Rasa Smite, Raitis Smits

Artistic Research in the Network Society: from New Media to Post-media Art

Abstract

Artistic research today is challenging knowledge creation in contemporary society. Located in the contested territory between academic knowledge traditions and contemporary art practices, artistic research today has become an independent form of knowledge on its own. Although artistic research has entered academia quite recently, there are artists who have been actively working with new media technologies for several decades, using scientific approaches and combining art with science.

We will be tracing the phenomenon back to new media art and artistic explorations in the early stage of the Internet in the 90s, considering these in a way as predecessors of artistic research. We will also be focusing on the most important developments of the early Internet cultures and networked digital art, analysing them from the post-media perspective of today. What was so unique about the 90s Internet cultures and networked art that was exploring and developing new concepts such as immateriality, process-based, collaborative creation, real-time presence, and feedback mechanism? And what has changed today, when we have entered the age of post-media, characterized by rather different concepts – new aesthetics, neomateriality, objecthood, data visualization, and social network "imagery"? And last but not least, how do digital media technologies provide new tools and facilitate new contexts for artistic research?

We will be studying the cases of several exhibition projects by the Riga-based RIXC Center – *Fields* (2014) and *Data Drift* (2015) – as well as analysing artwork from *Open Fields* (2016) and the related young artist show *Impulses* (2016). These cases show that artistic research that uses science and technology as well as data as a new artistic medium is capable of creating new knowledge and reflecting on current realities, the complexity of our society, and the challenges of our time.

Keywords

artistic research, digital technologies, new media, post-media, network society, data visualization

Introduction

Artists who have already been using digital technologies and science for decades are among pioneering artists-researchers. Unlike more traditional artists, whose primary intention is to reflect on reality (natural, social or cultural), digital artists and artists-researchers are engaged in constructing new realities and envisioning new worlds. Artists who have been working with new media since the advent of the Internet have been actively involved in both developing the critical Internet cultures and new theoretical discourses in the 90s and pushing the boundaries of the new media through their own creative practices. Creative use of digital information and communication technology is based on different logic than more traditional forms of artistic creation. Hence, new media art requires that new knowledge should be used, obtained and produced. This makes new media and digitally networked art very different from other contemporary art fields. Manovich (1996) has described these two parallel lines of development in contemporary art practices as two separate "lands" in an analogy with Disneyland – "Duchamp-land" is represented in conceptual contemporary art, whereas "Turing-land" is based on the information technology paradigm and refers to new media art.

Today, the Internet is no longer a marginal phenomenon in society nor the avant-garde of contemporary arts. Currently, all media is becoming convergent, and digital technologies are deeply embedded in our lives. According to various authors, we have entered the post-media age (Krauss, 1999; Guattari, 1996; Manovich, 2000; Weibel, 2005; Quaranta, 2010). Today, there is also no longer a single medium dominating in contemporary media art practices, which are rather engaged with contemporaneity and critical thinking. However, there still exists a gap between the two lands described by Manovich, and different types of approaches are used. Christiane Paul (2016) suggests that "more traditional fine art forms and digital media arts would mutually benefit from more integration within educational institutions". We agree that this is also an institutional and infrastructural question, as any intersections are rather difficult to

integrate into traditional single discipline fields. Yet we believe that more interdisciplinary methods and approaches as well as more open and more susceptible ways of thinking are crucially important for application in all fields if we would like to understand our networked societies and the complexity of our time and to find less hazardous routes into the future. We claim that artistic research is among the interdisciplinary fields which are capable of facilitating very important intersections and crossovers.

In order to show the transformative potential of artistic research, we will be tracing the phenomenon back to one of its origins, namely networked digital art. We will be analysing our own experiences with the early Internet cultures and *net.art* of the 1990s from the post-media perspective of today, analysing the most important developments and qualities that have contributed to new knowledge creation. Hence, "artists have not only taken up art criticism and negotiations, they now also integrate research methods and scientific knowledge into their artistic process to such a degree that it even seems to be developing into an independent form of knowledge on its own." (Busch, 2009)

Theoretical Background: from New Media to Post-media Conditions in Art

"By creating mobile ad-hoc networks or by pointing antennas towards outer space or the depth of oceans artists literally open up the horizons towards the possibilities of a new way of seeing and interacting with the world."

Armin Medosch (2006)

In the mid-90s artists were among the first who were keen on using the new digital technologies and exploring the conceptually new space – the Internet. Artists of all times have been interested in new means and mediums, but many of them have turned out to be very limited for artistic use. For example, the fax is nearly forgotten today, and you can make only a few interesting works of art with this tele-technology. Yet with the advent of the Internet, it soon became clear that this time it is different and that the Internet has much greater potential. In 1996, when Manuel Castells (2000 [1996]) was introducing the concept of

"network society", he was also arguing that "the new information technology paradigm provides the material basis for its pervasive expansion throughout the entire social structure". And artists in the 1990s were fully aware of this: they not only experimented with new media tools and new possibilities, but also built trans-local collaboration networks, connecting Western and Eastern European artists, theorists and thinkers. Hence, artists had an important role in building "critical Internet cultures" in their very beginnings. However, it happened around 1998 that *net.artists* were "kicked out" of the *nettime* mailing list. Neither their confrontative artistic actions nor other self-expressive experiments within the *nettime* list were recognized by the community. At around the same time *nettime*, initially an open platform, turned into a moderated and serious discussion-only forum. *Net.artists* decided to leave *nettime*, instead creating their own platform, the *7-11* mailing list, where they could experiment with new concepts, forms and aesthetics, referencing the specific contexts and features of new media and the Internet (Smite, 2011). However, critical theorists of *nettime* were also partly right: for example, it was due to the single artist that the most important forum for artists working in new media was closed down in the late 90s, thus also showing how fragile our networks are (Smite, 2011). In this regard, greater success was achieved by *Faces*, a cyberfeminist community which united women working with new media – academics and hackers, feminists and activists, artists and designers; their mailing list is still used by the community today, and it is still a very responsive social environment. Meanwhile, another mailing list-based trans-local artist community – *Xchange*, initiated by the Riga-based *E-Lab Center* (founded by ourselves in 1996) – was pushing the boundaries of the new electronic space by using sound and online streaming possibilities. Trans-local, collaborative and artistic projects such as *Xchange* (which received the *Prix Ars Electronica* in 1998) or *Makrolab*, a project by Marko Peljhan (exhibited at *Documenta 1997*), showed the potential to be embodied in an arts context as well as the capability of carrying out in-depth research on the implications of the network society. Yet these artistic research achievements didn't succeed in bridging the huge gap between Manovich's "Duchamp-land" and "Turing-land". With "Duchamp-land" Manovich was referring to the art world represented by galleries, museums and art journals as well as to contemporary conceptual art, originated by the artist Marcel Duchamp and later represented as "relational aesthetics" – as Bourriaud (2002) has termed contemporary art practices in the 90s, which are located on "social interstice". "Turing-land" refers to new media art, which researches the new aesthetics and concepts of algorithm and computation.

 "What we should not expect from Turing-land is art which will be accepted in Duchamp-land. Duchamp-land wants art, not research into new aesthetic possibilities of new media."
                                      Lev Manovich (1996)

On the one hand, Manovich was right – convergence between those two lands during the past twenty years did not happen or happened just occasionally. On the other hand, the situation today is different, as we have entered the post-media age, and we are witnessing media convergence on a larger scale. Artists who in the information technology era at the close of the 20th century were on an emerging art avant-garde – experimenting with information technology aesthetics, discovering the new cyberspace borders and creating immaterial art in wireless networks, radio waves and the universe – are now "returning" to social reality and addressing sustainability issues. It is not new that media art critically addresses socially political questions; however, the perspective revealed by this setting is. Digital technologies today are deeply embedded in all daily spheres of life, and social networks have become an intrinsic element of daily routine and professional life, creating a new type of complexity for social relations.

According to Peter Weibel (2005): "This state of current art practice is best referred to as the post-media condition, because no single medium is dominant any longer; instead, all of the different media influence and determine each other. The set of all media forms a universal self-contained medium." According to Weibel's deliberations, today "all art is already post-media art". For instance, when RIXC together with Jens Hauser curated the exhibition *Transbiotics* in 2011, we aimed at

tracing a shift in the bioart field too, where art is not only converging with biology but also engaging with socio-technological discourse. Weibel (2005) also argues that "the new media were not only a new branch on the tree of art but actually transformed the tree of art itself". The post-media situation is at the heart of the "contemporization" tendency in contemporary media art. In contrast to other contemporary art movements, which are mostly oriented toward social deconstruction and reflection, media artists are profoundly interested in technology and science, collective working, creative experiments and processual art. And – contemporary media art not only mixes media, it also seeks out new contact zones between traditionally different disciplines unrelated to art, continuing to bring innovation into contemporary art and changing the role of art in society.

Artistic Research Methodology and Case Studies

With regard to methodology, as early as the 90s new media opened up new possibilities for creative explorations and artistic inquiry. Today, the post-media situation offers an even greater variety of possibilities for artistic research through convergence, intersections and crossovers. Art has always been a reflective practice, but we would also like to argue that the very important potential of artistic research also lies in its transformative and interdisciplinary qualities, or as Bourriaud (2002) has put it – contemporary art practices work as catalysts (rather than centres). Either way artistic research is shown to be capable of creating new knowledge. We will be analysing three major approaches of knowledge creation through art practices here.

The first approach we will use here is to reflect upon our own artistic practices; we will be analysing our own works of art as well as the contexts within which they have been created. For two decades we have been actively working with new media, using scientific approaches and combining art with science. The second approach which we will use in studying post-media conditions in art is exhibition curating. We will be studying cases from some of the more recent exhibitions organized by our RIXC

Center. And last but not least, we will introduce artistic research from the perspective of academic education.

Creating the context, establishing new collaborations and networking have always been as important for us as the creation of our own artwork. Our first artistic initiative was the *Xchange net.radio network* (1997), which united about sixty different pioneering Internet streaming initiatives from all over the world – sound artists, DJs, electronic musicians, independent radio activists, etc., who were engaged in exploring the "acoustic cyberspace". Over the decades, we have also initiated several other networks and collaborative artistic projects. More recently, together with our RIXC Center and partners from Nordic and Baltic countries, we founded *Renewable Network* (2009), where artists have teamed up with scientists and both rural and urban communities to develop new ideas for more sustainable and more imaginative futures. We organized a series of *Renewable Lab* art and science workshops, experimenting with different sustainable technologies. As a result, we used one of the most innovative technologies – the "bacteria battery" – in our artwork series *Biotricity*. We set up small bio-electricity power stations in a pond outdoors and created live "bacteria battery" installations indoors. We created real-time sonification and visualizations from recorded data, thus making visible the invisible activity in nature – e.g. how bacteria produce electricity at the bottom of the pond. In this way we also aimed to show how contemporary aesthetics such as data interpretation can reveal the complex structure of the ambiguous relations between nature and technology, ecological systems and electronic networks, and human and micro-worlds.

Bacteria battery as well as a wide selection of other "post-media" artwork could be seen at several exhibitions in Riga in recent years, the largest of which was *Fields* (2014), which we curated together with artist and curator Armin Medosch, founder of the Technopolitics initiative in Vienna. The exhibition took place in the Arsenals exhibition hall at the Latvian National Museum of Art in the framework of Riga 2014 – European Cultural Capital. Medosch (2014) explains: "*Fields* is a curatorial

Figure 1. "Biotricity – Bacteria Battery", "Fields" exhibition (Riga: Rasa Smite and Raitis Smits (photo: RIXC), 2014)
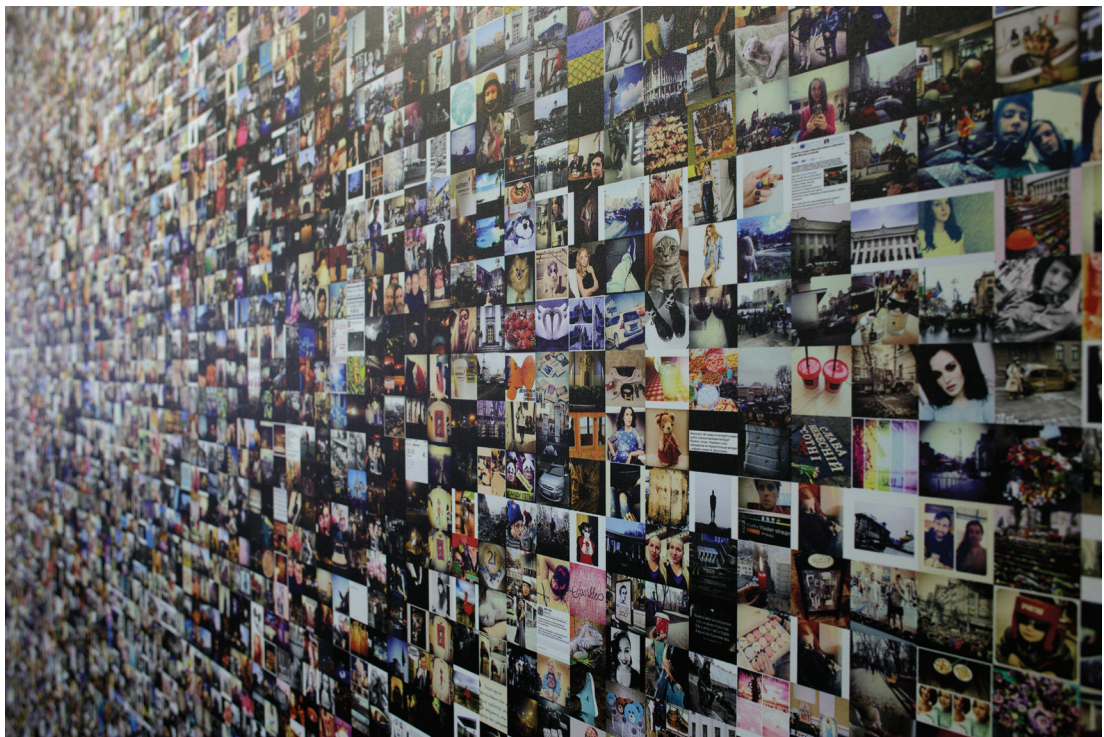
Figure 2. "The Exceptional and the Everyday:
144 hours in Kyiv", "Data Drift" exhibition, kim?
Contemporary Art Center, (Riga: Lev Manovich,
Alise Tifentale, Mehrdad Yazdani, and Jay Chow
(photo: Kristine Madjare), 2014)

Figure 3. "Pond Battery", "Open Fields", RIXC
Festival exhibition (Riga: Rasa Smite and
Raitis Smits (photo: Kristine Madjare), 2016)

Figure 4. "Brain Messages", "Impulsi"
exhibition, RISEBA H2O 6 Architecture and
Media Center (Riga: Gunta Dombrovska
(photo: Kristine Madjare), 2016)

research project that engages with the works of selected artists in order to explore generative concepts – concepts that do not simply describe what exists in a static way but are contextual seedbeds for new practices." *Fields* was one of the largest manifestations of post-media art, featuring more than 40 works of art, which showed that art in post-media conditions has highly transformative and visionary potential. However, symbolic and aesthetic qualities as well as critical, investigative and confrontational aspects also proved to be just as important for "post-media art" in maintaining a line between physical and mental realities and utopias. We curated the *Fields* exhibition with the intention of creating a "post-media" and "techno-ecological" perspective, showing how art today is changing its role in society – it is not only creating new aesthetics, but also getting involved in scientific, social and technological transformations. Medosch (2014) puts it as follows: "*Fields* seeks a novel approach for the mapping of potential new territories for artistic explorations." These new art practices often work as connections, they cross borders and interact with different fields, social groups, people's perception of the world and the world beyond them, whilst the artistic language is a key element and the "shortcut" to initiating a dialogue with society, reaching the public's awareness and creating feedback with it.

Data Drift (2015) was an exhibition which we curated together with Lev Manovich at the kim? Contemporary Art Centre. While *Fields* explored "post-media" conditions, *Data Drift* focused on another big issue of contemporary media culture, namely data. Regarding this exhibition Manovich (2015) claimed: "If painting was the art of the classical era, and photography that of the modern era, data visualization is the medium of our own time. Rather than looking at the outside world and picturing it in interesting ways like modernist artists (Instagram filters already do this well), data designers and artists are capturing and reflecting on the new data realities of our societies." Hence, data visualization has not only become an important approach in contemporary culture, it is also creating a new aesthetics of its own. The *Data Drift* exhibition showcased works by some of the most influential data designers of our time as well as by artists who use data as their artistic

medium.

"How can we use the data medium to represent our complex societies, going beyond 'most popular', and 'most liked'? How can we organize the data drifts that structure our lives to reveal meaning and beauty? How to use big data to 'make strange', so we can see past and present as unfamiliar and new?"
Lev Manovich (2015)

Most often in the art and culture field research is carried out in the framework of either cultural studies or critical theories. Manovich suggests that there is also a third way, cultural sociology, which could help us to analyse a large amount of visual data – from museum archives to social media "imagery". Data visualization opens up new possibilities for archiving as well as reinterpreting and exhibiting artwork because it allows one to study a large number of works together. And "when we bring many works together and compare them, we acquire the capacity to look at the past and present from other unfamiliar and novel perspectives" (Manovich, 2015).

In recent years artists have shown an interest in studying at a higher academic level and receiving a doctoral degree. Yet if the curriculum for doctoral studies in the arts is designed for researchers, i.e. art historians, this means that the field of art is in fact missing one of the most important facets – discovery, which can only be obtained through practice. Therefore, for more than a decade practice-based, practice-led artistic research on a doctoral level is entering academia, aiming to invent and integrate into the academic system a new knowledge-creation methodology which is based on artistic practice. According to Carole Gray and Heather Delday (2009), artistic research is a reflective practice: "Reflective practice attempts to unite research and practice, thought and action in a framework which involves practice as an active agent for inquiry, and which acknowledges the particular and special knowledge of the practitioner." Professor Carole Gray is an expert on artistic research, and she has been involved in establishing the New Media Art programme in Liepaja since its very beginnings in 2007. This new education programme was a collaboration between Liepaja University, the RIXC Center

Main principles of new media and post-media

New Media	Post-media
Immateriality	Neomateriality
Process-based	Object-oriented
Collaborative	Individual
Self-referential	Self-referential
Internet-based	Media convergence
Shared autonomous infrastructures	Web 2.0 social network sites
Networked digital technologies	Social media-based "imagery"
Interdisciplinarity	Data visualization

Figure 5. Summary of the main principles of new media
and postmedia, based on "Fields", "Open Fields",
"Data Drift" exhibition case studies
(Riga: Rasa Smite and Raitis Smits, 2018)

for New Media Culture in Riga and the K@2 cultural centre in Karosta. Liepaja's case is unique in Latvia and the Baltics: it is a full-cycle education programme in new media arts – from bachelor's to master's to doctoral studies. The programme is academic, module-based, and primarily designed by integrating the artistic research approach into the academic education system. During the past 10 years, the programme has grown and developed, achieving great results, such as their annual *iWeek* festival (since 2009) and *Sound Days* (since 2013). The graduate student exhibition *Impulses* (2016) was also a great achievement by this programme, as it showed fifteen conceptually interesting and technically quite advanced interactive works of art.

The *Impulses* exhibition was part of *Open Fields* (2016), an international artistic research conference and exhibition. Artists of the *Open Fields* and *Impulses* exhibitions aimed to explore how art can meaningfully contribute to the environmental, scientific and technological challenges of our time. *Open Fields* also challenged traditional academic disciplines, engaging with "open fields", that is with interchanges and crossings between practices that are barely sustained by one discipline alone. With the *Fields* exhibition in 2014 we have opened multiple conversations about how art

has the potential to not only criticize society and thereby provide a mirror for it, but also to more directly intervene in material and social structures. In these exhibitions, we could also experience the post-media situation, with new materiality and object-orientated outcomes.

"The concept of neomateriality is proposed [...] to describe an objecthood that incorporates networked digital technologies, and embeds, processes, and reflects back the data of humans and the environment, or reveals its own coded materiality and the way in which digital processes see our world."

Christiane Paul (2015)

Hence, artists of the *Open Fields* and *Impulses* exhibitions were challenging the notion of contemporary aesthetics. They were moving across, bringing together and combining different kinds of knowledge, various media and diverse fields as well as using scientific, cultural and social data as new artistic mediums and interpreting them in new and meaningful ways.

Conclusion

Today, two decades after the terms were coined, in entering the post-media age, we can witness some tendencies of "Turing-land" and "Duchamp-land" converging. But as we would

like to argue, art has also become an important domain in itself; it has become capable of serving its own table and inviting other disciplines to join in and contribute.

With regard to academic education, we also see that artistic research approaches have great potential, particularly if we agree with Christiane Paul (2016), who has suggested that more traditional fine art forms and digital media arts would mutually benefit from intersections as well as from integration within educational institutions. Artistic research also challenges more traditional types of knowledge production, as artists-researchers often carry out their research not only within the walls of a university, but also at contemporary media art festivals, exhibitions, symposiums, and residencies. We would also like to argue that art today is not only critical, it also comprises the

capability of envisioning more positive future scenarios and inspiring its audiences. Yet we also claim that today new aesthetics such as *objecthood* and *neo-materiality* are increasingly replacing previously well recognized concepts such as process-based and "immaterial". Also, we have experienced that data visualization is not only used as a new artistic medium; it also comprises new capabilities for studying visual culture represented by large amounts of data and archives.

Overall, we can say that art in the age of post-media has transformative potential and critical, investigative, symbolic and aesthetic qualities. Hence, artistic research is among the disciplines that reflect on current realities, the complexity of our society, and the challenges of our time.

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