https://jonaslund.com/works/im-here-and-there/

Introduction to net.art - Alexei Shulgin and Natalie Bookchin, 1994-1999. https://bookchin.net/projects/introduction-to-net-art/

iPhone Live - Johannes Osterhoff, 2012. https://artbase.rhizome.org/wiki/Q2390

Life in AdWords - Erica Scourti, 2013. https://vimeo.com/62502498

Life Sharing - Eva and Franco Mattes (0100101110101101), 2001-2003. https://0100101110101101.org/life-sharing-is-back/

Map of the Internet - Jay Simons, 2014. https://www.deviantart.com/jaysimons/art/Map-of-the-Internet-1-0-427143215

Mass Ornament - Natalie Bookchin, 2009. https://bookchin.net/projects/mass-ornament/

My Boyfriend Came Back from the Ware - Olia Lialina, 1996. https://www.artsy.net/artwork/olia-lialina-my-boyfriend-came-back-from-the-war

Operation Earnest Voice - Jonas Lund, 2019. https://jonaslund.com/works/operation-earnest-voice-brexit-division/

Privilege - Amalia Ulman, 2016. https://privilege.amaliaulman.eu/about.html

Queer-Alt-Delete - Andie Shabbar, 2018. https://journals.scholarsportal.info/details/07321562/v46i3-4/195_q.xml

Raised by Google - Sarah Selby, 2019. https://www.sarahselby.co.uk/projects

Recipe for a Google Party - Adam Overton, 2007. https://muse.jhu.edu/article/209715

Red Lines - Evan Roth, 2018-2020. https://redlines.network/

Safebook - Benjamin Grosser, 2018. https://bengrosser.com/projects/safebook/

Satellite Arts Project - Kit Galloway and Sherrie Rabinowitz, 1975-1977. http://www.ecafe.com/getty/SA/index.html

ScanOps - Andrew Norman Wilson, 2012. http://www.andrewnormanwilson.com/ScanOps.html

Social Shot - Nina Eberhard, Max Eschenbach, Simon Frambach and Jörn Röder, 2015. https://maxeschenbach.com/projects/the-social-shot

The Best is yet to Come - Silvio Lorusso, 2012. https://silviolorusso.com/work/the-best-is-yet-to-come/

The Nine Eyes of Google Street View - Jon Rafman, 2008-ongoing. https://googlestreetviews.com/

The Poietic Generator - Olivier Auber, 1986. https://poietic-generator.net/

The Status Project - Heath Bunting, 2007-ongoing. http://status.irational.org/

The Web I Want - Jeremy Bailey, 2015. https://www.youtube.com/watch?v=9eJKUzeIvLE

The World in 24 Hours - Robert Adrian, 1982. https://ars.electronica.art/outofthebox/en/24hours/

The Zizi Show - Jake Elwes, 2020. https://www.jakeelwes.com/project-zizi-show.html

This is Propaganda - Tino Sehgal, 2002-2006. https://www.tate.org.uk/art/artworks/sehgal-this-is-propaganda-t12057

Twitter Demetricator - Benjamin Grosser, 2018. https://bengrosser.com/projects/twitter-demetricator/

Untitled Game - JODI, 1996-2001. https://www.eai.org/titles/untitled-game

Versions - Oliver Laric, 2012. https://vimeo.com/85436770

Veteranas and Rucas - Cuadalupe Rosales, 2015-ongoing.
https://www.veteranasandrucas.com/projects-1

Virtual Plotter Series - Jean-Pierre Hébert, 1995.
https://digitalartarchive.siggraph.org/artwork/jean-pierre-hebert-un-cercle-trop-etroit/