

Artistic ventures into the world of big data: Work, communication and politics of a minoritarian force

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ABSTRACT

The use of information technologies in almost every aspect of work and communication has resulted in a vast amount of data that is constantly being stored and analysed. This paper investigates the dynamics surrounding the use of big data for the creation of capital and for the common good. Through the presentation of specific art projects that express work, communication and politics within the Information age, it seeks to juxtapose the majoritarian system of capitalist production with minoritarian force of networks that are focused on the benefit of people. These alternative visions experiment with the idea of the world machines and seek paths to bring them into existence.

Author Keywords

Online participation, visual arts, big data, communicative capitalism, social networks, sharing, crowdsourcing

ACM Classification Keywords

Public policy issues, social issues

INTRODUCTION

Digital media interfaces play a great part in our daily lives, translating our preferences, beliefs, interactions and displacements into endless streams of data. As the data is stored, analysed and interpreted, it becomes a valuable point of reference for multiple beneficiaries, from systems of capitalist production to networks that are created to serve the social good.

Through a focus on artistic experiments with social networks and data, this paper will highlight the potential of *world machines* in exploring alternative uses of information with politically significant value. Through a juxtaposition of different viewpoints, we will see how digital networks can empower the capitalist system of production or divert it towards a new reality where the information created by the people is used to benefit people.

Considering the political dimension of data processing, one is tempted to ask: Could participation in world machines generate social change by breaking the barriers of social exclusion and giving birth to a more immediate form of democracy? Or are social networks a Trojan horse for the imposition of free labour and the accumulation of capital in the hands of a few corporations?

This paper will seek to approach these questions, through specific examples of artistic works that deal with big data and participation in social networks. Although we are talking about works of art, what sets them apart is that their inquiries are not simply visual, but rather expand onto the social field. Considering the orientation of the artworks towards the benefit of the public, one could consider that the artistic projects in question have a lot in common with world machines.

As the discourse will focus on these examples -in parallel to data harvesting focused on capital production- it is significant to note here that we are not dealing with a simplistic juxtaposition of good versus evil or beneficial versus harmful, but rather a whole spectrum of ideas that often reflect multiple perspectives –aiming both at capital profit and social benefit, for example. Moreover, one should not disregard the fact that ideologically antagonistic forces often use the same means to articulate opposite views –often exploiting or subverting the ideas of the ‘rival’ side. The fluidity of this reality, where each tool can easily morph into its ideological opposite, makes the discourse all the more challenging.

THE EXTRACTION OF CAPITAL FROM BIG DATA AND DIGITAL LABOUR

The rapid advancement of information technologies in science and everyday life has enabled the ever increasing accumulation and storage of data. In many cases, what used to be a laborious and slow process, based on careful extraction of information, selection of samples and understanding, has now evolved into *big data*: a constantly updated stream of a vast amount of information, instantly stored and analysed. As a result, emphasis has shifted from causality to correlation [10]; researchers, scientists and marketing specialists do not need to look for representative and accurate samples constantly, as they can have an entire set of data and quickly analyse how their information relates to a certain type of behaviour or a physical phenomenon. Public authorities and private corporations alike are interested in extracting as much information as possible from user behaviour online, on mobile and geo-positioned devices. For the first time in history there is such an abundance of information on people’s consumer, political and social behaviour.

Within this frame, the possibilities for the creation of social connections are immense. Even since the early days of the Internet, when this degree of connectivity was still in a nascent stage, it became obvious that the digital space could evolve into a non-hierarchical, democratic world where anyone could take part in the creation of culture and knowledge. The enthusiastic participation into networks multiplied the potential of platforms where the information was provided by the public for the public. As the users sought networks for communication, education, work or leisure, they experimented with peer to peer networks, social media, wiki platforms and messaging applications. Some of these quickly transformed from small networks or crowdfunded initiatives to financial giants. Other times, internet users took advantage of the popularity of certain corporate networks to promote their own collective goals.

In this reality, where tools and networks overlap, how does a capitalist network differ from a world machine? In both cases the data that is being exploited is extracted either from the users' online behaviour and preferences, or their labour. However, the goals and the process of creation of information differ greatly. In capitalist production the people are estranged from the outcome of their work. The digital workplace is largely based on the *crowdsourcing* of labour – a process of fragmentation of work in small repetitive tasks and its outsourcing towards a large group of people that either carry them out for free –as is the case with Captcha images that require the recognition of images unreadable by software- or with a minimum benefit, as we shall see below. In a way, we are dealing with a digital assembly line, where the dematerialization of the final product enables the deterritorialization of labour; this means that the digital workers are in different countries and time zones, alienated from the product of their work and deprived of labour rights –contract, minimum wage- that may exist in their country [4, 13]. Thus, digital work is largely regulated outside the national legislative framework, allowing the maximization of profit and the accumulation of capital into the hands of a few powerful companies.

Sites such as Amazon's Mechanical Turk are specialized in assigning work to a large group of people. As stated in the platform website, the Mechanical Turk is a marketplace for on-demand, scalable workforce, where people carry out 'Human Intelligence Tasks' in return for a small reward, which in fact amounts to a much lower remuneration than a minimum wage. During the past couple of years, the tendency of outsourcing work has resulted in even more sophisticated working relations, within the frame of the so-called *sharing economy*; companies such as Airbnb, Uber or BlaBlaCar generate profit by helping their users work for others or contract their services at a very low price. The users definitely reap certain benefits, but the biggest part of the profit goes towards the mediating

company, that ultimately makes use of the work of millions of 'workers', while it actually needs to contract only a handful of people to set up and administer their online platform.

An interesting change that has occurred since the launch of the Mechanical Turk in 2005 until today's sharing economy services is the emphasis on the concept of 'community'; the big digital enterprises constantly project this notion by encouraging the participants who provide their services to gather in local meetings or exchange views and experiences online. However, in most cases there is no real communal spirit, but rather an individual need for low cost services and personal profit.

On the other hand, there are many efforts to use collective work for the re-evaluation of the economic system and the introduction of fairer values, towards a real sharing economy, where everyone could benefit from accessing data and exchanging services.

Within this vision, one could view Julieta Aranda and Anton Vidokle's 'Time/Bank' (2009-ongoing) as a world machine that creates a community of workers who help each other. The project invites artists to offer their work to other members of the community; in exchange, they don't receive money, but a 'time currency' that they can redeem whenever they need the help of anyone in the community –whether it is for an internet-based work or work in the real space. In practice, this means that if an artist provides an hour of work, then he/she can ask for the help of any member in any country for an hour. The availability of work is advertised in the platform of the project. The time currency is "backed by trust within a cultural community, rather than by gold or state authority", as is stated by the artists [2].

The idea of a time currency can be traced to 19th century economic and political theory and has found multiple applications ever since –from Josiah Warren's *Cincinnati Time Store* (1827-1830), to the German *Notgeld*, the 'emergency money' that referred to goods, rather than abstract value during the Interwar inflation, and from Paul Glover's 'Ithaca Hours' (1991-today) to the Greek *Time Bank* that emerged during the current economic crisis. Based on the same idea, but taken to a global context, the 'Time/Bank' project allows artists and people who work within the art world to exchange work on an equalitarian basis. In this case participation benefits the individual and the community as well. Moreover, it adds value to tasks that usually are being performed on a volunteer basis –a different value than the monetary value added to the artwork by the art market.

Ultimately, the participants are encouraged "to think about this project as a chance to create worlds, to imagine and produce other realities; to further the work that has been

done towards a society where things are different” [12]. During a time when the financialisation of economy and the imposition of neoliberal values have put a strain on the working class, a world machine where people could get informed about availability of labour and exchange it under equal terms could reinstate economy into a more humane context, highlighting the value of solidarity.

COMMUNICATION ON SOCIAL MEDIA AND THE ART OF SHARING

As was mentioned above, the power to instantly capture and analyse data has caused an inexorable need for nonstop updated information: photos, status updates, comments. Thus, communicative acts online are not so much aimed at reaching understanding or transmitting knowledge –as a reading of Jürgen Habermas would suggest [9], but instead they are often reduced to a data stream where each message is stripped of the meaning it contains. There, each bit of information is soon replaced by something new. Perhaps this is why any kind of communication online (texts, images, videos) is referred to with the general term *content*; it is simply data that fills a page, preferably entertainment, where the message is not as important as the production of capital, which takes place through the sharing of information and buying of the products advertised in the same page. Thus, one could consider that the content on the feed of social networks is inherently apolitical, not only because it serves the production of capital, but also because it is stripped of its communicative potential, as it is largely ephemeral and short-lived.

On one hand, online communication can empower voices of opposition to the dominant political power and help them unite in action, as we shall see. On the other hand, these voices could be stifled by the information overload. As Giorgio Agamben notes, “what prevents communication is communicability itself”[1]. So, even though globalized social networks enable communication, eventually, communication could become less and less meaningful, as the focus is shifted onto number of visitors and conversion rate to product sales.

The issues occurring from sharing everyday life and ideas are frequently being addressed in contemporary art projects, which attempt an alternative reading to the information harvested from social networks, showing how much data can be contained in social network updates. At the same time, these projects showcase how social media users come together in groups and share information, generating ‘sub-networks’ within the main one.

The project ‘144 hours in Kiev’ (2014), carried out by the Software Studies Initiative and coordinated by Lev Manovich, reveals how content originating from social networks can be subject to multiple information analyses. Through computational and data visualization techniques the project explores the Ukrainian revolution (17-22

February 2014) through the pictures shared on Instagram during this period –which amount to 13,208 images taken in central Kiev by 6,165 users. [11]

The project is built on the qualitative and quantitative analysis of the subjects, the tags, the comments and the metadata of the images. Up to an extent, the variations in the main topics and tags reflect the evolution of the events in question –for example, the changes in the demographics of the protesters and their demands. However, this story of the protests in Kiev is inscribed within a larger set of images that are captures from everyday life during the days of the revolution. As Manovich observes “during the exceptional events, the exceptional co-exists with the everyday. The images of Maidan clashes, political slogans, and burned cars and buildings appear right next to everything else: selfies, parties, cultural events, etc. Through a number of different visualizations, we explore how the extra-ordinary and ordinary are connected visually (the use of images) and textually (tags).” [11]

As Instagram is mainly an image sharing network, it can give a more laconic account of the events, comparing to Facebook or Twitter that can be used more effectively for the exchange of ideas, the dissemination of collective gatherings and the occasional propaganda. Undoubtedly, the work is a testimony of the events through the eyes of the particular demographic that uses this application. However, the retrospective data analysis of these images provides a more thorough reflection of the events than the ephemeral feed of the social network: the metadata indicate where the events took place, the ruptures in image flow imply the imposed disconnections of service, the tags express the changes in the feelings and goals of the protagonists of the action, while the irrelevant images represent a parallel course of events, where life went on as usual.

In this sense, one could perceive the Instagram images of this particular place in this particular moment in time as a network of stories within a greater network, as a world machine that gathers the testimonials of a historic moment. The artistic project in question thus helps the public access this source of knowledge and make the world machine visible –one that is dependent on the greater network, but has its own goals that are meant to serve the users and not the company that owns the platform.

Thus, the extraction and analysis of big data from conventional expanded networks gives visibility to more local ones, which manifest “the transition from the mass-media era to a *post-media age*, in which the media [are] reappropriated by a multitude of subject-groups capable of directing its resingularization” [8], meaning that we move from the major to the singular, the minor.

SHARING VISIONS FOR THE FUTURE AND DATA FOR THE COMMON GOOD

As has already been mentioned, the dominant tendency within the world of the big data is the collaboration towards the production of capital. Even though their beneficiaries are only a handful, the big internet corporations represent the biggest share of the information gathered and circulated around the Internet, which increases their popularity and power exponentially. If we were to apply Gilles Deleuze and Felix Guattari's theory regarding the minor, these corporations express "the majoritarian as a constant and homogenous system". This does not refer to absolute numbers, but to the forces that gather the most power, implying "a state of domination". The counterpart to this system is the "minoritarian as a potential, creative and created, becoming" [7]. From this perspective, the platforms that explore uses of the big data towards the common good deviate from the rule of the major. This means that the world machines express the minoritarian, a world in the process of becoming.

There are numerous world machines that belong in this paradigm; networks that control government spending and corruption, data feeds about the weather and natural phenomena, open cartography projects, initiatives to protect citizen privacy. Among these, the ones that focus on direct democracy express the politics of the Information Age. Such initiatives build digital tools and applications that help local and national authorities create their policies according to the decisions of the citizens, while they provide a virtual space where citizens can exchange views.

Paolo Cirio's 'Global Direct' (2014) could potentially create a world machine in the service of direct democracy. The artwork provides relevant information and possibilities for participation; on a first level, based on a series of organograms, the artist visualises his ideal of efficient and decentralized governance, where political decisions are taken after consulting with the people. In Cirio's vision of democracy active participation is the key to implementing policies and controlling their effectiveness. Each decision is taken directly by the people without the mediation of authorities and lobbyists. As the artist states, "Global Direct deploys alternatives to the current political and socioeconomic landscape and encourages creative thought about alternative models based on individuals collaborating through global networks. Ultimately, the artwork may be considered a political manifesto to inspire future political trends and organizations through an unconventional and visionary reorganization of society" [5]. On a second level, the public can get a foretaste of this direct democracy by proposing slogans for the campaign of Global Direct and making their voice heard. Lastly and most importantly, the Global Direct website features links to organizations that actively pursue online democracy, transparency in governing, open data and direct participation in decision

making, as well as an extensive digital library of researches and experiments regarding the topic. Therefore, the artwork does not simply project into the future, but also looks into solutions for the present and presents the tools to achieve direct democracy.

Direct decision making on an equalitarian basis seems like a rather utopian notion –as not all citizens have the same means to access information and learn about the topics in question. Nevertheless, a world machine focused on dissemination of information and the education of the public could make a significant contribution during elections and referenda. There is, however a significant difference between 'Global Direct' and the current democratic procedures; the direct democracy platforms are characterized by a non-hierarchical structure [7], reminiscent of the political fomentations that took place since 2010; the Occupy movement, the Spanish Indignados and other international grassroots political movements sought to realize this kind of open and direct democracy, where decisions were being made in assemblies in public spaces. Utopic though these movements may have seemed to be –especially after they faded out within the reality of tough austerity policies– apparently they have left a seed that could bring political change, as some of their protagonists have been recently voted into the political arena of the European South (see for example the May 2015 Spanish municipal elections).

Therefore, 'Global Direct' reflects this tendency that is prominent in global citizen and activist movements currently. Moreover, the numerous platforms and tools presented within the project could be viewed as world machines that can bring these political ideas into life.

CONCLUSION

In an era where a big part of work and communication takes place online, the information that results from these actions is constantly being analysed and stored, constituting a valuable element in the creation of capital and knowledge. As the majoritarian forces of capital production divert the digital tools towards a fragmented and deterritorialized labour, the minoritarian organizes them into world machines, which can impact the way people organize their work, document important events and take collective decisions. Contemporary art reflects these fomentations in artworks that constitute world machines –as the 'Time/Bank'–, projects that reveal the existence of world machines within bigger networks –as the '144 hours in Kiev'– or even familiarize the public with existing ones –as in 'Global Direct'. At the same time, the projects selected here define a new form of political action within the digital space, one that strives to explore potential alternatives to the dominant hegemonies.

Art and politics, ultimately, are interrelated and mutually dependent, as they both belong to the public sphere, dealing

with judgment, decision and public action [3]. Within this view, the aforementioned approaches could be seen as indicative of the antagonistic balances between different groups that are necessary for an effective democratic dialogue. Admittedly, said dialogue is not conducted in fair terms for everyone, as economic and political power still exerts its majoritarian dominance. However, this discourse can contribute to the understanding of complex economic and political relations of the age of online capitalism. Within this context, the art that visualizes world machines can constitute a significant part of the discourse regarding active decision-making in communicative, cultural and political processes.

REFERENCES

1. Giorgio Agamben. 2000. *Means Without End: Notes on Politics*, Minneapolis: University of Minnesota Press, Minneapolis, 84-85.
2. Julieta Aranda and Anton Vidokle. 2009. "Time/Bank". Retrieved May 20, 2015 from <http://e-flux.com/timebank/>
3. Hannah Arendt. 1968. *Between Past and Future: Eight Exercises in Political Thought*, New York: Viking Press, New York, 218-223.
4. Ayhan Aytes. 2013. "Return of the Crowds: Mechanical Turk and Neoliberal States of Exception", in Trebor Scholz (ed.) *Digital Labor: The Internet as Playground and Factory*, Routledge, New York, 79-97.
5. Paolo Cirio. 2014. "Blueprints for a Global Participatory Society". Retrieved May 20, 2015 from http://www.paolocirio.net/press/texts/text_global-direct.php
6. Jodi Dean. 2005. 'Communicative Capitalism: Circulation And The Foreclosure Of Politics', *Cultural Politics*, March, 51-73.
7. Gilles Deleuze and Félix Guattari. 1987. *A Thousand Plateaus*. Minneapolis: University of Minnesota Press, 126-127.
8. Félix Guattari. 2000. *The Three Ecologies*. Athlone, London, 40
9. Jürgen Habermas. 1984. *The Theory of Communicative Action, Volume I: Reason and the Rationalization of Society*, Beacon Press, Boston, 63
10. Martin Hand and Sam Hillyard (eds.) 2014. *Big Data? Qualitative Approaches to Digital Research*, Emerald Group, Bingley
11. Lev Manovich, Alise Tifentale, Mehrdad Yazdani, and Jay Chow. 2014. "The Exceptional and the Everyday: 144 Hours in Kyiv" IEEE Big Data 2014 Conference. Retrieved June 30, 2015 from https://drive.google.com/file/d/0B2zp_-wC_PsZxZzZzeDRaS0tpdUU/view
12. Rasha Salti. 2012. "Time/Bank: A Conversation with Julieta Aranda and Anton Vidokle", *Manifesta Journal* #14, March. Retrieved May 20, 2015 from <http://www.manifestajournal.org/issues/souvenirs-souvenirs/timebank-conversation-julieta-aranda-and-anton-vidokle>
13. Tiziana Terranova. 2000. 'Free labor: Producing Culture for the Digital Economy', *Social Text*, 63, Volume 18, Number 2, 48