Mapping Utopian Art: Alternative Political Imaginaries in New Media Art (2008-2015)

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Abstract

This thesis investigates the proliferation of alternative political imaginaries in the Web-based art produced during the global financial crisis of 2008 and its aftermath (2008-2015), with a particular focus on the influence of communist utopianism. The thesis begins by exploring the continuous relevance of utopianism to Western political thought, including the historical context within which the financial crisis of 2008 occurred. This context has been defined by the new political, social and cultural milieu produced by the development of Data Capitalism – the dominant economic paradigm of the last two decades. In parallel, the thesis identifies the "organic" connections between leftist utopian thought and networked technologies, in order to claim that the events of 2008 functioned as a catalyst for their reactivation and expansion. Following this analysis, the thesis focuses on how politically engaged artists have reacted to the global financial crisis through the use of the World Wide Web. More specifically, the thesis categorises a wide range of artworks, institutional and non-institutional initiatives, as well as theoretical texts that have either been written by artists, or have inspired them. The result of this exercise is a mapping of the post-crisis Web-based art, which is grounded on the technocultural tools employed by artists as well as on the main concepts and ideals that they have aimed at materialising through the use of such tools. Furthermore, the thesis examines the interests of Data Capitalists in art and the Internet, and the kinds of restrictions and obstacles that they have imposed on the political use of the Web in order to safeguard them. Finally, the thesis produces an overall evaluation of the previously analysed cultural products by taking into account both the objectives of their creators and the external and internal limitations that ultimately shape their character. Accordingly, the thesis locates the examined works within the ideological spectrum of Marxist and post-Marxist thought in order to formulate a series of proposals about the future of politically engaged Web-based art and the ideological potentialities of networked communication at large.

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During the period of registered study in which this thesis was prepared the author has not been registered for any other academic award or qualification. The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

Signature:

Date: 11th April 2016

To my parents

To my teachers

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Introduction

In retrospect, the first stages of the research that supports this doctoral thesis can be traced fifteen years back, to my studies at the Faculty of Law, Economic and Political Sciences of Aristotle University of Thessaloniki, in Greece. In 2001, I was a second-year student at the University's BSc programme in Economics, and I was about to specialise for another two years in Business Administration. Although I had already decided that I wanted to become an artist, I felt that in order to be able to meaningfully approach social, political and economic issues through my artworks, I first needed to understand to a minimum extent the complexities that define the modes of production of an increasingly globalised economy. Thanks to the programme's various modules and, in particular, those focusing on marketing and consumer behaviour, I quickly came to realise the multifaceted connections between the architecture of our economic systems and the means of communication that we use on an everyday basis. This realisation encompassed not only the content of such means, but also their own distinct architecture and the modus operandi through which information is produced and reproduced. Most importantly, perhaps, I came to realise the profound ways in which our instruments of communication may determine our individual and collective economic practices and, through this process, the values that imbue a social body's behaviour beyond the economy.

However, in many ways, the economic theories, principles and formulas that I was taught during my first four years in Higher Education were put under question as we entered the historical period that started with the outbreak of the subprime mortgage crisis in the US, in 2007. The burst of the "bubble" of the American housing market was an early indication that there might be limits to the financialization of the economy and the economic paradigm that until 2007 seemed to be unchallengeable.[1] Interestingly, what this first crisis provided us with was a glimpse into the widespread failures of the global financial system, as too many banks and other financial firms had been cultivating a culture

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[1] US house prices started declining in 2006, following a period of sharp increase, particularly after 2001. By 2003 the US Federal Reserve had lowered its Federal funds rate from 6.5% to just 1% – the lowest rate in 45 years. By 2004, the American homeownership rate had peaked at an all-time high of 69.2%. Following the decline in prices, adjustable-rate mortgages were reset at higher interest rates. However, higher monthly payments meant that it suddenly became much more difficult for borrowers to refinance their loans. As mortgage delinquencies increased rapidly, all securities backed with mortgages lost their value.

of excessive borrowing in order to sustain their own excesses.[2] This context was emphatically confirmed with the events of 2008, which had an impact of a truly global scale this time. As Lehman Brothers, the fourth largest investment bank in the US, went bankrupt in September 2008 due to negligence and malfeasance connected with the period that preceded the subprime mortgage crisis, it started becoming obvious not only that we had moved from the phase of "owner's capitalism" to "managers' capitalism", but – most importantly – that the "principal-agent problem" (i.e. the fact that managers have been running companies for their own personal benefit, instead of the shareholders' benefit)[3] had become an organic part of our economic paradigm. Several other banks also went bankrupt across the globe in the years that followed, and in a largely "unimaginable" development that defied the spirit of "laissez-faire" capitalism, sovereign states bailed-out many of them.[4] At the same time, governments and Central Banks alike responded with unprecedented fiscal stimulus packages and monetary policy expansion measures, which, however, had a much smaller effect than the one envisioned by policymakers. As a result, such moves have been repeated several times since the outbreak of the crisis.[5] In 2009, despite the aforementioned responses and the impetus of emerging markets and developing economies, the global GDP contracted.[6] The period of the Great Recession saw even the most powerful economies in the world shrunk, like for instance in the case of the US (18 consecutive months in recession, between December 2007 and June 2009)[7] and the

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[2] Carl Levin and Tom Coburn, 'Wall Street and the Financial Crisis: Anatomy of a Financial Collapse' (*Hsgac.senate.gov*, 2011) <http://www.hsgac.senate.gov//imo/media/doc/Financial_Crisis/FinancialCrisisReport.pdf?attempt=2> accessed 20 March 2016.

[3] See: Michael C Jensen and William H Meckling, 'Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure' (1976) *Journal of Financial Economics* vol. 3, p. 305; and Jean-Jacques Laffont and David Martimort, *The Theory of Incentives: The Principal-Agent Model: Vol. 1* (2nd edn, Princeton University Press 2002).

[4] In the US alone, bailed-out banks have included giants such as Citigroup, Bank of America and JP Morgan. In the UK, bailed-out banks have included Lloyds, the Royal Bank of Scotland and – in a prominent "bank-run" case – Northern Rock.

[5] The most prominent case in this context is Greece, and the three "rescue packages" that the country has received in order to fund its sovereign debt, as well as the debts of its banks (2010, 2012 and 2015).

[6] International Monetary Fund, 'Report for Selected Country Groups and Subjects' (*IMF.org*, 14 September 2006) <http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/weorept.aspx?pr.x=21&pr.y=15&sy=2006&ey=2016&ssd=1&sort=country&ds=.&br=1&c=001%2C110%2C163%2C200&s=NGDP_RPCH&grp=1&a=1#download> accessed 20 March 2016.

[7] The National Bureau of Economic Research, 'US Business Cycle Expansions and Contractions' (*Nber.org*, 20 September 2010) <http://www.nber.org/cycles/cyclesmain.html> accessed 20 March 2016.

UK (27 months in recession in total, between mid 2008 and mid 2012).[8] Finally, the ongoing crisis in the Eurozone has seen several countries (Greece, Portugal, Ireland, Spain and Cyprus) require "rescue packages", either in order to refinance their government debt, or in order to bail out some of their over-indebted banks. According to official statistics, my home country Greece experienced a staggering sixty-four consecutive terms in recession between 2008 and 2014 – many more than what the country had experienced during World War II.[9] Most importantly, in 2015, Greece went once again into recession[10] and, the current prediction is that Greece has also been in recession during 2016.[11] Finally, in another notable event, the most important developing economy in the world, China, announced that its economic growth for 2015 had been the slowest in a quarter of a century,[12] and an even gloomier prediction has been made for 2016.[13]

This PhD thesis adopts as its starting point the chain of events described above, whose consequences can still be felt across the globe. Its area of investigation encompasses not only the causes of a prolonged and severe crisis, but also the alternative modes of socioeconomic being that may be proposed as "antidotes" to the deep "systemic breaches in accountability and ethics at all levels"[14] that have been emphatically defining our globalized economic paradigm over the last three decades. In order to explore such alternatives, the thesis will turn to the potentialities opened by the traditionally powerful association between a society's communication technologies and its ideological direction,

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[8] Grahame Allen, 'Key Issues for the New Parliament 2010' (*Parliament.uk*, 2010) <http://www.parliament.uk/documents/commons/lib/research/key_issues/Key-Issues-Recession-and-recovery.pdf> accessed 20 March 2016; and Simon Rogers and Amy Sedghi, 'UK GDP since 1955' *The Guardian* (25 October 2013) <http://www.theguardian.com/news/datablog/2009/nov/25/gdp-uk-1948-growth-economy> accessed 20 March 2016.

[9] 'Eurostat - Tables, Graphs and Maps Interface (TGM) Table' (*Ec.europa.eu*, 28 September 2015) <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=te c00115> accessed 20 March 2016.

[10] ibid.

[11] 'ΤΡΙΜΗΝΙΑΙΑ ΕΚΘΕΣΗ ΙΟΥΛΙΟΣ - ΣΕΠΤΕΜΒΡΙΟΣ 2016' (*Γραφείο Προϋπολογισμού του Κράτους στη Βουλή*, 2016) <http://www.pbo.gr/Reports/TabId/1085/ArtMID/5206/ArticleID/11368/QUARTERLY-REPORT-JULY-SEPTEMBER-2016.aspx> accessed 29 November 2016.

[12] Mark Magnier, 'China's Economic Growth in 2015 Is Slowest in 25 Years' *The Wall Street Journal* (19 January 2016) <http://www.wsj.com/articles/china-economic-growth-slows-to-6-9-on-year-in-2015-1453169398> accessed 20 March 2016.

[13] 'China GDP Annual Growth Rate | 1989-2016 | Data | Chart | Calendar' (*Tradingeconomics.com*, 2016) <http://www.tradingeconomics.com/china/gdp-growth-annual> accessed 29 November 2016.

[14] 'Financial Crisis Inquiry Commission' (*Fcic.law.stanford.edu*, 2 October 2011) <http://fcic.law.stanford.edu/> accessed 20 March 2016.

which by the time of my first university degree had already been widely theorised. In addition to this context, the subject matter of the thesis will be defined by the new sets of relationships that have emerged in the meantime, as technologies like Web 2.0 have gradually transformed our everyday lives and our understanding of the world as an interconnected milieu. Most importantly, the thesis will embark on this exploration from the distinct perspective of contemporary cultural production, and art's own use of the new means of communication.

Accordingly, the aim of this thesis is to investigate the relationship between alternative political imaginaries and post-crisis New Media Art. More specifically, the thesis examines the influence of communist utopianism and its multiple legacies on the ideological dispositions of the politically engaged Web-based art that has been produced during the global financial crisis of 2008 and its aftermath (2008-2015). The thesis uses the term "Web-based art" in order to denote two types of projects: Firstly, the category refers to artworks that exist exclusively online and largely adhere to the already established practices and traditions of net art – namely, projects that use the diverse tools provided by the Internet and, predominantly, the World Wide Web. And, secondly, the term incorporates artworks that might exist in physical spaces, but also have important online components, which are necessary for the communication of their creators' aesthetic and ideological objectives.[15] Apart from such artworks, the thesis also examines relevant institutional and non-institutional initiatives, as well as theoretical texts that have either been written by artists, or have inspired them.

The thesis poses four principal research questions. Firstly, what is the relevance of alternative political imaginaries – and in particular those inspired by communist thought – to the historical and technocultural context within which the global financial crisis of 2008 occurred? Secondly, what are the main formal and conceptual characteristics of the political Web-based art that has been produced between 2008 and 2015? Thirdly, what are the interests of global capitalist elites in art and the Internet, and what kind of restrictions have they imposed on the political use of the Web in order to safeguard them? And, finally, to what extent the political Web-based art of the post-crisis era has been the result of the paradoxical combination of capitalism's products (in the form of networked media) and

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[15] The thesis regards Web-based art as a subset of New Media Art, which can be defined as a group of artworks that combine traditional media-based practices (e.g. video, animation and experimental film) with practices based on new technologies, which do not necessarily have a media-related component (e.g. electronic art, robotic art and bio art).

communism's visions (in the form of alternative anti-capitalist modes of political organisation, social being and cultural production)?

In order to answer those research questions, the thesis employs elements stemming from four main bodies of knowledge: Marxist theory, contemporary art practice, information and communication technologies (ICTs), and economics. The combination of those fields is necessary not only because of the complexity of the questions posed, but also because of the transient nature of the subject matter of this investigation. The main part of the analysis conducted in this thesis is based on a particular historical conjuncture in the development of contemporary art. This conjuncture refers, firstly, to a specific set of events (the global financial crisis of 2008 and its aftermath) and, secondly, to the adoption and adaption of a specific medium-tool (the World Wide Web). With a view to addressing the challenges produced by this context of contemporaneity and hybridity, the thesis proposes a set of new concepts, which I shall outline in the next few pages. Those concepts collectively constitute a prominent contribution of this thesis to knowledge, in addition to its main – and more easily identifiable – contribution: the covering of an important thematic gap in the existing scholarship, which relates to the investigation of the impact of the global financial crisis on contemporary art.

The new terminology associated with the development of the proposed concepts is mainly introduced in the final chapter, and it includes the terms "pro-cybernetic localism", "post-net participation" and "Internet of Praxis". This vocabulary is employed in order to describe a new kind of public engagement with online and physical spaces, one which combines their unique characteristics in order to produce ideologically subversive artistic objects and cultural initiatives. In this context, the final chapter also reintroduces and refines the concept of "cybertopos" – a term that first appeared in scholarship in 2001, in an article by information and communication technologies theorist Jonathan Marshall titled "Cyberspace or Cybertopos: The creation of online space".[16] Although Marshall investigates in the article the relationship between cyberspace and physical spaces, the term "cybertopos" only appears in the title of his paper, thus completely lacking a definition. In the last chapter of this thesis, I provide a specific theoretical framework for "cybertopos", which becomes essential in my evaluation of the dual/hybrid spatial nature of Web-based art and its socio-political potentialities. To those terms, I would like to add the "distributed art object" of online reproduction, which is theorised as the successor of

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[16] Jonathan Marshall, 'Cyberspace or Cybertopos: The creation of online space' in *Social Analysis* (vol 45, no 1, Berghahn, New York 2001) pp. 81 – 102.

the mechanically reproduced and digital art objects, and contrasted with the singular-unique object that still dominates the mainstream art world. Finally, of particular importance is the proposition of "Data Capitalism" – a term that first appeared in scholarship in 2012, through the call for papers that was published by the Leonardo Electronic Almanac for its special issue titled "Red Art: New Utopias in Data Capitalism".[17] The issue was edited by Lanfranco Aceti, Susanne Jaschko, Julian Stallabrass and myself, and it was based on a session that I organised and convened at the 17th International Symposium on Electronic Art (ISEA), in 2011 (Istanbul, Turkey).[18] Furthermore, the term has been referenced by Julian Stallabrass in his 2013 essay "Elite Art in an Age of Populism".[19] Despite those early attempts to define its main characteristics, in recent years, "Data Capitalism" has been increasingly associated with a range of diverse concepts, including "Big Data",[20] the temporal experience of networks,[21] surveillance,[22] and the role of privacy regulations.[23] Those approaches have – at least partly – deprived the term from the economic context that it originally aimed to describe. The perspective that I adopt throughout this thesis aims to restore and enrich this context. All of the terms listed above, as well as other key terms and concepts that are crucial to my investigation have been included in the Glossary, which can be found at the end of the thesis.

The introduction and/or elucidation of those terms and concepts functions as an important tool for the fulfilment of a prominent gap in the existing scholarship. As I have already stated, this contribution refers to the study of the politically engaged Web-based art produced between 2008 and 2015, and, in particular, to its strong affinities with the various strands and legacies of Marxist thought. Notably, the previously described gap was only partly covered with the 2014 publication of the volume of the Leonardo Electronic Almanac that I initiated and co-edited. More specifically, because of the nature of the

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[17] 'Leonardo Electronic Almanac – Red Art LEA Call For Papers' (*Leoalmanac.org*, 2012) <http://www.leoalmanac.org/red-art-lea-call-for-papers/> accessed 10 April 2016.
[18] 'From New Media to Old Utopias' (*isea2011.sabanciuniv.edu*, 2011) <https://isea2011.sabanciuniv.edu/panel/new-media-old-utopias> accessed 10 April 2016.
[19] Julian Stallabrass, 'Elite Art in an Age of Populism', loc. cit.
[20] Steve Lohr, *Data-Ism* (Oneworld Publications 2015).
[21] Mark B. N. Hansen, 'The Operational Present of Sensibility' in *The Nordic Journal of Aesthetics*, No. 47 (Aarhus 2014) pp. 38 – 53.
[22] Ulrik Ekman and others (eds), *Ubiquitous Computing, Complexity, And Culture* (Routledge, London 2015).
[23] '13th ETUC Congress – Speech by Martin Schulz, President of the European Parliament' (*Europarl.europa.eu*, 2015) <http://www.europarl.europa.eu/the-president/en/press/press_release_speeches/speeches/speeches-2015/speeches-2015-september/pdf/13th-etuc-congress-speech-by-martin-schulz-president-of-the-european-parliament> accessed 10 April 2016.

publication as a selection of articles, reviews and visual essays from authors of different backgrounds and specialisations, it was not possible to provide a systematic mapping of the Web-based practices that have emerged since 2008. In addition, the realization of this intellectual exercise was not facilitated by the fact that the volume did not focus exclusively on online and Web-based art, but rather on a wide range of new media artworks, practices and cultural schemes.

The absence of those analytical elements characterizes the entire body of publications that have hitherto aimed at exploring the association of the global economic crisis with contemporary artistic practices. This becomes readily identifiable when we examine the scope of the most prominent of these publications, as well as the case studies that support their analyses. In late 2010, American artist, activist and writer Gregory Sholette published *Dark Matter: Art and Politics in the Age of Enterprise Culture.*[24] His book focuses on the subversive art practices that have emerged in the last three decades thanks to the development of inexpensive new media technologies. Sholette describes those practices as contemporary culture's "creative dark matter" – a set of anti-capitalist artworks and artistic initiatives that lie at the margins of the mainstream art world.[25] Although Sholette successfully identifies the important role of the Internet in the fruition of this ideological and artistic milieu, his book provides a more general overview of oppositional practices and their theorisation. As a result, it only tangentially explores the influence of the global financial crisis of 2008 on New Media Art (including Web-based art), drawing more attention, instead, to the mapping of key events in the historical evolution of global capital's structural crisis (e.g. by exploring the fiscal crisis of the 1970s, or contextualising the Argentinean economic collapse of 1999-2002). A very similar approach can be found *Global Activism: Art and Conflict in the 21st Century* (2015), which was edited by artist, curator and theorist Peter Weibel.[26] The book accompanied the exhibition *global aCtIVISm*, which was organised by the ZKM Centre for Art and Media, in Karlsruhe, between December 2013 and March 2014.[27] Just like the artists in the exhibition, the authors that were selected by Weibel for the book investigate a very wide range of connections between contemporary art and activism in the publication's 700 pages. More specifically, they explore ecological issues, gentrification, women's rights, legal issues as

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[24] Gregory Sholette, *Dark Matter: Art And Politics In The Age Of Enterprise Culture* (Pluto Press, London 2010).
[25] ibid., p. 1.
[26] Peter Weibel (ed), *Global Activism: Art and Conflict in the 21st Century* (MIT Press, London 2015).
[27] The exhibition's website: 'Global Activism' (*Global-activism.de*, 2016) <http://www.global-activism.de> accessed 6 December 2016.

well as the events that occurred in the context of the "Arab Spring". As a consequence, only a small part of the book relates to economic issues and the financial crisis of 2008; and even in that part, there is a limited focus on Web-based practices. Thus, although *Global Activism* successfully demonstrates the perceptivity of a significant part of the art world towards political struggles, economic inequalities and social divisions, at the same time, it underplays the role of the most powerful medium of the 21st century: the Internet.

Three years after the publication of *Dark Matter*, Gregory Sholette edited in collaboration with Austrian artist Oliver Ressler a book that addresses much more directly the context produced by the global financial crisis. Just like with Weibel's *Global Activism*, Sholette and Ressler's *It's the Political Economy, Stupid: The Global Financial Crisis in Art and Theory* (2013)[28] accompanied an exhibition under the same title, which was curated by the two editors and has travelled to various countries since 2011.[29] Sholette and Ressler included in the book contributions from various politically engaged artists and cultural producers, as well as essays of different lengths and formats by renowned theorists and philosophers, such as Slavoj Žižek, Judith Butler and David Graeber. The participating authors call for the proliferation of radical new art forms that are able to break the traditional boundaries between the production, dissemination and reception of art. This is particularly applicable to collaborative and communal works, which can employ a different artistic language in order to ultimately catalyse a different (art) world. Quite surprisingly, however, there are very limited references in the book to the contribution of the Internet to this "regenerative" process, and very few case studies to support the authors' stated aspirations in the context of networked societies. Therefore, the essays could be characterised as being much more speculative than analytical when it comes to the new art that has been produced since 2008.

In contrast to the predominantly contextual approach adopted by Sholette, Ressler and Weibel, new media theorists Tatiana Bazzichelli and Geoff Cox decided in 2013 to focus on the examination of specific anti-capitalist methodologies that have been espoused by artists in the aftermath of the global financial crisis. In their book *Disrupting Business: Art*

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[28] Gregory Sholette and Oliver Ressler (eds), *It's The Political Economy, Stupid: The Global Financial Crisis in Art and Theory* (Pluto Press, London 2013).

[29] The venues where the exhibition has been staged are: Open Space, Open Systems, Vienna, Austria (2011); Austrian Cultural Forum, New York, USA (2012); Centre of Contemporary Art, Thessaloniki, Greece (2012); Pori Art Museum, Pori, Finland (2013); Center for Cultural Decontamination, Belgrade, Serbia (2013); Gallery 400/University of Illinois at Chicago, USA (2013); Galerija Nova, Zagreb, Croatia (2014); NeMe Arts Centre, Limassol, Cyprus (2014); DAAP Galleries, University of Cincinnati, Cincinnati, USA (2016).

and Activism in Times of Financial Crisis,[30] the two editors and their contributors (amongst whom we find Oliver Ressler) explore how artists can appropriate capitalist business tools and strategies in order to develop alternative modes of cultural production. In this case, the speculation that is championed by *It's the Political Economy, Stupid* materialises as a practical agent that may subvert the political economy of the market, with a view to achieving much wider autonomy within new and/or parallel economic models. Nevertheless, the works-case studies employed in *Disrupting Business* use a wide variety of media; and even when artworks in online media are examined, the main perspective of the analysis is that of subverting the mechanics of corporate operations. This means that although several of Bazzichelli and Cox's contributors theorise the Internet as an influential anti-systemic platform or tool (e.g. Paolo Cirio; Geert Lovink and Nathaniel Tkacz; Dmytri Kleiner and Baruch Gottlieb; Heath Bunting), in the end, the book produces a rather fragmented and partial image when it comes to the exact nature and role of Web-based art in the post-crisis world. Finally, a similar position of disregard can be identified in the investigation conducted by art critic Yates McKee in his book *Strike Art: Contemporary Art and the Post-Occupy Condition* (2016).[31] As a collaborator of various post-Occupy groups, McKee's main objective is to highlight the relation of art to the radical politics promoted by Occupy. Starting from the active role of artists in the movement and the artistic/visual language produced in the context of its activities, McKee traces Occupy's (artistic) legacy in several activist groups (e.g. MTL, Not an Alternative, the Illuminator, the Rolling Jubilee and G.U.L.F.), in order to reach more recent initiatives, like Black Lives Matter. Once again, however, and despite the pivotal role of social media in the development of Occupy, the Internet is largely absent from McKee's analysis. Finally, it is worth noting that because of the subject matter of *Strike Art* and all of the books listed above, very few of the artists whose projects are examined in this thesis are referenced in them.[32]

Quite naturally, then, the process of covering the previously described scholarly gap constitutes an ambitious and, perhaps, risky intellectual exercise: as the reverberations of

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[30] Tatiana Bazzichelli and Geoff Cox (eds), *Disrupting Business: Art & Activism in Times of Financial Crisis* (Autonomedia, New York 2013)

[31] Yates McKee, *Strike Art: Contemporary Art and the Post-Occupy Condition* (Verso, London 2016).

[32] The most notable exception is Paolo Cirio, whose practice is included in *Global Activism: Art and Conflict in the 21st Century* and *Disrupting Business: Art and Activism in Times of Financial Crisis*, in which he is a contributor. Also, there are short references to post-2008 works an initiatives by W.A.G.E. (in *Dark Matter: Art and Politics in the Age of Enterprise Culture*, and in *Strike Art: Contemporary Art and the Post-Occupy Condition*) and Burak Arikan (in *It's the Political Economy Stupid: The Global Financial Crisis in Art and Theory*), while Dmytri Kleiner is one of the contributors of *Disrupting Business*.

the crisis are still spreading or – even – evolving, and as networked technologies are continuously advancing, the analytical focus of the investigation undertaken by this thesis may have to shift. Nevertheless, I believe that in spite of those challenges, this thesis constitutes a timely and necessary exercise. Firstly, it is necessary in order to identify and categorise for the first time the diverse Web-based political artworks and cultural initiatives that have emerged since the outbreak of the crisis. Then, it is necessary in order to explore the limitations and obstacles that those sets of practices have encountered, or may encounter in the future. And, finally, it is necessary in order to locate the aforementioned cultural products and methodologies within an increasingly fluid ideological spectrum, which itself requires – at least partly – redefinition. The latter stage of this study will allow us to not only explore the future of politically engaged Web-based art, but also to systematise the ideological potentialities of networked communication at large.

Mapping Utopian Art: Alternative Political Imaginaries in New Media Art (2008-2015)

The first chapter of this thesis, titled "Creating (in) Data Capitalism: New Art for a New Economy?", embarks on the previously described investigation by elaborating on the methodological basis on which its main hypotheses and assertions will be grounded. More specifically, the chapter identifies the subject matter of the thesis as an "intersection" between the evolutionary paths of Late Capitalism and contemporary art. Accordingly, the analysis of the methodology begins with the theorisation of Data Capitalism as an economic system whose main raw material and output is programmable information (data). The main catalyst for the rise of this new phase in the evolution of our globalised economic system has been the development of the World Wide Web, which gradually altered the balance in the principal agent of economic expansion from consumption to production (user-generated data and content). However, the system's overdependence on data, as expressed through the algorithmic control of the economy, has been a prominent cause of the global financial crisis (e.g. through high-frequency trading). Notably, alongside the quantification of everyday life due to widespread processes of datatization, they constitute two of the main elements against which Web-based cultural producers reacted after 2008. Yet, this reaction did not occur within a cultural "void". By the outbreak of the crisis there was already an important tradition of New Media Art practices on whose basis cultural

producers could create new politically engaged artworks and projects. As the chapter explains, this tradition begins with tactical media artists and their diverse interventions in public spaces, which expressed a strong critique of the political, economic and cultural order through temporary disruptions to urban life. The second and most important tradition stems from net art, which emerged in the mid 1990s, as Internet access and applications were rapidly spreading. Post-crisis cultural producers have had the opportunity to build on the rich legacy of artists who have worked on the Internet by exploring its radical political potentialities. Finally, it is worth noting the significant contribution of online activist platforms that have taken advantage of the new potentialities opened by Web 2.0 in order to influence public opinion on a truly global scale. Thanks to the focused "issue-based" approach of those artistic practices and alternative channels of public advocacy, a fertile online ground for the revitalisation and promotion of anti-capitalist ideas was already in place by 2008.

The second chapter of the thesis explores the theoretical framework under which we could bring together Web-based art and the re-activation of political utopianism that followed the crisis ("Utopia Distributed: The Organic Connections of the Internet with Communist Thought"). More specifically, the chapter identifies communist thought and its multiple traditions as the unifying agent for the evolutionary paths of the economy and culture that have been described above. This agency is delineated by revealing the Internet's "organic" connections with communist utopianism, through an examination of the work and legacy of Walter Benjamin. The chapter begins with an analysis of the role of utopianism in Western political philosophy during the two decades that preceded the global financial crisis and followed the Fall of the Berlin Wall (1989). Despite the anti-utopian spirit defining this period, utopia managed to survive in the Western public sphere, ultimately finding an ideal catalyst for its proliferation in the events of 2008. As a result, the ideological annulment of the anti-utopian rhetoric exemplified by thinkers like Francis Fukuyama and John Gray has been accompanied by the re-emergence of questions around the role of grand narratives in the post-crisis world, including the potential of communism. The thesis employs Walter Benjamin's study of Immanuel Kant in order to approach such questions. More specifically, the chapter draws connections between Kant and Benjamin's shared interest in the notion of "justice" and Benjamin's work in the field of art under the influence of Marx. The thesis claims that the main element that links those two aspects of Benjamin's work is "possession" – a capacity that is negated in the case of art through the art object's mechanical reproduction. In today's context, digital and online reproduction

constitute capacities that defy to an even greater extent the power of aura and historicization. The passage from the singular-unique to the "distributed" art object, and from an "auratic" to a more democratic mode of cultural production becomes, as a result, a natural means for the formulation of new revolutionary demands that focus on the power of "here-and-now" ("jetztzeit" in Benjamin's work). Those potentialities are further highlighted in the final part of the chapter, through the examination of two significant reinterpretations of Benjamin's work in the context of the Internet Age: *The Work of Art in the Age of Digital Reproduction* (1995) by Douglas Davis, and *Engineering Culture: On 'The Author as (Digital) Producer'* (2005) by Geoff Cox and Joasia Krysa. The comparison of the two texts reveals not only the continuous relevance of Benjamin's revolutionary assertions to the development of the Internet as a cultural milieu, but also its transformation into a much more personal and, thus, political tool of expression, which requires a deeper sense of social agency and responsibility from its users.

The third and fourth chapters constitute the "core" of this thesis, as they examine the responses of artists, collectives and cultural institutions to the global economic crisis ("Diagnosing the Crisis: Deconstruction and Protest" and "The Rise of Radical Institutions: Towards Alternative Modes of Socioeconomic Being", respectively). They jointly propose an inclusive "navigation map" whose aim is to systematise the anti-capitalist Web-based art that has been produced between 2008 and 2015. For the construction of this "map", both chapters adopt the point of view of the artists, as this has been expressed in the descriptions of their artworks, their practice statements, manifestos, articles, academic papers, public talks and interviews. Through the combination of such sources, the thesis is able to highlight the artists' utopian language and theorisation, with a view to identifying, connecting and, finally, categorising their common goals, aspirations and dreams. The latter may be expressed through the adoption of practices that denounce capitalism, practices that dismantle its economic and ideological functions, and – finally – practices that propose alternatives.[33] As it will be indicated, those modes of anti-capitalist resistance often co-exist within the same artworks, which explicitly or implicitly reference the legacies of Marxist thought. In order to materialise their resistance, the works that are analysed employ a variety of tools, including the use of hacktivist methodologies, the adoption or inception of digital currencies, the establishment of hackerspaces, and the re-appropriation and activation of public spaces as manifestations of the commons. At the

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[33] Valentina Montero Peña and Pedro Donoso, 'Dissent and Utopia: Rethinking Art and Technology in Latin America' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac* vol. 20, no 1 (Leonardo/ISAST, San Francisco 2014) p. 137.

same time, other artworks and artistic initiatives share a predominantly conceptual and issue-based approach. Accordingly, such projects focus on ideas and phenomena like immaterial labour, the formation of an online proletariat, the devalorization and the underfunding of the arts and culture in the period that has followed the global financial crisis, and the development of strategies for reimagining and reconstructing the state. Through the synthesis of those tools and concepts, new media artists have attempted to catalyse the re-emergence of revolutionary political thought and action as an attainable and realistic objective that could lead to social transformation.

The element that distinguishes the two chapters is the extent to which artists are willing to not only dismantle and denounce Data Capitalism, but also to move towards its replacement through the articulation of a new economic, social and political system. Accordingly, in the third chapter, my investigation will produce a mapping of artworks and projects that have a considerably "diagnostic" approach. This is expressed through works that systematically deconstruct the modus operandi of Data Capitalism and protest against its multiple social ramifications. The overall goal of those practices is to activate the political consciousness of citizens and help them to develop a much deeper understanding of their class position. The aforementioned artworks and cultural initiatives will be followed, in the fourth chapter, by a larger body of projects, whose focus becomes the gradual formulation of much more practical propositions. Such proposals constitute the core preoccupation of the practices of cultural producers who aspire to establish new modes of socioeconomic being. The latter are actively promoted by their initiators as viable alternatives to the capitalist economic model and the social, political and cultural conditions that it produces.

The fifth chapter of the thesis attempts to locate the main obstacles that may hinder the ability of the previously analysed artistic projects to materialise their socio-political ambitions ("Between Myth and Reality: The Limits of the Political Web"). More specifically, the chapter considers the multiple ways in which some of the main economic, political and cultural agents related to Data Capitalism have been in a position to exert pressure and restrict the utopian impulse that was born in the Internet following the crisis. Those agents include the various institutions and instruments associated with the contemporary art market, such as commercial galleries, auction houses, art fairs, biennials, collectors and museums, and their expanding relationship with the Web; social media platforms and their corporate networks; online mega-corporations, such as Web portals, search engines, cloud computing companies and electronic retailers; financial institutions and fiscal policy

bodies, including commercial banks and Central Banks; and, finally, governments and transnational institutions with regulatory powers over the Internet. Accordingly, the chapter will suggest that the all those agents have been able to exert strong practical as well as ideological "pressure" on the Internet by appropriating and/or manipulating to a considerable extent the very tools that are employed by politically engaged artists and cultural producers. This capacity has been evident in phenomena such as the commercialisation of the Web and online art; the rise of online corporate monopolies; the development of modes of online disinformation and censorship; and the fierce institutional control of the Internet's architecture on a national as well as a transnational level. All of those obstacles have the capacity to radically delimit the effectiveness of online anti-capitalist initiatives, including the capacities of Web-based art across its various methodologies and concepts as set out in chapters three and four.

The sixth and final chapter of this thesis attempts to produce a holistic evaluation of the projects analysed or referenced in chapters two and three, on the basis of Marxist and post-Marxist thought ("Changing a Changing World: Art Within Endless Crisis"). Firstly, the chapter adopts as its assessment criterion Marx's writings, and more specifically *The Communist Manifesto*, before embarking on a consideration of the writings of post-Marxist thinkers whose work has focused on the ideological nature of new media technologies. The thesis identifies the incapacity of those diverse ideological traditions to fully capture the scope of Web-based post-crisis art, proposing, in addition, an investigation into the ideological space between denationalised liberalism and global governmentality. Furthermore, the chapter elaborates on the systemic ideological impasses produced by Data Capitalism, which are directed against the sustainability of revolutionary political thought in all of its expressions. More specifically, the thesis makes the proposition that we live in a "Society of Non-Spectacle" in which the procedural sublimity generated by networked media has led to the cultivation of a "gamified" and, thus, highly uncritical public sphere. The latter is increasingly determined by an abstract perspective on the social body's function and potentialities, which is exemplified by the counter-productive intellectual devices like the multitude. Finally, the chapter identifies the opportunities for socioeconomic change engendered by the political Web-based art of the crisis, which may help us to develop a new understanding of networked communication at large. In this context, the thesis recognizes the need for the cultivation of a new, more strategic approach to the relationship between cyberspace and physical space, which is synopsised in the notion of "cybertopos". The materialization of this relationship requires the activation of

physical space's distinct traits through *and* in parallel to the use of networked media. Accordingly, the development of a culture of "pro-cybernetic localism" could function as an antidote to the depoliticised conception of networked media that characterises many of today's technology-driven discourses (e.g. "Internet of Things" and "Internet of Places"). Such approaches should be replaced by the proposition for an "Internet of Praxis", within which the ethos of "post-net participation" that emerged from the crisis' social and artivist movements could flourish. The subject of "post-net participation" is a "value-driven demos", whose scope lies beyond the largely "theological" theorisation of the multitude that still dominates leftist thought. In contrast to this view, the praxes of the new "demos" should be directed against the Web's powerless socialisation (e.g. in the form of social media), which ultimately functions in favour of Data Capitalism's process of accumulation. The Web-based art of the future could capitalise on the lessons learnt from the crisis and embrace a new context of socialisation, which could provide a fertile ground for the alternative political imaginaries stemming from the Marxist tradition.

Chapter 1

Creating (in) Data Capitalism: New Art for a New Economy?

Towards a New Economic Paradigm

In the *Manifesto of the Communist Party* (1848), Karl Marx and Friedrich Engels famously describe, with remarkable precision, the complex technological, economic, political and social conditions, which 150 years after the publication of their work, we came to call "globalisation". The two thinkers begin their analysis by specifying the basic elements on which the production model of a globalised economy would be based:

> All old-established national industries have been destroyed or are daily being destroyed. They are dislodged by new industries, [...] by industries that no longer work up indigenous raw material, but raw material drawn from the remotest zones; industries whose products are consumed, not only at home, but in every quarter of the globe. In place of the old wants, satisfied by the production of the country, we find new wants, requiring for their satisfaction the products of distant lands and climes.[34]

Marx and Engels go on to elucidate the consequences of globalisation, underlining the interdependence of all nations – a condition that incorporates both the material and the immaterial or intellectual mode of production. Within this environment of interconnectivity, it becomes practically impossible to adopt a one-sided perspective on transnational issues, since what happens at one part of the world can influence significantly and at a great speed what happens at other places. The improved means of communication are the key agent that facilitates this process both on a practical as well as on an ideological level. Notably, those means of communication allow the bourgeoisie to promote on a global scale not only a specific economic model, but also a cultural model – a particular interpretation of what constitutes human civilisation.

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[34] Karl Marx and Friedrich Engels, *The Communist Manifesto* (Pluto Press, London 2008) pp. 38-39.

In today's world, Marx and Engels' 19th-century vision of interdependence and interconnectivity might have been realised to a considerable extent; however, the means of communication that have been developed in the meantime constitute much more than propaganda tools. More precisely, contemporary communication technologies lie at the "hard core" of an unprecedentedly globalised economic system, whose vision of constant growth depends almost entirely on the production and reproduction of communication's very content: information. In the global economy of the 21st century, some of the most financially powerful corporations sell information rather than material goods, whilst basing their activities exclusively in the immaterial realm of cyberspace (e.g. Google). At the same time, user-generated information produced online drives the expansion of the most socially and culturally influential corporations that the world has ever seen (e.g. Facebook, YouTube and Twitter). And, finally, global financial markets rise and fall as a result of the spread of information on real-time networked mass media. Notably, this financial modus operandi is combined with the adoption of speculative trading practices, which are defined by the new nature of information as a quantifiable commodity (datatization). Of course, this is not the first instance in human history in which information has been recognised as having the capacity to give birth to other information, which, in turn, may generate wealth – private, or public.[35] However, as art writer and critic Julian Stallabrass notes, it is the first time that we see a dialectical synthesis of the notions of production and reproduction, as new technologies bind them together irrevocably.[36] As I will indicate, over the last three decades, the global domination of capitalism and the advent of networked technologies have together nurtured the conditions for the rise of a new kind of economic paradigm, in which the production and reproduction of data appear to be by themselves capable of sustaining the system. The rise of Data Capitalism could be understood as the global establishment of this mode of production, whose main raw material *and* output is programmable information (data).

Within this system, the Internet constitutes the most important streamline for the practically incommensurable flows of information, which engulf all aspects of our lived experiences: from work to leisure, from one continent to another, from one device to another, and – most importantly – across most social groups and classes. Nevertheless, in

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[35] On a basic microeconomic level, we could claim that private education constitutes such a case. This can be traced back to Classical and Hellenistic Greece, and the tuition fees paid by aspiring civil servants, political leaders and public orators to prominent philosophers, like Protagoras and the Sophists.

[36] Julian Stallabrass, 'Elite Art in an Age of Populism' in Alexander Dumbadze and Suzanne Hudson (eds), *Contemporary Art: 1989 to the Present* (John Wiley & Sons, Oxford 2013) p. 9.

spite of the immaterial streamline's impressive volume and reach, its actual complexity does not reside primarily in those two quantifiable traits, but, rather, in the hybrid nature of its "source". The latter can be traced to the fact that we are not merely users of information anymore – we are also producers. As prosumers of new media technologies and products (producers and consumers at once),[37] we have developed a radically different relationship with the means of communication, as our immersion in them becomes much more multifaceted in terms of our emotional involvement *and* our role as economic agents. Both of these aspects are dependent on a new mode of economic instrumentation that sees Internet users "engage in permanent creative activity, communication, community building and content-production".[38]

As a consequence of this context, we proactively seek for information-data that will enable us to produce new data, whose quality should be deemed "satisfactory". This satisfaction is not merely the goal of a demanding consumer, but also the objective of an individual who might wish to sell – directly, or indirectly – the product of his activity, thus *actively* lending to it an economic function. For instance, a user might decide to sell in an online store an e-card that he designed by manipulating one of his holiday photos with the help of a piece of software like Photoshop. And, the owner of a local store may develop a stronger presence on social media platforms in order to attract more friends and followers, who might, then, become customers of his business. Nevertheless, the most important part of capital accumulation under Data Capitalism can be attributed to the role of Internet users as *passive* producers of data. Given that we individually and collectively create patterns through our online behaviours, the data gathered and analysed from those behaviours become financially exploitable products for online corporations – for instance, through the utilization of personalised marketing tools. Therefore, given that almost the totality of our activities is in a position to leave a "trace" on networked media, it is the totality of our lives that becomes exploitable in the context of Data Capitalism's "productive consumption".[39] In other words, within the "prosumer merger" that we have described above, the most important economic agent is the producer, not the consumer. This context constitutes a radical shift from all previous phases of the capitalist paradigm, which

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[37] The term "prosumer" was coined by futurologist Alvin Toffler, and first appeared in his book *The Third Wave* (1980). More recently, "prosumer" has also been employed in the context of describing the buyers of high-end electronic products (e.g. digital cameras), which approximate the capacities of professional equipment. In this case, "prosumer" is the combination of the terms "professional" and "consumer". For an early study of the latter interpretation of the term, see: Philip Kotler, 'Prosumers: A New Type of Customer' (1986) *Futurist* September - October pp. 24-28.
[38] Christian Fuchs, *Digital Labour and Karl Marx* (Routledge 2013) p. 100.
[39] Harry Cleaver, *Reading Capital Politically* (Anti/Theses, Leeds 2000) p. 123.

focused on the proliferation of consumption as the main means for achieving economic expansion.

The Rise and Fall (?) of Data Capitalism

However, as Marx and Engels have also predicted in *The Communist Manifesto*, the capitalist world of interdependence and interconnectivity is doomed to ultimately fall into a deadly spiral of crises. As the two authors argue, bourgeois society conjures up gigantic means of production and exchange, which – at some point – become impossible to control. More specifically, the perpetuation of the relations of production, exchange and property, on which the established class structures are based, necessitates a greater and quicker consumption of the economy's production forces. Nevertheless, such a function cannot be supported by the socioeconomic system, which struggles to keep up with the required intensity of the consumption. Accordingly, the capitalist society ends up resembling a "sorcerer who is no longer able to control the powers of the nether world whom he has called up by his spells".[40] As a result of this incapacity, an epidemic of over-production occurs, to which the bourgeoisie responds in two distinct, yet interconnected ways: "On the one hand by enforced destruction of a mass of productive forces; on the other, by conquest of new markets, and by the more thorough exploitation of the old ones".[41] However, in reality, this reaction only paves the way for new crises, which are more extensive and even more catastrophic. This deterioration can be readily explained if we take into account the fact that the means through which the crises can be prevented, or "resolved", decline every time that a further destruction of productive forces, a further market expansion, or a further measure of exploitation of an existing market is applied. Consequently, according to the manifesto, the gradual collapse of the system appears inevitable. Today, the mode of production might be considerably different from the one that Marx and Engels had experienced during their time, and on which they based their prediction. Nevertheless, the two thinkers have been able to successfully identify that it is not the implementation of the capitalist model that has the capacity to ultimately bring the system to a collapse, but rather, its very architecture.

The "epidemic of over-production" that Marx and Engels describe in their manifesto is, in today's economic environment, an epidemic of *data* over-production. However, in

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[40] Marx and Engels, *The Communist Manifesto*, op. cit., p. 41.
[41] ibid., p. 42.

contrast to the case of physical products that remain unconsumed, the data that we are producing today can be stored, preserved and used at any given time. Therefore, their over-production does not mainly refer to their quantity, but rather to the amassing of the "wrong" kind of data. The adjective "wrong" denotes data that cannot be "productive", because of the fact that they bear no connection with the real traits of the economy. In order to comprehend this complex quantitative *and* qualitative condition, we need to consider the fact that within a thoroughly immaterial production system, value is not based on physical reality anymore; rather, it is based on projections, expectations and assumptions, which are epitomised in the function of the financial markets. This mode of speculation is inherent in today's financialized economic model. For instance, Facebook's financial value in the summer of 2014 was 192 billion US dollars – namely, a staggering 128 times higher than its reported annual profits.[42] Such a valuation completely defies traditional economic logic, which entails that the actual value of a company should be calculated as a relatively modest multiple of its annual profits – usually no more than 7 to 8 times this profit. The question that naturally arises here is on the basis of what kind of information-data do we project that Facebook will have in the future such strong profitability that it would be in a position to justify its current valuation? Quite evidently, the real economy is incapable of informing this kind of long-term hypothesis and, thus, feeding evaluative models with "real" data becomes a challenge. In other words, the gap between what the model requires and what the real economy is in a position to generate in the form of data produces a "natural" environment of speculation. Therefore, the under-consumption disparity in Data Capitalism is a qualitative rather than a quantitative matter, as data that should have originated from the real economy are replaced in financial models by data that have been projected by *other* models. Data Capitalism is thoroughly delineated by this *self-referential* architecture.

Thus, in order to analyse in more depth this multifaceted economic context, it is necessary to, first of all, define the epidemic of Data Capitalism more accurately; for, it constitutes not only a problem of data over-production, but also a symptom of data over-dependence. On an elemental level, this set of conditions can be attributed to the procedural nature of wealth accumulation under Data Capitalism, which is inextricably connected to the fact that computational processes are now the rule in all types of human activities (either directly, or indirectly – explicitly, or implicitly). As a result, our economic

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[42] James Ball, 'Facebook Worth 128 Times Its Profits? That's beyond Optimistic – It's Euphoric' *The Guardian* (25 August 2014) <http://www.theguardian.com/technology/2014/jul/25/facebook-valuation-billions-market-buy-sell-profit> accessed 21 March 2016.

practices have also developed strong computational characteristics.[43] More specifically, algorithms and bots[44] determine the decisions made within financial markets, and the same decision-making context applies increasingly to the actions through which other economic agents (e.g. states, companies, individual investors, etc.) may respond to market-related developments and their consequences. One might assume that this is a process of optimisation, in which the insufficiencies and bias of the human factor are minimised, or overcome altogether. However, as sociologist Donald Mackenzie notes, in reality, "market design is a political matter",[45] and this entails that the computational tools that are employed by the markets also display political characteristics. Those political elements become salient if we consider that financial modelling is a thoroughly inscriptive process, in which the computer models that are developed "act on economic situations as much as describe them".[46] In other words, although individual aspects of the decision-making process might follow the principles of statistical modelling, which is based on the formulation of clear assumptions and randomness (e.g. gathering data on the factors that may influence currency exchange rates), the overall system can be characterised as deterministic in terms of its objective (e.g. the manipulation of currency rates' fluctuations in order to generate profit by instantly exchanging large amounts of money from one currency to another).

The deterministic nature of this process is accentuated further if we additionally consider the fact that the "clear assumptions" on which financial models are based also display ideological rather than mathematical, or scientific characteristics. For instance, the assumption that we will be in a position to maintain, or – even – increase, the current level of exploitation of a particular natural resource may completely ignore the environmental and, accordingly, socio-political ramifications of the hypothesis. Most importantly, however, such an assumptive context applies not only to financial modelling, but also to the models that may determine public economic policies. Over the last three decades, such policies have been increasingly dependent on financial markets and their fluctuations – for instance, through the financial assets included in the portfolios of pension funds, or as an "antidote" to crises, like the 2008 bail-out of several "too big to fail" banks by sovereign

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[43] Geert Lovink and Nathaniel Tkacz, 'Friends with Money' in Tatiana Bazzichelli and Geoff Cox (eds), *Disrupting Business: Art & Activism in Times of Financial Crisis* (Autonomedia, New York 2013) p. 179.

[44] Bots are software applications that run automated scripts online in order to perform specific tasks.

[45] Donald A MacKenzie, *Material Markets: How Economic Agents Are Constructed* (Oxford University Press 2008) p. 32.

[46] Lovink and Tkacz, op. cit., p. 180.

states. Interestingly, this context of public policy-making can have direct connections with the formation and/or the perpetuation of socioeconomic classes. For example, the hypothesis about what is the minimum cost of life in a specific country impacts the way in which economic models determine what might constitute an "appropriate" national living wage. Based on this assumption, a redistribution of wealth can take place, which may be directed either towards the most vulnerable strata of society, or towards the most privileged classes. In conclusion, we could synopsise the nature of Data Capitalism's financial models by highlighting three major characteristics: Firstly, the decisions made by a given model always follow the same direction, with a view to achieving a specific objective. The latter cannot be "neutral", as there are always ideological characteristics that define both its logic and its social impact. Secondly, the models are fully automated through the computerisation of their function. And, finally, the models execute all decisions in fractions of a second ("high-frequency trading").[47] Consequently, the human agent is not only excluded from this process, but, also, appears incapable of intervening in any meaningful way, as its exclusion is thoroughly structural – not incidental.

Unsurprisingly, the social implications of the previously described financial conditions can be traced back to the elemental fact that financial "traders' primary relationship is with screens and other telecommunication devices"[48] – not with the instruments and situations that express the real economy. As it has already been indicated, this means that the "post-human" character of financial markets becomes "post-social", for there is a gap between model-based assumptions and projections, and physical reality. Nevertheless, the deterministic and "post-social" nature of the modelling process is in a position to cause serious problems, even *before* having any impact on the real economy. This danger is exemplified by the category of market events called "flash crashes", which may occur in the context of high-frequency trading. Flash crashes can be described as the

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[47] The goal of high-frequency trading computer models is to capture very small amounts of money on every trade that they execute – practically, a fraction of a penny. Traders move in and out of short-term positions in equities, futures, options, currencies, etc. several times during the same day. As a result, their small gains per trade accumulate quickly and by the end of the day they may report large profits. Notably, even three years after the outbreak of the crisis (2011), high-frequency trading accounted for more than 60% of all stock trading and 30%-40% of the futures market. Most importantly, high-frequency trading firms have proved very active in the area of lobbying through political contributions, with a view to securing their modus operandi and overall market influence.
See: 'High-Frequency Lobbying' *The New York Times* (18 July 2011) <http://www.nytimes.com/imagepages/2011/07/18/business/18fasttrade_g.html> accessed 21 March 2016.
[48] Lovink and Tkacz, op. cit., p. 180.

result of algorithms working exactly as programmed, but in financial conditions that have not been predicted by their creators. Two of the most notable cases of such events were reported at the New York Stock Exchange in 2010, and at the Singapore Exchange in 2013.[49] In the case of the American Stock Exchange, 1 trillion US dollars were "lost" in the value of US equities within just 36 minutes on 6 May 2010.[50] The fluctuation was so significant that the "Dow Jones Industrial Average (DJIA) experienced the biggest intraday point decline in its entire history".[51] And, in the case of Singapore, the flash crash "deadlock" continued for three days in October 2013, resulting in a loss of 6.9 billion US dollars in the Exchange's capitalization.[52] Despite the fact that there is still no clear image regarding the exact sequence of the events that unfolded during those two flash crashes, there is a general consensus in the relevant scholarship that high-frequency trading played a crucial, if not the most important role.[53] At the same time, the role of high-frequency trading was combined with important weaknesses in the trade-reporting infrastructure of Exchange markets, which high-frequency traders have exploited.[54] This framework suggests that in the case of flash crashes we are not are faced with a computational failure, but rather with a *logical* failure, which occurs due to our incapacity to project all possible financial situations through the models that we construct.

The previously described departure from logic is, in fact, a systemic feature of Data Capitalism, which defies the rationality of "homo economicus" – a key principle of neoclassical economics.[55] However, this particularity of Data Capitalism can be thoroughly

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[49] On Tuesday 25 November 2014, two smaller flash crashes were reported at the NYSE. Other types of technical glitches have also been accused for the extreme fluctuations of individual stocks, or for problems in the function of Exchange markets, like – for instance – in the case of the closure of the Chicago Board Options Exchange on 25 April 2013.

[50] Andrei Kirilenko and others, 'The Flash Crash: The Impact of High Frequency Trading on an Electronic Market' (*Cftc.gov*, 2014) <http://www.cftc.gov/idc/groups/public/@economicanalysis/documents/file/oce_flashcrash0314.pdf> accessed 21 March 2016; and Stephen Grocer, 'Senators Seek Regulators' Report on Causes of Market Volatility' *Wall Street Journal* (7 May 2010).

[51] ibid.

[52] 'Singapore Exchange Regulators Change Rules Following Crash' *Singapore News* (3 August 2014) <http://www.singaporenews.net/index.php/sid/224382417/scat/a677a0718b69db72/ht/Singapore-Exchange-regulators-change-rules-following-crash> accessed 21 March 2016.

[53] Kirilenko and others, loc. cit.

[54] Eric M Aldrich, Indra Heckenbach and Gregory Laughlin, 'The Random Walk of High Frequency Trading' [2015] *Social Science Research Network* <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2481201> accessed 21 March 2016.

[55] According to the traditional economic paradigm, "homo economicus" ("economic man") is the figurative human being characterized by the infinite ability to make rational decisions. Those decisions are based on his ability to choose the optimum out of all possible alternatives by gathering and constantly updating all available information. Homo economicus is able to consider

explained if we theorise the system and its crisis through the lens of Behavioral Finance – namely, by taking into account the influence of psychological, social, cognitive, and emotional factors on the decisions of financial agents. In the case of financial markets, this is synopsised in the notion of "what the market thinks" – the herd behaviour of the mass of investors. As political economist Christian Marazzi asserts, "In financial markets, speculative behaviour is rational because the markets are self-referential. Prices are the expression of the action of collective opinion, so the individual investor does not react to information but to what he believes will be the reaction of the other investors in the face of that information".[56] Notably, Marazzi's analysis is supported by empirical evidence provided by the financial markets' impressive "back-and-forth swings" in August 2008. However, the most important, perhaps, element that links this behaviour to Data Capitalism as a new economic paradigm is the role of information. The French economist André Orléan, a pioneer of the theory of self-referential finance, has underlined that once investors adopt a herd behaviour, communication becomes a key ingredient in the function of the market and, thus, of today's economy as a whole.[57] Investors and other economic agents need information (data) in order to be able to speculate on what might happen next. Yet, given that the distinction between the financial sphere and the real economy sphere has collapsed, and the inscriptive character of algorithmic models, speculation can readily lead to speculative bubbles. Marazzi synopsizes this context by noting that "For companies listed on the stock exchange, the centrality of communication certainly leads to economic distortions, in that the self-referentiality of the markets exposes them to the risks of volatility in the markets, originating from factors which have nothing to do with productive rationality".[58]

This systemically embedded lack of control has been one of the main features of the global financial crisis of 2008 and the period that has followed it. The ongoing economic turmoil in the Eurozone and in other parts of the world, and the asthenic growth of the global economy in comparison with the pre-crisis era may be seen as the results of a set of

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all the consequences of his actions and only makes decisions that maximise his self-interest, beyond emotions or any external system of beliefs. Finally, homo economicus dislikes risk.

[56] For a thorough analysis of Orléan's approach to the crisis, see: André Orléan, *The Empire Of Value* (The MIT Press, Cambridge MA 2014).

[57] Christian Marazzi, 'Conventions and disruptions' in Riccardo Bellofiore and Giovanna Vertova (eds), *The Great Recession And The Contradictions Of Contemporary Capitalism* (Edward Elgar, Cheltenham 2014), p. 89.

[58] ibid.

systemic failures that *still* remain out of control.[59] Notably, this context of prolonged uncertainty has catalysed strong socio-political reactions around the globe, which have been expressed by different electorates and social groups as a demand for radical change. For instance, in the Eurozone area, all governments that signed loan agreements and "bail-out" memoranda with the International Monetary Fund (IMF) and the European Central Bank (ECB) did not survive for long the pressures of austerity and lost their majorities in national elections. At the same time, politicians with socialist agendas have gained ground not only in the crisis-hit countries of the Eurozone, which have displayed a high degree of political volatility since the outbreak of the crisis, but also in countries that have had traditionally strong political establishments, with considerably conservative ideological characteristics. In the last few years, relevant cases have included the rise of Senator Bernie Sanders as the runner-up for the Presidential nomination of the Democratic Party in the US, and the double election of Jeremy Corbyn as the leader of the UK's Labour Party, though an open voting process. Most importantly, perhaps, the impressive emergence of new social movements in the aftermath of the crisis, such as "Occupy Wall Street" (USA), "Indignados" (Spain) and "Aganaktismeni" (Greece), has reflected the need of large parts of our societies to find alternative modes of socioeconomic being, which would be in a position to successfully control the financial system and prioritise social over economic demands.

Those aspirations and the left-wing political agendas within which they are located have displayed important "pre-revolutionary" characteristics, as they have been regularly directed against *structural* elements of Data Capitalism. Those include components such as the algorithmic control of the economy and the quantification of everyday life through a process of constant datatization. The latter entails that all types of information are "translated" into readable, sharable and comparable data, which can, then, be used in financial modelling. Reacting to such practices, and alongside the various phenomena of social unrest and political disobedience that the world has experienced since 2008, the aforementioned political developments have been able to produce a context of class polarisation with explicitly subversive potentiality at times. In the following chapters of this thesis we will explore the influence of this political climate on culture, in the form of

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[59] International Monetary Fund, 'Report for Selected Country Groups and Subjects' (*Imf.org*, 1 April 2015)
<http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/weorept.aspx?pr.x=21&pr.y=15&sy=2006&ey=2016&ssd=1&sort=country&ds=.&br=1&c=001%2C110%2C163%2C200&s=NGDP_RPCH&grp=1&a=1#download> accessed 21 March 2016.

Web-based art. However, the economy is only the first of the two principal factors that have determined the character of Web-based art produced after the crisis. The second factor has been art itself and, more specifically, the rich tradition of artistic practices and movements that have been inspired by alternative political imaginaries. In all probability, the most prominent of those traditions during the last century has been the amalgamation of revolutionary political thought and cultural production that was catalysed by the seminal events of October 1917 in Russia – the Bolshevik Revolution. By using this historical synthesis as a starting point, we will use the second part of this chapter in order to develop a more solid understanding of the cultural and ideological basis that has shaped the political Web-based works of the post-crisis era. Finally, this investigation will be further developed and expanded in the next chapter, in which we will explore a third, "underlying" factor: the philosophical framework that organically brings together Web-based art and communist utopianism.

Art of the Revolution and the Revolution of Art

The aftermath of the Great October Socialist Revolution[60] was an unprecedentedly dynamic period for all artists, designers, architects, theorists and writers who aimed to build a new relationship between art and everyday life through the integration of the one into the other.[61] The People's Commissariat of Enlightenment – the Soviet Ministry of Culture[62] – encouraged artists to celebrate the Revolution and reinvent art by bringing their work out of their studios and into public space: in the central squares, the parks and the streets of towns and cities, and on the facades of prominent public buildings.[63] Interestingly, Lenin insisted that post-revolution monuments should not reflect merely the Russian history; rather, they should adopt an overtly internationalist approach, which would evoke the universal character of socialism and its founding principles. Accordingly, the list of the historical figures that artists memorialized in their newly built monuments started from antiquity and heroes who had fought tyranny, like Spartacus, Gracchus and Brutus; and it

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[60] The "Great October Socialist Revolution" has been the official name used by the Soviets. See: Vladimir Il'ich Lenin, *On The Great October Socialist Revolution* (Progress Publishers 1967).
[61] For a more extensive study of the Russian avant-garde art, see: Catherine Cooke, *Russian Avant-Garde* (Academy Editions 1995).
[62] See: Sheila Fitzpatrick, *The Commissariat of Enlightenment: Soviet Organization of Education and the Arts under Luncharsky, October 1917-1921*, (Cambridge University Press 1970).
[63] Syrago Tsiara, 'Utopia and Reality in the Art of the October Revolution' (2008) *Historein* vol. 7 pp. 87 – 88.

reached much more recent revolutionaries, like German communist martyrs Karl Liebknecht and Rosa Luxemburg. In between, one could spot the Italian national hero Garibaldi, the English utopian socialist Robert Owen, the French utopian theorists Charles Fourier and Saint-Simon, as well as cultural figures such as Heinrich Heine and Frédéric Chopin.[64]

At the same time, the windows of the offices of the Russian Telegraph Agency (ROSTA) became innovative information channels, as they featured regularly changing illustrations of the latest social and political events. Furthermore, art was travelling around the country through propaganda trains and lorries, which were painted with revolutionary slogans and images. In addition, those means of transport were distributing posters and books, as well as playing selected speeches by Lenin on their loudspeakers.[65] However,

Figure 1: Agitprop train (1919)

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[64] Richard Stites, *Revolutionary Dreams: Utopian Vision and Experimental Life in the Russian Revolution* (Oxford University Press, USA 1988) pp. 89-90.
[65] Tsiara, loc. cit.

lorries and trains were not the sole products of industrialisation that were perceived as both literal and metaphorical vehicles for the dissemination of socialist art. Technological advances, like the improved means of transportation, and the new modes of centralised production were widely considered to be the catalysts that would allow artists to create original forms of art. In a process of gradual consolidation, the Soviet avant-garde "forged connections rather than posed analogies between artistic and industrial production, cultural and political revolution".[66] New industrial technologies and scientific innovations propelled social utopian expression in all forms of literature, the visual arts and music, even during the period that had led up to the October Revolution.[67] As artists Mikhail Larionov and Natalya Goncharova proclaimed in their *Rayonists and Futurists* manifesto of 1913, "the whole brilliant style of modern times – our trousers, jackets, shoes, trolleys, cars, airplanes, railways, grandiose steamships – is fascinating". According to the artists of the Revolution, this unprecedented epoch of change was opening up not just for their own country, but also for humanity as a whole.[68]

Despite the fact that the path towards communism in the case of Russia did not open as a result of capitalism's crises (as Marx and Engels had predicted in *The Communist Manifesto*), it still aimed at realising the context for the arts that the two authors had already delineated in some of their earlier writings. More specifically, *The German Ideology* (1846) describes thoroughly the effect that the establishment of a post-revolutionary communist society would have on cultural production. Notably, Marx and Engels not only locate the origins of creativity within the mode of labour, but they also specify how a different (i.e. communist) mode of labour shall transform the cultivation of artistic talent and its span:

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[66] Hal Foster, 'Some Uses and Abuses of Russian Constructivism', *Art into life: Russian Constructivism 1914-1932* (Rizzoli International Publications, New York 1990) p. 244.

[67] There are numerous cases of artists and works that exemplify this trend. In visual arts, relevant artworks vary from Vladimir Tatlin's "counter reliefs" (three-dimensional constructions using wood and metal, which were either displayed in corners or more conventionally similar to paintings) to Kazimir Malevich's Suprematist paintings. In literature, Alexander Bogdanov's *Red Star* (1908) and *Engineer Menni* (1913), mixed technological and political revolution with science fiction, by imagining a communist society on planet Mars. The futurist poems of Aleksei Gastev describe passionately machines as an extension of human nature, while Vasilii Kamenskii wrote "ferro-concrete poems" that were composed by words suspended like airplanes. The Futurist opera *Victory Over the Sun* was first performed in Saint Petersburg in 1913, with a libretto by poet Aleksei Kruchenykh and music by Mikhail Matiushin. Kazimir Malevich designed the opera's stage sets, costumes and lighting.

[68] Mary Ann Caws (ed), *Manifesto: A Century of Isms* (University of Nebraska Press 2000) p. 242.

The exclusive concentration of artistic talent in particular individuals, and its suppression in the broad mass which is bound up with this, is a consequence of division of labour. If, even in certain social conditions, everyone were an excellent painter, that would not at all exclude the possibility of each of them being also an original painter, so that here too the difference between 'human' and 'unique' labour amounts to sheer nonsense. In any case, with a communist organization of society, there disappears the subordination of the artist to local and national narrowness, which arises entirely from division of labour, and also the subordination of the artist to some definite art, thanks to which he is exclusively a painter, sculptor, etc., the very name of his activity adequately expressing the narrowness of his professional development and his dependence on division of labour. In a communist society there are no painters but at most people who engage in painting among other activities.[69]

Marx and Engels go on to underline the importance of "original and free development of individuals" within a communist society and the fact that establishing connections between people will contribute towards this outcome.[70]

If we tried, then, to synopsize this prospective context for artistic creation, and combine it with the goals of nascent Soviet culture, we could claim that they are both based on a new understanding about the social function of art. The latter is expressed through a series of interconnected principles and objectives. First of all, socialist art should aim at achieving an unprecedented geographical reach, in order to embrace the whole of society and, in particular, those of its members who have had more limited access to culture due to their unprivileged social position. Unsurprisingly, such a position is very often associated with living in an equally unprivileged geographical position, be it the working-class

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[69] Karl Marx and Friedrich Engels, 'The German Ideology' in David McLellan (ed), *Karl Marx: Selected Writings* (Oxford University Press 2000) p. 206.

[70] ibid., p. 207. Furthermore, in the introduction of his *Dialectics of Nature* (1898), Engels provides some noteworthy examples of cultural figures who exemplified the expanded perspective on artistic talent that is analysed in *The German Ideology*: "Leonardo da Vinci was not only a great painter but also a great mathematician, mechanician, and engineer, to whom the most diverse branches of physics are indebted for important discoveries. Albrecht Durer was painter, engraver, sculptor, and architect, and in addition invented a system of fortification embodying many of the ideas that much later were again taken up by Montalembert and the modern German science of fortification". See: Friedrich Engels, 'The German Ideology' in William Dugger and Howard Sherman (eds), *Evolutionary Theory in the Social Sciences* vol. 3 (Routledge, New York 2003) pp. 10 – 11.

suburbs of a metropolis, or the remote villages of the countryside.[71] Furthermore, the new context for artistic creativity should not be looking merely inwards – namely, towards the society of a single country – but, rather, it should attempt to accentuate the international and universal elements that it aspires to communicate, both formally and conceptually. This dual "expansion" would be made possible thanks to the products of technology and their employment as channels of dissemination. No artificial exclusions apply to the forms of art that can be disseminated; on the contrary, there should be a strong interdisciplinary or cross-disciplinary element in the character that cultural initiatives and events may adopt. Accordingly, new forms of engagement can materialise, as people are offered the opportunity to re-evaluate and rediscover the relevance and the role of art in its different forms for their everyday lives. Artists shall actively engage with society and aim to transform the members of the audience into co-communicators of their ideas. Most importantly, this perspective would emerge through a particular socioeconomic prism, which associates directly art with the dominant production model and the tools that it employs – for instance, though the division of labour, which Marx and Engels identify as the source of conceptual "narrowness". Therefore, communism's orientation towards the disappearance of *class* culture does not in any way entail the disappearance of *all* culture.[72] The aim of the political and cultural transformation is clear: to replace an old system, in which the formation and augmentation of capital happens only in benefit of some social classes (the bourgeoisie), with a new system of equality, in which capital, including *intellectual* and *cultural* capital, shall become common wealth.

Crisis 2.0: Art Alert!

Several of the artists that have been active during the historical period that started with the global financial crisis of 2008 have found inspiration in those very objectives of nascent Soviet art. Their artworks, projects and interventions have been based on the ideals of openness, inclusivity and collaboration within a context of strong political engagement, which their Soviet counterparts enthusiastically espoused almost a century ago. However, in the case of contemporary artists aiming for political change, the trains and the lorries of the People's Commissariat of Enlightenment were replaced by a range of very different

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[71] In the case of nascent Soviet culture, those conditions were – at least partly – addressed through the public interventions-artworks of artists, as well as though the propaganda lorries and trains that traveled across Russia.

[72] Marx and Engels, *The Communist Manifesto*, op. cit., p. 58.

means: smartphones, desktops, laptops and tablets. In addition, in the squares around the world where large crowds gathered to protest against the dominance of the financial markets over politics, their slogans, their songs, their banners, their discussions and their emotions were not mediated merely through traditional media outlets, like television, the radio and the printed and electronic press, but *primarily* through the means that they were literally holding in their own hands. Thanks to those networked gadgets, protestors were able to document their activities and the reactions of the security forces, express their opinions and inform the people who were absent about the reality on the ground. This information was instantly transmitted and shared with audiences around the world, through still images, videos and texts. Therefore, we could easily identify two major new attributes that define the nature of the means of communication in the early 21st century: firstly, all of the previously listed devices are interconnected thanks to the Internet and the use of networked applications; and, secondly, all of them have a strong personal character, not only as objects of personal use, but also – if not mainly – as items integrated into all aspects of their users' everyday lives.

In their influential manifesto *The ABC of Tactical Media* (1997), new media cultural theorists and practitioners David Garcia and Geert Lovink associate the notion of the everyday life with the political use of new media technologies, by referencing the work of French philosopher Michel de Certeau.[73] In his book *The Practice of Every Day Life* (1984), De Certeau proposes the transformation of consumers into *active* producers, through the imaginative use of elements and tools that are already available within their immediate surroundings and social environments. In order to elucidate this approach, De Certeau draws a distinction between "strategies" and "tactics". He associates the latter with the ability of the weaker in society to disrupt the dominant order as established by more powerful through the deployment of different strategies. In contrast, tactics are related to

> clever tricks, knowing how to get away with things, 'hunter's cunning,' manoeuvres, polymorphic simulations, joyful discoveries poetic as well as warlike they go back to the immemorial [...] intelligence displayed in the tricks and imitations of plants and

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[73] David Garcia and Geert Lovink, 'The ABC of Tactical Media' (*Nettime.org*, 16 May 1997) <http://www.nettime.org/Lists-Archives/nettime-l-9705/msg00096.html> accessed 21 March 2016.

fishes. From the depths of the ocean to the streets of the modern megalopolises, there is a continuity and permanence of these tactics.[74]

Those subversive capacities started becoming more widely visible in the early 1990s, thanks to the much cheaper and easy-to-use media products that were entering the lives of more and more people. Those products included camcorders, video projectors, sound systems and video reproduction devices. Accordingly, technological innovations became the main agent that contributed to the rise to tactical media, which are defined by Garcia and Lovink as "what happens when the cheap 'do it yourself' media [...] are exploited by groups and individuals who feel aggrieved by or excluded from the wider culture".[75]

The two authors identify the "heroes" of tactical media in the form of activists, hackers, street rappers, pranksters, nomadic media warriors and camcorder kamikazes, before referencing the practice of Polish artist Krzysztof Wodiczko as "an exemplary example of the tactical".[76] Since the 1980s, Wodiczko has been creating large-scale slide and video projections of politically and socially charged images, which "occupy" the façades of important buildings and monuments around the world. Some of his most influential projects include the projection of the image of Ronald Reagan's hand in the pledge of allegiance pose, on the AT&T Long Lines Building, which is situated in the financial district of New York. This public intervention took place just four days before the 1984 US Presidential Elections and it aimed at criticising the subordination of political power to financial power. And, in 1985, Wodiczko projected a swastika on the façade of the South Africa House in Trafalgar Square of London, as a protest for the continuous financial and political support of the British government for the Apartheid regime. Garcia and Lovink characterise such historical practices as "temporary reversals in the flow of power", and they associate them with the inherent objective of tactical media to oppose the rule of money over people. Quite evidently, this definition gives room for rather diverse

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[74] Michel de Certeau, *The Practice of Everyday Life* (University of California Press, Berkeley 1984) p. xii. De Certeau provides an example of tactics by referring to the history of Latin America: "For instance, the ambiguity that subverted from within the Spanish colonizers' 'success' in imposing their own culture on the indigenous Indians is well known. Submissive, and even consenting to their subjection, the Indians nevertheless often made of the rituals, representations, and laws imposed on them something quite different from what their conquerors had in mind; they subverted them not by rejecting or altering them, but by using them with respect to ends and references foreign to the system they had no choice but to accept [...] their use of the dominant social order deflected its power, which they lacked the means to challenge; they escaped it without leaving it. The strength of their difference lay in procedures of 'consumption'" (ibid., p. xiii).
[75] Garcia and Lovink, loc. cit.
[76] ibid.

interpretations and practices that could be identified as being "tactical". Therefore, it would be more useful – and more accurate, perhaps – to conceptualise the embracement of tactical media as the exploitation of a pool of potentialities associated with the seizure of communication means that either become temporarily available, or that are appropriated after having been left "unclaimed" over a considerable period of time.

This approach to communication resources nurtures what we could call a "media-conscious environment"[77] in which art, politics, media and technology are much more likely to be combined through the identification of their overlaps and mutual influences. As the members of the tactical media collective Critical Art Ensemble (CAE)[78] wrote in 2001, "the tactical media practitioner uses any media necessary to meet the demands of the situation". In consequence, "specialisation does not predetermine action. This is partly why tactical media lends itself to collective efforts, as there is always a need for a differentiated

Figure 2: Krzysztof Wodiczko, *Projection onto South Africa House* (1985)

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[77] John Baldock, Nick Manning and Sarah Vickerstaff (eds), *Social Policy* (3rd edn, Oxford University Press 2007) p. 97.
[78] The collective's website: 'Critical Art Ensemble' (*Critical-art.net*) <http://www.critical-art.net/> accessed 28 March 2016.

skill base".[79] Interestingly, Michel de Certeau describes this hybridization in rather artistic terms: as a form of hidden "poesis" that is "dispersed, but it insinuates itself everywhere, silently and almost invisibly, because it does not manifest itself through its own products, but rather through its ways of using the products imposed by a dominant economic order".[80] This attitude has been particularly evident in the projects of the Critical Art Ensemble, which include – amongst others – the creation of networked bikes designed for nomadic broadcasts, which constituted detournements of mainstream media broadcasts (*Radio Bikes*, Graz, Austria, 2000); a simulation of a dirty bomb's explosion in public space (*Radiation Burn*, Halle, Germany, 2010); and *A Public Misery Message: A Temporary Monument to Global Inequality* (Kassel, Germany, 2012), in which participants were lifted by a helicopter to hover at a height that allowed them to visualize the economic separation of the top 1% of wealthiest people from the bottom 99%.[81]

Most importantly, however, the spirit exemplified by the projects the writings of the Critical Art Ensemble can be found throughout the 1990s and the early 2000s in the works of various net artists, who can be considered as precursors of the Web-based artistic practices developed after 2008. For instance, the artivist group ®™mark (art mark) adopted a pseudo-corporate brand identity in order to accentuate the protections enjoyed by corporations, in contradistinction with the legal provisions for artists and cultural producers at large.[82] In one of their most prominent projects, the members of the group created in 1999 a spoof website for the Presidential campaign of George W. Bush (GWBush.com), in order to criticise his conservative views. The outrage by the then Republican candidate's campaign, led Bush to the controversial assertion that "there ought to be limits to freedom".[83] Natalie Bookchin, a former member of ®™mark, has been exploring through her personal work various subjects associated with the economy, corporate culture, equality and democracy. One of Bookchin's most acclaimed net art projects, which provides a fierce critique of the capitalist mode of labour, is *Metapet*

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[79] Critical Art Ensemble, *Digital Resistance: Explorations in Tactical Media* (Autonomedia, New York 2001) p. 8.
[80] De Certeau, op. cit., p. xii.
[81] By early 2016, the collective had also published seven books: *The Electronic Disturbance* (1994), *Electronic Civil Disobedience & Other Unpopular Ideas* (1996), *Flesh Machine: Cyborgs, Designer Babies, & New Eugenic Consciousness* (1998), *Digital Resistance: Explorations in Tactical Media* (2001), *Molecular Invasion* (2002), *Marching Plague* (2006), and *Disturbances* (2012).
[82] The group's website, 'RTMark' (*Rtmark.com*, 2000) <http://www.rtmark.com/>, was under construction as of October 2016.
[83] Terry M Neal, 'Satirical Web Site Poses Political Test' *The Washington Post* (29 November 1999) <http://www.washingtonpost.com/wp-srv/WPcap/1999-11/29/002r-112999-idx.html> accessed 21 March 2016.

(2003). The work is an online game in which players adopt the role of corporate managers who control genetically modified human employees, or "transgenic virtual pets". In an overt critique of the uncritical character of our networked capitalist society, all "Metapets" have been bioengineered in order to include in their DNA a fictional obedience gene, which is normally found in dogs.[84]

Bookchin and the rest of ®™mark's members, supported passionately another online artistic collective, Etoy, in its legal battle with the owners of www.etaoys.com, who wanted to buy the collective's website. Etoy, which describes itself in its mission statement

Figure 3: Natalie Bookchin, *Metapet* (2003)

as a "corporate sculpture",[85] launched in 1999 a multifaceted net art project called *Toywar*, in response to the aforementioned legal case. The work was an online game, through which

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84 As Bookchin notes, "Playing according to the rules will lead to the most boring of outcomes. Players will earn money, but who cares? Money makes you a 'winner' but you can't do anything with the money, and the game will soon become pretty dull. On the other hand, playing poorly will lead to some of the more interesting game elements. Your Metapet will become a lot more colourful and rebellious, artists' mini games (in which I had other artists design simple little games about biotechnology) will show up, and your pet starts sending messages back and forth to other Metapets". See: 'Metapet' (*Metapet.net*) <http://metapet.net/> accessed 21 March 2016; and Natalie Bookchin, 'Metapet' (*Bookchin.net*) <http://bookchin.net/projects/metapet/> accessed 21 March 2016.

85 The collective's members go on to note that "etoy twists artistic production and appearance in a world dominated by ambivalent parameters: mass production and consumption of information and goods, global transportation, branding, maximization of profits, growing complexity, technological penetration of life and virtualization". See: 'Fundamentals' (*Etoy.com*) <http://etoy.com/fundamentals/> accessed 21 March 2016.

players could support Etoy by engaging in various online activities (e.g. by criticising Etoys in online forums), whilst driving the stock price of Etoys.com down. The legal battle ended in January 2000, with Etoys' announcement that they were dropping their original lawsuit.[86] In the same spirit of anti-capitalist critique, net art duo Jennifer and Kevin McCoy launched in 1999 *Airworld*, a website that constituted the online presence of a spoof airline company. The marketing slogans that were featured in the website were collected by a specially designed piece of software that searched the Web and selected stereotypical marketing jargon and, then, used them in audio Web casts, thus producing a corporate parody.[87] Finally, by the late 1990s, collectives such as Electronic Disturbance Theater (EDT) had managed to introduce hacking practices to the repertoire of online tools available to politically engaged artists. One of the group's most famous works has been *Zapatista Tactical Floodnet* (1998), which invited Internet users to participate in collective electronic civil disobedience, in solidarity with the Zapatistas – the revolutionary movement of indigenous people in Chiapas of Mexico. The first online action took place on 10 April 1998, in the form of a virtual "sit-in" that facilitated the malfunction/hacking of the websites of individuals and organizations considered to be agents of Mexican neo-liberalism and to have played a negative role in the suppression of the rights of the people of Chiapas.[88] The attacks were directed (amongst others) against the websites of former Mexican President Ernesto Zedillo, former US President Bill Clinton, the Mexican Stock Exchange and Chase Manhattan Bank.[89] EDT artist and programmer Brett Stalbaum characterized the project as "an example of conceptual net.art that empowers people through activist/artistic expression".[90]

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[86] 'Projects: Toywar 1999/2000' (*Etoy.com*) <http://etoy.com/projects/toywar/> accessed 21 March 2016

[87] Jennifer McCoy and Kevin McCoy, 'Mccoyspace: Airworld Series (1999-2000)' (*Mccoyspace.com*, 2012) <http://www.mccoyspace.com/project/57/> accessed 21 March 2016.

[88] The Zapatista Tactical FloodNet' (*Thing.net*) <http://www.thing.net/~rdom/ecd/ZapTact.html> accessed 21 March 2016.

[89] Mark Tribe and Reena Jana, *New Media Art* (Taschen, Cologne 2007) p. 40.

[90] The Zapatista Tactical FloodNet', loc. cit.
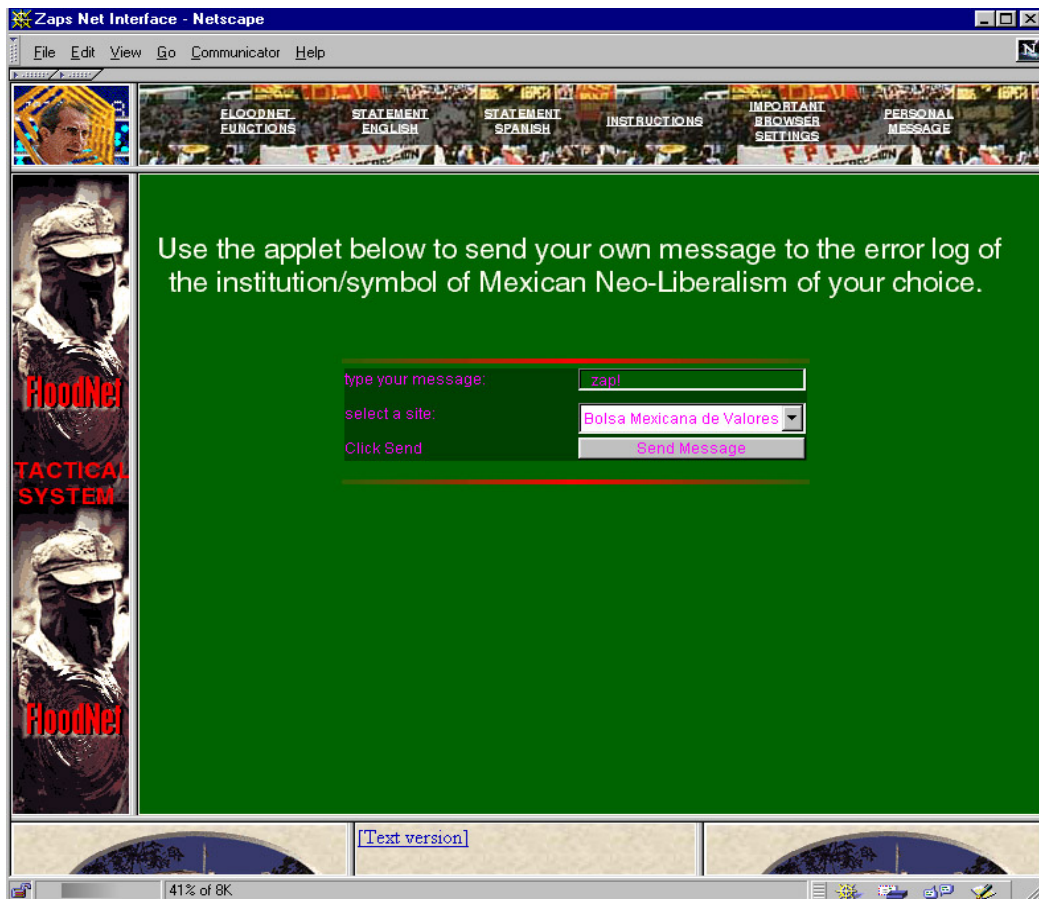
Figure 4: Electronic Disturbance Theater, *Zapatista Tactical Floodnet* (1998)

In parallel with the work of this first generation of online cultural producers, several online activist initiatives managed to transcend the ephemerality of traditional tactical media practices and influence public opinion on a truly global scale. This has been possible thanks to the engagement of their audience through a more focused "issue-based" approach, with stated long-term ambitions, as well as through the development of a networked "platform" model that offers far greater logistical possibilities. This combination can be found in the modus operandi of online non-profit public policy advocacy groups, whose aim has been to address both international and domestic issues. The earliest and most prominent example of such an organisation is MoveOn.org, which started in 1998 as an e-mail group that circulated petitions. By early 2016, the platform had more than 8 million registered members and it had become the "blueprint" for most online civic organisations. By regularly using online petitions and promoting fundraising schemes in support of specific causes, platforms such as Avaaz, Change.org, SumOfUs.org, GetUp, 38 Degrees, Campact, and 350.org, have been able to secure millions of signatures-participants in their petitions and, accordingly, exert sustained pressure on policymakers and corporations through their campaigns. In addition, the rise of open-publishing networks of

journalist collectives, such as Indymedia, which was founded during the 1999 Seattle WTO protests,[91] indicated the power of bottom-up information, especially in times of social upheaval.[92] Finally, the most prominent example of online activism in recent years has been the WikiLeaks platform, whose publication of news leaks and classified media has managed to attract worldwide attention. Since 2006, WikiLeaks has published classified or top-secret information, including diplomatic cables, which were provided by anonymous whistle-blowers. Over the years, those leaks have concerned war conflicts (e.g. the Iraq and Afghanistan wars, including the high-profile leak of a Bagdad airstrike video in 2007 by US Army intelligence analyst Chelsea Manning); human right violations (e.g. the suppression of Tibetan dissent in China, and the Guantanamo Bay detention centre procedures); financial scandals (e.g. Barclays bank tax avoidance case); environmental scandals (e.g. the toxic waste dumping in the Ivory coast by the Dutch corporation Trafigura); and, last but not least, the mass surveillance operations of various governments (e.g. the MYSTIC surveillance programme

Figure 5: WikiLeaks

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[91] The protests in Seattle occupy an important place in the history of the anti-globalisation movement, which was initiated in the late 1980s. The Seattle protests took place on 30 November 1999 and were directed against the World Trade Organisation's Ministerial Conference, which was convening in order to launch a new round of multilateral trade negotiations.
[92] This fact was emphatically confirmed later by the crucial role that Web 2.0 media applications played in the formation and/or coordination of new revolutionary political movements, with its first manifestations found during the main events of the "Arab Spring" (2010-2011).

of NSA, which was originally revealed by former CIA employee Edward Snowden).[93]

Consequently, by the outbreak of the global financial crisis, there was already an important tradition of online artistic and activist practices that appeared capable of supporting "the impulse behind successive generations of avant-garde utopian art movements in which the role of artists was envisioned as being to liberate a potential for art making (or the creative principal) in everyone".[94] Following the events of 2008, this liberating function has been understood and materialised by cultural producers not simply as the result of the passage from the net art practices of Web 1.0 to the new potentialities opened by Web 2.0; rather, artists have embraced this context as an invitation to move from the passive prosumption favoured by Data Capitalism to a context of active participation in the processes of creating and disseminating socially engaged creative content. This recuperation of the utopian moment,[95] as David Garcia calls it, has been the ultimate outcome of the intersection – or, rather, the clash – between the economy and art. The reaction against the crisis of Data Capitalism and its main components (datatization and the algorithmic control of the economy) managed to gradually give birth to more "unashamedly" political approaches, expressed by artists who have systematically aimed at revitalising alternative political imaginaries through the advanced tools offered by networked media. The next chapter of this thesis will explore the critical framework under which we could therorise Web-based art and the re-activation of political utopianism that followed the crisis. As it will be demonstrated through the work and legacy of Walter Benjamin, communist thought and its multiple traditions functioned as a powerful unifying agent for the evolutionary paths of the economy and culture that we have described above.

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[93] Notably, in 2013, WikiLeaks assisted Edward Snowden to leave Hong Kong and fly to Russia, en route to the Republic of Ecuador, where he could seek political asylum. However, Snowden was unable to continue his journey after arriving in Moscow, and he was granted a temporary asylum by the Russian Federation.

[94] David Garcia, 'From Tactical Media to the Neo-Pragmatists of the Web' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac*, vol 20, no 1 (Leonardo/ISAST, San Francisco 2014) p. 128.

[95] ibid.

Chapter 2

Utopia Distributed: The Organic Connections of the Internet with Communist Thought

In and Out of Communism: Theorising New Worlds

On 25 October 1917, the Winter Palace in St Petersburg was stormed by numerous fully equipped tanks and other armoured vehicles. They were engaged in a fierce battle in order to enter the official residence of all Russian monarchs since 1732, and were courageously supported by 125 ballet dancers, 100 circus artists, 260 secondary actors, 1,750 supernumeraries, 500 musicians, 200 women (mainly students) and 150 assistants. Their every move was meticulously planned by theatre director Nikolai Evreinov and their heroic actions were watched by more than 100,000 people, who were gathered in the Palace Square in order to witness a decisive moment of change in world History. As the Bolshevik Red Guards finally managed to occupy the Palace, red lights were lit, a cannon was fired from battleship *Aurora* and fireworks marked the beginning of the celebrations for the successful initiation of the Great October Socialist Revolution in Russia.[96]

Of course, this short account of the *Uprising of the 25th* (as Lenin himself used to call the storming of the Tsar's residency) is merely a description of the re-enactment that took place exactly three years after the events that led to the rise of communism in the global political stage. Like most propaganda re-enactments, it was all but an accurate portrayal of the day's events. More specifically, the actual storming did not take place during the day, but, rather, in the middle of the night. There was no fierce fighting involved and the palace fell in the hands of the Bolsheviks after an almost bloodless siege: the soldiers merely crossed the square and entered the palace by a side entrance at around 2 am. In the malachite hall, the ministers of the Kerensky government surrendered without much hesitation and the whole operation was over by 3:10 am. Finally, no more than 300-400 soldiers participated in the storming, without the need of any support from tanks and

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[96] Nancy Van Norman Baer, *Theatre in Revolution: Russian Avant-Garde Stage Design 1913-1935* (Thames and Hudson 1991) pp. 72-73.

armoured vehicles in order to occupy the square and conquer the palace.[97] Yet, all these facts did not matter much when it came to the re-enactment itself, whose rather illuminating subtitle was "a mass action".[98] For, the most important aspect of it was not all the major, or minor inconsistencies that one could potentially remark, but, rather, the very fact that, at last, the storming of the Winter Palace could be documented through photographs and films. The Revolution now had an image.

Figure 6: The re-enactment of the storming of the Winter Palace (1920)

Seven decades later, the events that signalled communism's "withdrawal" from the global political stage did not require any re-enactment in order for them to be documented. The fall of the Berlin Wall (9 November 1989) was broadcast live on television screens around the world, while hundreds of photojournalists were also present in order to

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[97] Orlando Figes, *A People's Tragedy: The Russian Revolution, 1891-1924* (Jonathan Cape, London 1997) pp. 491-492.
[98] Lars Kleberg, *Theatre as Action: Soviet Russian Avant-Garde Aesthetics* (Charles Rougle tr, Macmillan, London 1993) pp. 44-64.

capture the image of History in (mass) action. Yet, there was another kind of difference between the two historical events that signalled on a symbolic, as well as on a practical level, the rise and the fall of communism. Whereas the establishment of a communist state had been anticipated and theorised at least since the publication of Marx and Engel's *Manifesto of the Communist Party* in 1848, the (immanent) collapse of communism had been a much less anticipated and theorised event. In other words, although the status quo of a world *with* communism had been largely envisioned (even if such an image proved "erroneous" with regard to the way in which socialism was ultimately put into practice as a step towards communism), a world seemingly *without* communism emerged almost immediately as an open-ended question.[99] This thesis will attempt to continue regarding it as such. Nevertheless, since History is, almost exclusively, written by the "winners" of each struggle, it was not long before a "conclusive" theory about a world without communism was conceived. The *Friedliche Revolution* (Peaceful Revolution) of 1989 was in genuine need of a text that would outline a framework of certitude within a rapidly changing world.[100] And just like it took three years for the Bolsheviks to produce a matching image for their Great Revolution, it took the theorists of neoliberal capitalism three years in order to formulate what felt like, for quite a long time, as the most solid and thorough interpretation of the world that appeared to emerge from the debris of the Berlin Wall. Interestingly, the work that finally undertook this challenging role did not merely provide an explanation for the reshaping of History as witnessed in the events of 1989-1991, but, rather, it triumphantly proclaimed the very End of it.

In his famous book *The End of History and the Last Man* (1992), American political economist Francis Fukuyama declared that the fall of communism designated that liberal democracy – as defined through the prism of the "free market" – was the optimum form of social organization and, in that sense, History had reached by 1992 its final goal or stage.

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[99] In his book *Everything Was Forever, Until It Was No More: The Last Soviet Generation* (2005), Russian anthropologist Alexei Yurchak describes how in the late 1980s the "perestroika" started generating doubts to Soviet citizens as regards the "eternal state" of their socialist political organisation. However, the *proximity* and the *rapidity* of the system's collapse remained something that almost no one could have foreseen. See: Alexei Yurchak, *Everything Was Forever, Until It Was No More* (Princeton University Press 2006).

[100] The Romanian Revolution of December 1989 has not been equally peaceful, as the Nicolae Ceauşescu regime and, then, the National Salvation Front (FSN), which succeeded it, are responsible for the deaths of more than 3,000 people. In addition, the transition of Lithuania to independence and to a free market economy has been marked by various tensions, which involved interventions by the Soviet Army as well as incidents with Soviet paramilitary groups.

Figure 7: The Fall of the Berlin Wall (1989)

Despite adopting an overtly Hegelian schema,[101] Fukuyama denounced Marx's interpretation of Hegel as being completely delimiting.[102] The only accurate exegesis of Hegel's Universal History is, according to Fukuyama, the one that identifies the "achievement of absolute self-consciousness" with life in a liberal democratic state in the post-communist era.[103] Fukuyama went on from this position to become a guru of the neoconservatives in USA during the 1990s and, notably, on 3 June 1997, he co-signed with other prominent members of the "movement" (including Dick Cheney, Donald Rumsfeld, Paul Wolfowitz, Jeb Bush, Norman Podhoretz and Elliott Abrams) the Statement of Principles of the *Project for the New American Century*, which called for the adoption of a "Reaganite policy of military strength and moral clarity".[104] Nevertheless, History proved

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[101] Fukuyama examines Hegel by using the interpretation of his work by philosopher Alexandre Kojève.

[102] Francis Fukuyama, *The End of History and the Last Man* (1st edn, Hamish Hamilton, London 1992) pp. 64-65.

[103] ibid. p. 64.

[104] Project for the New American Century, 'Statement of Principles' (*Web.archive.org*, 3 June 1997) <http://web.archive.org/web/20070810113753/www.newamericancentury.org/statementofprin ciples.htm> accessed 23 March 2016. See more at: Institute for Policy Studies, 'Project for the New American Century' (*Rightweb.irc-online.org*, 21 March 2013) <http://rightweb.irc-online.org/profile/project_for_the_new_american_century/#_edn1> accessed 23 March 2016.

more unpredictable than what Fukuyama expected when he published his "conclusive" version of human evolution, just three years after the demise of the Soviet Union. Thus, following the invasion of Iraq (2003)[105] and the economic crisis that began with the burst of the housing market bubble in the US (2007), Fukuyama became a fierce critic of the Bush Administration. In addition, he re-positioned himself with regard to the responsibility of the state in a globalized economy, turning in favour of a much more proactive regulating role, and he voted for Barack Obama in the Presidential Elections of 2008.[106] Even more impressive, in an interview in early 2012, Fukuyama asked for the formation of a Tea Party on the Left in order to counterbalance the influence of Wall Street in global politics, and he accused President Obama for not nationalising the banking sector when he took over from President George W. Bush in 2009.[107]

The trajectory of Fukuyama's political choices might produce an interesting story; yet, it does not reveal much by itself about the ideological framework vindicated in *The End of History* and its actual influence. Notably, in the same interview cited above, Fukuyama appeared to be in the confident position to claim that there is still no alternative system to capitalism. In other words, Fukuyama seems to suggest that even amid the worst crisis of capitalism, the failures of the system do not mean that it is not the best system available. It would be, therefore, too "convenient" and, perhaps, naïve to dismiss Fukuyama's theorisation of the human condition merely on the basis of the previously described "evidence". Of course, the full investigation of Fukuyama's claims and their reverberations is beyond this study's purposes and possibilities. Nevertheless, their impact on one of the main concepts examined in this thesis is of particular interest, since it provides a rather solid explanation for Fukuyama's unwavering faith in capitalism. The concept that I am referring to is utopia. In order to illuminate utopia's relation with this particular kind of faith, I would like to briefly focus on two central elements of the narrative developed in *The End of History*. More specifically, I would like to examine how Fukuyama's monosemous theorisation of history ultimately becomes a monosemous ethical paradigm; and, then, how his analysis of the Hegelian "struggle for recognition" completely ignores the idea of revolution as an integral part of human nature. The former characteristic of Fukuyama's

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[105] 'Why I Won't Vote For George Bush' (*The Times*, 2004) <http://www.thetimes.co.uk/tto/life/article1720828.ece> accessed 6 April 2016.

[106] The Dish, 'Fukuyama For Obama' (*The Atlantic*, 2008) <http://www.theatlantic.com/daily-dish/archive/2008/05/fukuyama-for-obama/216126/> accessed 6 April 2016.

[107] 'Spiegel Interview with Francis Fukuyama: "Where Is the Uprising from the Left?"' *Spiegel Online* (1 February 2012) <http://www.spiegel.de/international/world/0,1518,812208,00.html> accessed 23 March 2016.

premise deprives utopia of its ability to formulate ethical claims, while the latter denies the means for the realisation of such claims in practical terms.

From the "End of History" to the End of Utopia

By proclaiming the End of History, Fukuyama inevitably invites his readers to define a breaking point between what one could name a "historicist" condition and a "meta-historicist" one. However, he does not provide us with a clear set of criteria and tools on the basis of which we could potentially identify such a breaking point. Instead, according to French philosopher Jacques Derrida, "Fukuyama defines liberal democracy here as an actual reality and there as a simple ideal".[108] In other words, he oscillates between the past (if we are to accept that liberal democracy has already been accomplished) and the future (by theorising liberal democracy as an objective still waiting to be realised). The outcome of this dichotomy is a hybrid version of the present. The latter is transformed into a schizophrenic temporal form that strives to combine the qualities of something that can already be experienced (and which is, thus, ethically robust according to Fukuyama's judgment), with the qualities of something that has yet to arrive (a fact which would, then, entail that the present is experiencing an ethical lack of some form). This peculiar situation can only lead us towards the conclusion that the breaking point I referred to earlier is, in fact, *now*. Fukuyama appears to suggest that the break that was incised on History by liberal democracy only began in 1989 and is still an operation in progress. Nevertheless, the adoption of this theorisation would refute the very idea of the "point" and, thus, the existence of a true break or change in historical time, which could, then, be "transcended".

In order to defend his position, Fukuyama introduces the argument that his trans-historical approach is, in reality, an investigation of the timeless human nature.[109] Instead, however, of making things clearer, this choice renders his perspective even more convoluted: if there is, indeed, a single human nature (that can, notably, be translated into a specific political system), then, what is the single set of ethics that characterises this nature? The ideas of both democracy and liberalism appear to be discredited at once by Fukuyama's determinism. Nonetheless, there is an explanation about his postulation. As Derrida notes in *Spectres of Marx* (1993), Fukuyama's work is, in effect, a gospel stemming

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[108] Jacques Derrida, *Specters of Marx: The State of the Debt, the Work of Mourning, and the New International* (Routledge, London 2006) p. 78.
[109] Fukuyama, op. cit., p. 138.

from the Christian tradition. Fukuyama becomes an evangelistic figure that spreads the "good news" of the alliance between liberal democracy and the "free market", which is realised through the death of Marxism.[110] The concept of time emerging in *The End of History and the Last Man* lies in harmonious agreement with this new "gospel": if glimpses of afterlife can already be experienced in this life thanks to Jesus' sacrifice and resurrection, then, we live, indeed, in a hybrid present. The death of Marxism and the reign of the liberal democratic state do not adopt merely the form of this dogma, but, also, part of its content. This religious perspective is, perhaps, even more evident in the second element of Fukuyama's theorization that I would like to underline in this context; namely, the "struggle for recognition".

On 20 July 1997, less than two months after the publication of the Project for the New American Century, in an article entitled "The World Resurrects Che", the New York Times proclaimed that if Che Guevara had been alive, "he would be firmly in the capitalist camp".[111] In the spirit of a neoliberal capitalist triumph against any potential alternative system (ideally exemplified by the ghost of revolutionary socialism), the idea of revolution itself was "overtaken" by the new dominant global ideology. Quite simply, it seemed that what was happening at that time around the world thanks to neoliberal capitalism was so revolutionary, that any other notion of revolution was condemned to evaporate: an "Apocalypse" of some kind had already taken place. This redemptive principle lies at the epicentre of Fukuyama's anti-utopian and anti-revolutionary thought. Fukuyama synopsizes this principle by adopting Alexandre Kojeve's exegesis of Hegel's "struggle for recognition". According to this interpretation of Hegel's concept, any historical process can be understood as a continuous struggle of humans to be recognized by other humans. This is critical for the fulfilment of self-recognition, since in order to become aware of himself as a separate entity, an individual has to be recognized first by other human beings as a man.[112] Fukuyama believes that this non-materialist historical dialectic "is much richer in its understanding of human motivation than the Marxist version, or than the sociological tradition stemming from Marx".[113] In agreement with this suggestion, neoliberal capitalist democracy is credited with providing a solid framework of freedoms for individuals in order for them to be able to successfully seek the recognition of their fellow-citizens.

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[110] Derrida, op. cit., p. 72.
[111] Tina Rosenberg, 'The World Resurrects Che' *The New York Times* (20 July 1997) <http://www.nytimes.com/1997/07/20/opinion/the-world-resurrects-che.html> accessed 23 March 2016.
[112] Fukuyama, op. cit., p. 147.
[113] Fukuyama, op. cit., p. 144.

Thanks to this capacity, the individual does not have to go to the extreme point of risking his own life in order to be recognized by others anymore[114] and, therefore, any mode of revolutionary thought or action can be permanently banished. If "the French Revolution was the event that took the Christian vision of a free and equal society, and implemented it here on earth",[115] then, the "Promised Land of liberal democracy"[116] has made even the idea of revolution impertinent to human consciousness.

Thus, if we accept Fukuyama's premise as formulated in *The End of History and the Last Man*, the ethical core of political utopianism can no longer remain relevant to today's world: utopia has already been achieved in the form of the post-1989 liberal democratic state. For Fukuyama, utopia and the idea of revolution died along with communism, even if the demise of the latter did not automatically lead western liberal democracy to the development of its full capacities. Nevertheless, one would expect that since Fukuyama's political and ideological choices have been largely contested by the course of a History still at work, the road for utopianism, including a socialist one, would have opened once more. In reality, however, Fukuyama's "roadblock" is positioned only on one side of utopia's path. There is another "roadblock" positioned on the opposite side, which stems from a considerably different, yet equally hostile standpoint. The work that probably synopsises this perspective more eloquently than any other, is the book of English political philosopher John Gray, *Black Mass: Apocalyptic Religion and the Death of Utopia* (2007).

From the End of Utopia to Another "End of History"

Interestingly, in *Black Mass*, Gray offers an overt condemnation of Fukuyama's main doctrines. More specifically, he asserts that the idea of a history moving towards an End is a fiction that exceeds any possibility for a rational assessment and, at the same time, liberal democracy's legitimacy as the unique mode of global governance is an argument not supported by reality.[117] Nevertheless, when it comes to his evaluation of utopianism, Gray adopts a deterministic approach very similar to the one deployed by Fukuyama in *The End of History and the Last Man.* His view on utopia is lucidly synopsised in the beginning of his book's final chapter, appropriately titled "Post-Apocalypse". In this, Gray argues that "the

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[114] Fukuyama, op. cit., p. 147.
[115] Fukuyama, op. cit., p. 199.
[116] Fukuyama, op. cit., p. 134.
[117] John Gray, *Black Mass: Apocalyptic Religion and the Death of Utopia* (Penguin Books, London 2008) p. 175.

faith in Utopia, which killed so many in the centuries following the French Revolution, is dead. Like other faiths it may be resurrected in circumstances that cannot be foreseen; but it is unlikely to trouble us much further in the next few decades".[118] Given, however, the author's earlier assertion that utopian movements are usually developed following a disaster,[119] his claim that faith in utopia is dead appears to suggest that no such disastrous historical events should be anticipated in the near future. This prediction would entail, however, the possession of some kind of prophetic qualities evidently located within the field of metaphysics, which Gray so vehemently rejects in his book. Once more, History appears to have reached a "pause", if not an "End" of some form. This "pause", however, does not come without important implications in the sphere of ideology; for, it is not an empirical observation, but, rather, a construction aiming at producing a very particular, or – even – "manipulable" understanding of History.

Gray provides two distinct sets of criticisms against utopia in order to construct his anti-utopian argument. The first criticism that he develops in this context regards utopia as a counter-productive intellectual device, given that it can lead to modes of social being that are naïve, non-executable and thoroughly inefficient. In order to support this postulation, Gray goes back to the "origins" of utopia in the form of Plato's *Republic*, Thomas More's *Utopia* and some 19th century intentional communities.[120] These traditions of utopianism should be collectively understood as "a movement of withdrawal from the world",[121] rather than as an attempt to change it. This "tolerant" theorisation of utopia is, also, evident in Gray's general view on the Western pre-Christian world, which is often contrasted with Christianity's decisive influence on the development of the modern, apocalyptic utopianism. Yet, what is more revealing about Gray's view on the pre-Christian ancient world is not what he writes about it, but, rather, what he does not write. Despite the fact that in his earlier book, *Straw Dogs: Thoughts on Humans and Other Animals* (2002), Gray is much more willing to locate the roots of modern utopianism in Plato (in accordance with thinkers like Karl Popper),[122] in *Black Mass* he suggests that it was only after its contact

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[118] ibid., p. 260.
[119] ibid., p. 8.
[120] The Welsh social reformer Robert Owen (1771-1858) established intentional communities in the UK and the US, while communities based on the ideas of the French philosopher Charles Fourier (1772-1837) and the French political theorist Henri de Saint-Simon (1760-1825) were established not only in their home country, but also in the US (ibid., p.36).
[121] ibid., p.21
[122] Karl Popper, *The Open Society and Its Enemies: Volume 1: The Spell of Plato* (Routledge, London 1945).

with Christianity that Platonism became part of modern utopianism.[123] Nevertheless, by avoiding to further engage with the legacy of ancient Greek philosophy, what he avoids is, in reality, to examine the historical context within which philosophers like Plato developed their (utopian) political works and, accordingly, the extent to which such a context could be relevant to today's political debates around democracy and its demise.

A crucial characteristic that Gray fails to identify about Plato's work is that his utopian thought stems from a remarkably solid reality: the Greek *polis* within which Plato was born, brought up and taught. Any ancient polis consisted of two "entities": *ecclesia* and *oikos*. Oikos was the private household and it stood symbolically for each citizen's personal interests, whereas ecclesia represented the body of people designated to take care of the polis' common affairs. In between those two "entities" one can locate *agora*, the physical space where all the citizens were gathered in order to "reconcile" their private interests with the shared interests of the polis. Agora is exactly the physical as well as the *conceptual* space within which any philosopher was called to perform his role. In his treatment of the Greeks, however, Gray appears to completely ignore the physical aspect of the agora and the way in which it informs every aspect of Plato's, and any other Athenian philosopher's, work. There is no other way to explain his assertion that the arguments of someone operating within a real physical space, like Plato, can acquire such an explicitly naïve, unrealistic and, in effect, fictional character. In other words, the germs of real and feasible change should be present in the proposals of the philosopher to the polis, even when he uses a description that employs fictional or symbolic elements, with a view to communicating his premises more easily to a diverse audience. The adoption of the aforementioned realistic or pragmatist elements would make at least a small proportion of the citizens to be convinced and envisage as realisable a project that, for most people, might initially appear like pure fantasy. Plato is fully conscious of this process, which aims at producing a political "sensus communis" for the city-state, as he clearly indicates in the *Republic*.[124]

Yet, Gray's consideration of the Greek classical philosophers (or, rather, the lack of any substantial consideration) also hints, in my opinion, at another fact; namely, at his unwillingness to articulate any genuine criticism against the western liberal state and *its* version of democracy. Notably, Gray chooses not to make any references to the function of the polis on the level of everyday citizenship. This approach is associated with an implicitly

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[123] Gray, op. cit., p. 11.
[124] Plato, *Republic* (Oxford University Press 1993) 500d10-501e6

Figure 8: View from the speaker's platform at the ancient agora in Athens (Pnyx)

utopian theorization of Athenian democracy and, thus, with the dismissal of its potential value for today's democracies, which, arguably, operate under very different socioeconomic conditions. Such criticism has been, at least partly, based on the assertion made in popular literature that Athens was a small city-state and, thus, the openness and directness of its democratic procedures was only possible thanks to its size.[125] Nevertheless, the truth is that ancient Athens was not such a small city in terms of the part of its population that enjoyed full political rights: an estimation of the number of Athenian citizens (adult males owning land) in the 5th century B.C. brings them to a minimum of 30,000 and a maximum of 50,000.[126] This fact inevitably raises questions not only about the way we envision the systems of representation adopted by our democracies, but, also, about the administrative structures that we privilege for the accomplishment of our everyday public activities and social endeavours. One could, perhaps, claim that there are no real lessons to be learnt from a city-state whose economic system was based on slavery

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[125] Lyman Tower Sargent, *Utopianism: A Very Short Introduction* (Oxford University Press 2010) p. 18.
[126] John Thorley, *Athenian Democracy* (2nd edn, Routledge 2004) p. 74.

and whose political rights were reserved only for a portion of its population.[127] Nevertheless, realism (which Gray identifies as the antidote to utopianism) would compel us to accept that even if the accusations made against Athenian democracy are entirely accurate, still, ideas like seisachtheia,[128] the draw for participating in certain public bodies, the open law-making process, the scrutiny in front of a "popular tribunal" after the end of all civil and military magistrates' terms (most of whom could not exercise the same office twice) could form a potentially fruitful basis of dialogue about the quality of western liberal democracy. In his effort to produce an all-encompassing theory serving the rejection of utopia, Gray ignores any achievement of systems that could be characterised as "unrealistic" from the perspective our current model of the liberal democratic state. Thus, what we could diagnose in Gray's work is a latent post-historicist negation of change, which refutes the possibility of formulating credible claims for a deeper and wider democratic function within our existing political and economic systems.[129]

Searching for the Nature of Revolution

The second criticism that Gray develops in *Black Mass* against utopia is a much more predictable one: according to it, utopia belongs to a violent, catastrophic and, thus, highly dangerous strand of human thought. In support of this view, Gray refers to a variety of cases as diverse as Nazism, the American neo-conservatives, the Bolsheviks and the different terrorist groups nurtured by Islamist fundamentalism.[130] In spite of their explicit

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[127] One of the most prominent set of criticisms against the paradigm of Greek democracy can be found in Martin Bernal's seminal book *Black Athena: Afro-Asiatic Roots of Classical Civilization* (Free Association Books 1991).

[128] Seisachtheia (σεισάχθεια, from σείειν *seiein*, to shake, and ἄχθος *achthos*, burden) was a set of laws introduced by the Athenian lawmaker Solon (c. 638 BC–558 BC) when he became chief magistrate (archon) in c. 594 BC. Through seisachtheia, Solon cancelled all debts in order to restore land to its constitutional holders and forbade the use of personal freedom as a collateral in all future debts dealings. See: Matthew Dillon and Lynda Garland, *Ancient Greece: Social and Historical Documents from Archaic Times to the Death of Alexander* (Routledge, London 2010) pp. 305 – 308.

[129] The disregard for democratic investment in late capitalist societies, along with the connection of any historical process with almost exclusively economic criteria is salient in the work of many neoliberal thinkers. In his highly influential work *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States* (Harvard University Press 1970), Albert Hirshman makes it clear from the very title of his book that similar qualitative criteria should be applied to the evaluation of both private economic organizations and democratic states. And two decades later, Francis Fukuyama states in *The End of History and the Last Man*: "Just as a modern economist does not try to define a product's 'utility' or 'value' in itself, but rather accepts the marketplace's valuation of it as expressed in a price, so one would accept the judgment of the 'marketplace' of world history." (Fukuyama, op. cit., p. 136)

[130] Gray, op. cit., p. 35.

differences, Gray claims that all those historical examples are the violent products of the Christian Western world's cultural paradigm and that, in fact, they all stem from the tradition of Enlightenment and its philosophers.[131] The case that I would like to make in order to contradict this second major anti-utopian argument is provided by Immanuel Kant, who is identified in *Black Mass* as "the supreme Enlightenment figure" after Voltaire, and as a "great philosopher".[132] Despite this fact, however, his name is mentioned in the whole book only twice and when Gray refers to Kant's work he only does so in order to underline his racist attitude towards non-Europeans, as expressed in *Observations on the Feeling of the Beautiful and the Sublime* (1764). Therefore, Gray chooses to present the past in a rather selective way, in order to justify his argument against utopianism. Quite naturally, the question that arises at this point is "why?"

In order to provide an answer to the previous question and demonstrate the *critically* non-violent legacy of Kant, I would like to examine his interpretation of revolution; namely, the potentially most violent form that utopianism may adopt. There is a "seeming contradiction" in the theorisation of revolution made in Kant's work, as Hannah Arendt points out in her *Lectures on Kant's Political Philosophy* (1982).[133] This contradiction lies in the fact that although Kant perceives the *enthusiasm* produced by revolution as a positive sign of humanity's capacity to evolve towards a potentially better future, at the same time, he appears to condemn any kind of violence associated with it. He mentions in *The Conflict of the Faculties* (1798), with regard to the French Revolution:

> The revolution of a gifted people which we have seen unfolding in our day may succeed or miscarry; it may be filled with misery and atrocities to the point that a sensible man, were he boldly to hope to execute it successfully the second time, would never resolve to make the experiment at such cost—this revolution, I say, nonetheless finds in the hearts of all spectators (who are not engaged in this game themselves) a wishful participation that borders closely on enthusiasm, the very expression of which is fraught with danger; this sympathy, therefore, can have no other cause than a moral predisposition in the human race.[134]

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[131] Gray, op. cit., p. 34.
[132] Gray, op. cit., p. 85.
[133] Hannah Arendt, *Lectures on Kant's Political Philosophy* (Ronald Beiner ed, University of Chicago Press 1982) p. 44.
[134] Immanuel Kant, *The Conflict of the Faculties* (Mary J Gregor tr, University of Nebraska Press 1992) p. 153.

Kant goes on to advocate that "such a phenomenon in human history *is not to be forgotten*, because it has revealed a tendency and faculty in human nature for improvement".[135] Notably, however, there are certain conditions to be fulfilled in order for this improvement to materialise: offensive war should be avoided and the end product of the revolution should be a "Republican constitution".[136]

Kant could, perhaps, come under the criticism of changing his views on revolution as expressed in his earlier works, like *The Science of Right* (or *Doctrine of Right*) (1790). However, the connection that he makes between the avoidance of offensive war and the need for a Republican constitution is, in fact, remarkably consistent with the argumentation developed by him even before the French Revolution, and, in particular, with the reasoning that he provides in various points of his short essay *Perpetual Peace: A Philosophical Sketch* (1795). Furthermore, in *The Science of Right* itself, Kant describes in detail his concept of the *true* Republic:

> Every true Republic is and can only be constituted by a Representative System of the People. Such a Representative System is instituted in name of the People, and is constituted by all the Citizens being united together, in order, by means of their Deputies, to protect and secure their Rights. [...] People then does not merely represent the Sovereignty, but they are themselves sovereign.[137]

Kant continues his analysis by further delineating the qualitative characteristics of such a Representative System:

> The capability of Voting by possession of the Suffrage, properly constitutes the political qualification of a Citizen as a Member of the State. But this, again, presupposes the Independence or Self-sufficiency of the individual Citizen among the people, as one who is not a mere incidental part of the Commonwealth, but a Member of it acting of his own Will in community with others. The last of the three qualities involved, necessarily constitutes the distinction between active and passive Citizenship; although the latter conception appears to stand in contradiction to the definition of a Citizen as such.[138]

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[135] ibid., p. 159.
[136] ibid., p. 153.
[137] Immanuel Kant, *The Science of Right* (Forgotten Books, Charleston 2008) p. 142.
[138] ibid., p. 104.

Therefore, by describing the indispensable attributes of the "true Republic" and its system of representation, Kant already circumscribes the area within which any political change might occur. For, such kind of action should neither threaten the function of public distributive justice, nor should it ignore that "legislative power […] can only belong to the united will of the people".[139] Only if political change "is carried forward by gradual reform and in accordance with fixed principles, it may lead by a continuous approximation to the highest political good, and to perpetual peace".[140]

In this context, Kant appears to *supplement* rather than contradict his earlier views, when writing *The Conflict of the Faculties*, shortly after the French Revolution. In other words, even if we accept his most "pro-revolutionary" positions, Kant's theorisation could hardly be characterised as one encouraging violent political and social behaviour, as Gray appears to suggest. The appropriation of History on which Gray builds his argument stems from his effort to establish a largely "post-ideological" context for the present: if the ideologies of the past nurtured violent utopianism and today we are through with utopia (as Gray claims throughout his book), then, it could be readily claimed that we have somehow managed to overcome ideology itself – or, at least, to prevail over what one could call "bad"-utopian ideology. It is at this critical point, that Gray's largely "post-ideological" conception of the present appears to, eventually, converge upon Fukuyama's "post-historical" and "post-ethical" theorisation of human nature. Interestingly, Gray concludes his chapter on the Americanization of Apocalyptic utopianism by the neo-conservatives in the USA, in a distinctly trans-historical tenor, which appears to purposefully ignore the differences between ideologies and eras. More specifically, he turns to Dostoyevsky's novel *The Possessed* (1871-2) in order to draw an analogy between the Russian revolutionaries of 1917 and the ideological principles of the George W. Bush administration: "Like Dostoyevsky's deluded visionaries", Gray asserts, "neo-conservatives embraced force as a means to Utopia".[141]

Kantian Justice and the Repudiation of Possession

The examination of Fukuyama and Gray's work has demonstrated that even before the outbreak of capitalism's worst ever crisis, in 2008, utopia should not have been dismissed

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[139] ibid.
[140] ibid., p. 160.
[141] Gray, op. cit., p. 205.

as a living entity within human consciousness, despite – in many ways – remaining "dormant". The catalyst effect of the crisis itself on the revitalization of our relationship with notions of utopianism will be thoroughly explored in the following chapters of this thesis, through the perspective of politically engaged Web-based art. Yet, in order to fully apprehend the basis on which the art of the post-crisis period has been produced, it is necessary to connect political theory to art. Rather predictably, perhaps, this will happen in this thesis by engaging with Kant's work on aesthetics. Nevertheless, it would be useful to perform this transition by concentrating for a little bit longer on Kant's moral and political philosophy. In particular, his work in the *Doctrine of Right* is essential not only in order to understand better the foundations on which his relation to the concepts of violence and revolution is built, but, also, in order to identify his impact on the work of Walter Benjamin, whose ideas have been fundamental in any theorisation of the digital art object during the last three decades.

In the field of Kantian studies, the *Doctrine of Right* remained for a rather long time a relatively overlooked part of Kant's philosophical system.[142] Interestingly, one could make a similar claim about Benjamin's *Notes Toward a Work on the Category of Justice* (1916), which constitutes an effort to re-approach Kant's *Metaphysics of Morals* and replace his "doctrine of right" with what Benjamin calls the "category of justice". Kant's work in the *Metaphysics of Morals* investigates the legal rights that an individual enjoys or is able to acquire, through an exploration of the relation between private and public law. Centrally located in his analysis is the idea of the "axiom of external freedom"; namely, the innate right that we have to objects external from ourselves, including the possession of physical objects as well as the regulation of our relations with other individuals and the results of their actions. In the "Introduction to the Doctrine of Right", Kant delineates the context of this original right to freedom by defining it as follows: "Freedom (independence from being constrained by another's choice), insofar as it can coexist with the freedom of every other in accordance with a universal law, is the only original right belonging to every man by virtue of his humanity".[143] Through the assumption of this original right to freedom, an individual can require from everyone else to act towards him according to a universal law

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[142] In the last three decades, important studies have re-evaluated Kant's work the *Doctrine of Right*. See, for example: Wolfgang Kersting, 'Politics, Freedom and Order: Kant's Political Philosophy' in Paul Guyer (ed), *The Cambridge Companion to Kant* (Cambridge University Press 1992) pp. 342 – 366; Leslie Arthur Mulholland, *Kant's System Of Rights* (Columbia University Press 1990); and Allen D Rosen, *Kant's Theory of Justice* (Cornell University Press, Ithaca 1993).

[143] Immanuel Kant, *The Metaphysics of Morals* (Mary J Gregor ed, Cambridge University Press 1991) p. 63.

of right.[144] Yet, in order to peacefully enjoy this universal right, an individual has to withdraw from the natural state of external freedom and adhere to what Kant calls a "juridical state":

> From private Right in the state of nature there proceeds the postulate of public Right: When you cannot avoid living side by side with all others, you ought to leave the state of nature and proceed with them into a rightful condition, that is, a condition of distributive justice. The ground of this postulate can be explicated [entwickeln] analytically from the concept of Right in external relations, in contrast with violence (violentia).[145]

Benjamin attempts to construct a philosophical framework that would permit the "reconciliation" between the state of nature and the juridical state (Rechtstaat), which Kant describes in terms of two rather rigidly defined entities. It is exactly from the "lacuna" between the two states that Benjamin's contribution emerges, under the influence of Marx.

In the *Notes Toward a Work on the Category of Justice*, the principle of right does not automatically appear as a virtue for Benjamin. Instead, virtue is something profoundly deeper, since it is designated as the element that leads to justice: "Justice is the power of virtue", Benjamin states, connoting the association of the two concepts with two distinctly different systems of classification.[146] In the central position that the "axiom of external freedom" occupied in the *Doctrine of Right*, Benjamin now places the idea of possession. The opening of his *Notes* leaves no room for doubt with regard to its significance in relation to justice: "No order of possession, however it may be articulated, leads to justice", Benjamin asserts.[147] In view of this "transition", Kant's passage from the state of nature to the juridical state should, also, be replaced; what Benjamin replaces it with is the passage from right to justice. The latter should be understood as a condition in which a good cannot be a possession anymore.[148] In other words, the attainment of justice entails that the idea

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[144] Sharon Byrd and Joachim Hruschka, *Kant's Doctrine of Right: A Commentary* (Cambridge University Press 2010) p. 10.
[145] Kant, *The Metaphysics of Morals*, op. cit., pp. 121-122.
[146] Peter Fenves, *The Messianic Reduction: Walter Benjamin and the Shape of Time* (Stanford University Press, Stanford 2011) p. 206. In his book, Fenves focuses on neglected aspects of Benjamin's work by examining, amongst others, his friendship with Gershom Scholem. It is in Scholem's *Diaries* that Benjamin's revision of Kant's *Metaphysics of Morals* first appears in international bibliography.
[147] Benjamin in ibid., p. 189.
[148] Benjamin in ibid., p. 198.

of possessing something in terms of merely enacting the rights emanating from Kant's juridical state has been permanently overcome. Thus, whereas we can seek a virtue by demanding it, we cannot do the same with justice: justice is a state that either exists or does not exist.[149]

According to Benjamin, what appears to threaten any attempt at approximating the category of justice is the inherent violence that can be ascribed to any actual possession.[150] Nevertheless, violence should not been perceived monosemantically here, for, under specific conditions, it can acquire a genuine revolutionary, or socially "transcendent" character. In order to substantiate this disposition, Benjamin expands Kant's interpretation of violence ("violentia") from a Marxist perspective, and he identifies "pure *Gewalt*" ("pure violence/power") as the catalyst element in his theorization. In the *Doctrine of Right*, Kant condemns the labour theory of property,[151] but, at the same time, is open to the taking over of unclaimed spaces, provided that their aspiring possessors demonstrate an adequate amount of *Gewalt*. For Benjamin, this principle should be radically expanded so that it can be applied to situations in which everything is owned by a very limited number of individuals.[152] Accordingly, the proletariat is portrayed as the only rightful recipient of this kind of power,[153] which, nevertheless, should be used with prudence and as a "gift" – as a kind of "divine power".[154] That is why Benjamin underlines that "pure *Gewalt*" should be understood as merely a stage towards the realization of the category of justice: "In this world divine *Gewalt* is higher than divine lack of violence [Gewaltlosigkeit]; in the coming world, divine lack of violence higher than divine *Gewalt*".[155]

Benjamin's Revolutionary Art Object

The ontological differentiation of justice that Benjamin proposes and its revolutionary power are deeply engraved not only in his writings in the area of political philosophy, but,

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[149] ibid., p. 188. This fact could, possibly, illuminate the origin of Kant's difficulty in identifying an adjective that would effectively differentiate juridical possession from physical possession. Notably, in the *Doctrine of Right* he experimented with various adjectives, including "intentional", "virtual" and "potestival". Nevertheless, none of them proved satisfactory in the end.

[150] ibid., p. 189.

[151] Kant in ibid., p.195. According to the labour theory of property, formulated by John Locke, the exertion of labour upon natural resources gives a "natural right" to the individual exerting the labour to own such resources and their products.

[152] Benjamin in ibid., p.213.

[153] ibid., p. 220.

[154] ibid., p. 219.

[155] ibid., p. 225.

also, in his work on art. Just as in his *Notes* he recognizes the absence of a single "form" for right and morality as positive in political terms,[156] in his seminal essay *The Work of Art in the Age of Mechanical Reproduction* (1936) Benjamin praises the art object's new "unformable" ontology as a direct result of the mass reproducibility offered by photographic and reprographic technology. Benjamin regards the latter as a catalyst that can help the art object to formulate revolutionary demands and contribute to the pursuit of social change. At the root of the political and revolutionary promise that Benjamin saw in mechanically reproduced art lies its ability to overcome the artwork's "aura" and the rituals appended on it through tradition. For Benjamin, the latter controls our relationship with the work of art through the imposition of a specific "reading" on it and the creation of a monosemous context of "legitimisation" that excludes any other interpretation.[157] In other words, the aura is not an "ontological property" of the object in itself, but rather an artificial construction that delimits the object's qualities. Therefore, by physically multiplying the artwork through copying it (mechanical reproduction), what we are doing in effect is to "free" the work from its authoritative and distant character and, as a result, we are given the opportunity to democratise it both quantitatively and qualitatively.

According to Benjamin, this was not possible before the invention of photography and cinema and, most importantly, before realising the inherent ideological dispositions of such new media. For, the aura is not a given fact *about* the artwork, but, rather, a set of relations formed *around* it, which act as a "protective fence". What those relations protect is quite easy to identify: the dominant (cultural) order and the interests of the ruling classes. This political perspective is vividly reflected even in works predating *The Work of Art in the Age of Mechanical Reproduction*. For instance, Benjamin refers with precision to this "prior" stage in the artwork's ontology and to its "resistance" to the new conditions generated by technology, when he describes the nature of early photographs in his *Little History of Photography* (1931). Adopting a photograph of writer Franz Kafka as a case study, he elaborates on the origin of its auratic qualities:

> This picture, in its infinite sadness, forms a pendant to the early photographs in which people did not yet look out at the world in so excluded and godforsaken a manner as this boy. There was an aura about them, a medium that lent fullness and

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[156] ibid., p.197.

[157] As Benjamin notes, "the uniqueness of a work of art is inseparable from its being imbedded in the fabric of tradition". See: Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction* (Hannah Arendt ed, Schocken 1969 [1936]) p. 223.

security to their gaze even as it penetrated that medium. And once again the technical equivalent is obvious: it consists in the absolute continuum from brightest light to darkest shadow. Here, too, we see in operation the law that new advances are prefigured in older techniques [...] So much for the technical determinedness of the auratic appearance.[158]

Figure 9: The photograph of Kafka referenced by Walter Benjamin

Benjamin identifies as a form of "technical conditioning of the auratic appearance" the "posturing stance" adopted by people in many photographs and, notably, he connects such technical choices directly to the preoccupations of the members of the bourgeoisie:

> After 1880, though, photographers made it their business to simulate the aura which had been banished from the picture with the suppression of darkness through faster lenses, exactly as it was being banished from reality by the deepening

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[158] Walter Benjamin, *Selected Writings: 1927-1934, volume 2* (Belknap Press of Harvard University Press 1999). p. 515-517.

degeneration of the imperialist bourgeoisie.[159]

It seems quite reasoned, then, that the destruction of the aura, which Benjamin so enthusiastically proclaimed in *The Work of Art in the Age of Mechanical Reproduction,* is ultimately grounded on its conception as an act of (political) justice: "To pry an object from its shell, to destroy its aura, is the mark of a perception whose 'sense of the universal equality of things' has increased to such a degree that it extracts it even from a unique object by means of reproduction", he writes.[160] If we, thus, conceptualize the object in the way that Benjamin is advocating – as a combination of a material and an immaterial existence (the "shell") – mechanical reproduction functions as a destructive as well as a rescuing gesture: the aura is destroyed and, at the same time, the object is "saved" as a new kind of "value" is appended on it. The critical element that defines this new "value" is the object's potential for distribution to an audience that is wider than ever before in human history – a fact that, nevertheless, does not have any negative effect on the work's formal qualities. Therefore, the development of technology, in the form of photography and cinema, marks for Benjamin not only the fall of the aura, but, also, the rise of the potential to pursue a new order in which justice can be finally fulfilled.[161] The idea of the "pure *Gewalt*" resonates once more strongly in Benjamin's work. The violent and revolutionary reordering of perception, which accompanies the destruction of the aura, acquires the characteristics of an almost "divine" catalyst. By transforming the individual artwork, the collapse of the aura has the potential to also transform the collective cultural condition through the mechanical reproducibility of all cultural objects.

Deconstructing the Aura: Deconstructing Time

Since, however, the aura is part of the fabric of tradition, which – by its nature – may encompass many "layers", its removal and the ensuing transformation of the art object is, above all, a *process*. But, such a process does not come without contradictions, or obstacles. Based on the previous analysis, it is possible to conceptualise the "condensed" time of the aura as the time of the "retroactive" object: an object whose qualities have been the product of an intense exercise of historicization. Thus, even if the aura is indeed removed

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[159] ibid., p. 517.
[160] Benjamin, *The Work of Art in the Age of Mechanical Reproduction*, op. cit., p. 222.
[161] As Benjamin writes: "For the last time the aura emanates from the early photographs". Thus, there is a permanent rupture with the past conditions of artistic production. ibid., p. 224.

"automatically" through reproduction, the illumination of its "layers" and the repositioning of the artwork in time and space is a much more complex function. Benjamin alludes to this fact in *The Work of Art in the Age of Mechanical Reproduction*, when he recognizes from the very beginning that space (and, thus, the object) is interwoven with time on an existential level in any theorisation of art.[162] The aura conceals the importance of this relationship by forming a specific narrative-chronicle around it. Yet, since, in the Age of Mechanical Reproduction each member of the audience can potentially acquire a copy of the object, the uniqueness of the narrative can no longer be a sustainable claim. If we take into account this attack on narrative and the recognition of the significance of time in the reception of the art object, then, it comes as no surprise that *The Work of Art in the Age of Mechanical Reproduction* is, ultimately, a work about a time-based medium: film. It is important to notice that Benjamin associates the shattering of tradition and the "aura" with the mass movements of renewal defining his age, and he concludes: "Their most powerful agent is film".[163]

Nevertheless, Benjamin's interest in a medium that was not that new by 1936 and his shift of focus from photography to cinema can acquire an even more illuminating character – especially with regard to its relevance to the Digital Age – if one places more emphasis on the historical conjuncture of his work. Benjamin attacked narrative and its manipulation of time through the aura, not simply because he was able to deconstruct it, but – most importantly – because he already had a glimpse of what was coming. Notably, *The Work of Art in the Age of Mechanical Reproduction* was written just a few months before the 1936 Summer Olympics, which were held in Berlin. For the Nazi regime, the Games constituted a unique opportunity to prove to the world not only the supremacy of the German athletes (who ranked first in the collection of medals), but – most significantly – the political and economic power of Germany and the scientific and technological progress that the country had attained. For this purpose, the Nazis offered to the world an achievement that was able to overshadow the newly built stadia and arenas of their capital city: the first, ever, live television broadcasting of a sports event. In total, more than 70 hours of live sporting action were transmitted and more than 150,000 people in Germany witnessed this historic occasion at special viewing booths, called "Public Television Offices". The event was widely discussed and publicised in Germany in the months preceding the Games and given Benjamin's vivid interest in technological innovation, it

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[162] ibid., p. 221.
[163] ibid.

would be perfectly legitimate to assume that he must have known about the broadcasting whilst writing an essay that investigated the cultural implications of technological progress. Interestingly, the printed programme accompanying the television broadcastings was available in four languages and it ended with the following remark: "From these initial stages of television in broadcasting and telephony, there is a growing up a cultural development that promises to be of unsuspected importance to the progress of mankind".[164]

Figure 10: The front cover of the television programme for the 1936 Olympic Games

Although the concept of progress that the television programme of 1936 referred to was, quite naturally, vague and hard to project into the future, its origins lie very close not

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[164]   '1936   German   Olympics'   (Tvhistory.tv,   2016) <http://www.tvhistory.tv/1936%20German%20Olympics%20TV%20Program.htm> accessed 4 April 2016.

only to Benjamin's theorisation, but, also, in effect, to our own "fluid" understanding of time in contemporary cultural theory. If the passage from the old media to television marks a transition from what one could name "fiction time" to "real time", then, the possibility of instantly shifting between different real-time images and sounds and interacting with them thanks to new media technologies could only push the boundaries of our perception of temporality even further. This "fluctuating" conceptualization of time carries a very strong political character and is crucial not only for the fostering of new social demands (or, the re-emergence of old ones), but, in essence, for the very existence of utopianism within human consciousness.

This necessity becomes evident if we consider the diverse relations that utopia has developed with the notion of "time" in the course of history. In some cases, utopianism has been based on a mythical and idealised vision of the past, whereas, during other periods, utopias have attempted to imagine a fundamentally better future. For instance, the story of Eden in the book of Genesis in the Bible depicts a utopia that has been lost forever, because of man's original sin at the dawn of history, for which he was exiled far from God's garden. Furthermore, and moving outside the Christian tradition, authors like the Roman poet Ovid refer to a "Golden Age" in the past, when there was no need for laws, punishment and wars, since everyone "maintained good faith and did what was right".[165] Alternatively, and positioned at the other side of the temporal spectrum, Plato's *Republic* – the widely considered root of Western utopianism – aimed at approximating the ideal society by projecting a supreme structure that was based on a deep understanding of the idea of justice. Even philosophers who rejected Plato's approach, like Aristotle, maintained this orientation towards the future, presenting their own version of the ideal state and what it would offer to its citizens.[166] Regardless of the past or future orientation, however, the real basis for the construction of utopianism is, in fact, the present. All utopias operate as comparative devices through which a judgement about the current condition of a society can be made. Thus, they may criticize the present by juxtaposing it to a much better past; or, they may perform the same function by describing what would be the right choices for a future that would be much better than the present. Quite evidently, both points of view bear profound political and revolutionary promise, through their implicit questioning of

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[165] Ovid, *Metamorphoses* (M Innes tr, Penguin Books, London 1955) p. 31. Ovid's mythological account was the most prominent version of the "Golden Age", which was, later, passed into the middle Ages and the Renaissance.

[166] Aristotle presents his views on the ideal polis in his *Politics* (Greek: *Πολιτικά*). See: Aristotle, Ernest Barker and R. F Stalley, *The Politics* (Oxford University Press 1995).

the existing order of things.

Yet, this subversive character becomes even more salient when utopias are enacted, in some form, in the present. Notably, in such occasions, the agents of the existing status quo are keen to apply specific rules and limitations to the enactment, so that the dominant order is successfully preserved and the participants of the enactment do not become "vectors" of a deviant ideology. Hence, during antiquity, Ovid's "Golden Age" was enacted through Saturnalia, the Roman festival in honour of Saturn, which was held every year on 17 December. The festivities were characterised by a thorough overturning of social norms, which even saw masters providing table service for their slaves. Nevertheless, private celebrations would last for no more than a week (in many cases, just for a day). During the Middle Ages, similar rituals were expressed through the story of Cockaigne, or Cockayne, which described a mythical land of plenty, in which all the difficulties and the harsh living conditions of the poor had disappeared and food and sexual freedom was offered to everyone on equal terms. This story is closely associated with practices like the carnival, in its various versions, which subverts the established order in people's everyday lives by mixing social classes and overturning people's roles; in short, by generating a brief social revolution. The medieval Feast of Fools is one of the most interesting and characteristic cases, since the "revolt" adopted a highly blasphemous nature. More specifically, it demanded the mocking of Church officials by their own congregations, whose members would normally be in a subordinate position. The festival was vehemently condemned by the Church and was finally forbidden by the Council of Basel in 1431, amid the adoption of severe penalties.

This stance of prohibition has been a common characteristic of all systems of power in their fight against elements of utopianism that might raise social demands implying dissatisfaction with the present condition. For instance, following World War II, the Catholic Church emphatically opposed movements like Liberation Theology, a Christian doctrine developed in Latin America that believes that the Church should actively contribute to the emancipation of the poor from political, social and economic injustice.[167] Notably, for the supporters of the movement, "Jesus became a social agitator and the poor, as referred to in the gospels, came to be equated with the proletariat as defined by Marx".[168] Even today, the Catholic Church aims at diminishing the importance of Liberation

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[167] Another example is Black Theology.
[168] John Hooper and Dan Collyns, 'Peru University in Vatican Battle over Right to Call Itself Catholic' *The Guardian* (28 October 2012) <http://www.guardian.co.uk/world/2012/oct/28/peru-university-vatican-catholic?fb=optOut> accessed 23 March 2016.

Theology, by largely presenting it as a utopian and blasphemous strand that flourished under the special political conditions of Latin America in the 1970s and the 1980s. In other words, according to the official Church, the movement should be perceived as a limited phenomenon, both geographically *and* temporally. But, what if the previously described enactments continued? What if time could become "fluid" enough in order to foster utopianism on a whole new basis? What if utopian demands became pursuable alternatives, rather than deviations from "normality", forbidden activities, or institutionalised spectacles?

The Fluid Temporality of Contemporaneity

In the eight decades that have followed the 1936 Olympics that Walter Benjamin experienced, the reconceptualisation of temporality thanks to technology became so extensive, that it has been vividly reflected not only in the approach that cultural theorists have adopted with regard to the present, but, also, with regard to the past. During the 1990s, art historians like Georges Didi-Huberman[169] and Mieke Bal,[170] introduced in their analyses the idea of "anachronism", in order to describe the capacity of artworks to overcome their traditional temporal identity and belong both to the present *and* the past. Their arguments entail that an artwork could produce considerably different meanings in different times and places and, thus, art itself could acquire a much more flexible role as a social agent. More recent contributions to this field have even applied the same principle to periods in art history that bear very strong "canonical" identities. For example, in their book *Anachronic Renaissance* (2010),[171] art theorists Alexander Nagel and Christopher Wood examine the artistic production of the late Middle Ages and the Renaissance in light of this new conceptualisation of time and the context "contemporaneity". Their work produces polyvalent interpretations of ideas like the "copy", the "replica" and "authorship", which engage with *and* refute at the same time the influence of (historical) distance. One of the main concepts that the two authors employ in their work in order to synopsise this "liberating" function of enagagement and refutation is "subsitution". As Nagel and Wood

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[169] Georges Didi-Huberman, *Fra Angelico: Dissemblance and Figuration* (Jane Marie Todd tr, University of Chicago Press, Chicago 1995); and Georges Didi-Huberman, *Confronting Images: Questioning the Ends of a Certain History of Art* (John Goodman tr, Pennsylvania State University Press 2005).
[170] Mieke Bal, *Quoting Caravaggio: Contemporary Art, Preposterous History* (University of Chicago Press 1999).
[171] Alexander Nagel and Christopher S Wood, *Anachronic Renaissance* (2nd edn, Zone Books 2010).

claim, "to perceive an artifact in substitutional terms was to understand it as belonging to more than one historical moment simultaneously. The artifact was connected to its unknowable point of origin by an unreconstructible chain of replicas".[172] Quite evidently, the content of the term "replica" here can acquire a signification that goes well beyond the mere reconstruction of a physical object. The (re-) definition of the artwork, which – notably – alludes to a procedural origin ("chain of"), may connect the artifact's material nature with its immaterial existence; namely, with its philosophical, anthropological, ideological and cultural function through time.

Art historian Terry Smith, whose work principally examines contemporary art, adopts a very similar position on temporality, which echoes vividly Nagel and Wood's concept of "substitution". According to Smith, "in contemporary conditions periodization is impossible", since "contemporaneity consists […] in the actual coincidence of asynchronous temporalities".[173] In this context, we might develop a sense that specific kinds of time are "running out", while others seem to prevail and vice-versa. An explanation for this condition may be provided if we consider that globalisation lies in a state of "suspension" from which it might never, actually, escape: it is a process that is not complete; yet, it appears to constantly seek completion, despite the fact that its incapacity to produce unity makes this goal largely unattainable.[174] Therefore, the inability to singularly define the present experience of temporality engenders a radicalisation of the past-present-future triad: time is mixed and displaced[175] and, as a result, "it is becoming more and more common to feel oneself as standing, in important senses, at once *within* and *against* the times".[176] In other words, the term "contemporary" should be understood through its multiplicity, with regard to both temporality *and* art as one of its products. In particular, when referring to contemporary art, we refer to something that is "hosting" multiple narratives not only because it is happening today and, thus, it has not managed to produce sufficient "distance" yet, but, rather, because there cannot be a dominant and stable narrative building such "distance" anymore.[177] Interestingly, Smith identifies the new

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[172] ibid., p.30

[173] Terry Smith, Okwui Enwezor and Nancy Condee (eds), *Antinomies of Art and Culture: Modernity, Postmodernity, Contemporaneity* (Duke University Press 2009) pp. 8-9.

[174] Terry Smith, *What Is Contemporary Art?* (The University of Chicago Press, Chicago 2009) p. 198.

[175] ibid., p.211.

[176] ibid., p. 198

[177] This fact is, perhaps, reflected to some extent in the efforts of several prominent mid-career contemporary artists to historicize their achievements and "secure" their place in history. For instance, this might be claimed about events such as Damien Hirst's Tate Modern retrospective in 2012 and his involvement in the London Olympic Games, or Tracy Emin's appointment as a

modes of artistic creation, like digital interactivity, as tools of "reconciliation" with the multiple natures of time. As he notes,

> they mark out a physical or virtual space, a part of the world, as a site pervaded by provisionality and possibility – a place in which, precisely by exempting itself from all external rules governing location, and by suspending for a time the operation of the world's increasingly multiplicitous temporalities, while yet acknowledging their powers in these very deferrals, the work of making meaning may be undertaken.[178]

French art writer and curator Nicolas Bourriaud characterises contemporary artists who adopt such practices as "semionauts". In his book *Postproduction* (2002), Bourriaud argues that DJs, Web surfers and postproduction artists build their own original paths through a universe of signs ("semia"), by imagining links and remixing the possible relations between disparate sites.[179] As a result, new media artworks reconfigure knowledge and undermine the notion of originality (being at the origin of), because of the constantly shifting prism embedded in this new cultural landscape.[180] Bourriaud further elaborates on those ideas and connects them directly to contemporary artistic production though his curatorial work for "Altermodern", the 4th Tate Triennial (2009). Notably, a whole section of the exhibition at Tate Britain, in London, was devoted to the exploration of time as a crucial component of what it means to be an artist working in the Digital Age. Bourriaud names this condition "heterochronia":

> it describes artists' work which cannot be easily anchored to a specific time; which asks us to question what is contemporary. Without nostalgia, artists trace lines and connections through time as well as space. It is not the modernist idea of time advancing in a linear fashion, nor the postmodern time advancing in loops, but a chaining or clustering together of signs from contemporary and historical periods

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Professor at the Royal Academy in 2011. It would seem that despite their phenomenal commercial and publicity successes, such artists have been feeling the pressure of establishing a "narrative" for their careers at a much earlier age than what one would have expected a few decades ago for artists of a similar standing.

[178] Smith, *What is Contemporary Art?*, op. cit., p.195.
[179] Nicolas Bourriaud, *Postproduction: Culture as Screenplay: How Art Reprograms the World* (Caroline Schneider ed, Jeanine Herman tr, Lukas & Sternberg 2002) p. 18.
[180] ibid., pp.13-19.

which allows an exploration of what is now.[181]

Therefore, "Altermodern" can be perceived as a kind of hypertext, through the interconnections of which artists can translate and transcode information that originally referred to times and places that were considered as "non-translatable" and "non-transcodable". Interestingly, in the catalogue of the exhibition, Bourriaud relates the newness of this state to the global economic crisis. In an attempt to delineate the political context of altermodernity's art, Bourriaud makes a direct comparison between the rise of the term "postmodern" and the oil crisis of 1973, and the appearance of "altermodern" and the financial crisis of 2008.[182]

This political potential of altermodernity's "post-medium" condition could, also, be traced in the role that artists are "organically" called to perform.[183] In her 2011 book *Under Blue Cup*, art critic and theorist Rosalind Krauss, describes this role by "baptising" Bourriaud's "semionauts" the "knights of the medium". Through the employment of memory as the core of her analysis, Krauss highlights the idea of time and presents it as the element that differentiates the current cultural condition from any other period. Alluding to a rather polemical approach to artistic production through the use of the term "knights", Krauss determines the mission of contemporary artists as that of inventing a new medium. However, the process proposed for this invention might appear somewhat oxymoronic: on the one hand, artists are asked to remember the importance of the medium in the context that this was affirmed by Modernism; and, on the other hand, they are asked to forget the specifics of the medium. In other words, and in a similar manner to Benjamin's destruction of the "aura", artists are called to overcome tradition: "Wanting to forget the traditional medium" should be their goal, Krauss notes.[184] For her, this is the only way to actively re-infuse artistic media with life: by using them as if they were brand new. Yet, in reality, the role of memory within digital media can acquire a more explicit social character, provided that one also views such media as technical objects. In *For a New Critique of Political*

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[181] 'Tate Triennial 2009: Altermodern - "Heterochronia"' (*Tate.org.uk*, 3 February 2009) <http://www.tate.org.uk/context-comment/video/tate-triennial-2009-altermodern-heterochronia> accessed 23 March 2016.
[182] Nicolas Bourriaud (ed), *Altermodern: Tate Triennial 2009* (Tate Publishing, London 2009) pp. 16-17.
[183] For more on the "post-medium condition": Rosalind E Krauss, *'A Voyage on the North Sea': Art in the Age of the Post-Medium Condition* (Thames & Hudson, London 2000).
[184] 'In Conversation: Rosalind Krauss with Yve-Alain Bois' *The Brooklyn Rail* (1 February 2012) <http://www.brooklynrail.org/2012/02/art/rosalind-krauss-with-yve-alain-bois> accessed 23 March 2016.

Economy (2010), French philosopher Bernard Stiegler attempts to "update" Marx's *A Contribution to the Critique of Political Economy* in the Digital Age, asserting that "all technical objects constitute an intergenerational support of memory which, as material culture, overdetermines learning [*apprentissages*] and mnesic activities. [...] A newborn child arrives into a world in which tertiary retention both precedes and awaits it, and which, precisely constitutes this world as world".[185] New technologies can reconfigure the "psycho-political" context within which memory is theorized by Stiegler, not only by "reinventing" media, but, also, by revealing their relation to the dominant economic and social order. Interestingly, Stiegler underlines in his book *Technics and Time* (1998) that "there is no work without technics, no economic theory that is not a theory of work, of surplus profit, of means of production and investment".[186]

Grand Narratives: Joining the Pieces

In view, then, of this more open political perspective, a plausible question arises: are there any "windows" for the return of utopianism and "grand narratives", such as communism, within the previously analysed theorisations of time? At first instance, and given "contemporaneity's" fluid nature, this goal might appear rather difficult to attain. In the exhibition catalogue of "Altermodern", Bourriaud goes back to the conditions defining postmodernity and the end of "grand narratives" in order to allude to the permanence of their disappearance. As he asserts, narratives like Marxism were succeeded by globalisation, which, nevertheless, "does not designate a cultural period properly speaking, but a geopolitical standardisation and the synchronisation of the historical clock".[187] Therefore, the end of actual "grand narratives" is largely still in place. And, at the same time, even "alterglobalisation does not seek cumulative solutions to the steamrollering effect of economic globalisation – rather a concatenation of singular responses within models of sustainable development".[188] Adopting a different point of view, which, nevertheless, leads to the same conclusion, Terry Smith underlines that "master narratives"

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[185] Bernard Stiegler, *For a New Critique of Political Economy* (Daniel Ross tr, Polity Press 2010) p. 9
[186] Bernard Stiegler, *The Technics and Time 1: The Fault of Epimetheus* (Richard Beardsworth and George Collins trs, Stanford University Press 1998) p. 31.
[187] Bourriaud, *Altermodern*, op. cit., p. 20.
[188] Bourriaud, *Altermodern*, op. cit., p. 23.

might still nominally persist, yet, they have become highly simplified.[189] As a result of this process of simplification, they undermine their very existence and their future prospects, thus becoming prone to fragmentation and to the creation of divisions between the distinct groups that may be formed within or around them. It is important to notice that such groups and "anti-groups" could be easily created today through the use of new media technologies and the wide variety of social media applications and websites that define our everyday experiences of the Internet.

Nevertheless, and despite their undeniable importance, the obstacles that we have described above may not be sufficient in order to dismiss the re-emergence of "grand narratives" in new forms. If one takes into account the fact that, in many cases, the previously analysed theorisations allude to, or even, fully reveal their inherent contradictions, then, there is plenty of room for opposite interpretations. More specifically, in *Postproduction*, Bourriaud asserts that the new media artwork "functions as the temporary terminal of a network of interconnected elements, like a narrative that extends and reinterprets preceding narratives".[190] In other words, instead of a process of destruction, we are faced with a process of reinterpretation of (grand) narratives, through art. Furthermore, in the *Altermodern Manifesto*, Bourriaud describes the emergence of a unifying "new universalism", whose basis, through the ubiquitous use of media, is translation, subtitling and generalised dubbing. And, in the catalogue of the exhibition, he goes a step further, by naming the last part of his introduction "A Strategic Universalism". What Bourriaud appears to suggest in this is that since technology has unified the world and redefined planetary scale, what we might need for an ambiguous and volatile future is a new, more "strategic" approach to what is collectively possible in the context of globalization. Interestingly, Terry Smith describes this very context by referencing Jacques Derrida and his concept of "à venir": a state of "perpetual advent" – something that is always to come.[191] Smith argues that after the era of "grand narratives" and their appended "certitudes" what will come is, in reality, impossible to foresee or predict: "aftermath may last forever", he asserts.[192] Notably, the use of the term "aftermath" here does not allude to a complete extinction, but, rather, to a process of constant destruction *and* reconstruction: master narratives might have disappeared as distinct entities, yet, their fragments could be

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[189] Terry Smith refers predominantly to the George W. Bush Presidency and the context of its "war on terror", which has been defined by the manipulation and oversimplification of concepts like "freedom", "democracy", or – even – "jihad" (Smith, *Antinomies of Art and Culture*, op. cit., p. 10).
[190] Bourriaud, *Postproduction: Culture as Screenplay: How Art Reprograms the World,* op. cit., p. 19.
[191] Smith, *Antinomies of Art and Culture*, op. cit., p. 9.
[192] Smith, *What is Contemporary Art?*, op. cit., p. 6.

found surrounding us at any given time.

Accordingly, a "here-and-now" filled with revolutionary potential may come into view, not only because of its possible radical content (which may re-emerge as a "fragment" past revolutionary narratives), but, predominantly, because of its very form. In his essay *On the Concept of History* (1940), Walter Benjamin refers to this "here-and-now" as "jetztzeit" and he connects it to "the consciousness of exploding the continuum of history [that] is peculiar to the revolutionary classes in the moment of their action".[193] Interestingly, in the same paragraph, Benjamin recounts an incident from the July Revolution in Paris in 1830,[194] during the first evening of which "it turned out that the clock-towers were shot independently and simultaneously in several places". Accordingly, revolutionaries are called by Benjamin to take part in the class struggle, as delineated within Marxist thought, by taking control of time, memory, and, thereby, History.[195] In this context, one should not fail to notice the particularly significant role that time occupies in Marx's critique of political economy and the capitalist system, through the introduction of the "socially necessary labour time". According to Marx's theory, which radically differentiates him from neoclassical economists, the value of a commodity equals the quantity of socially necessary labour time required for its production.[196] This time can be defined as the time demanded "in a given state of society, under certain social average conditions or production, with a given social average intensity, and average skill of the labour employed".[197] The most important element in this proposition is the fact that Marx focuses not on the notion of price, but, rather, on that of value. In other words, his aim is to elucidate what one could name "the real price", which, nevertheless, is manipulated by the capitalists. It is through this system of distortion that "value" finally becomes "price". At the same time, Marx theorizes value from a social, rather than an individual perspective, since he associates it with the *average* intensity and the *average* skill available within a society. What the ruling classes attempt to do is to conceal this social character and benefit from surplus labour, which produces surplus value and, thereby, surplus profit. For this purpose, they construct a dominant "narrative" that privileges a monosemous socioeconomic

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[193] Dennis Redmond (tr), 'On the Concept of History by Walter Benjamin' Paragraph XV (*Marxists.org*) <https://www.marxists.org/reference/archive/benjamin/1940/history.htm> accessed 31 March 2016.

[194] Benjamin refers to the Revolution that took place on 27-29 July 1830, which resulted in the overthrow of King Charles X and the creation of a new constitutional monarchy for France.

[195] 'On the Concept of History by Walter Benjamin', op. cit., Paragraphs IV-VI.

[196] This is explained in depth in the first chapter of Marx's *Capital*.

[197] Karl Marx, 'Wages, Price and Profit', *Selected Writings: Karl Marx and Friedrich Engels* (Collector's Library 2004) pp. 99 – 100.

condition, at the core of which lies individualism.

Returning to Walter Benjamin's writings about art and its social agency, the object's mechanical reproduction may be drawn up against narrative (any "narrative": political, economic, cultural, etc.), not as an apparatus that does not allow for it to exist at all, but, rather, as a means to expose the basis on which it has been built, its structure and, in the end, its potential forgery.[198] Therefore, we could synopsize and, at the same time, "expand" Benjamin's intellectual endeavour, by describing it as an attempt to illuminate the true nature of the artistic object and the conditions of its production, as well as an invitation to radically modify those conditions in a constantly evolving process. Through the passage from mechanical reproduction to digital reproduction and, then, online reproduction, this invitation becomes even more open and inclusive than Benjamin had ever envisioned. For, the qualitative and formal consistency of the work of art is combined for the first time with a truly global quantitative character, which is realised through the agency of a global network – the Internet. This transformation and its ideological potentialities can be traced distinctly in the writings of contemporary artists and theorists who have been directly inspired by Walter Benjamin and his meticulous investigation of the art object's political nature. Since the advent of digital and networked technologies such thinkers have employed Benjamin's work as a starting point in order to theorise art in the age of its online reproducibility. The examination of two of the most prominent "re-interpretations" of Benjamin's essays *The Work of Art in the Age of Mechanical Reproduction* (1936) and *The Author as Producer* (1934) will provide us with a clearer image as regards the new technocultural order that was born with the advent of the Internet and the growth of the World Wide Web. It is this within this very context of the proliferation of networks that the global financial crisis of 2008 broke out.

Art in the Age of Online Reproduction

In his 1995 essay *The Work of Art in the Age of Digital Reproduction (An evolving thesis, 1991-1995)*, artist and art writer Douglas Davis attempts to update Walter Benjamin's legacy, at a critical moment for the scope of both new media and contemporary art. Davis asserts in his essay that through Digital Art we have managed to reach a point where

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[198] German literary theorist Eva Geulen notes that "The perception of the aura rises from its loss". See: Eva Geulen, 'Zeit Zur Darstellung. Walter Benjamins Das Kunstwerk Im Zeitalter Seiner Technischen Reproduzierbarkeit' (1992) *Modern Language Notes* vol. 107 p. 580.

"everyone finally talks to everyone"[199] and this is a moment when the inner self can be liberated. More specifically, thanks to the new instruments of communication, new stimuli may be born, as direct modes of (artistic) expression and interaction become possible. In this way, Virtual Reality can become a "Realer Reality", and it is within this new kind of reality that the fictions of the "master" and the "copy" have no meaning anymore.[200] It is exactly the rise of this directness entails the inevitable fall of the "aura". Yet, according to Davis, the fall is even deeper than what it first appears to be, for digital media are capable of undermining not only the "aura" of the original, but also the very concept of originality. As everything can be individualized, we can now produce a "post-original original";[201] namely, an original that is so subjective and personal, that any attempt to claim that some kind of authority attached to it becomes totally meaningless. Accordingly, the singular artistic object of the past becomes the distributed artistic object of the present, not only in terms of its geographical reach, but also in terms of its ontology: "Here is where the aura resides – not in the thing itself but in the originality of the moment when we see, hear, read, repeat, revise".[202] In this sense, the demolition of the "aura" is above all a demolition of hierarchy, as the "object" recedes and (personal) "experience" becomes the most important element in New Media Art. This development is a way to fight homogeneity, produce non-linear concepts, violate continuity or, even, (art) history itself – a means to question the dominant perception of truth and "refute the conviction that the world mind is one mind".[203] This is very much a political perspective, which suggests that we might live in an interconnected world, but we can claim for autonomy as well. Therefore, the new capacities of aesthetic "openness" offered by the Digital Age can become politicized: "Let anarchy thrive" is the radical invitation made by Davis in his essay.[204]

However, what Davis does not provide us with in *The Work of Art in the Age of Digital Reproduction* is a concrete ideological framework, whose realisation would transform individuation into a tangible political gesture. On the contrary, in several parts of the essay, the tone used by the author is rather vague, or – even – messianic, yet without identifying the exact role of the alleged technocultural "Messiah". More specifically, there is a comparison between the global communication networks and the ancient Greek God

[199] Douglas Davis, 'The Work of Art in the Age of Digital Reproduction (an Evolving Thesis: 1991-1995)' (1995) *Leonardo* vol. 28 no. 5, Third Annual New York Digital Salon p. 381.
[200] ibid., p. 381.
[201] ibid., p. 383.
[202] ibid., p. 386.
[203] ibid., p. 384.
[204] ibid., p. 385.

Prometheus, who gave the gift of fire to humankind,[205] accompanied by several references to God and to the prophetic qualities of technology innovators. To a certain extent, Davis' utopian language might seem credulous two decades after the publication of his essay. Arguably, many of his predictions and hopes about the capacities of networked media have been realized, through the advent of technologies such as tablets, smartphones, Wi-Fi and 3G/4G communication networks. Yet, at the same time, none of those have led to a thriving of anarchy as an ideological apparatus that has produced an environment of unquestionable progress for our societies. Nevertheless, it would be hard to deny that through the development of his arguments, Douglas Davis successfully identifies some of the paths through which the powerful tools offered by networked technologies may revive utopianism and make its expressions part of our everyday lives.

Ten years after the publication of Davis' paper, academics and curators Geoff Cox and Joasia Krysa edited a selection of essays under the title *Engineering Culture: On 'The Author as (Digital) Producer'* (2005). In their work, the two editors-authors attempt to re-approach Benjamin's legacy, whilst avoiding "the 'naïve optimism' of much new media practice".[206] The result of this endeavour is a much more "strategic" theorisation of new media art than the one proposed by Davis, which illustrates the rapidity of technocultural change within a period of just a decade. Cox and Krysa adopt as a starting point Benjamin's interest in the relation between form and content in literature and, correspondingly, in all forms of artistic creation. The main element that defines the nature of this relation is, according to Benjamin, the process through which a work is produced. Cox, Krysa and the authors that contribute to their book focus on identifying different ways of revealing the complex production processes employed by digital and networked media, and – most importantly – on investigating the capacity to intervene in those processes.[207] The disruption of the "conception of technology as value-neutral tool that, by extension insists technological development is an ethically indifferent activity"[208] constitutes the necessary first step in order to redefine the role of the digital author. Through their analyses, the contributors of the book underline the pivotal importance of the transformation of the cultural producer "from a supplier of the production apparatus, into an engineer who sees

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[205] ibid., p. 381.
[206] Geoff Cox and Joasia Krysa (eds), *Engineering Culture: On 'the Author as (digital) Producer'* (Autonomedia, New York 2005) p. 11.
[207] ibid., p. 7.
[208] The Institute of Applied Autonomy (IAA), 'Engaging Ambivalence: Interventions in Engineering Culture' in Geoff Cox and Joasia Krysa (eds), *Engineering culture: On 'The Author as (Digital) Producer'* (Autonomedia, New York 2005) p. 98.

his task in adapting that apparatus".[209] The latter is largely determined by phenomena such as the proliferation of immaterial labour and the rise of new forms of exploitation in online media, including "free labour". Those processes have to be subverted by finding new forms of resistance, whose strategies will put "emphasis on the production of knowledge and culture, rather than wealth".[210] Open source cultural practices, "self-institutions", collaborative online authoring systems like Wikis, and free software development may create the basis for anti-systemic contexts of digital production and the emergence of new property relations.

The theoretical framework adopted in *Engineering Culture: On 'The Author as (Digital) Producer'* is characterised by a distinct shift from the potential of the *medium* to transform the individual (Douglas Davis) to the potential of the *individual* to transform the medium; or, more accurately, to the *duty* of the individual to transform the medium. In the case of the cultural producer and his strategy to generate change, this is combined with the realisation of the increasing interconnection between digital cultural products and the capitalist new media economy. The espousal of this overtly political point of view also contributes to the identification of the contradictions that may reside in today's new media art practices, which operate within a pervasive capitalist mode of production. Such an intellectual exercise reflects the experience and knowledge acquired in the decade that separates the two key texts that we have briefly examined in the context of Benjamin's legacy – both in terms of the technological progress that has taken place during this period of rapid innovation (1995-2005), as well as in terms of the growth of Web-based art as a distinct set of practices.[211]

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[209] Walter Benjamin, 'The Author as Producer' John Heckman tr. (July – August 1970) *New Left Review* I/62 pp. 83-96.

[210] Cox & Krysa op. cit., p. 9.

[211] An additional explanation for the different approaches between Douglas Davis and Cox and Krysa (apart from the gap in time and, thus, the gap in technology) could, potentially, be found in the different geographical origins of the authors – North America and Europe. Platonic and neo-platonic theorizations of art remain strong in the American tradition of art theory and art history. Such approaches predominantly focus on visuality, since the sense of sight is regarded as a "shared" as well as a "transcendent" quality, through its "negation" of materiality. In contrast, art history in Europe has been much more vividly concerned with materiality. Notably, in his essay "Freaks of Number", Matthew Fuller argues that mainstream computing is locked into a form of neo-Platonism, which finds "beauty in the most apparently simple, the most purely expressed of formal resolutions to a problem". A more "material-based", Marxist perspective on digital art may bring the art object in the forefront of our theoretical investigations and fight the image/object dichotomy. The latter hinders considerably our capacity to recognise the economic and, accordingly, political dimension of the (digital) art object. See: Matthew Fuller, 'Freaks of Number' in Geoff Cox and Joasia Krysa (eds), *Engineering culture: On 'the author as (digital) producer'* (Autonomedia, New York 2005) pp. 161 – 175.

In the decade that separates us from 2005 and the publication of *Engineering Culture: On 'The Author as (Digital) Producer'*, the expansion of Web 2.0 increased exponentially the capacities offered by networked technologies. The emphasis on user-generated content, the rapid growth of social media platforms and the proliferation of wireless telecommunications have accentuated to an unprecedented extent the power of the author as producer. However, at the same time, those developments have produced a much more fractured and complex environment for human communication and interaction. It is within this environment that the global financial crisis of 2008 occurred. In many ways, the crisis came to remind us what political theorist Hannah Arendt called "the right to have rights";[212] or, in other words, it has helped us to recognise the continuous relevance of the process of recognition. As we have suggested in this chapter, the annulation of Hegel's "struggle for recognition" has been one of the key anti-utopian arguments of the pre-crisis period, for it has been associated with the declaration of the "End of History" and the assertion that no fight to gain "recognition" is required anymore in the context of the neoliberal capitalist state. The events of 2008 and their severe consequences have emphatically refuted this claim. As we have indicated through the parallel examination of Benjamin and Kant, the idea of justice, which is the ultimate goal of recognition, is inextricably connected with the idea of possession. Accordingly, the accentuation of the divisions of possession (wealth) following the global financial crisis has brought to light both the necessity of the struggle and the essential role of utopian political thought as its enabler. In the case of art, this need is organically connected with Benjamin's mechanically reproduced art object, whose possession moves from an auratic to a democratic status. Benjamin's notion of a "distributed" cultural object, which was formulated under the influence of Marx's ideas, ultimately found an ideal agent in the Internet, both in terms of reproduction and geographical reach. As a result, even before the outbreak of the crisis, new media theorists and practitioners had the opportunity to identify the inherent political potentialities of art's online creation and distribution.

The projects that will be examined in the next two chapters will indicate that the crisis functioned as a two-fold catalyst for politically engaged art. On the one hand, it revived the overt utopian spirit exemplified by Davis, in an attempt to employ new media to promote socialist ideals as alternatives to the dominance of capitalism. And, on the other hand, artists and cultural workers have often adopted the strategic view on the Internet exemplified by Cox and Krysa, in order to give a more concrete shape to novel, or

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[212] See: Hannah Arendt, *The Origins of Totalitarianism* (New York, Harcourt Books, 1994).

– even – radical modes of social being. The work of such artists, collectives and institutions testify to the fact that utopianism has managed to survive the rise of Data Capitalism and, then, thrive as a framework of political thought in the context of the most severe economic crisis of the last eight decades. However, the same claim could be made about the severity of the obstacles that capitalism, in its new data-fuelled incarnation, has generated in order to delimit the scope of new utopian thinking. In order to fully illuminate the political dimension of post-2008 Web-based art, we have to examine both tendencies; namely, both the potentialities opened by the artistic projects that have been fighting Data Capitalism *and* the challenges that have undermined, or may undermine in the future their political ambitions. The next two chapters of this thesis will be the first part of this dual investigation. They will focus on the powerful technocultural tools adopted, or coined by artists in the aftermath of the global financial crisis, as well as on the distinct conceptual approaches that the use of those tools has been based on. As it will be indicated, for several artists, the crisis of 2008 can be perceived as the critical moment when Benjamin's "pure *Gewalt*" is – finally – mediated, with a view to enriching the spirit of the socioeconomic change that was gradually emerging across the globe.

Chapter 3

Diagnosing the Crisis: Deconstruction and Protest

Formulating the "Telekommunist" Agenda

At the height of the global economic crisis, in 2010, software designer Dmytri Kleiner published his influential *Telekommunist Manifesto* – a revised collection of texts that he and his collaborators at the Telekommunisten network had been working on since 2006.[213] The Telekommunisten network constitutes a collective of software designers, cultural producers and activists who collaborate in order to investigate the political economy of communication technologies, with a particular focus on the potential of free networks and free culture. In the manifesto, Kleiner theorises class conflict in the context of information economy, arguing for the voluntary establishment of collaborative and shared structures of cultural production and economic distribution. Three main questions are at the core of Kleiner's endeavour: Firstly, what kind of economic architecture does the infrastructure of the Internet produce? Secondly, how is value created within networks and, accordingly, what are the characteristics of cognitive labour? And, finally, where does ownership lie? One of the most interesting and revealing parts of the multi-part manifesto is "The Manifesto of the Telekommunisten Network", in which the author "hacks"-modifies the second section of *The Communist Manifesto* in an attempt to reinterpret and "update" the principles set out by Marx and Engels. Kleiner begins by proclaiming that "the first step in the revolution by the working class is to develop a network of enterprises where people produce for social value and share as equals, and to build and expand the economic size of these enterprises to raise the organized proletariat to the position of being the dominant economic class".[214] Kleiner goes on to apply a number of key substitutions with Marx and Engels' text: instead of the abolition of private property, he suggests its mutualisation; in the place of a centralised state, he envisions a common stock of production assets that function on the basis of decentralisation; he identifies the producer-consumer relationship as the new antagonism that has replaced the distinction between town and country; and he

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[213] Dmytri Kleiner, *The Telekommunist Manifesto* (Institute of Network Cultures, Amsterdam 2010).
[214] ibid. p. 26.

proposes a distributed and global production model instead of a concentrated and national one. Accordingly, Kleiner calls for a system of self-organisation through which the members of the "landless" proletariat of Web 2.0[215] will expand their economic and political power, instead of trying to directly gain political supremacy through revolution.[216]

In order to contribute towards this objective, Kleiner proposes two instruments: "venture communism" and "copyfarleft". Both concepts constitute disruptive "reversals" of two significant adversaries of leftist networked culture: venture capitalism[217] and copyright. According to Kleiner, venture communism is an economic paradigm whose main characteristic is the establishment of venture communes. Those communes can be understood as self-organised, shared-ownership "firms", through which peer-to-peer (P2P) network technologies can be funded, developed and distributed. All independent producers belonging to the commune share a common stock of productive assets, to which they have equal access. Production is not centrally coordinated in the venture commune; only the stock is managed by it, making sure that goods are made available to the independent producers who might need them (e.g. housing, or tools).[218] Finally, "ownership in a venture commune can only be acquired by contributions of labour, not property".[219] In terms of intellectual production, the main tool that is required to allow such a peer-to-peer system to exist is, according to Kleiner, the copyfarleft. The copyfarleft constitutes a radical reinterpretation of the already existing framework of copyleft (i.e. a leftist substitute for the capitalist framework imposed by copyright), which includes intellectual property licenses such as the General Public License (GPL).[220] The *Telekommunist Manifesto* identifies two prospective categories of users of cultural products: the users who are members of worker-owned businesses or worker-owned collectives, in which case they are granted a "worldwide, royalty-free, non-exclusive, perpetual" license;[221] and users who are operate as private businesses that aim "to generate profit from the labour of employees

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[215] ibid., p. 19.
[216] ibid., pp. 26-27.
[217] 'Venture capitalism' denotes a system of economic expansion based on the funding with private equity capital of early-stage, high-potential, growth companies (start-up companies). Quite often those companies belong to the technology sector.
[218] Kleiner, op. cit., p. 23.
[219] Kleiner, op. cit., p. 24.
[220] Kleiner, op. cit., p. 36. The GPL is the most widely used free software license. It grants users (individuals, private and public organizations, companies) the freedom to use, study, share, copy and modify the software. The GPL was released by Richard Stallman in 1989 and since then there have been revisions in order to keep up with both technological innovations and new legal and regulatory frameworks.
[221] Kleiner, op. cit., p. 45.

paid by salary or other wages",[222] in which case no use is permitted. Those terms are explained and theorized in more depth in the six-page "Peer Production License",[223] which is also the license under which *The Telekommunist Manifesto* has been published. For Kleiner, copyfarleft is the most effective legal framework in order to prevent "property owners from turning our productivity into their accumulated wealth"[224] and stop the exploitation and limitations imposed on the author's freedom through the intellectual property regime that is currently in place.

The artistic projects and interventions of the Telekommunisten collective pose similar questions through interactive artworks that often adopt an experimental, speculative, or – even – satirical character. According to the collective, their works could be seen as the products of a "performative science fiction": they often fail to function as expected, or they function in a variety of unexpected ways. By playing with elements of surprise, bewilderment, humour and parody, they aim to introduce the political economy of the Internet into the debates of media artists, theorists and the public. Those objectives become evident in the group's *Deadswap* (2009), which has been a social experiment that explored the potential for *off-line* file-sharing and communication systems, with a view to accentuating the importance of establishing *online* decentralised network structures free of corporate or state control.[225] Originally, the platform worked by having people covertly passing a USB memory stick from one to another, with the coordination of the process being executed through an anonymous SMS gateway. As a result, there was no need for an Internet connection. In early 2016, the collective presented *Deadswap 2.0*, which uses an Android app that allows participants to coordinate the circulation of the USB memory stick more easily. The work constitutes an oblique, humorous and tangible interpretation of what Kleiner calls the antagonism between peer-to-peer communism (which promotes a distributed model of production) and the client-server capitalist State (whose main aim is the commercialisation of all networked communication).[226] Most importantly, perhaps, it is worth noting that *Deadswap* has "distributed" the responsibility of maintaining the privacy of the system to all each members, instead of using a centralised formal entity for this purpose. As a part of Telekommunisten's "Miscommunication Technologies" series, *Deadswap* can be perceived as an attempt to make visible the social relations embedded in

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[222] Kleiner, op. cit., pp. 46-47.
[223] Kleiner, op. cit., pp. 44-49.
[224] Kleiner, op. cit., p. 20.
[225] The intervention has taken place in Berlin and Aarhus.
[226] Kleiner, op. cit., p. 7.

communication technologies by transferring them into physical reality and "reversing" them.
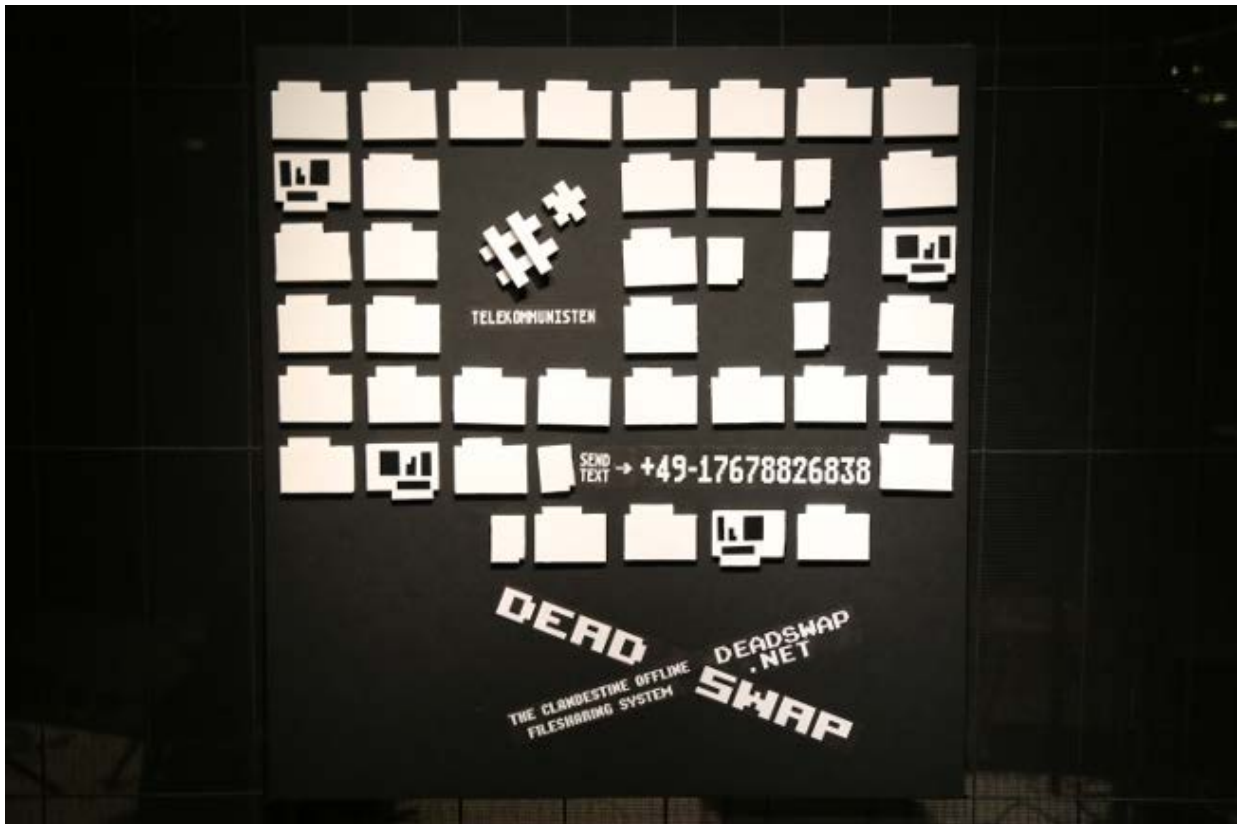
Figure 11: The *Deadswap* stand at the Transmediale festival in Berlin (2012)

The issue of decentralisation also lies at the heart of *Octo* (2013) – a rather literal transcription of decentralised communication.[227] The work has been described by the collective in a rather ironic and humorous tone, as "the most radically disruptive project in the history of telecommunications, bringing the transformative power of digital communications to the physical sphere".[228] Its stated aim has been to connect all households and business places around the world with pneumatic tubes that provide high-speed delivery of packages to and from any member of the network. Notably, the *Octo* prototype system was installed for the first time throughout the Haus der Kulturen der Welt in Berlin, one of the very few cities around the world that used to offer for a very long time a public service of Pneumatic Tube Transport ("Rohrpost").[229] The service dispatched

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[227] The work was produced in joint collaboration with reSource and transmediale 2013.

[228] 'OCTO: A Global Pipe Dream Come True' (*Transmediale.de*, 2013) <http://www.transmediale.de/content/octo-a-global-pipe-dream-come-true> accessed 25 March 2016

[229] The service was available from 1865 to 1963 in West Berlin and until 1976 in East Berlin.

small cylindrical containers propelled by compressed air through a network of tubes, delivering messages around the city. In support of their vision, the members of the Telekommunisten group also created a dedicated crowdfunding website,[230] through which they publicised the project and invited people to contribute to its realisation, whilst proclaiming that "the next generation [of communication] is physical!"[231] To a large extent, *Octo* constitutes a parody of corporate social networks and a critique for the deification of Data Capitalism's immateriality.[232] In addition, however, and by being installed in Berlin, where there used to be an actual Pneumatic Tube Transport system, *Octo* opens up questions around alternative forms of communication and social organization, and their unreserved dismissal through their characterization as "utopian". In the case of *Octo*, site-specificity and historical precedence interweave in order to humorously expose the audience to such potentialities.

Remaining faithful to the spirit of *The Telekommunist Manifesto*, the focus of the collective's projects and interventions is, thus, placed on the importance of forming new and truly open models of communication. The often unconventional and humorous visual language that the Telekommunisten members have adopted in order to express this need is particularly revealing, for it hinds at a historical moment of hybridization between art, alternative forms of social engagement and activism. As the members of the collective note, the answer to the question of what makes their projects art is rather simple: "It's art because it is carried out in an art context, at events like Transmediale, Hack.Fem.East, Sousevelance, and at places such the Piet Zwart Institute and the Israeli Center for Digital Art."[233] The highly speculative character of both *The Telekommunist Manifesto* and the

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[230] 'Seidenstrasse Powered by OCTO-P7C-ES' (*Octopost.me*) <http://www.octopost.me/> accessed 25 March 2016.

[231] The physicality of the project was further accentuated by two adjunct events. "PNEUMAtic circus" was a project in which 100 international mail artists contributed pneumatic post capsules containing instructions and scores to be used by transmediale festival visitors for small actions and performances at the Haus der Kulturen der Welt. "The GIZ Alumni Network Collaboration" was developed with GIZ, The German Agency for International Cooperation, and consisted of capsules containing quotes from online discussions investigating the context of social and political network-based collaboration, as well as blank sheets of paper on which the visitors of the festival could offer their own opinions. For more information, please, visit: 'OCTO: A Global Pipe Dream Come True' (*Transmediale.de*, 2013) loc. cit.

[232] The full title of the project, as mentioned in the crowdfunding website, is revealing in this context: 'OCTO P7C-1 Intertubular Octosocial Pneumatical Networking'

[233] 'Thimbl' (*Telekommunisten*, 2011) <http://telekommunisten.net/thimbl/> accessed 13 April 2016.

Figure 12: *Octo* installed at Haus der Kulturen der Welt, in Berlin (2013)

projects that have been inspired by it is indicative of the fact that the formulation of alternative modes of socioeconomic being may be "protected" and, accordingly, "legitimised" in the context of cultural production. In the case of the post-2008 world, what has been effectively protected is the "window" to utopianism that opened as a result of the consequences of the most severe economic crisis for over eight decades. By combining the principles of networked communication with the physicality of their projects, the members of the Telekommunisten group have aimed to confront the audience with a new context of thinking about the realities of capitalism and, accordingly, the need for change.

This spirit imbues – to different extents – all the projects featured in the following two chapters, which constitute the "core" of this thesis. However, the artworks and artist-led initiatives that we will explore in them develop a much more direct relationship with networked communication than that of the Telekommunisten works, for they make the World Wide Web an essential element of both their conceptual basis and function. Accordingly, the purpose of the third and fourth chapters of this thesis will be to systematically examine those responses of individual artists, collectives and cultural institutions, in order to propose an inclusive "navigation map" for the political, Web-based art that has been produced between 2008 and 2015. For the construction of this "map",

both chapters will adopt the point of view of the artists, as this has been expressed in the descriptions of their works, their practice statements, manifestos, articles, academic papers and interviews. Through the combination of such sources, the thesis will highlight the artists' utopian language and theorisation, with a view to identifying, connecting and, finally, categorising their common goals, aspirations and dreams. The latter may be expressed through the adoption of practices that denounce capitalism, practices that dismantle its economic and ideological functions, and – finally – practices that propose alternatives. As it will be indicated, those modes of anti-capitalist resistance often co-exist within the same artworks, which explicitly or implicitly reference the legacies of Marxism.

The element that will distinguish the two chapters is the *extent* to which artists have been willing to not only deconstruct and condemn Data Capitalism in the aftermath of the crisis, but also to move towards its replacement through the creation of new economic, social and political institutions. More specifically, in the current chapter, my investigation will produce a mapping of artworks and projects that have a considerably "diagnostic" approach. This will be expressed through works that take apart the modus operandi of Data Capitalism and protest against its multiple social ramifications. The overall goal of those practices has been to activate the political consciousness of citizens and help them to develop a much deeper understanding of their class position. The aforementioned artworks and cultural initiatives will be followed, in the fourth chapter, by a larger body of projects, whose focus becomes the gradual formulation of much more *practical* than theoretical propositions. Such proposals aspire to establish new modes of socioeconomic being as viable alternatives to the capitalist economic model and the social, political and cultural conditions that it produces.

In terms of the methodology adopted in the mapping, the works and initiatives of politically engaged Web-based artists are organised in two distinct ways: Either on the basis of the tools and processes that they have been employing, which may include hacktivism, the adoption or inception of digital currencies, the establishment of hackerspaces, and the re-appropriation and activation of public spaces as manifestations of the commons. Or, in other cases, the categorisation will take place on the basis of the projects' common conceptual focus and their "issue-based" approach, which may refer to ideas and phenomena such as immaterial labour, the formation of an online proletariat, the devalorisation and underfunding of the arts in the period that has followed the crisis, and the development of strategies for reimagining and reconstructing the state. In the cases in which the tool or methodology used can be deemed to possess an inherent anti-systemic

character, then, the categorisation of the works on that basis is going to be prioritised. And, in the cases in which the common message that is promoted by the works appears to be the artists' priority regardless of the tools that they might be using for its communication, then, the works' shared subject matter will become the criterion of the grouping. As it will become evident, in some instances, there are overlaps between those criteria, which are by no means mutually exclusive. For instance, projects that use a strong anti-systemic tool such as digital currencies may criticise the problem of financial speculation and currency manipulation in the context of Data Capitalism; yet, at the same time, they might also address the lack of public funding for the arts and culture in the economic and political climate of the post-crisis era. Finally, it should be underlined that as austerity and economic uncertainty continue in many parts of the world, and as technology evolves further, additional types of works and, thus, groupings may emerge in the near future.

In the current chapter, this methodological trajectory will materialise in two sections. The first and lengthier section will examine the multiple ways in which cultural producers have built on the potentialities for consciousness raising that were catalysed by the crisis through the identification of the invisible architecture of Data Capitalism, its privileged mode of labour, the class divisions that it accentuates and the impact of the crisis on cultural production. Then, in the second section, I will investigate the influence of the modes of protest and civic mobilisation that have occurred since 2008 on the strategies that several artists have developed in relation to public space. As I will indicate, the practices of such artists have been characterised by a strong focus on the notion of the "commons" and, more specifically, on their appropriation by Data Capitalism and the necessity to reclaim them.

The Systems of the System: Making Sense of Data Capitalism

In the preface of *A Contribution to the Critique of Political Economy* (1859), Marx famously proclaimed that "it is not consciousness of men that determines their being, but, on the contrary, their social being that determines their consciousness".[234] In the case of Marxist theorisations of political economy, the idea of "social being" is inextricably connected with

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[234] Karl Marx, 'A Contribution to the Critique of Political Economy', *Marx and Engels on Literature and Art* (Progress Publishers, Moscow 1976) pp. 41 – 42. Marx has often been accused of being an anti-humanist philosopher, because his assertion that relations of production determine consciousness implies that humans can be easily manipulated. However, there are several thinkers who reject this delimiting interpretation of Marx's intentions. See: Norman Geras, *Marx and Human Nature: Refutation of a Legend* (Verso Books, New York 1983).

the established system of social organisation, which – in turn – stems from the dominant system of production. Ideology constitutes an intrinsic part of both systems, given that it may conceal their direct connection and create a "false consciousness".[235] Marx traces this function back to one the most basic forces of capitalism, in the form of commodity fetishism. As he famously explains in *Capital* (1867), "a commodity appears at first sight an extremely obvious, trivial thing".[236] However, this only happens for as long as a product remains tied exclusively to its use-value. Once a specific price/amount of money is assigned to a product (exchange-value), people start perceiving it as if value naturally inheres in the object and, accordingly, in all objects – people are only able to see "the relations which the act of exchange establishes between the products".[237] As a result, the amount of actual labour that has been spent on the commodity, as well as the complex network of all the other relations through which it has been produced remain invisible. This mystification, or fetishism, effectively erases the exploitation and domination of one part of the society over another and, therefore, no class consciousness can be born.[238]

Accordingly, raising consciousness around this process of mystification has consistently been an important concern for politically engaged artists, and – in particular – for artists influenced by socialist ideas. Following the global crisis of capitalism that started in 2008, artists employed the tools offered by the World Wide Web in order to build a new class consciousness through two distinct routes: firstly, by revealing the origins of the crisis and the nature of the system that has produced it; and, secondly, by exposing the effects that the crisis has had on specific social groups and sectors of human activity. As it will be indicated in this section, in the case of examining the crisis' roots, artworks and artist-led projects largely focused on the immateriality – and, thus, the "invisibility" – of the flows of capital in Data Capitalism, which produce a specific mode of labour. At the same time, artists who have been interested in the crisis' consequences have focused on the impoverishment of the most vulnerable social classes, and the violent redistribution of

[235] See: György Lukács, *History and Class Consciousness (Studies in Marxist Dialectics)* (7th edn, MIT Press, Cambridge, MA 1971).

[236] Karl Marx, *Capital: A Critique of Political Economy: V. 1* (Ben Fowkes tr, Penguin Books in association with New Left Review 1990) p. 163.

[237] ibid., p. 165.

[238] Notably, Karl Mannheim associates directly knowledge with class, claiming that different systems of knowledge emerge from different sets of social conditions. The social positions of the bourgeoisie and the proletariat define the forms of knowledge that those two groups are able to assimilate, and, thus, they distort social reality. See: Karl Mannheim, *Ideology and Utopia: An Introduction to the Sociology of Knowledge* (Harcourt, Brace, New York 1959).

wealth, which has also affected many culture-related sectors as well as the humanities as a whole.

Deconstructing the flow

In his works, Turkish-born, New-York-based artist Burak Arikan generates elaborate network maps that use social, political and economic issues as inputs, in order to make the exchange/power relations that Marx refers to visible. His aspiration is to share this "network intelligence" with everyone and illuminate how societies work in the context of globalised Data capitalism.[239] Quite interestingly, many of Arikan's works start from a seemingly paradoxical position as they investigate the socio-economic networks in Turkey; namely, a country that is widely considered as one of the strongest emerging economies and markets in the world.[240] Despite the fact that the global economic crisis affected his home country to a comparatively limited extent, Arikan developed an increasing interest in documenting and critiquing the pervasiveness of neoliberal capitalist principles in Turkey. Accordingly, in *Networks of Dispossession* (2013), Arikan creates a mapping of the relations of capital that have fuelled the urban transformation of Turkish cities over the past couple of decades.[241] His network visualisations expose the connections between the state and large corporations that have been involved in and have benefited from urban development.[242] The idea of "dispossession" is particularly evident in the expropriation of the commons, as public spaces have been subject to rapid privatisation across the country over the last three decades in particular. A range of online interactive maps reveal the influence of specific corporations, as well as the dispossessed minorities who have been

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[239] Arikan's map-based projects have been widely exhibited internationally, including presentations at the Museum of Modern Art (New York), Venice Architecture Biennale, São Paulo Biennial, Istanbul Biennial, Berlin Biennial, Sharjah Biennial, Marrakech Biennial, Ars Electronica, and KW Institute for Contemporary Art.

[240] Turkey is present in all performance lists for international emerging markets (IMF, EMGP, FTSE, MSCI, Standard & Poors and the Dow Jones list, amongst others), a member of the G-20 group, and Bloomberg positioned the country at number 7 in its "Top 20 Emerging Markets" chart for 2013 (its highest position in recent years). See: 'The Top 20 Emerging Markets' (*Bloomberg.com*, 30 January 2013) <http://www.bloomberg.com/slideshow/2013-01-30/the-top-20-emerging-markets.html> accessed 25 March 2016.

[241] The project's website: 'Mülksüzleştirme Ağları' (*Mulksuzlestirme.org*) <http://mulksuzlestirme.org/> accessed 25 March 2016.

[242] The work has been presented, amongst other venues, at the New Museum, in New York.

Figure 13: Burak Arikan, *Networks of Dispossession* (2013)

affected by the Turkish government's confiscations of privately-owned land.[243] The ideological background of urban transformation is further explored in *Islam, Republic, Neoliberalism* (2012).[244] The work is comprised of three maps, in which the mosques, republican monuments, or museums, and shopping malls of Istanbul appear to "compete" with each other in order to gain domination over the city's public spaces.[245] As the different types of buildings are connected, new symbolic spaces are formed, which are indicative of the increasing competition between the three major ideologies defining Turkey today: Islam, Republic and Neoliberalism. The work approaches the value of urban space through an original perspective that goes beyond the limitations of the geographical map. *Islam, Republic, Neoliberalism*, thus, invites the inhabitants of Istanbul to rethink how ideology

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[243] Ever since the post-coup Third Republic (1983), the newly opened Turkish economy became heavily focused of construction, with several cities multiplying their populations. This has been particularly evident in Istanbul, whose mayor in the 1980s Bedrettin Dalan proudly pronounced the economic capital of the country as a "city of yuppies." See: Jenny White, *Muslim Nationalism and the New Turks* (Princeton University Press, Woodstock 2012) p. 36.

[244] The work is both available online and in a printed version in the exhibitions in which it has been presented (e.g. 2012 Istanbul Design Biennial).

[245] Burak Arikan, 'Islam, Republic, Neoliberalism' (*Burak-arikan.com*, 2012) <http://burak-arikan.com/islam-republic-neoliberalism> accessed 25 March 2016.

can materialize and become a visible and tangible part of their everyday lives through the urban landscape that is surrounding them.[246]
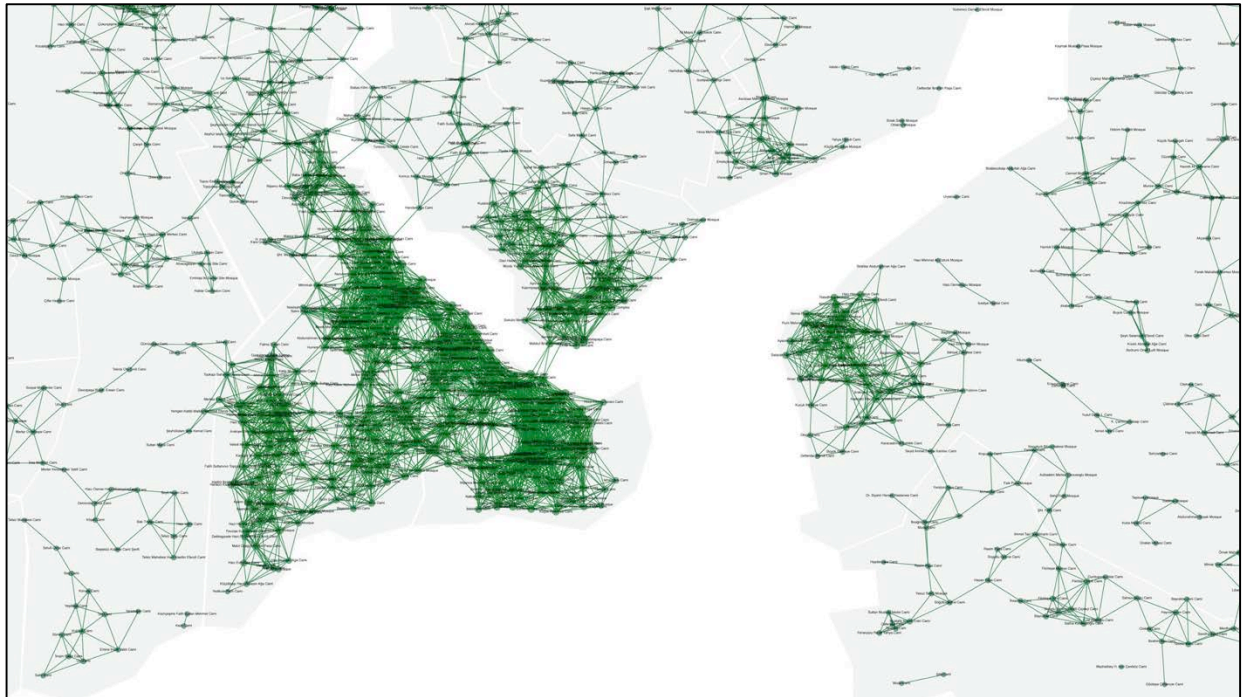
Figure 14: Burak Arikan, *Islam, Republic, Neoliberalism* (2012)

Another group of Arikan's works investigates the main agents through which urban and economic development at large have been achieved; namely, the privileged taxation regime for large corporations that remains concealed, as well as the widespread connections of educational institutions with companies. Corporate wealth comes under severe scrutiny in the *Network for Foundations and Corporations through Shared Board Members* (2011), which exposes the links between tax-exemption and corporations listed in the Istanbul Stock Exchange.[247] As Arikan explains in his personal website, "the network map organizes itself by running as a software simulation, where the names naturally find their position on the canvas through connecting forces, revealing the central actors,

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[246] As Jenny White notes, in the case of Turkey Islamic norms and neoliberal norms merged in order to support the country's newly conceived identity. In the idealised version of the Islamic community, "capitalist relations and patron-client systems […] are represented as economies of affection based on family, neighborly and Islamic 'love' (*sevgi*) and service (*hizmet*)." See: White, op. cit., pp. 173-174.

[247] The work is both available online and in a printed version in the exhibitions in which it has been presented (e.g. Kunstmuseum Wolfsburg).

indirect links, organic clusters, structural holes, and outliers".[248] The database on which the work was based included 350 corporations, 234 tax-exempt foundations and their 3310 board members, through whom the connections are being made. In *Higher Education Industrial Complex* (2013), the tax-exempt foundations have been replaced by 68 private universities and their boards of trustees.[249] The network map allows users to navigate from one node to another in order to reveal the relations of power developed between the various central and peripheral actors in Higher Education.[250] Notably, apart from corporations, the organisations of the map also include privately-owned foundations, associations, political parties and state universities. As a result, the user is able to explore through the interactive maps the Turkish educational ecosystem in political, social and economic terms, developing an awareness of the different ways in which the nature of education can be influenced.[251]
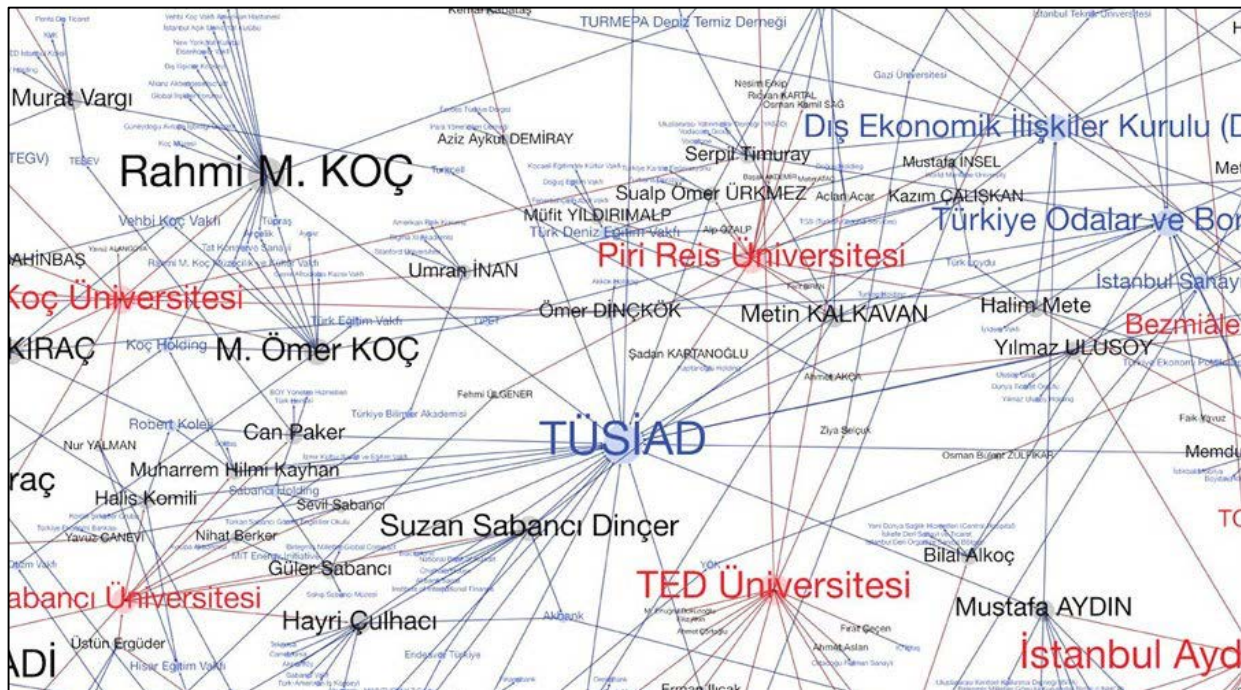
Figure 15: Burak Arikan, *Higher Education Industrial Complex* (2013)

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[248] Burak Arikan, 'Network of Foundations and Corporations through Shared Board Members: Turkey Edition' (*Burak-arikan.com*, 2010) <http://burak-arikan.com/network-of-foundations-through-shared-board-members-turkey-edition> accessed 25 March 2016.

[249] Burak Arikan, 'Higher Education Industrial Complex' (*Burak-arikan.com*, 2013) <http://burak-arikan.com/ozeluniversiteler/index_en.html> accessed 25 March 2016.

[250] The interactive map can be accessed here: Burak Arikan, 'Higher Education Industrial Complex' (*Graphcommons.com*) <https://graphcommons.com/graphs/b4f91671-c778-4b01-85ba-205625e26b4e> accessed 25 March 2016.

[251] The work was exhibited at Koç University.

Notably, Arikan's works function without harming or affecting directly the organisations whose networks of affiliations they are critiquing. Other artists, however, have adopted a considerably more aggressive line of action in order to refocus people's attention on the operational structure of Data Capitalism as one of the primary causes of the crisis. Building on the tradition of hacking and hacktivism, the practice of Italian conceptual artist Paolo Cirio constitutes a prominent case, with his works often resulting in controversies and legal actions.[252] Cirio exemplifies what new media theorist McKenzie Wark describes in *A Hacker Manifesto* (2004) as the effort of digital cultural workers and hackers to extract new ideas out of an old arrangement of things – an endeavour that ascribes to them the status of a new class of workers. The new ruling class that they have to confront are the "vectoralists"; namely, the large corporations that control vectors – the various paths and networks through which information flows.[253] Accordingly, within Data Capitalism, it is not capital by itself that ascribes power, but, rather, the capacity to manipulate capital's immaterial movement through networks.

This is particularly true in the case of large-scale tax evasion that takes place through banks located in tax havens – namely, a practice usually reserved for the "rich few", which Cirio aims to democratise in his contentious work *Loophole4All* (2013). In order to materialise this aspiration, the artist hacked the governmental servers of the Cayman Islands, one of the main offshore centres for high finance around the world. An additional reason for Cirio's choice of the Cayman Islands has been the fact that they are consistently in the top positions of the global Financial Secrecy Index.[254] This entails that apart from functioning as a tax haven, the islands also avoid any transparency in the way that their financial authorities deal with international tax crime investigations. Cirio managed to steal the identities of more than 200,000 anonymous companies registered in the Caymans and he, then, moved their addresses to his own Caymans mailbox.

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[252] Hannah Feiler, 'Künstler Und Die NSA: Die Kunst Überwacht Zurück' *Frankfurter Allgemaine Zeitung* (22 May 2015) <http://www.faz.net/aktuell/feuilleton/kunst/ueberwachung-overexposed-von-paolo-cirio-13607673.html> accessed 25 March 2016.

[253] McKenzie Wark, *A Hacker Manifesto* (Harvard University Press, Cambridge, MA 2004) p. 1.
 Wark further elaborates on this new context: "That the vectoralist class has replaced capital as the dominant exploiting class can be seen in the form that the leading corporations take. These firms divest themselves of their productive capacity, as this is no longer a source of power. They rely on a competing mass of capitalist contractors for the manufacture of their products. Their power lies in monopolizing intellectual property – patents, copyrights and trademarks – and the means of reproducing their value – the vectors of communication. The privatization of information becomes the dominant, rather than a subsidiary, aspect of commodified life." ibid.

[254] See: Tax Justice Network (*Financialsecrecyindex.com*, 2 November 2015) <http://www.financialsecrecyindex.com/> accessed 25 March 2016.

Accordingly, people from around the world were invited to visit the project's website, www.Loophole4All.com, and buy a counterfeited certificate of incorporation of a real Caymans company for as little as 99¢ USD. In this way "small businesses and middle class people can invoice from the major offshore centres and avoid unfair taxes, legal responsibility and economic disruption in their own indebted home countries, in a form of global civil disobedience".[255] At the same time, the artist set up a company in the City of London as a legal "shield" for his actions, thus appropriating (and exposing) a standard offshore business strategy. Finally, as part of his research on the subject, Cirio posted on www.Loophole4All.com a series of video interviews with experts, who provide viewers with insights into the complex networks of corporate tax avoidance and offshore finance.[256] *Loophole4All* received a strong condemnation from the authorities of the Cayman Islands, who reassured the public about the continuation of the special financial status of the islands through their press announcements. In addition, Cirio received cease and desist letters, other legal threats, had his two PayPal accounts suspended and a complete ban on trading. However, in the end, his project managed to gain wide international exposure, and it won the Golden Nica Award, the most important prize of the prestigious Ars Electronica Festival, in 2014.[257]

Notably, in both the project's website and the different gallery spaces where Cirio regularly exhibits *Loophole4All*, he accompanies documentation material from the project with a diagram that depicts the different flows involved in the work's business strategy: flows of liability, incorporation, tax, cash, data and operation. The diagram does not merely shed light on the interconnected corporate practices that are protected through offshore finance; most importantly, it illuminates the flux of Data Capitalism's structure, or what

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[255] From the project's first Press Release: Paolo Cirio, 'Loophole for All - Press Release. NYC, 15th February 2013' (*Paolocirio.net,* 2013) <http://www.paolocirio.net/press/PDF/Loophole4All_PR_15_02_2013.pdf> accessed 25 March 2016.

[256] Those practices include: hiding toxic financial products and debts, hiding capital, price and assets manipulation, avoidance of bankruptcy and insolvency obligations, insurance for risking operations, e-commerce selling exemptions, tax avoidance for patents' registration, and money laundering, amongst others. See: 'Documenting and Investigating Offshore Centers' (*Loophole4all.com*) <http://loophole4all.com/doc.php> accessed 25 March 2016.

[257] Further information can be found in the project's fourth Press Release: Paolo Cirio, 'Loophole for All Press Release - June 2nd 2014, NYC.' (*Paolocirio.net*, 2014) <http://www.paolocirio.net/press/PDF/Loophole4All_PR_02_06_2014.pdf> accessed 25 March 2016.

Figure 16: Paolo Cirio, *Loophole4All* (2013)

curator and academic Lanfranco Aceti terms as an elimination of *fixed* meaning.[258] In theorising Cirio's work, Aceti connects the artist's practice with Deleuze and Guattari's definition of "decoding" as given in *A Thousand Plateaus: Capitalism and Schizophrenia*: "Let us recall that 'decoding' does not signify the state of a flow whose code is understood (*compris*) (deciphered, translatable, assimilable), but, in a more radical sense, the state of a flow that is no longer contained in (*compris dans*) its own code, that escapes its own code".[259] In *Loophole4All*, Cirio attempts to do the exact opposite; namely, to produce meaning by indicating that power has been transferred from the nodes into the flows of his diagram and, thus, it has become a highly manipulable entity. Inevitably, then, whatever might inhabit the nodes – most notably, the concepts of the state, authority and citizenship – appears to have been completely neutralised in terms of its meaning: it does not "mean" anything until it has become fluid. For instance, in the case of the Cayman Islands, their state authority does not "mean" anything until it is exerted as the "fluid" regulatory context of a tax haven.

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[258] Lanfranco Aceti, 'When Aesthetic Is Not Just a Pretty Image' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac* (vol 20, no 1, Leonardo/ISAST, San Francisco 2014) pp. 234 – 237.

[259] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (Brian Massumi tr, 1st edn, University of Minnesota Press, Minneapolis 1987) p. 448.

Figure 17: Paolo Cirio, *Loophole4All* Certificates of Incorporation (2013)
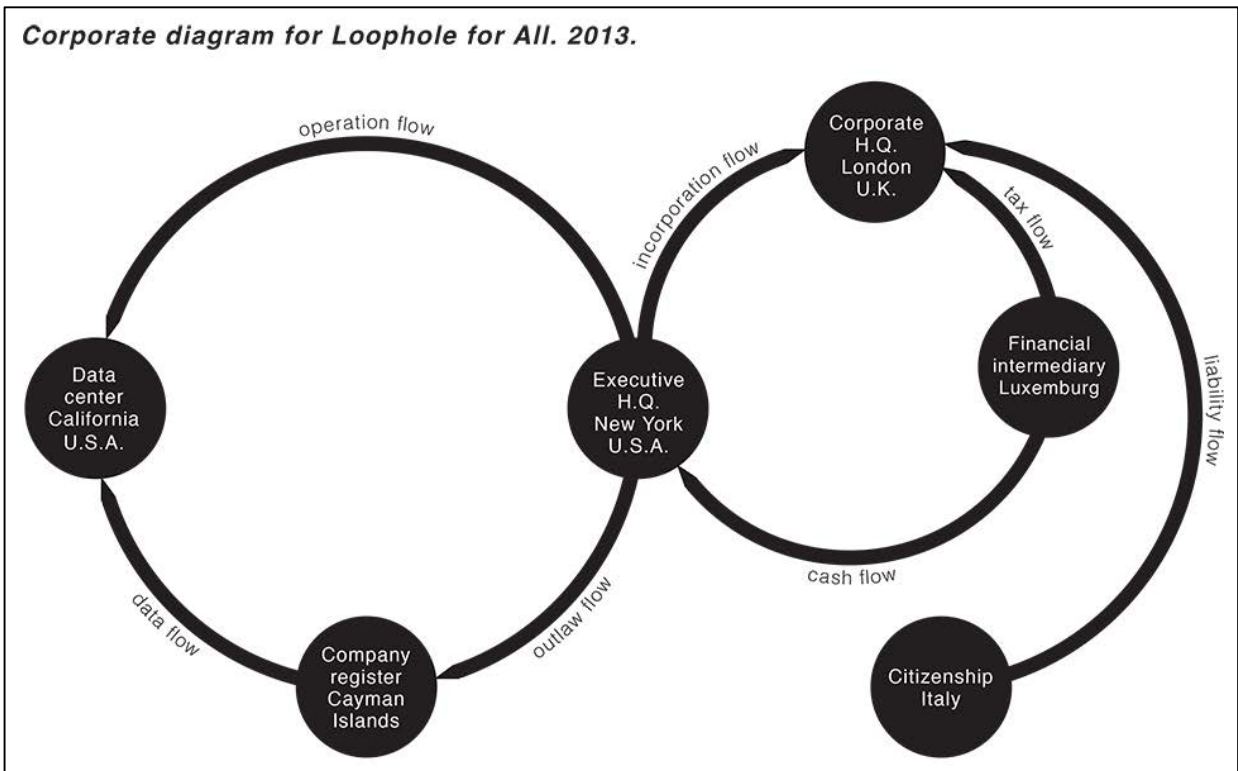
Figure 18: Paolo Cirio, *Loophole4All* corporate diagram (2013)

Labour as domination

The mode of labour that Data Capitalism privileges is defined by the previously described "elimination of meaning", which largely stems from its function as an operational system of flows. Manuel Castells pointed to the rise of this condition almost two decades ago, when he pronounced that "in the network society, a fundamental form of social domination is [...] the prevalence of the space of flows over the space of places. The space of flows structures and shapes the space of places, as when the differential fortunes of capital accumulation in global financial markets reward or punish specific regions".[260] Notably, in Data Capitalism the flows of economic activity do not have to be fixed on a particular place anymore, as cognitive labour is delocalised. This development is accompanied by the radical change in the nature of economic expansion, which has become largely based on information and knowledge, either through the activities of its intellectual workers,[261] or through its financialization and the dependence on information-data that we have described in the introduction of this thesis. The merge of cognitive labour with venture capitalism in the two decades that have followed Castells' original assertion has led to the precarisation and impoverishment of cognitive labour, given that its cost has to constantly fall in order for a greater profit to be generated. Accordingly, as political economist Christian Marazzi notes, in the current historical conjuncture there is an apparent "contradiction between the valorisation of knowledge and the devalorisation of the workforce that explains the current cleavage of the labour market between a 'working class aristocracy' on the one hand and a 'flexible proletariat' on the other".[262]

The increasingly immaterial and/or automatized nature of labour and the labour market is addressed in *Invisible Threads* (2008), a "mixed reality performance installation" by Stephanie Rothenberg.[263] The work is comprised of two parts, which combine virtual and physical spaces in order to create a successful jeans company bearing the (ironic) brand name "Double Happiness". In the online space of the popular metaverse *Second Life*

[260] Manuel Castells, *The Rise of the Network Society: The Information Age: Economy, Society and Culture* (Blackwell, Oxford 1996) p. 398.
[261] Yann Moulier-Boutang, *Cognitive Capitalism* (Polity Press 2012) p. 57.
[262] Christian Marazzi, 'The Privatization of the General Intellect' (Nicolas Guilhot tr *Destructural.files.wordpress.com*, 2010) <https://destructural.files.wordpress.com/2010/10/christian-marazzi-the-privatization-of-the-general-intellect.pdf> accessed 25 March 2016.
[263] Video documentation of the work can be found here: Stephanie Rothenberg, 'Invisible Threads– A Virtual Sweatshop in Second Life', video recording, (*Vimeo.com*, 2014) <https://vimeo.com/82201852> accessed 25 March 2016.

(SL),[264] the artist set up a virtual sweatshop that simulates a real life factory: the facility is fully equipped with weaving looms, dye vats, bolt roll cutters, laser cutters, piston and thread spools, sewing machines and a quality control chain. Through job advertisements placed in the SL classifieds, SL citizens (avatars) are hired and are, then, offered training sessions before they are able to start working at the factory. Just like in real life, they specialise in operating the various machines as well as in serving as floor managers, supervisors and security guards. Workers receive 200 Lindens per hour (the SL currency), which translates into around 75¢ USD per hour in real life, depending on the daily exchange rate. All employees live in the virtual factory village and everybody is closely monitored by the factory's management and held accountable for their efficiency and production errors. Any shortcomings might result in working overtime, receiving a reduced salary, or – even – being made redundant.

Figure 19: Stephanie Rothenberg, *Invisible Threads* (2008)

The second part of the work can be found in the physical spaces of museums and galleries, in the form of a retail kiosk (fully equipped with a dressing room) where jeans are produced through a cotton canvas printer.[265] Using a microphone and a web cam,

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[264] 'Second Life' (*Secondlife.com*) <http://secondlife.com/> accessed 25 March 2016.
[265] The work premiered at the 2008 Sundance Film Festival at the New Frontier Theater in Park City, Utah and has also been exhibited in "FeedForward: Angel of History" at LABoral Center for Art & Industry in Gijon, Spain; the symposium closing event for Synthetic Times Beijing Media Art

costumers who visit the kiosk in gallery spaces can directly connect with the factory's virtual space and place their orders. A rather Orwellian audio and video live stream allows the workers to see and hear the customers, whilst the customers can observe the production of their ordered pair of jeans in real time. Notably, digital workers have a limited amount of time in order to push the right buttons and coordinate the production of the jeans; otherwise, the assembly line cannot function and, as a result, production has to start again from the beginning. Once the jeans have been printed at the kiosk, they can be easily assembled and are, then, ready to wear. They are sold to customers for prices ranging between $30 and $40 USD, or 7,300-9,400 Lindens.[266] Quite evidently, apart from experiencing very hostile working conditions, the digital workers of "Double Happiness" are also hugely underpaid. By using globalised telematic manufacturing as a production model/ example, Rothenberg manages to highlight the convergence of digital labour and real life commodities, in the context of a virtual economic environment whose implications often remain invisible.

Figure 20: Stephanie Rothenberg's *Invisible Threads* installed at LABORAL Centro de Arte, Gijon, Spain (2010)

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[266] The estimation was based on March 2016 exchange rates.

In 2011, Rothenberg collaborated with artists Jeffrey Crouse and Michael Schieben in order to further her investigation into digital outsourcing, by focusing on the changes that the development of Web 2.0 has produced for the adult entertainment industry.[267] The outcome of this collaboration was *Laborers of Love/LOL*, a crowdsourcing project in the form of an Internet service-website on which customers can order personalised videos of their sexual fantasies (www.laborersoflove.com). Those videos are characterised by Rothenberg as "recombinant", given that they look more like "a mashup, where 1970's experimental cinema meets canned Photoshop filters, and ultimately reflects on how desire and pleasure are represented, fragmented and abstracted through the consumption of online digital media".[268] The website works by outsourcing customers' fantasies to a global pool of anonymous online workers (even home-based), who are not specifically connected to the sex industry. In order to find this workforce, the *Laborers of Love* website uses Mechanical Turk (www.mechanicalturk.com), a crowdsourcing job engine created by Amazon for people seeking temporary online employment. Mechanical Turk works by posting requests for Human Intelligence Tasks (HITs) – jobs that are just a few steps away from automation, but still require the contribution of human intelligence in order to be completed.[269] Workers are paid a small amount of money for each task that they successfully carry out, and with more than a million users listed around the world, there is always a willing workforce to choose from. Once the customers of *Laborers of Love* have filled in the order form with their specifications (sources of material, cut frequency, glitch and speed versus accuracy option), the online workers start assembling images and videos that are related to the fantasy, thus gradually compiling the final video. The higher the price that the buyer is willing to pay, the faster and the higher is the quality of the final result. Most importantly, the customer is provided with a real time data visualisation map that reveals the locations of the hired workers (from Bangkok to Bogotá, and from Miami to Mumbai, etc.) as well as the IP addresses of the content that is being mined. Finally, when

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[267] The term "outsourcing" has been used in order to cover a variety of practices related to commissioning third parties to execute a particular business process (material or immaterial). Also, "outsourcing" has been increasingly associated with the privatisation of public services. In both cases, the main incentive is the reduction of operational costs of the corporation or the state-owned organisation, and the accumulation of financial savings.

[268] Stephanie Rothenberg and Jeff Crouse, 'Laborers of love/LOL: Behind the Scenes' (*Isea2011.sabanciuniv.edu,* 2011) <http://isea2011.sabanciuniv.edu/paper/laborers-lovelol-behind-scenes> accessed 25 March 2016.

[269] Mechanical Turk is also used by marketing companies as a cheap, readily available tool that collects psychological, emotional and behavioural information about online consumers. For example, the website's workers might get paid in order to answer an online survey researching their feelings about specific products and services.

the video is ready, a link and a password are emailed to the customer, who is also given the option of anonymously posting his video on the *Laborers of Love* website.[270]
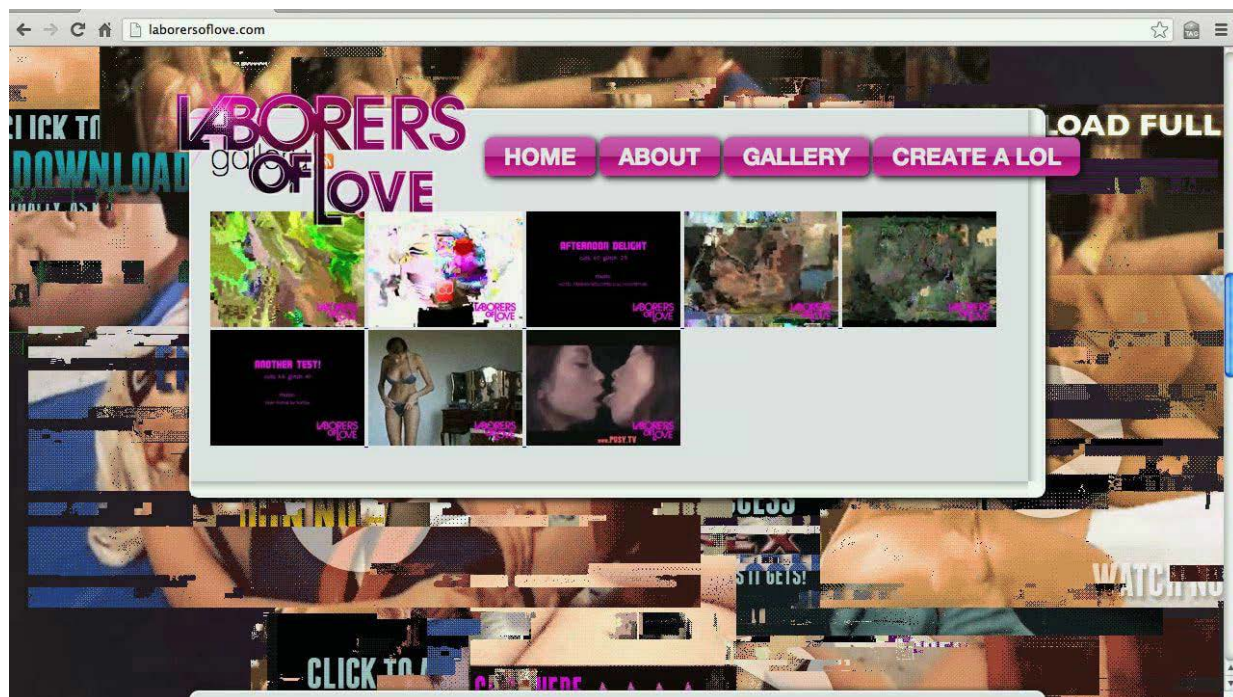
Figure 21: Stephanie Rothenberg, Jeffrey Crouse and Michael Schieben, *Laborers of Love* (2011)

One of the most interesting aspects of connecting immaterial labour with today's adult entertainment industry is the fact that porn does not generate pleasure for the viewer simply because of its content, but also because it eroticises the mediation of technology. Through the screen, images acquire a "commodity texture" that relocates vision within the subjectivity of the observer.[271] More specifically, as writer and curator Franklin Melendez notes in his study of the advent of video in relation to sexuality, the "performers' bodies and the […] screen start to question priority of content over medium",[272] since the pleasure of the body blends with the pleasure of the disembodied gaze that is adopted by the viewer. Notably, the disembodied workers of *Laborers of Love* should not be perceived merely as the object of the customer's disembodied gaze; they are, also, generating themselves a similar form of gaze, which is being addressed to the very

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[270] The project has been exhibited at "Perspectives on Imaginary Futures", House of Electronic Arts, Basel, Switzerland; "Time & Motion: Redefining Work Life", FACT (Foundation for Art & Creative Technology), Liverpool, England; Transmediale 2013, BWPWAP: Desire, Berlin, Germany; and "Technolust", Magic Lantern Cinema, Providence, RI, USA.

[271] See: Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (The MIT Press, Cambridge, MA 1990).

[272] Franklin Melendez, 'Video Pornography, Video Pleasure and the Return of the Sublime' in Linda Williams (ed), *Porn studies* (Duke University Press, London 2004) pp. 401 – 427.

activity that they are participating in: a disembodied conceptualisation of their own labour. The sustainability and profitability of immaterial labour depends on this command over the workers' subjectivity. Philosopher and sociologist Maurizio Lazzarato was one of the first to theorise this process, arguing that immaterial labour is "even more totalitarian than the earlier rigid division between mental and manual labor (ideas and execution), because capitalism seeks to involve even the worker's personality and subjectivity within the production of value".[273] Through the development of a context of "participative management", immaterial labour aims to foster "communicational relationships" between workers, which neutralise antagonism in terms of class. As all workers are required to openly express themselves ("communicate" by sharing information and, thus, collaborating), the antagonism between hierarchy and cooperation appears to be abolished, with a sense of shared responsibility amongst the members of the workforce replacing it.[274] Not surprisingly, however, this responsibility is monosemous, since it is not reflected neither in the actual relations of power within the production system, nor in the salaries of the workers. This mode of exploitation (which becomes evident in *Laborers of Love*) can reach an even more extreme level through the mediation of networked technologies and become completely free: "free both in the sense of 'not financially rewarded' and of 'willingly given'".[275]

In the milieu of Data Capitalism, the most widespread model of free labour can be found in the form of social media and their related technologies.[276] In this case, the input of the users-workers is supplied on a completely voluntary basis and without receiving any kind of remuneration, whereas the social media websites and applications are able to generate profit through advertising, as well as through the processing and selling of a vast amount of user-generated data. In addition, social media "colonise" the users' time, since they "suck surplus-value by pursuing citizen-laborers in every moment of their lives, with the result that the working day is excessively lengthened and intensified".[277] Information technology theorist Tiziana Terranova theorises the rise of immaterial and affective labour

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[273] Maurizio Lazzarato, 'Immaterial Labor' in Paolo Virno and Michael Hardy (eds), *Radical thought in Italy: A Potential Politics* (University of Minnesota Press, Minneapolis 1996) p. 135.
[274] ibid.
[275] Tiziana Terranova, *Network Culture: Politics for the Information Age* (Pluto Press, London 2014) pp. 93-94.
[276] The term "social media" covers a wide range of websites and applications that perform a variety of functions: social networking; video, images, documents and music sharing; blogs and discussion platforms; wikis; and virtual worlds, amongst others.
[277] Christian Marazzi, *The Violence of Financial Capitalism* (Kristina Lebedeva and Jason Francis McGimsey trs, Semiotext(e), Los Angeles 2011) p. 56.

as the result of what she calls the "hijacking" of the open-source movement by digital capital, which impaired the "gift economy" tradition of the early Web.[278] As she notes, "especially since 1994, the Internet has always and simultaneously been a gift economy *and* an advanced capitalist economy".[279] This hybrid, yet highly contradictory nature of profit-oriented networked communication is exemplified by social media and their overt exploitation of affective labour.

In her work *The Affect Machine* (2012), New York-based artist and new media researcher Karin Hansson reflects on the ambiguities that emerge from the operational structure and the language used by social media networks, in which concepts such as "friendship", "sharing", "following", or "liking" become monetised assets. Hansson attempts to expose and play with this unbalanced approach, inspired by Antonio Negri and Michael Hardt's argument that "a kind of spontaneous and elementary communism" could be born out of affective labour and the networked relations that it is able to build.[280] *The Affect Machine* merges the structure of a social networking platform with that of a marketplace (such as a stock exchange market), and invites its users to invest their social capital in interesting subjects or people. Each member's social capital is comprised of a set amount of initial "shares" with no monetary value, which can be traded in any way that the user wishes. By making an investment through his/ her shares, the user undertakes the responsibility of helping in the development and wellbeing of a specific person or asset. In this way, users are able to form a network of connections and create an "Affect family" – a concept that aims to subvert the bourgeois character of traditional family.[281] As Hansson notes, "You invest in each other by helping out whenever it is possible. The more successful the group, the more successful the individual gets".[282] The artist sees this formulation as a disruption of the division between the private and the public sphere – as part of a scenario for a future system of social organisation embodying Marx's definition of man's communal

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[278] Terranova, op. cit., p. 93.

[279] Terranova, op. cit., p. 94.

[280] Michael Hardt and Antonio Negri, *Empire* (Harvard University Press, Cambridge, MA 2001) p. 294.

[281] In *The Communist Manifesto*, Marx and Engels call for the abolition of the bourgeois family, claiming that its foundations are capital and private gain. Accordingly, the exploitation of children and women should stop and education should be rescued from the influence of the ruling classes and become social. Marx and Engels op. cit., pp. 59-60.

[282] 'F.A.Q.' (*Affectmachine.org*) <http://affectmachine.org/wordpress/?page_id=51> accessed 25 March 2016.

nature:[283] "Our products would be so many mirrors in which we saw reflected our essential nature. This relationship would moreover be reciprocal; what occurs on my side has also to occur on yours".[284]
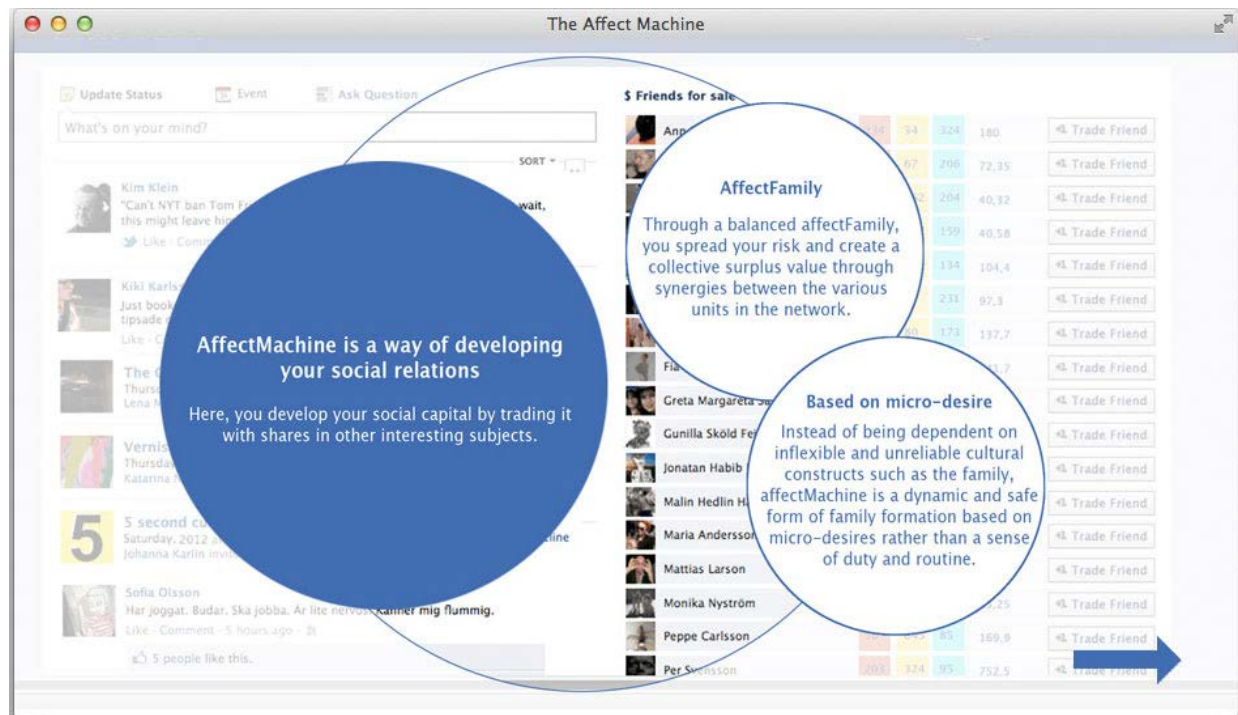
Figure 22: Karin Hansson, *The Affect Machine* (2012)

In this context of reaction against online immaterial labour, we could identify a final group of artists who have chosen to formulate their critique by intervening directly in already existing social media platforms. A characteristic example of this strategy is *Seppukoo* (2009-2011) by the artistic duo of Liens Invisibles.[285] The title of the work is a reference to the traditional Japanese ritual suicide Seppuku (切腹), which can be translated as "stomach-cutting", or "abdomen-cutting".[286] Liens Invisibles invited Internet users to end their virtual lives by deleting their Facebook accounts, thus "liberating" their digital bodies from any identity constriction and exploitation. By registering on the *Seppukoo* website, Facebook account holders were offered the opportunity to automatically deactivate their profiles and customize their memorial pages. The personalized memorial

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[283] Karin Hansson, 'The Desires of the Crowd' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac*, vol. 20, no. 1 (Leonardo/ISAST, San Francisco 2014) p. 188.

[284] Karl Marx, 'Comments on James Mills' in Jon Elster (ed), *Karl Marx: A Reader* (Cambridge University Press, Cambridge 1986) p. 34.

[285] Liens Invisibles is comprised of Italian media artists Clemente Pestelli and Gionatan Quintini.

[286] The project's website: 'Seppukoo' (*Seppukoo.com*) <http://www.seppukoo.com/> accessed 25 March 2016.

pages were, then, sent to all the ex-Facebook users' contacts-friends, with the encouragement to do the same in order to rise up the "Seppukoo Rank". In this context, the project could be understood as a humorous "parasitical" event-performance that takes place within (or parallel to) the most popular social networking website to date. Its aim of subverting the viral marketing strategies that largely define profit-making in social media is materialized by disconnecting instead of connecting people; in other words, by restricting the marketing pool that is available to online marketeers. However, above anything else, *Seppukoo* is a project that touches upon the issue of free choice and the right of self-determination. In contradistinction to the self-assertiveness and directness that could be associated with suicide, Facebook and other social media make it rather difficult for their users to fully delete their profiles and the data linked to them.[287] In other words, social media platforms aspire to keep us as immaterial labourers for life. The opposition to the everlasting online labour and the commodification of that data that we produce highlights the significance of freedom both in our virtual and our real lives, which are now inextricably interwoven with what we post, like, watch and share online. Being conscious of those connections is important not only for our role as users, but also for our role as active agents within the immaterial and concealed modes of production of Data Capitalism.
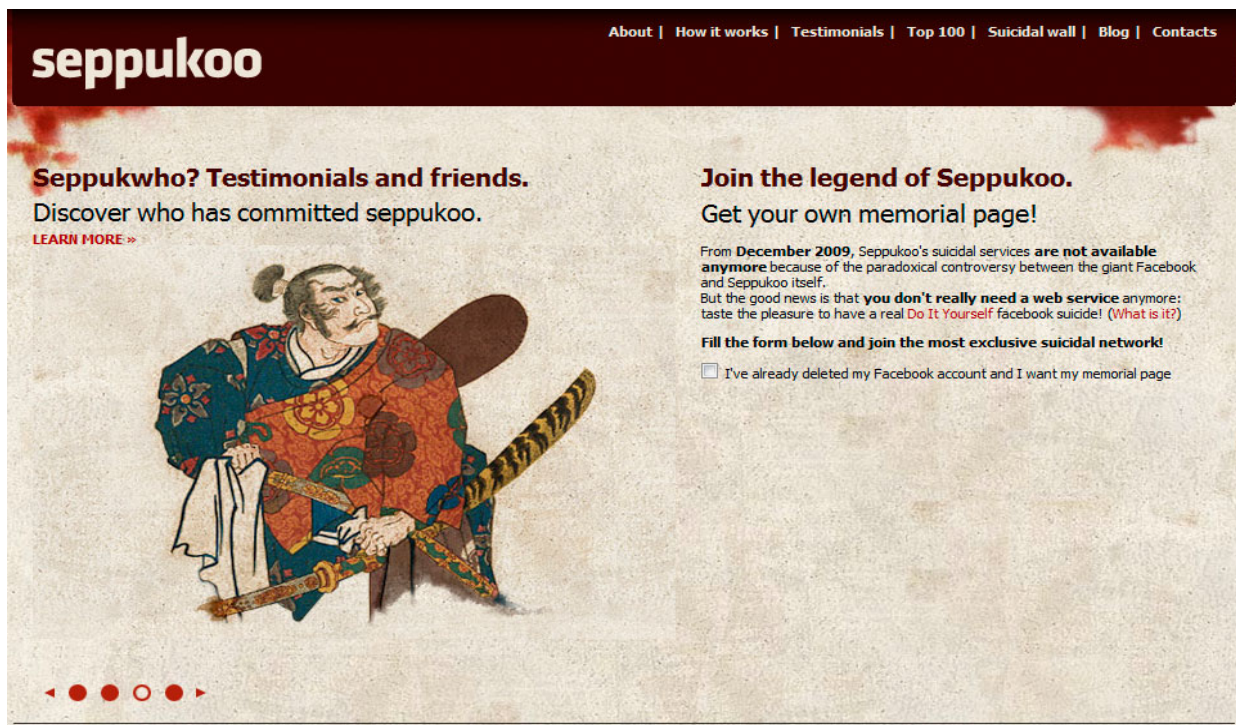
Figure 23: Liens Invisibles, *Seppukoo* (2009-2011)

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[287] Samuel Gibbs, 'How to Delete Your Facebook Account' *The Guardian* (4 February 2014) <http://www.theguardian.com/technology/2014/feb/04/how-to-delete-facebook-account> accessed 25 March 2016.

The rediscovery of the proletariat

For Marx and Engels, revolutionary consciousness can materialise only if people are in the position to recognise the common source of their hardships, as well as the common nature of the solutions through which their problems could be overcome. This is the sole path that could lead to the creation of "the proletariat *as* proletariat, that spiritual and physical misery conscious of its misery, that dehumanisation conscious of its dehumanisation and thus transcending itself".[288] However, the formation of this consciousness is more of a process, rather than an instantaneous realisation, or a moment of "spiritual transcendence". The *Communist Manifesto* clearly states that the proletariat has to go through different stages of development and evolution until it is ready to replace the bourgeoisie and its system of production.[289] Notably, Marx and Engels underline that the expansion of the union amongst the workers will only become possible thanks to "the improved means of communication that are created by modern industry, and that place the workers of different localities in contact with one another".[290] In other words, the means of communication are not simple tools in the hands of the workers, but rather essential instruments for the proletariat's very constitution. Interestingly, this goal of an expanded union resonates strongly with the post-2008 effort of political movements and activists to establish connections between different social groups and to reveal the spiritual and physical misery that has been caused by Data Capitalism. This objective has inspired various politically engaged artists, who have attempted to express through their own work the need to build the consciousness of the proletariat *as* proletariat.

An artist in whose work we can identify this ideological orientation is California-based Natalie Bookchin, who, as noted in the introduction, has been a pioneer in the field of politically engaged net art since the mid 1990s. In 2009, Bookchin was commissioned by the Los Angeles County Museum of Art (LACMA) to produce *Testament*, an ongoing series of video works composed of extracts found in online video diaries, or "vlogs". The videos chosen by the artist address a wide range of social issues through the personal narrations

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[288] Karl Marx and Friedrich Engels, 'The Holy Family' in David McLellan (ed), *Karl Marx: Selected Writings* (2nd edn, Oxford University Press 2000) p. 134.

[289] More specifically, in the beginning, the struggle is undertaken by individual labourers who gradually start uniting with other workers in their workplaces. More compact bodies are, then, formed on a local level, equipping the proletariat with the confidence to organise in larger numbers and on a regional and national level. As the workers expand in numbers, their union expands too, and it becomes the vehicle through which their political actions can adopt a distinct class-based character, in order to overthrow their national bourgeoisie and start establishing connections with other labourers around the world.

[290] Marx and Engels, *The Communist Manifesto*, op. cit., pp. 46-47.

of people who have experienced a particular set of circumstances and they, then, decide to share those experiences on YouTube. Bookchin edits elaborately hundreds of fragments and presents them both in gallery spaces as video installations and online, both on video-sharing platforms and on her personal website. Individual clips are assembled in the form of streams in which, "as in a Greek chorus, individuals echo, respond to, contradict, add refrains, iterations, and variations, join in, and complete solo narrations".[291] The work that exemplifies more than any other those connections with the format as well as the content of Greek tragedy is *Laid Off* (2009), a video that features personal accounts of Americans who have lost their jobs.[292] In the video, small frames gradually light up over a black background, and different people start recounting the way in which they were fired on the same day that they shot the video. In some cases, it is only them who have been dismissed and, in other cases, it has been the whole of their department, or – even – the whole company that is shutting down. The vloggers are voicing a very similar narrative even when they are not using exactly the same words. This fact reveals the common patterns both in the processes through which their dismissal was announced to them and in the feelings and reactions that the incident engendered. As a result, the managerial ethos of the companies is revealed and the individual anonymous workers appear on the screen as a social body that, over the course of the video's four-minute duration, starts acquiring the distinct character of a social class. This becomes even more evident when some of the vloggers contrast their personal situation with that of the companies' senior managers. Finally, in the second half of the video, some of the dismissed employees assess their redundancy as a liberating event. They express the hope that it will provide them with quality time for themselves and the opportunity to pursue what they really want in life, free from what they term as a "non-fulfilling" mode of labour.

Discussing her remixing technique and its relation to ancient Greek theatre, Bookchin notes that "one of the roles of the chorus [...] was to act as a bridge between the audience and the actors, mediating the action between the two and interacting with both".[293] This function was particularly important in the context of Athenian democracy,

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[291] Matthew Newton, 'The Art of Being Downsized' *Forbes* (27 July 2011) <http://www.forbes.com/sites/matthewnewton/2011/07/27/the-art-of-being-downsized/> accessed 25 March 2016.

[292] Other videos in the series address issues like mental health and racism. Racial discrimination against African Americans is also the subject examined by Bookchin in *Now he's out in public and everyone can see* (2012).

[293] Bookchin quoted in Natalie Bookchin and Blake Stimson, 'Out in Public: Natalie Bookchin in Conversation with Blake Stimson' (*Rhizome.org*, 9 March 2011)
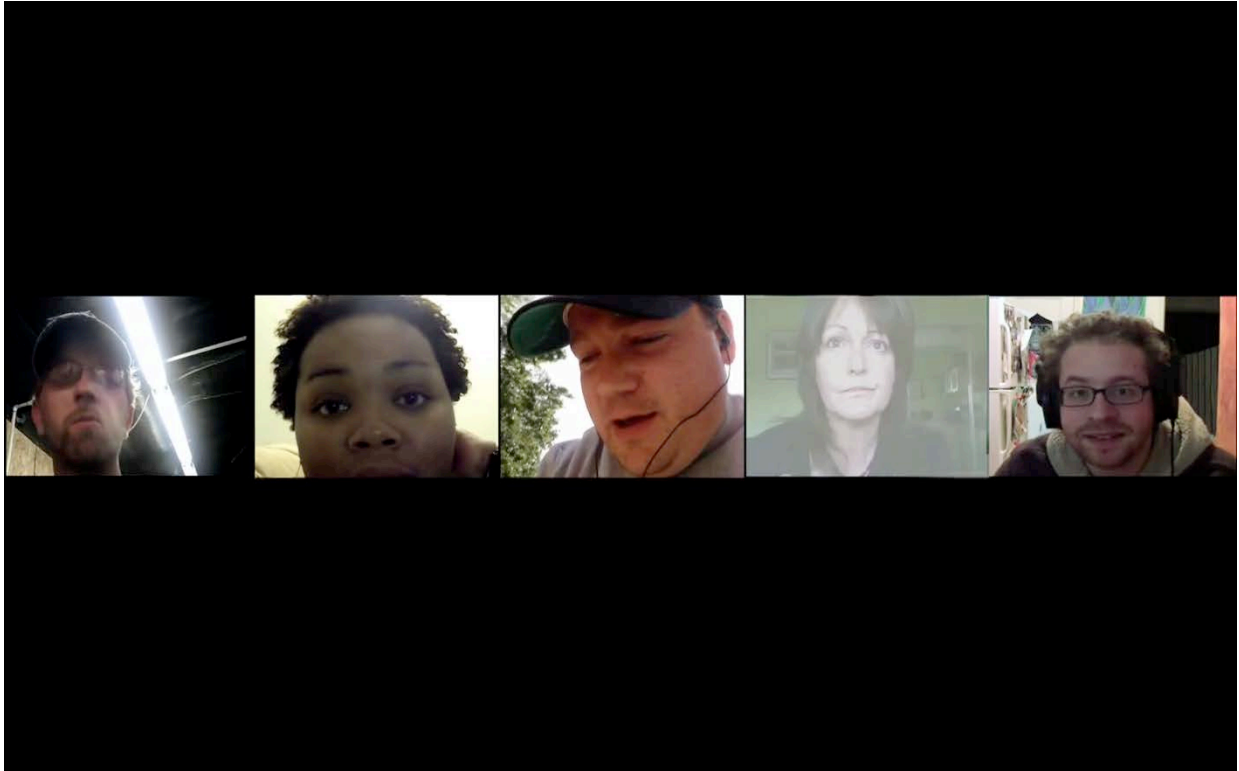
Figure 24: Natalie Bookchin, *Laid Off* (2009)

since it allowed citizens to realize their connections with the rest of the polis, whilst educating them about the structures of power on the basis of which the ancient polis operated. In much of Bookchin's work, this realisation comes as the result of the artist's faith in the principle of collaboration. As she notes,

> I think of art making and teaching as fundamentally creative social practices. I teach from the position that most art making is collaborative, that in the current parlance, artists edit, remix and sample ideas, attitudes, and images, working from within culture rather than outside of it. I think some of the best work comes out of dialogue, critical awareness, and active engagement in the world.[294]

In *Laid Off*, the idea of collaboration is combined with what artist and academic Karen O'Rourke sees as the influence of the Debordian concept of "détournement"; namely, the integration of artistic products that originate from different periods, which construct a new

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<https://rhizome.org/editorial/2011/mar/09/out-public-natalie-bookchin-conversation-blake-sti/> accessed 25 March 2016.
[294] ibid.

ensemble bearing an alternative scope and effect.[295] This becomes evident if we consider that Bookchin recombines found footage originating from different sources and, accordingly, imbues the videos, as a new collective entity, with a political meaning that expands their original intentions; or – even – the original intentions of the dissemination platform that the artist is employing for the exhibition of her work.

The potentially subversive character of this shift in scale, which becomes possible thanks to widened participation and the combination of individually produced material, is also evident in Bookchin's most recent project, *Long Story Short* (2014-2016).[296] The artist describes the work as a "composite group interview",[297] which concurrently adopts the forms of a feature film, an interactive web documentary and an online story archive. Using once more the format of the video diary, Bookchin asked from over 100 participants to reflect on poverty in post-crisis USA by sharing their personal stories of hardship. The interviewees describe in detail their unprivileged social position that often comes as the result of a vicious circle of poverty: in spite of the "American Dream" rhetoric, it seems that people are rarely offered a real opportunity to climb the social ladder. As the participants explain, they feel trapped in their circumstances, which are defined by problems such as the lack of affordable housing, poor health, drug addiction, limited education and virtually non-existent community support. In addition, some deprived neighbourhoods are so violent that one of the participants calls his own neighbourhood a "baby Iraq".[298] At the same time, American mainstream media under-report the extent of poverty and the huge divisions between the country's super-rich and those living below the poverty line. This is particularly true in states like California, where Bookchin and many of her interviewees live. *Long Story Short* attempts to challenge this context of misrepresentation by creating a social cinema that demonstrates that most of poverty's causes are fundamentally shared. Economic inequalities produce a class of "unseen" – people whose stories are not worth much to the government. The different dissemination platforms used by *Long Story Short*,

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[295] Karen O'Rourke, 'Art Work / Dream Work in New Media Documentary' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac*, vol. 20, no. 1 (Leonardo/ISAST, San Francisco 2014) p. 272. For the original definition of "détournement" see the inaugural volume of the journal of *Internationale Situationiste*, vol. 1 (*Ubumexico.centro.org.mx*) p. 13 <http://ubumexico.centro.org.mx/text/si/Internationale_situationniste_1.pdf> accessed 25 March 2016.

[296] 'Long Story Short' (*Natalie Bookchin*, 2016) <http://bookchin.net/projects/long-story-short/> accessed 6 April 2016.

[297] Natalie Bookchin, 'Long Story Short' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac*, vol. 20, no. 1 (Leonardo/ISAST, San Francisco 2014) p. 175.

[298] ibid., p. 176.

in combination with the range of personal narratives, propose a more *social* media, through which the class divisions accentuated by Data Capitalism become more easily identifiable.[299]
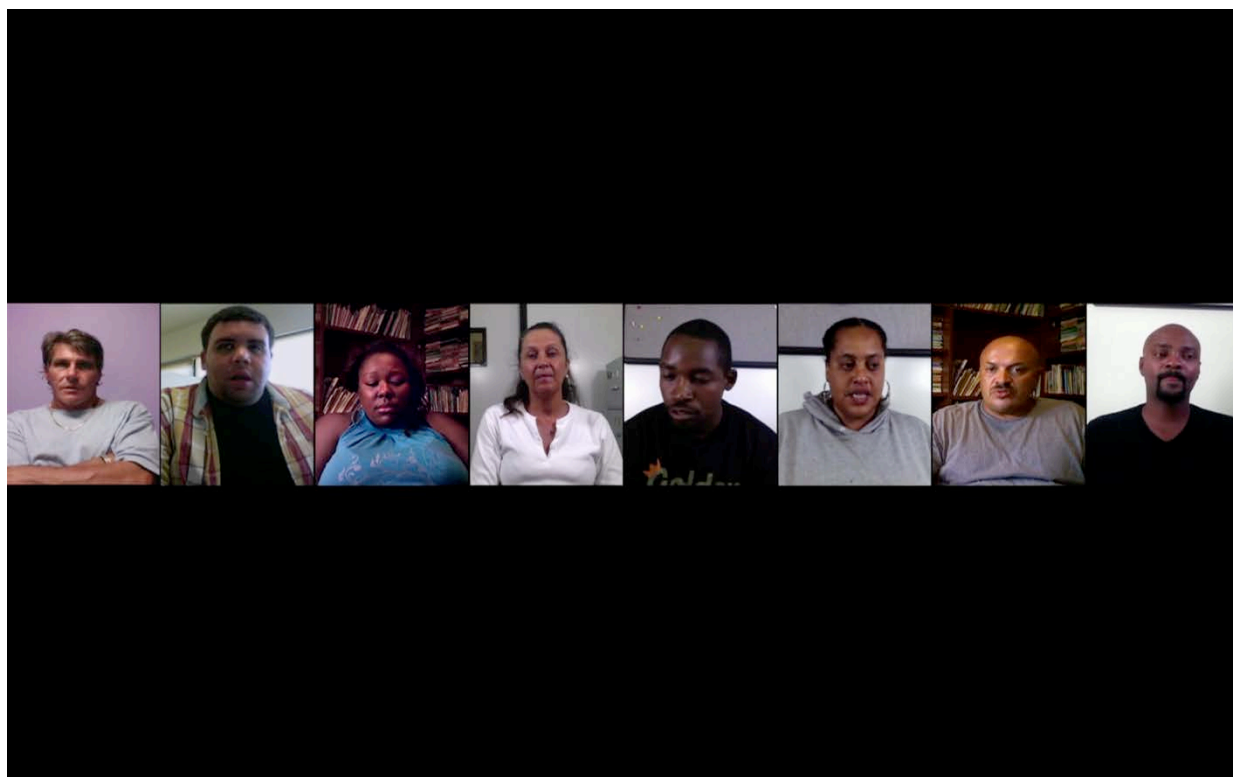
Figure 25: Natalie Bookchin, *Long Story Short* (2014-2016)

Cutting culture in a culture of cuts

One of the less widely exposed aspects of the economic crisis has been its profound impact on the arts and cultural institutions. Similar to Bookchin's *Long Story Short*, artists can be identified as a social class whose stories has also remained largely concealed, given that since the beginning of the crisis policymakers around the world have repeatedly prioritised support for the financial sector over support for the humanities and cultural producers.[300]

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[299] In its documentary film form, *Long Story Short* received its world premiere at the Museum of Modern Art (MoMA), in New York, on 22 February 2016 and it went on to win the Grand Prix at Centre Pompidou's "Cinéma du Réel" Festival, in Paris, in March 2016.

[300] For instance, funding for the arts in the UK was cut nationally and locally, with the budget of Arts Council England cut by 32% and the local government budget cut by 40% between 2010 and 2015. See: Mark Brown, 'Arts and Culture Being "Systematically Removed from UK Education System"' *The Guardian* (17 February 2015) <http://www.theguardian.com/education/2015/feb/17/arts-and-culture-systematically-removed-from-uk-education-system> accessed 25 March 2016. In addition, in the US, the Museum of Contemporary Art, Los Angeles was bailed out by the billionaire Eli Broad, in December 2008;

Notably, the budget cuts that have affected the arts should not be perceived as being independent from the cuts in other sectors, including education, state-funded health structures and general social support services. Rather, they form part of a much wider culture that has been gradually cultivated as the dominant political narrative of the crisis by the financial elites. What is particularly important to note here is the fact that the connotation of word "cut" is – most often – negatively charged: it signifies an act of separation, division, slicing, dissection, axing and, in the end, rejection from the social body. However, if the element that is cut can be associated with a "cancerous" entity, then, the act of slicing becomes something positive: a form of "cure". Art, culture and the humanities have often been described by the ruling classes in similarly unfavourable terms; namely, as elements of the social body that are dysfunctional and unproductive for the economy – sectors that are not worthy of public support anymore.[301] Accordingly, this climate has produced a twofold challenge for artists: on the one hand, the challenge of connecting the impact of the crisis on the arts with what has been happening in the rest of the society; and, at the same time, the challenge of making clear its specific impact on culture and artists themselves.

The online platform of the *Museum of Contemporary Cuts (MoCC)* has combined those two objectives since 2012.[302] Founded by Italian curator, artist and academic Lanfranco Aceti, MoCC explores the relationship between art and the economy at a time of financial crisis, with a view to presenting an alternative narrative about how the social body is perceived in Data Capitalism. The principal output of this investigation is a series of online exhibitions by different artists and curators whose interests lie in the field of the economy, social equality and social justice. Those exhibitions use extensively social media for the dissemination of their material (with one image, or video per day posted on MoCC's Facebook and Twitter accounts), and they are often related – loosely, or more directly – to

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and, in February 2009, the Metropolitan Museum of Art, in New York, announced that it would freeze staff hiring, and that 15 out of its 23 satellite stores around the country would close.

[301] In 2015, the UK's Warwick Commission concluded in its final report, titled '*Enriching Britain: Culture, Creativity and Growth*' that *"Policymakers are obsessed with a siloed subject-based curriculum and early specialisation in arts or science disciplines that ignores and obscures discussion around the future need for all children to enjoy an education that encourages creativity."* However, what this pressure entails is that in the climate of the economic crisis, the arts are being systematically removed from the British education system, as dramatic falls have been reported in the number of pupils taking GCSEs in design, drama and other craft-related subjects.   See: The Warwick Commission on the Future of Cultural Value, 'Final Report' (*Warwick.ac.uk*, 2 April 2015) <http://www2.warwick.ac.uk/research/warwickcommission/futureculture/finalreport/> accessed 25 March 2016.

[302] 'Museum of Contemporary Cuts' (*Museumofcontemporarycuts.org*, 2014) <http://museumofcontemporarycuts.org/> accessed 25 March 2016.

physical exhibitions concurrently taking place in different gallery spaces,[303] as well as to conferences, panel discussions and relevant publications.
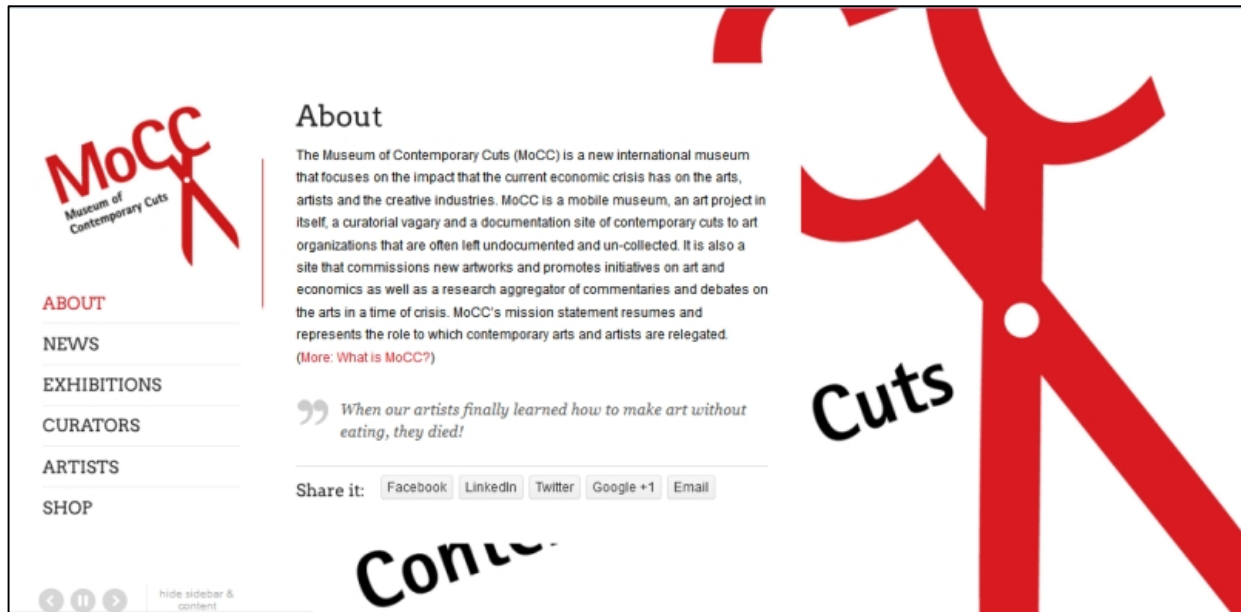
Figure 26: Museum of Contemporary Cuts (MoCC)

In his online exhibition for MoCC titled *Decoding the Flow* (2013), Paolo Cirio attempted to demystify the nature of global economic crisis by highlighting the "invisible" flows that define the operation of Data Capitalism. In order to do that, he revisited some of his most recent works and he provided succinct-yet-informative visual representations of the economic environment in which we live through a series of diagrams. Those diagrams focused on revealing the wealth accumulation processes of major corporations, like Google, as well as on formulating a variety of open society structures facilitated by new media technologies. The 2014 exhibition *Money is Time* by Russian new media artist Olga Kisseleva focused on the severe "cut" of personal time as an invaluable possession, by employing a variety of data visualisation techniques. Kisseleva used for her visualisations a mathematical formula that combined life expectancies and working hours in various countries in order to extract the "real value" of people's time, which she names "time-value". Through the presentation of the results in different forms, the artist highlights the monetisation of time by an abusive system of "servitude", which "slices" the employees' time into mere economic units – a strategy that effectively appropriates people's lives,

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[303] Those gallery spaces have included over the years Kasa Gallery (Istanbul); the Royal College of Art (London); Watermans Centre (London); and Guest Projects/Shonibare Studio (London).

whilst producing significant wealth divisions between regions, countries, or – even – genders.
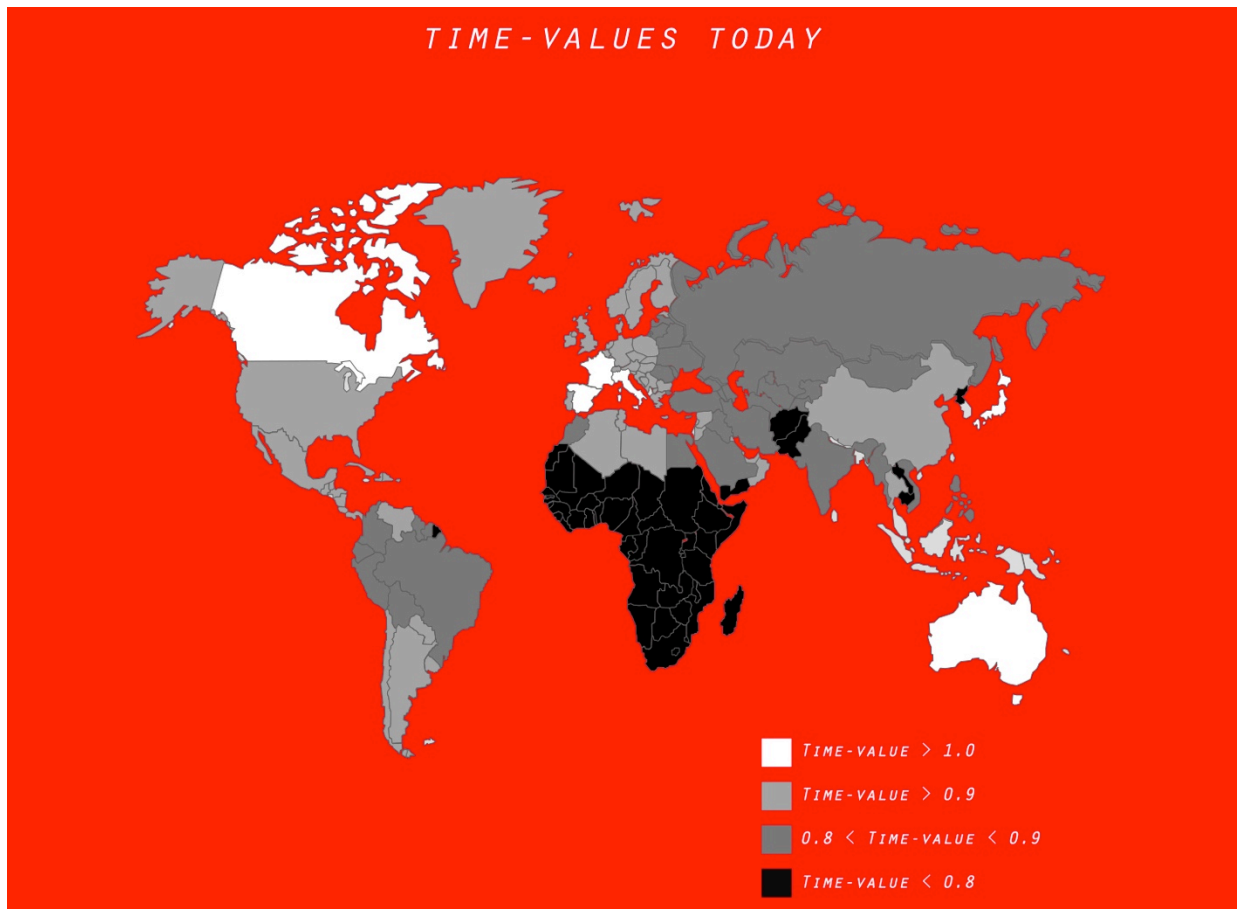
Figure 27: Olga Kisseleva, *Money is Time* (2014)

This extensive culture of monetisation is also addressed, from a different point of view, in Tom Corby's exhibition *No Detectable Level* (2013). Corby adopted as a starting point for his works his own medical condition, which requires the provision of state-funded medication, regular tests and consistent support by the services of the British National Health System (NHS). Notably, state-supported health systems have been under great financial pressure in several countries due to the fiscal policies adopted as a result of the crisis. For his exhibition, Corby produces an aesthetic transcription of the concept of the sick body, underlining the financial impact of the services that are being offered to him, but, also, the financial gain that is involved in the whole process for drug manufacturers and health services' providers. In this way, the artist poses the question of the value of human life, and if/how this can be defined in monetary terms. The images used by Corby include photos of his medication, weekly price catalogues or "drug tariffs", photos of the hospital equipment, as well as the collection of hats that the artist-patient wears depending

on his mood and feelings. The juxtapositions created by those images appear to connect the artist's ill body with an "ill" society that struggles to identify its priorities and values. Finally, an important part of MoCC's online presence is devoted to the circulation of news regarding the cuts in the budgets of publicly funded museums and art institutions around the world. Those stories have been regularly posted on the museum's website and on a variety of social media networks, accompanied by direct links to the news sources and/or the websites of the affected organisations.

Figure 28: Tom Corby, *No Detectable Level* (2013)

Quite predictably, perhaps, the severity of the crisis entails that the *Museum of Contemporary Cuts* has not been the sole online initiative through which artists, cultural workers and educators have been communicating their anxieties about the pervasive culture of cuts that Data Capitalism has engendered. This context of institutional critique is also vividly reflected in the activities of W.A.G.E. (Working Artists and the Greater Economy), a New York-based collective founded in 2008, which is advocating that all organisations pay artist fees and develop a protective framework for the labour rights of all creative professionals.[304] In their "wo/manifesto" (2008), the members of the group condemn the exploitative mode of labour imposed by the (increasingly financialized) art

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[304] 'W.A.G.E' (*Wageforwork.com*) <http://www.wageforwork.com/> accessed 25 March 2016.

market, which has been uncritically adopted even by non-profit art organisations. Due to widely established practice of non-payment important economic inequalities have been generated for cultural labourers. Those inequalities have only intensified amid the crisis, becoming an almost "formalised" status of artistic production. According to W.A.G.E., this trend should be actively fought, with the objective of achieving "the remuneration of cultural value in capital value".[305] In September 2010, W.A.G.E. launched a major online survey in order to gather and share information regarding the economic experiences of artists who have been exhibiting in non-profit art spaces in the New York City area, since 2005. The survey covered a variety of characteristics on the basis of which the data analysis was made, including the type of the exhibition, form of expenses, amount of fee, demographics and type of institution. On average, almost 60% of the artists who responded to the survey did not receive any form of payment or reimbursement for their participation in the exhibitions organised by New York galleries and museums.[306]

In an attempt to reverse this situation, W.A.G.E. initiated in 2010 a programme of Certification, through which the collective acknowledges the espousal of a "best-practices" operational model by art organisations that commit paying artist fees.[307] The W.A.G.E. Certification was launched as a blueprint for certifying individual exhibitions and it, later, adopted a more holistic approach in view of becoming able to evaluate the overall activity of institutions and their general microeconomic environment.[308] The first exhibition certified was "Free" at New York's New Museum (2010), which explored the different ways in which the Internet has transformed our understanding of publicness, openness, connectivity and dissemination.[309] Curator Lauren Cornell invited W.A.G.E. to take part in

[305] 'Wo/manifesto' (*Wageforwork.com*) <http://www.wageforwork.com/about/1/womanifesto> accessed 25 March 2016.

[306] The exact percentage is 58.4%. See: 'W.A.G.E. Survey Report Summary' (*Wageforwork.com*) <http://www.wageforwork.com/resources/4/w.a.g.e.-survey-report-summary> accessed 25 March 2016.

[307] 'About Certification' (*Wageforwork.com*) <http://www.wageforwork.com/certification/1/about-certification> accessed 25 March 2016.

[308] This includes elements like the institution's relationship to real estate (does it rent, own and/or function as a real estate market speculator/developer?); its age; whether it receives an endowment, or not; its long and short-term investment and funding strategies; the organization's mission; its annual total operating budget; the number of exhibitions that it produces; the number of cultural workers participating in its activities; and the definition of "equity" that it espouses. See: W.A.G.E, 'Principles of W.A.G.E. Certification' *The Brooklyn Rail* (5 February 2013) <http://www.brooklynrail.org/2013/02/artseen/principles-of-wage-certification> accessed 25 March 2016.

[309] 'Exhibition: Free' (*Archive.newmuseum.org*) <http://archive.newmuseum.org/index.php/Detail/Occurrence/Show/occurrence_id/1092> accessed 25 March 2016.

the show, with the group deciding that instead of exhibiting an artwork, they would undertake the negotiation of the fees for all participating artists.[310] As of 2014, and in order to receive the certification, art organisations can contact the collective online through its website, and apply on the basis of the requirements that have been established by The W.A.G.E. Summit.[311] In another example that reflects this spirit of unveiling the harsh

Figure 29: W.A.G.E. artist's fees calculator

realities of the cuts, the London-based Glasshouse Collective launched in 2014 its online project *The Work We Want*. Through the project's website, the collective asked digital workers originating from around the world to share their experiences of work, on the basis of four simple questions: "What work do you do? How much are you paid? What work do you want? How much do you want to be paid?"[312] By assembling the workers' responses, *The Work We Want* managed to expose the underclass of cultural microworkers that has been created due to Data Capitalism's expansion in "low wage economies". This expansion inevitably also puts under pressure the wages of digital workers who are based in more developed economies, as they need to compete online in order to receive commissions.

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[310] W.A.G.E, 'W.A.G.E Discuss Their Certification Projects' *Artforum* (23 November 2011) <http://artforum.com/words/id=29628> accessed 25 March 2016.

[311] The Summit took place on 13-14 January 2014 and its results were announced at the "Out of Alternatives" conference, which was organized by Common Practice New York and the Center for Curatorial Studies of Bard College on 18 May 2014.

[312] The project's website: 'The Work We Want' (*Workwewant.com*) <http://workwewant.com/> accessed 25 March 2016.

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Finally, in the context of the project, the members of the Glasshouse Collective created an online archive of videos featuring the views of individual artists, researchers, policymakers and lawyers on digital labour, as well as a case study of a commission of outsourced art.

In order to accentuate the previously described context of exploitation, W.A.G.E. presented in 2012 one of its most assertive protest actions, when it posted on YouTube a video ridiculing Carolyn Christov-Bakargiev, the artistic director of Documenta 13. The video criticised the curator's decision not to pay fees to the artists participating in the exhibition – one of the most prestigious shows in the world in the field of modern and contemporary art. Titled *pOWER (100): A Screenplay*, the video's title constitutes an overt reference to ArtReview's famous "Power 100" list, which is published annually by the magazine and charts the 100 most powerful figures in contemporary art world.[313] In the

Figure 30: W.A.G.E., *pOWER (100): A Screenplay* (2012)

video, the famous curator (listed at the first place of the "Power 100" list in 2012) is treated like an artist, in a "fictionalised melodrama", as the members of W.A.G.E. characterise the work.[314] The video begins by showing Christov-Bakargiev at a panel discussion in New York, explaining the situation regarding artist fees at Documenta: "If you were an artist,

[313] '2015 Power 100' *Art Review* (2015) <http://artreview.com/power_100/> accessed 25 March 2016.
[314] W.A.G.E, 'POWER (100): A Screenplay', video recording, (*Youtube.com*, 4 February 2013) <https://www.youtube.com/watch?v=A7OrU6qZkOs> accessed 25 March 2016.

you didn't get any money, no, because you were already invited to the exhibition, and you got to produce your work, so we didn't pay the artists".[315] Her comment is accompanied by some laughs. W.A.G.E.'s screenplay, then, goes on by cutting to an imaginary flashback in which the curator is being asked by the CEO of Documenta, Bernd Leifeld, to curate the exhibition without the expectation to receive any reimbursement for her work, because – just like the artists – she has "already been invited to the exhibition". Unsurprisingly, Christov-Bakargiev's response to such an employment prospect was negative.

It is important to note here that W.A.G.E.'s hybrid practices of advocacy and protest have not been independent of the preoccupations and actions of other cultural workers. This is particularly relevant to the period of political mobilisation that has followed the creation of Occupy Wall Street (OWS), in September 2011. Amongst the working groups formed within the movement, Arts & Labor has been the one dedicated to revealing the precariousness experienced by cultural producers in the context of the crisis. Since its inauguration, the group has been holding regular meetings that are advertised on its website, alongside a variety of other news, events and ways to get involved in art-related OWS activities. In 2012, the group posted online a letter addressed to the Whitney Museum of American Art, asking for the cancelation of the 2014 Whitney Biennial given that "it upholds a system that benefits collectors, trustees, and corporations at the expense of art workers".[316] As the members of Arts & Labor claimed in their letter, art institutions are today completely absorbed by a corporate ethos of profit, self-interest and oppression, and the Whitney Biennial is no exception to that. In another of its actions, the group managed to persuade the Frieze New York art fair to employ union workers for the construction of its 250,000 square foot tent, starting from 2015 – a labour practice that Frieze was the sole New York-based art fair to ignore since its inaugural edition in 2012. This result came after a vigorous campaign that lasted for almost two years, during which Arts & Labor built on their Occupy Wall Street network in order to stage various protest events. Rather poignantly, the group's members even renamed the art fair into a "rat" fair, in order to draw wider attention to its unethical employment practices.[317]

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[315] ibid.
[316] Arts & Labour, 'End the Whitney Biennial 2014' (*Artsandlabour.org*, 24 February 2012) <http://artsandlabor.org/end-the-whitney-biennial-2014/#sthash.zfYeawGh.YI3dPxMN.dpbs> accessed 25 March 2016.
[317] Arts & Labour, 'Facts about the Frieze NY "Rat" Fair' (*Artsandlabour.org*, 6 May 2013) <http://artsandlabor.org/facts-onfrieze/#sthash.QCPY2oRr.dpbs> accessed 25 March 2016.

From Occupying the Square to Reclaiming the Commons

Nevertheless, the most important contribution of the Occupy movement to the exhibition strategies employed by politically engaged artists has – probably – been the revitalisation of the role of public space in their practices. In an intervention that exemplifies this spirit, French multimedia artist Maurice Benayoun exhibited between January and March 2012 for the first time in the US his real-time data-visualisation artworks *Emotion Forecast* (2010) and *Occupy Wall Screens* (2011). Benayoun presented the two works in the large-scale public screens installed at the Big Screen Plaza of Manhattan, in an attempt to "redeploy" them within the geographical and ideological environment that gave birth to them (New York's financial centre). Both works belong to the ongoing series *Mechanics of Emotions*, in which the artist interprets the Internet as the world's "nervous system", producing diverse visualisations of data related to the emotional state of people. In *Emotion Forecast*, that information originates from websites related to current events in 3,200 cities around the globe, through whose posts Benayoun is able to "measure" 48 different emotions.[318] By associating the emotional state of the inhabitants with the

Figure 31: Maurice Benayoun, *Emotion Forecast* (2010)

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[318] The research and the development of the platform were carried out by Robin Gareus (CiTu-Paragraphe, Université Paris 8).

proximity of the locations, the work predicts the tendencies for the next couple of days. The forecasts are projected on a map that uses a hybrid visual language combining a stock ticker display with words-emotions such as "happy", "confused", "weak", "afraid", "strong" and "guilty", amongst others. In addition, the maps were available in real time on the project's website.[319] As Benayoun notes, "playing with words is sometimes the best way to connect different layers of information, different territories, different fields".[320] In the case of *Emotion Forecast*, those layers hint – once more – at the extensive culture of monetisation, as the human factor merges with the idea of prediction, quantitative manipulation and, in the end, commodification.[321] This context becomes even more salient and directly engaged with political dissent, in *Occupy Wall Screens*.[322] In the work, real-time stock valuations of major financial institutions are juxtaposed with the emotional trends emanating from Occupy sites located around the world, whose emotion-related data is collected from Web search engines. On the left hand side of the screen, Benayoun displays the emotional currents and on the right-hand side the stock values. In both cases, he once more uses the familiar stock tickers' template that is widely employed by Bloomberg-style news programs. In addition, for *Occupy Wall Screens* Benayoun only presents the stock values of *financial* companies, namely "only those making money with money",[323] which have, also, been the main responsible for the recent economic crises. By showing his works in a prominent public location not far from the actual site of the Occupy Wall Street movement, Benayoun is able to "reterritorialise" meaning and use public space in order to provide a vivid visual depiction of the clash between the institutional agents of Data Capitalism (1%) and the people (99%).

If we consider Benayoun's practice of activating public space as a platform for social protest, then, one could consider it only as the "first step", in the effort to produce political change. The natural "next step" in this process would be a renewed focus on public space itself, by redefining it not merely as a means to project social anxieties and struggles, but

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[319] 'Emotion Forecast' (*Emotionforecast.com*) <http://emotionforecast.com> accessed 25 March 2016.

[320] Michael Kurcfeld, '"Occupy Wall Screen": A Renowned French Media Artist Takes on Wall Street (VIDEO)' *Huffington Post* (30 January 2012) <http://www.huffingtonpost.com/michael-kurcfeld/wall-street-art_b_1239101.html> accessed 25 March 2016.

[321] Emotion Forecast has also been exhibited, amongst other locations, in ZERO1 San Jose Biennial, California; MOMENTUM, Berlin; Dubai, UAE; ISEA Sydney 2013; Federation Square, Melbourne, Australia.

[322] The project's website: Maurice Benayoun, 'Occupy Wall Screens: eMotion Stock Value' (*Benayoun.com*) <http://www.benayoun.com/projet.php?id=180> accessed 25 March 2016.

[323] Kurcfeld, loc. cit.

Figure 32: Maurice Benayoun, *Occupy Wall Screens* (2011)

rather as an active producer of viable economic and political alternatives. The discourses that have developed around this potentiality have at their core the idea of the "commons" and its capacity to subvert the neoliberal context of privatization and/or government regulation of what constitutes shared economic value in a society. In this context, the commons should not be conceptualised merely in terms of what we have inherited from the past, and are required to protect and pass to future generations (the natural environment and its resources; cultural and intellectual products; public goods, like infrastructures and public education or health systems). Rather, this definition should expand in order to include everything that we create and share, through the production and dissemination tools offered by networked technologies. This spirit of creativity engendered by the online collaborations between artists, programmers, researchers and hardware engineers has produced new forms of art that not only encourage a shift of mentality towards the commons, but, also, a transformation in the way that many art organisations perceive their social role and function.[324] Not surprisingly, this has been

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[324] Daphne Dragona, 'Artists as the New Producers of the Common (?)' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac*, vol. 20, no. 1 (Leonardo/ISAST, San Francisco 2014) p. 165.

especially true in the case of the countries that have been most severely hit by the global economic crisis and the austerity that it has brought for cultural institutions.

In 2010, the National Museum of Contemporary Art, in Athens (EMST), presented two new web-based exhibitions that explored the role of the commons as an alternative to the path proposed by the neoliberal economic model. *Esse, Nosse, Posse: Common Wealth for Common People* was the first of the two projects to be launched (April 2010) as an online platform that introduced both the museum's audience and Web users at large to the main principles of the commons, through a variety of artistic projects, open software initiatives and texts of critical theory.[325] With its triadic title referencing the spirit of Renaissance humanism (the doctrine "I am, I know, I can"), the platform aimed to demonstrate how knowledge and information could be reclaimed and, accordingly, used in order to produce wealth for the majority of people, instead for merely those who already control capital and its flows. Some of the works featured in the exhibition's website have already been examined in this thesis, including *Invisible Threads* by Stephanie Rothenberg and Jeff Crouse, and Dmytri Kleiner's Telekommunisten projects. In addition, *Esse, Nosse, Posse: Common Wealth for Common People* presented other relevant projects using diverse strategies with the purpose of demonstrating "the possibilities of re-appropriation of knowledge that may occur only through knowledge itself".[326] In *re_potemkin* (2008), the .-_-. "entity", as it calls itself,[327] invites online users to download for free re-edited versions of Sergei Eisenstein's *Battleship Potemkin* (1925), which is now on public domain (i.e. its intellectual property rights have expired), as well as share them on a peer-to-peer basis.[328] A rather different, yet highly imaginative critique of intellectual property is provided in another of the exhibition's works, *Free Culture Play*, which was released in 2008 by the

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[325] The project's website: 'Esse, Nosse, Posse: Common Wealth for Common People' (*Emst.gr*, 2010) <http://www.emst.gr/commonwealth/> accessed 25 March 2016.

[326] Daphne Dragona, 'Esse, Nosse, Posse: Common Wealth for Common People' (*Emst.gr*) <http://www.emst.gr/commonwealth/?page_id=2> accessed 25 March 2016.

[327] According to the "entity's" website, ".-_-. is a trans-territorial and trans-cultural distributed peer identity. everybody is free to use this identity, attribute this identity to their works and appropriate the works of this identity. .-_-. are not attributed as "he" or "she" or "they", but just as .-_-. , in any language. .-_-. is trans-lingual and also there is no single way to pronounce .-_-. in any language. .-_-. speak any language, but not any of them properly. .-_-. cannot be searched on the internet and can only be associated through the works, however .-_-. is not associated with any single individual. everybody can appropriate the identity and host the works of all .-_-. . all works of .-_-. are works of free culture." For more information, see: '.-_-' (*Httpdot.net*) <http://httpdot.net/.-_-./> accessed 25 March 2016.

[328] The project's website: '.re_potemkin:' (*Re-potemkin.httpdot.net*) <http://re-potemkin.httpdot.net/> accessed 25 March 2016.

Italian collective Molleindustria.[329] The project adopts the form of an online game that represents the battle between the free dissemination of knowledge and copyright control. Using the cursor, the player is invited to distribute knowledge to the people who move in a circle symbolising the commons – an area where knowledge is cooperatively created and shared. Outside this circle, one finds the area of the market. Within this, knowledge is commodified by the "vectorialist", a device that is the player's enemy, as it tries to copyright all ideas produced by the people. Those who cannot access knowledge in the common will stop producing new ideas and will turn into passive consumers. The goal of the player is to protect people from this danger, and liberate the ones who were captured by the market by repositioning them within the area of the commons. Finally, an important feature of the exhibition's website has been its open submission platform, through which artists, academics and media researchers have been able submit new works and essays, which enrich the scope of *Esse, Nosse, Posse* and keep it up-to-date.[330]
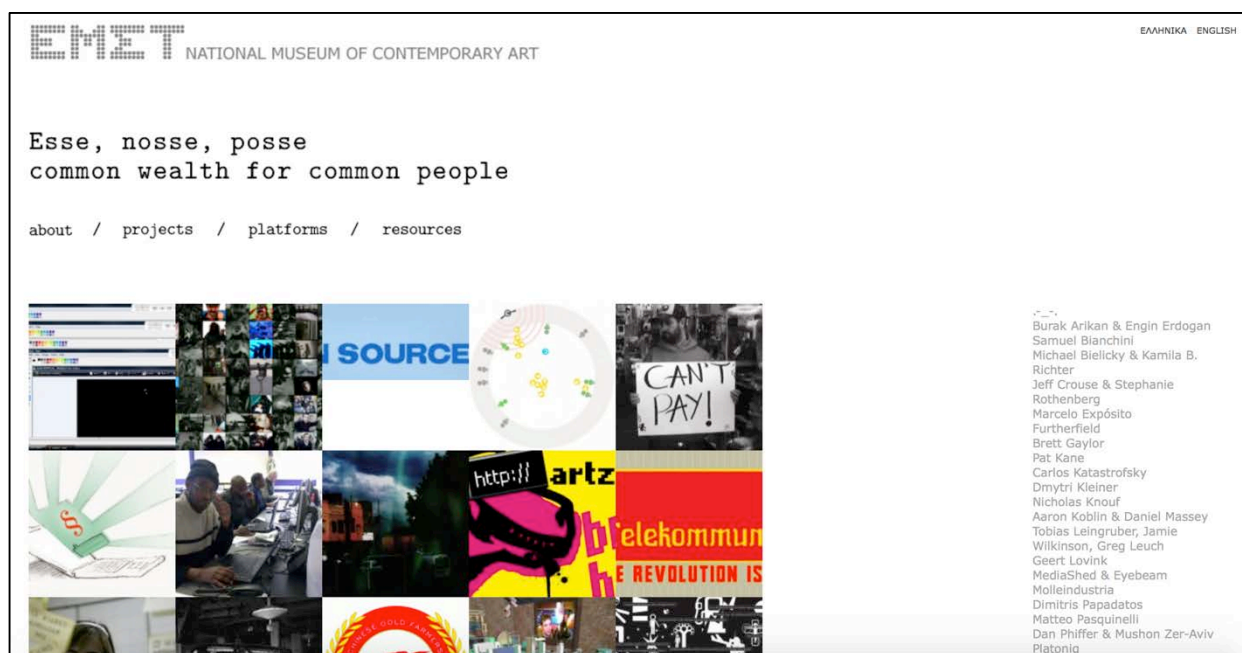
Figure 33: EMST, *Esse, Nosse, Posse: Common Wealth for Common People* (2010)

In December of 2010, EMST launched its second web-based exhibition, titled *Mapping the Commons*,[331] which came as a natural evolution of *Esse, Nosse, Posse: Common*

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[329] The project's website: 'Free Culture Game' (*Molleindustria.org*, 2008) <http://www.molleindustria.org/en/freeculturegame/> accessed 25 March 2016.
[330] The submission forms of the platform were still fully accessible in early March 2016.
[331] The project's website: 'Mapping The Commons Athens' (*Emst.gr*, 2010) <http://www.emst.gr/mappingthecommons/index.html> accessed 10 April 2016.

Wealth for Common People. The project was a collaborative cartography of Athens that employed free participatory software in order to produce an interactive map of the Greek capital based on the commons. Adopting the initial form of a workshop, *Mapping the Commons* was co-organised by EMST and Hackitectura, a Spanish collective of architects, artists, computer scientists and activists, which was founded in 1999 in Seville. Inspired by hacker culture, the group aims to subvert the established power structures with its projects, by combining the transformative effects of new technologies on physical spaces and the creation of social networks. The participants of the workshop that Hackitectura devised were post-graduate students and researchers in architecture, communication and media studies, and social and political sciences from different Athens-based universities.[332]
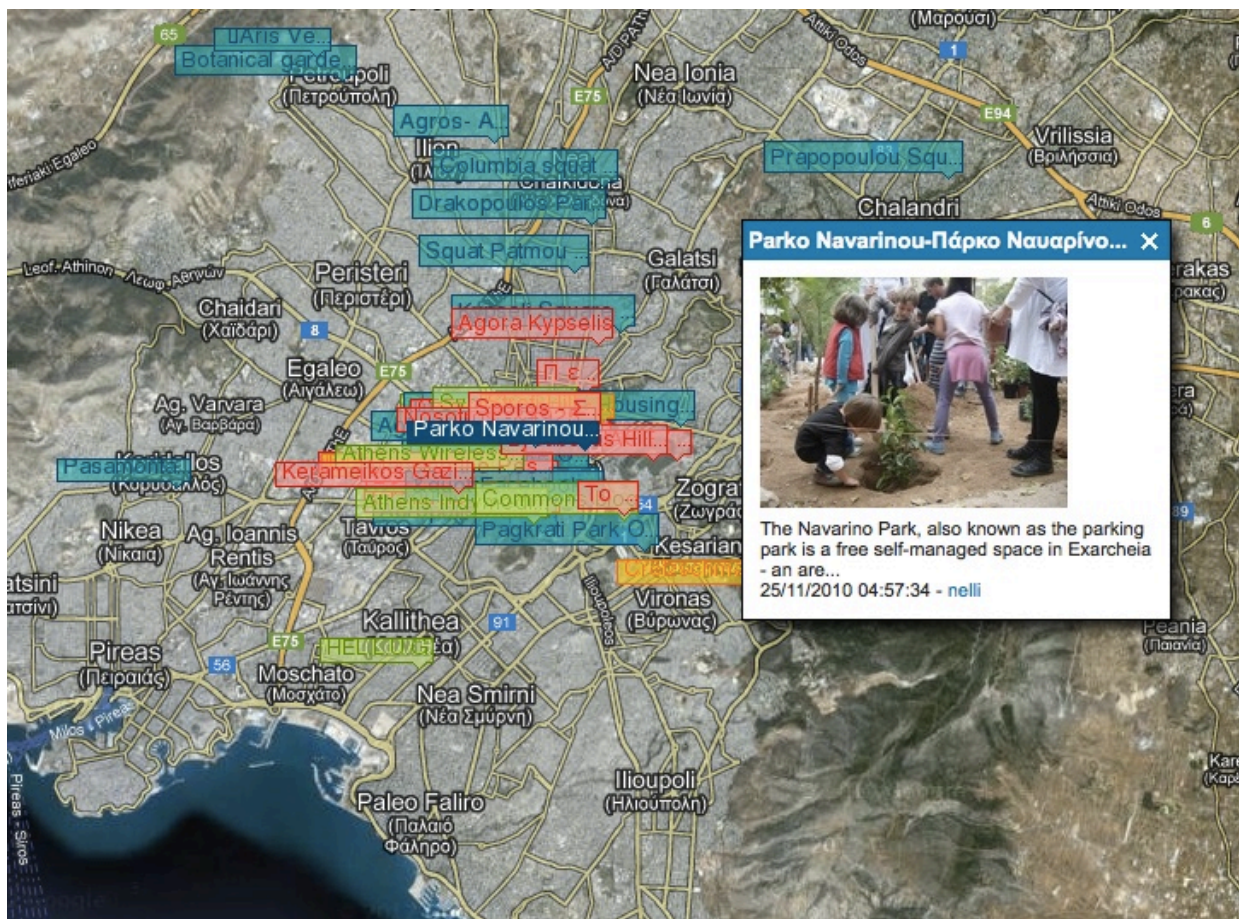
Figure 34: EMST, *Mapping the Commons* (2010)

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[332] More specifically, the participants came from the School of Architecture of the National Technical University of Athens, the Department of Communication and Media Studies of the National and Kapodistrian University of Athens and from the field of Social and Political Sciences of Panteion University.

Building on the diverse origins and research interests of the team, the mapping of the Athenian commons aimed to be as comprehensive as possible, covering all types of physical, cultural and digital commons. Accordingly, entries varied from self-managed parks to free Wi-Fi providers, and from the languages spoken in the different parts of the city centre to the locations of graffiti artworks. Those urban commons were documented over a period of eight days, during which participants registered and updated information on the online interactive map, including selected case studies documented in short videos. The project's website also featured a blog, in which the members of the team shared their experiences and explained their work processes. The online maps as well as other sections of the *Mapping the Commons* website still remain open to contributions, reflecting the fluid and dynamic character of urban landscape and the potential for exploring new ways of social emancipation from the oppressive structures of neoliberal capitalism.[333]

The two exhibitions have constituted a particularly extrovert gesture for EMST, since they enabled it to adapt its activities to technological change and focus on new audiences. Most importantly, however, they allowed the museum to respond to the political climate of the time, as Greece was going into the deepest recession of its modern history following the agreement of the first memorandum with its main lenders, the EU and the IMF. Furthermore, the two projects became an indirect means of tackling the severe cuts in the field of culture, given that the exhibitions' web-based nature made them much cheaper to produce and promote than physical exhibitions. According to the curator of both projects, Daphne Dragona, we could locate four main characteristics in *Mapping the Commons* and *Esse, Nosse, Posse*: the formation of new online and physical spaces enabling social encounter and interaction; the provision and empowerment of social and artistic tools that are – quite often – already available; the emergence of a new ethos of collectiveness and communality; and, finally, the creation of a new system of values, beyond exclusions and the profit-based understanding of social progress.[334] In combination, the two projects highlighted the creative appropriation of public spaces as a prerequisite for the production of common wealth. This deeply democratic function can be traced back to the simple fact that "there is no commons without commoning"[335] – namely,

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[333] Apart from Athens, Hackitectura has organized similar workshops and initiated relevant platforms in Istanbul, Rio de Janeiro, Belo Horizonte, São Paulo and Quito. For more information, see: 'Mapping the Commons – Research Open Lab on Urban Commons' (*Mappingthecommons.net*) <http://mappingthecommons.net/en/world/> accessed 25 March 2016.

[334] Dragona, 'Artists as the New Producers of the Common (?)', op. cit., pp. 170-171.

[335] ibid.

there is no commons without the human agency that brings them and their dormant potentialities to life.

The hackers of the streets

The connections established between political activism and art, and between art and the activation of public spaces in recent years, have been indicative of the need of artists and cultural organisations to engage in more depth with practices that might have been considered of marginal interest or special scope before the crisis. In 2012, Science Gallery in Dublin presented the exhibition *Hack the City*, which investigated ways of rethinking our socio-political relationship with the environments within which we live in towns and cities.[336] Inspired by the fact that urban areas have been rapidly becoming the dominant habitat for the planet's population and, thus, the main space of civic life, the exhibition invited the audience to adopt a "hacker mindset" in order to subvert Dublin's existing urban systems. By the time of the exhibition's opening (June 2012), the Irish capital had already experienced a rapidly rising rate of unemployment, large protests and the emergence of its own Occupy movement (Occupy Dame Street),[337] as a result of the economic crisis and the measures that accompanied the Irish bailout programme. The subtitle of the exhibition, *Take Control*, is indicative of the context within which the organisers located its mission – an endeavour combining elements of connectivity, openness, exchange, public good, autonomy and freedom, in order to produce, through participation, alternative forms of social interaction and organisation. Accordingly, the artworks, projects and interventions hosted by *Hack the City* engaged a diverse group of artists, programmers, researchers, activists and community leaders, with the aim to bring the practice of hacking into the streets.

This effort was vividly reflected in many of the presented works, including *The Artvertiser* (2010) by Julian Oliver, Damian Stewart and Arturo Castro.[338] The work is a hardware device as well as an Augmented Reality (AR) piece of software through which actual billboard advertisements are replaced in real time by artists' works. The software is able to recognize the advertisements on buildings, magazines, or vehicles and, then, treat

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[336] The exhibition's website: 'Hack the City' (*Dublin.sciencegallery.com*, 2012) <https://dublin.sciencegallery.com/hackthecity/index.html> accessed 25 March 2016.

[337] Occupy Dame Street (or Occupy Dublin) located its camp outside the Central Bank of Ireland plaza on Dame Street, in Dublin.

[338] The project's website: 'The Artvertiser' (*Theartvertiser.com*, 2010) <http://theartvertiser.com> accessed 25 March 2016.

the surfaces as a white "canvas" that can display different images or videos. The members of the audience were able to see the transformed billboards by wearing *Artvertiser's* AR goggles, by collecting a tablet from Science Gallery, or by simply using any kind of handheld web-connected device, like a smartphone. The platform through which the advertisements are replaced features a variety of artworks chosen from the Web, which attack consumerist culture and the commercialization of most human activities. Accordingly, the work transforms the read-only, proprietary imagery of our urban spaces into a read-write platform for the presentation of non-proprietary images and videos. Employing elements of humour and parody, *The Artvertiser* portrays the Internet as a redistribution mechanism that enables the audience to subvert the marketing narratives of commercialisation and consumption. The same ethos imbues another of Julian Oliver's projects, *Newstweek*, which

Figure 35: Julian Oliver, Damian Stewart and Arturo Castro, *The Artvetiser* (2010)

was developed in collaboration with Danja Vasiliev in 2011.[339] Also being part of the *Hack the City* exhibition, *Newstweek* could be characterised as an effort to reclaim the commons of information, as it is a device capable of manipulating the news read by people using wireless hotspots. Adopting the form of a simple wall plug, the device allows writers to remotely edit news read on devices connected to wireless networks without their users

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[339] The project's website: 'Newstweek' (*Newstweek.com*, 2011) <http://www.newstweek.com> accessed 25 March 2016.

being aware of this intervention. In this way, *Newstweek* exposes the vulnerability of a "strictly media-defined reality" – an omnipresent reality separated from any form of physicality. Most importantly, the work humorously reverses the top-to-bottom news distribution model, which may generate misinformation or – even – propaganda. In order to accentuate the subversion of this function, the project's website even features a special section dedicated to teaching Web users how to build their own *Newstweek* devices, using simple, low-cost hardware.[340]

Liam Young's *Electronic Countermeasures* (2011) also focused on the free distribution of information through the "re-appropriation" of technology. The project was realized in collaboration with Eleanor Saitta, Oliviu Lugojan-Ghenciu and Superflux, and used a flock of GPS-enabled drones that formed their own Wi-Fi network. By connecting to

Figure 36: Liam Young, *Electronic Countermeasures* (2011)

[340] Notably, one of Paolo Cirio's most recent projects titled *Daily Paywall* (2014) also deals with the idea of information as part of the commons. For this project, Cirio hacked the paywalls of the most influential financial publications (Wall Street Journal, Financial Times, and The Economist) making freely available 60,000 pay-per-view items that have been published over the course of 2014. *Daily Paywall* functions as an edited online newspaper that brings together the hacked articles in different issues, with each one focusing on the different economic injustices and contradictions of our time. One of the main novelties of Cirio's online paper is that instead of asking the readers to pay, it actually pays the readers $1 if they are able to answer a simple questionnaire that relates to the featured articles. For more information, see: Paolo Cirio, 'Daily Paywall' (*Paolocirio.net*, 2014) <https://www.paolocirio.net/work/daily-paywall/> accessed 31 March 2016. As of January 2015, the website http://DailyPaywall.com was not operational anymore.

it through their laptops, tablets or smartphones, users were able to freely exchange files on a local level. As a constantly flying, pirate file-sharing infrastructure, the drones could avoid detection, establish peer-to-peer networks and, then, disperse, following an original and rather provocative "informational guerilla" strategy. *Electronic Countermeasures*, thus, adopted the character of a site-specific tactical media intervention, in which any member of the public could participate with a view to defying the monetization of information and its hierarchical models of dissemination.

Finally, an even more direct engagement with the commons is demonstrated in *Uncommon Land* (2011) by Eilis Murphy, which used a variety of urban interventions in order to reveal what he calls the rise of "pseudo-public space" within our cities.[341] In the context of neoliberal capitalism, ownership and control of urban spaces is increasingly being transferred to private companies and other entities that lack democratic legitimization. Very often, this is not visible, with streets and plazas appearing to be "public", whereas – in fact – they are governed by rules set by private bodies. Activities like busking, begging, skateboarding, or photography are restricted or even prohibited in such spaces, with private security ensuring that the use of space remains privately regulated (e.g. Paternoster Square, in London). For *Uncommon Land*, Murphy invited the public to help him "hack" and reveal those invisible borders, by participating in flash mob events, photo-shoots, mapping and video documentation sessions, the results of which were, then, uploaded on the project's website. Often moving on the verge of legality, Murphy asks us through his work to imaginatively activate public space through the subversive use of already existing technological tools. Most importantly, however, the artist asks us to "deactivate" public space's current status as defined by a state-supported regulatory framework of monetisation, exploitation and exclusion – three principles that lie at the core of Data Capitalism's invisible modus operandi.

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[341] The   project's   website: 'Uncommon   Land'   (*Uncommonland.wordpress.com*) <http://uncommonland.wordpress.com/> accessed 25 March 2016.

Chapter 4

The Rise of Radical Institutions: Towards Alternative Modes of Socioeconomic Being

From Public Space to Hackerspace

In spite of the subversive political dispositions of many of the initiatives that we have analysed so far, it is important to note their often-ephemeral character. As exhibitions, performances or public interventions, their duration could only span from a few hours to a few months, thus often approximating Benjamin's concept of the "jetztzeit" – an action occurring "here-and-now". In addition, regardless of the fact that they had an online basis, or a strong online component that allowed them to – at least partly – "survive" beyond the duration of the exhibitions, institutional engagement with the social context catalysed by new media and the crisis became problematic once an exhibition, or intervention had finished. In other words, in such cases, it felt like artists and cultural institutions were only addressing the crisis in an isolated context: they were raising questions around the origins and/or the consequences of the crisis without, however, offering a framework within which potential answers could be systematically explored. Nevertheless, as the crisis persisted, artists, museums, independent art spaces, collectives and socially engaged cultural agencies gradually realised that there should be a set of more strategic and long-term responses to those conditions. The fourth chapter of this thesis is going to investigate and map those responses. The first section of the chapter will examine the rise of alternative institutions such as hackerspaces, which have been proposed by cultural producers as new modes for the production of common wealth. This investigation will be followed in the second section by an analysis of alternative economies and currencies, which have either been created by artists, or have been adopted by them in their projects. Finally, the chapter will conclude its mapping exercise with a section focusing on the efforts of artists and cultural institutions to radically reimagine community and the state as the dominant modes of societal constitution and civic governance.

First of all, the power of this revamped understanding of the political role of new media art becomes evident when we trace the appeal of creating new radical institutions

within the activities of traditional art institutions. Notably, the latter have responded to this need and the new social, political and cultural landscape produced by the crisis through three distinct trajectories: first of all, many cultural organisations decided to create new programmes or sections within their existing structures; others to reinforce initiatives that they had already established; and, finally, a third option has been to directly support independent schemes, which would be able to undertake on a more long-term basis the role that temporary new media exhibitions and projects have been fulfilling. Those approaches have been particularly evident in countries that have been the epicentre of the global financial meltdown, like Spain. More specifically, in Barcelona, the Centre of Contemporary Culture (CCCB) established in 2010 CCCB LAB,[342] in order to explore new forms of public exhibition that use the Internet, Data Journalism and science. At the same time, the Centre aimed at integrating techno-cultural advances with philosophy, literature and art, through a variety of events, in an attempt to underline the richness and diversity of technology's impact on art theory and intellectual production at large. In addition, many of the LAB's activities have had a strong educational orientation through various "open education" activities, an element that could also be found in another Barcelona-based organization, Platoniq.[343] Supported by the Department of Culture and Media of Catalonia, and the National Council for Culture and the Arts, Platoniq has largely based its new, post-crisis identity on its 2006 project *Bank of Common Knowledge (BCK)*, which researched "new ways of enhancing the distribution channels for practical and informal knowledge, as well as how to share it".[344] Remaining within this context of practice, Platoniq has created a variety of collaborative outputs that apply the working methods of the Internet and P2P to education, economics and social innovation. In Madrid, Medialab-Prado opened in 2013 its new headquarters in order to fulfil more successfully its role as a citizen laboratory for the production, research and dissemination of collaborative cultural projects. Their main focus has been placed on practices such as data visualization and new social and artistic strategies like the trans-disciplinary development of the commons.[345] Finally,

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[342] 'CCCB Department Dedicated to Research and Innovation in the Cultural Sphere' (*Blogs.cccb.org*) <http://blogs.cccb.org/lab/en>

[343] 'Platoniq CoLaboratory' (*Youcoop.org*) <http://www.youcoop.org/en/> accessed 26 March 2016.

[344] 'Platoniq: The Bank of Common Knowledge' (*Bancocomun.org*) <http://www.bancocomun.org/Wiki/queEsBcc/> accessed 26 March 2016.

[345] The project's website: 'Medialab-Prado Madrid' (*Medialab-prado.es*) <http://medialab-prado.es/> accessed 26 March 2016.

ColaBoraBora constitutes a prominent case from a slightly smaller Spanish city, Bilbao.[346] With the support of the local government, ColaBoraBora has established itself as an experimental platform fostering both online and offline discussions that involve a large number of local agents through regular meetings. Following the outbreak of the financial crisis, the aim of such interactions and exchanges has been specifically to propose new models of social organisation based on the commons, activism, open modes of cultural production and the mediation of new technologies.
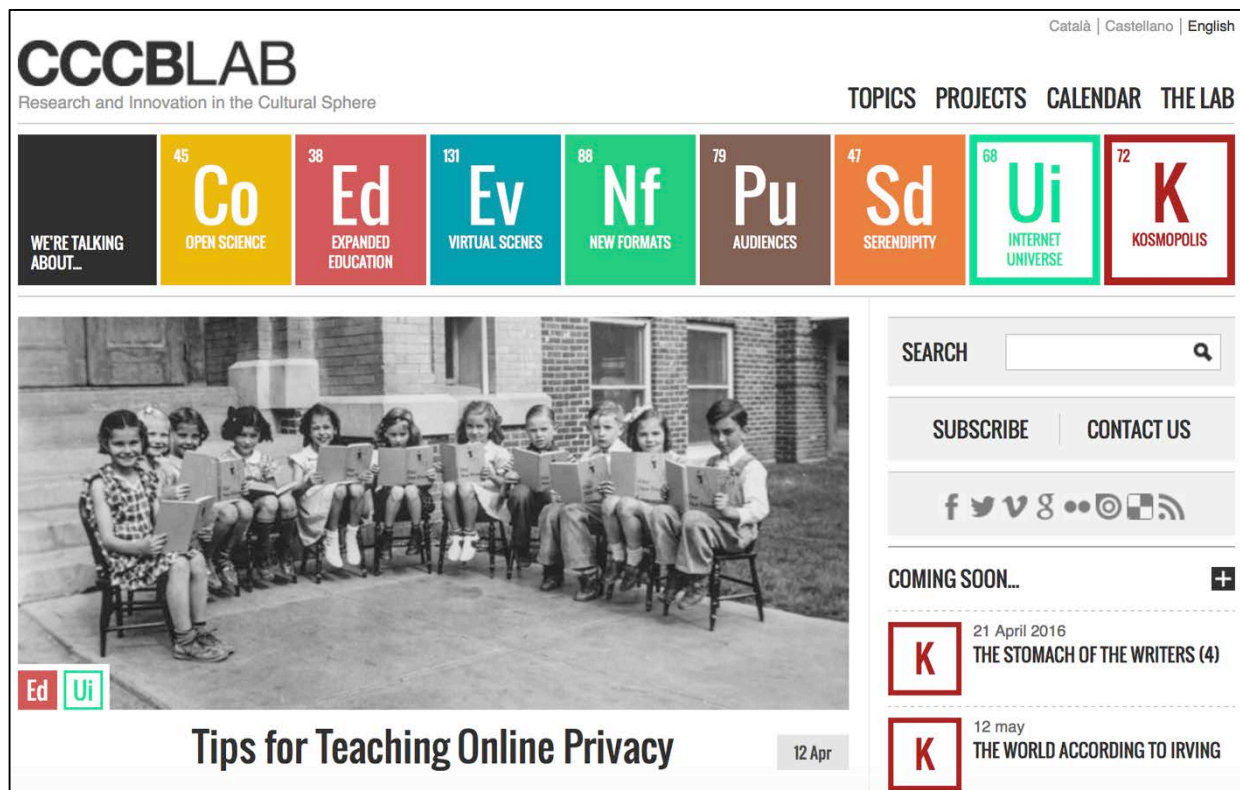
Figure 37: Centre of Contemporary Culture (CCCB) LAB

Despite the fact that many of the aforementioned cultural entities and their projects lack the aggressive character that would produce a "revolutionary" milieu of direct confrontation with the agents of Data Capitalism, we should not fail to recognise their impact on reimagining the dominant modes of social being that had been current in the pre-crisis period. In this context, their most important contribution should not be looked for in the content of their activities, but mainly in the fact that they all established a permanent *physical* presence within the city, in parallel to their permanent *online* presence. In other words, they have not been ephemeral exhibition projects hosted within a larger

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[346] The project's website: 'ColaBoraBora' (*Colaborabora.org*) <http://www.colaborabora.org/> accessed 26 March 2016.

institution, but, rather, independent entities with their own "headquarters" or "basis". Those conditions are part and parcel of the role of the new legitimacy was given to hackerspaces as a result of the crisis and the need of the creative communities of several crisis-hit countries to find new tools of communication and common expression.[347] However, the transition from the performative character of tactical media to hackerspaces should not be seen as a "confinement" from the public (although this danger always exists with any kind of studio, or workspace structure); rather, this development should be conceived as an effort to give a more permanent and concrete form to the alternatives that have been proposed as antidotes to the global crisis of Data Capitalism: a production of commons on a regular and sustainable basis.

This aim of sustainability lies at the core of several hackerspaces' ethos, especially in the countries in which public funding for cultural initiatives has decreased radically after 2008. A characteristic example of this ethos can be found at the activities of [HSGR] (hackerspace.gr) in Athens, which was founded in 2011 and has since then been in operation, supported almost exclusively by the contributions of its own members. Inspired by the spirit of technological "do-ocracy",[348] the participants are fully free to initiate any personal project that they might feel is worth pursuing, whilst reaching decisions about the overall function of the space as a community, through open monthly meetings. All activities are publicised and fully documented on the space's website, where the public can also access the detailed balance sheets of the organisation, which present its sources of income and the different types of expenditure.[349] Alongside the fact that most of the hackerspace's projects are related to activities like hardware hacking, alternative social networks and 3D printing (amongst others), there is also a considerable interest in sustainable modes of urban living. This is expressed in projects that promote environmentally friendly forms of transport such as cycling and carpooling, as well as in projects that develop innovative

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[347] On a basic conceptual level, we could, argue that the roots of hackerspaces may be traced to the early period of post-revolutionary Russia and the studios of the Constructivists. In Rodchenko's famous laboratory, for instance, artists, designers and architects were able to work in conditions of extensive experimentation and interdisciplinary collaboration, often combined with a strong sense of social and political mission, in order to produce a variety of speculative projects. See: Maria Gough, *The Artist as Producer: Russian Constructivism in Revolution* (University of California Press, Berkeley 2005); Victor Margolin, *The Struggle for Utopia: Rodchenko, Lissitzky, Moholy-Nagy ; 1917 - 1946* (University Of Chicago Press, Chicago 1997); and B Fer, 'Metaphor and Modernity: Russian Constructivism' (1989) *Oxford Art Journal* vol. 12, no. 1, pp. 14–30.

[348] Do-ocracy is an organizational structure that encourages individuals to choose roles and tasks for themselves and execute them, without the need for any institutional legitimisation or support of the action.

[349] The space's budget for 2013 can be found here: Hackerspace, 'The Cost of Hacking: Balance 2013' (*Budget.hackerspace.gr*) <http://budget.hackerspace.gr/2013/> accessed 26 March 2016.

ways of growing edible plants at home, like aeroponics.[350] Nevertheless, even in countries in which the impact of the crisis has been felt to a smaller extent than in Greece, similar principles have characterised the function of most hackerspaces and their initiatives.

London-based art space Furtherfield has been in the forefront of the new media art scene in the UK since its foundation by artists Ruth Catlow and Marc Garrett in 1997. Furtherfield has produced over the years a range of participatory exhibitions and events that encourage the members of the public to "become active co-creators of their cultures and societies".[351] Amid the economic crisis and the rise of inequalities that it has brought, Furtherfield developed a series of workshops titled *Zero Dollar Laptop*, which were accompanied by a programme of public debates and exhibitions, all inspired by the *Zero Dollar Laptop Manifesto* (2007). Published by artist, educator and free software advocate James Wallbank, the manifesto begins with the striking declaration "The zero dollar laptop is here!"[352] Following this first sentence, the writer goes on to describe the technical details of the "already distributed" laptop ("You weren't told about it at the time of distribution"), highlighting the fact that it is a device that is constantly being upgraded and that it uses free, open software. The zero dollar laptop is not intended primarily for multimedia entertainment; rather, its role is to educate and become a tool of production for individual users, NGOs, organizations and small businesses, whilst having a zero carbon footprint. Accordingly, the major question emerges: "where is the zero dollar laptop?" The answer provided by Wallbank is unexpectedly simple: it is probably sitting on one of our selves, unused, as we have already upgraded to a new, more powerful machine. Accordingly, the manifesto becomes an open call to install free, open source operating systems, like Linux, on our unused computers and familiarize ourselves with the communication capacities offered by open source software and its communities. For Wallbank, the localized, decentralized and do-it-yourself character of the technological applications that are encouraged by open software can become a catalyst in order to develop new skills, which

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[350] "Aeroponics is the process of growing plants in an air or mist environment without the use of soil or an aggregate medium (known as geoponics). The basic principle of aeroponic growing is to grow plants suspended in a closed or semi-closed environment by spraying the plant's dangling roots and lower stem with an atomized, nutrient-rich water solution. The leaves and crown, often called the "canopy", extend above." From: Hackerspace, 'Aeroponics' (*Hackerspace.gr*) <https://www.hackerspace.gr/wiki/Aeroponics> accessed 26 March 2016.

[351] 'About' (*Furtherfield.org*) <http://furtherfield.org/content/about> accessed 26 March 2016.

[352] James Wallbank, 'James Wallbank Says: The Zero Dollar Laptop Manifesto' (*Robvankranenburgs.wordpress.com*, 11 October 2007) <http://robvankranenburgs.wordpress.com/2007/10/11/james-wallbank-says-the-zero-dollar-laptop-manifesto/> accessed 26 March 2016.

are capable of transforming our social reality. This potentiality is vividly reflected in the final recommendation made in the manifesto: to freely distribute our zero dollar laptops to people living nearby. In this way, the zero dollar laptop shall become "a key computing platform for empowering individuals, stimulating creativity, overcoming poverty and enriching our shared culture [...] without any additional research, design, or manufacture".

The *Zero Dollar Laptop* workshops have been, in many ways, the materialization of Wallbank's manifesto. The project was launched by Furtherfield in January 2010 in collaboration with St Mungo's charity for the homeless and Access Space, the UK's longest running free, open access digital media lab.[353] The workshops used recycled laptops donated by different communities in order to teach homeless people, who had been excluded from formal education, core skills in computing. All zero dollar laptops have been running Free Open Source Software (FOSS) to create music, graphics and videos, with a special focus on distribution over the Internet. Once they completed their studies, the homeless participants left the programme with basic technical skills as well as one of the wireless-enabled laptops that they had often themselves modified during the workshops, in collaboration with their tutors. Notably, the attendance rates on the *Zero Dollar Laptop* course were high and very close to the actual completion rate.[354] This positive response could be attributed to the development of an innovative and supportive learning environment, which combined the tuition of technical skills with the creative experimentation offered by working with media applications. Finally, it is important to note that the programme promoted a sustainable model of technology-based education, in accordance with Furtherfield's ambition to develop "a critical view of growth economics and patterns of consumption".[355]

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[353] The website of St Mungo's charity: 'St Mungo's' (*Mungosbroadway.org.uk*) <http://www.mungosbroadway.org.uk/> accessed 26 March 2016. The website of Access Space: 'Access Space' (*Access-space.org*) <http://access-space.org/> accessed 26 March 2016.

[354] 'Zero Dollar Laptop Workshops' (*Furtherfield.org*, 2010) <http://www.furtherfield.org/outreach/zero-dollar-laptop-workshops> accessed 26 March 2016.

[355] 'Furtherfield Media Art Ecologies 2009-12' (*Furtherfield.org*) <http://www.furtherfield.org/projects/furtherfield-media-art-ecologies-2009-12#deets> accessed 26 March 2016.

Figure 38: Furtherfield, *Zero Dollar Laptop* workshop (2010)

The cases that we have examined in this section collectively indicate that one of the most distinct aspects of the rise of hackerspaces – both as physical entities *and* as a cultural paradigm – has been their strong commitment to fighting the commercialized and profit-driven exploitation of scientific progress. This privatisation of knowledge is often the result of the privileged access and exclusive ownership of technological innovations by large corporations. Consequently, the efforts to re-appropriate science and technology bear very strong political characteristics, as they aim to democratise some of the most important means of production and exploitation that are fuelling Data Capitalism.

The Currency of Capitalism and the Death of Currencies

In the 55th Venice Biennial of 2013, Greece was represented by video artist Stefanos Tsivopoulos, who exhibited a new video installation titled *History Zero* in the country's national pavilion.[356] The work was a film in three parts, presented in three different rooms, which brought together the individual stories of three people in present-day Athens and their unique relationships with money: an elderly and wealthy art collector suffering from dementia; a young immigrant from Africa collecting scrap metal from the streets; and an

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[356] The exhibition catalogue of the Greek participation in the 55th Venice Biennial: Syrago Tsiara and Stefanos Tsivopoulos (eds), 'Stefanos Tsivopoulos: History Zero, La Biennale Di Venezia 55 the International Art Exhibition, Greek Pavilion' (*Greeceatvenice.culture.gr,* 2013) <http://greeceatvenice.culture.gr/images/stories/55/140123_History_Zero_Stefanos_Tsivopoulos.pdf> accessed 26 March 2016.

artist wandering around the centre of the crisis-hit city seeking inspiration for a new artwork. However, the most revealing part of the installation was its fourth and central room. The room featured an extensive historical archive of texts and images presenting alternative economic systems, which have functioned, or have been functioning, without using an exclusive-single currency. The displayed examples varied from contemporary models of local exchange systems (LETS) to the use of "Mobile Money" in parts of Africa (a system of cash transfer based on pre-paid mobile phone minutes); and from different types of gift economies to Emissions Reductions Currency Systems. Those cases of non-monetary economies illustrated how societies can find imaginative, yet practical ways in order to escape the restrictions imposed by the political regulatory framework accompanying the single currency. By introducing systems that are based on the exchange of goods and services, those economies managed to propose not only a different system of transactions, but – most importantly – a different perspective on the notion of value.

Figure 39: Stefanos Tsivopoulos, *History Zero* central room (2013)

Tsivopoulos's poignant choice of placing the archive at the heart of the Greek pavilion should not be interpreted merely as the reaction of an artist whose country has been severely hit by the global economic crisis; rather, it would have been more accurate to claim that his choice has been a reaction against the very core of Data Capitalism, which is exemplified by currency fluctuations and their extreme manipulation by financial markets; namely a condition that has been clearly demonstrated by the global crisis of 2008. Most importantly, however, the manipulable character of currencies has brought into public

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debate, as well as into politically engaged art, the question of money's real nature and its inherent capacity to falsify value. Arguably, this realisation is not something that could be considered as a complete surprise, or as some kind of revelation. Rather, it constitutes a response that is characteristic during periods of intense socioeconomic turmoil. This applies equally to the reaction of artists and the reaction of the rest of society; and, in some cases, to both at once. For instance, during the US depression of the 1930s, unemployed itinerant men widely known as "hobos" were elaborately carving the faces and backs of nickel coins in order to increase their value above their five-cent denomination, by adding to them a supplementary artistic element. Such "hobo nickels" functioned as an alternative currency that oscillated between money and art, multiplying the available resources of a disadvantaged social group.[357]

Therefore, we could claim that the global economic crisis has functioned merely as a catalyst for the re-emergence of questions that can be traced well into the past. It is worth noting that in his work *On the Jewish Question* (1843), Marx makes a direct connection between the nature of money and the human condition, asserting: "Money is the universal, self-constituted value of all things. Hence it has robbed the whole world, the human world as well as nature, of its proper value. Money is the alienated essence of man's labour and life, and this alien essence dominates him as he worships it".[358] Quite interestingly, Marx's theorisation of money and several of the questions that he raises about its function could be discovered in even earlier writings – in fact, in some of the earliest works in the field of philosophy and critical theory. In this context, Aristotle's investigation of money in *Nicomachean Ethics* is of distinct relevance to our understanding of money's birth and evolution. More specifically, in his most important work on ethics, Aristotle describes money as the measure of value that produces the associations between all things, before he goes on to identify the "elementary" condition of falsification that is a prerequisite for money's very existence:

> It is therefore necessary that all commodities shall be measured by some one standard, as was said before. And this standard is in reality demand, which is what holds everything together, since if men cease to have wants or if their wants alter,

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[357] For more information, see: Joyce Ann Romines, *Hobo Carvings: An Exclusive Upgrade of Hobo Nickel Artistry* (DLRC Press 1996); Stephen P Alpert, *Hobo Nickel Guidebook* (The Original Hobo Nickel Society 2001); and Delma K Romines, *Hobo Nickels* (Lonesome John Publishing Co, Newberry Park, CA 1982).
[358] Karl Marx, 'On the Jewish Question' in David McLellan (ed), *Karl Marx: Selected Writings* (Oxford University Press, 1977) p. 60.

exchange will go on no longer, or will be on different lines. But demand has come to be conventionally represented by money; this is why money is called nomisma, customary currency, because it does not exist by nature but by custom (nomos), and can be altered and rendered useless at will.[359]

Aristotle's etymological analysis of the word "nomisma" ("currency" and "coin") is particularly revealing, as it underlines the fact that when it comes to currencies, value is decided by the lawmakers of a certain political elite or establishment ("nomos" is translated as "law" in both ancient and modern Greek). Yet, what is even more interesting in the case of "nomisma" is that it originates from the verb "nomizo" (*νομίζω*), which is a synonym of "think", "suppose", "infer", "deduce" and – last but not least – "speculate". Arguably, in the last three decades, Data Capitalism gradually pushed this context of speculation to its extremes. Economic "bubbles" have been the result of the practices adopted by speculators, which often involve the manipulation of financial markets through the spreading of information that may cause price fluctuations.[360] Notably, according to the *Volcker Rule*, which was signed as a US federal law by President Barack Obama in July 2010, speculative investments and practices played a crucial role in the financial crisis.[361]

"Liberating" speculation

In the aftermath of the crisis, several artists from around the world have employed the Internet in order to reverse the speculative character of neoliberal capital, adopting

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[359] H Rackham (tr), *Book V-Chapter 5-Section 10 & 11 [Arist. Eth. Nic. 1113a.20] – Nicomachean Ethics (or Ethica Nicomachea) Aristotle in 23 Volumes*, vol. 19 (Harvard University Press, Cambridge, MA; William Heinemann Ltd, London, 1934).

[360] The volatility caused by speculators can generate fluctuations in the prices of the tradable goods of different markets, such as bonds, stocks, derivatives, currencies, real estate, and, of course, antiques and fine art. As Keynes notes, "Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation." See: John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (Harcourt, Brace, Orlando 1991) p. 159.

[361] The Volcker Rule is included in § 619 (12 U.S.C. § 1851) of the Dodd–Frank Wall Street Reform and Consumer Protection Act, which was proposed by American economist and former United States Federal Reserve Chairman Paul Volcker. Its purpose has been "[...] to promote the financial stability of the United States by improving accountability and transparency in the financial system, to end 'too big to fail', to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes." See: 'Study & Recommendations on Prohibitions on Proprietary Trading & Certain Relationships with Hedge Funds & Private Equity Funds' (*Treasury.gov*, 2011) <https://www.treasury.gov/initiatives/Documents/Volcker%20sec%20%20619%20study%20final%201%2018%2011%20rg.pdf> accessed 26 March 2016.

themselves the role of the "speculators". In order to materialise this role, artists embarked on creating works that propose alternative currencies and new forms of exchanging value that move beyond the normative (and delimiting) concepts of monetisation. In a rather illuminating historical recurrence, contemporary artists have often adopted the role of the amateur "hobo" artists of the Great Depression, pursuing the exact same goal: to produce a new currency by altering, or "hybridising" an already existing one.[362] This "circle of history" is evident is Christian Nold's *Bijlmer Euro*, which was launched in January 2010 in the Bijlmer area of South East Amsterdam, and lasted for three months.[363] For the British artist, his currency has been a "parasitical" entity that produced "economic benefits for local people, inspires social connections and builds a complex network identity".[364] Residents of the Bijlmer area were given the opportunity to create their own "breed" of Euros by simply sticking on them a special recycled Radio-Frequency Identification (RFID) sticker, which had a unique electronic tag. Stickers could be obtained for free from a "Mobile Bicycle Bank" that toured the whole area, with a schedule of dates and locations that could be found on the project's website. Shops that participated in the Bijlmer Euro scheme scanned the hybrid notes and offered small discounts for using the Bijlmer Euro instead of standard currency. Furthermore, thanks to the notes' RFID component, money flows could be traced through a real-time data visualisation that was accessible to anyone, on a dedicated website.[365] Notably, the visualisation of flows could not be equated with the

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[362] Those practices have strong connections with the tradition created by Conceptual Art. For instance, in his *Insertions into Ideological Circuits 2: Banknote Project* (1970), Brazilian artist Cildo Meireles rubber-stamped subversive messages on both sides of banknotes. Those messages included slogans such as "Yankees Go Home" and "Straight Elections." The messages engaged directly with the political situation in the artist's home country, which was governed at the time by a highly oppressive military regime. In another example, American artist Lynn Hershman used her artistic alter ego, Roberta Breitmore, between 1974 and 1978 in order to make financial transactions. In her famous work *Check* (1974) she does exactly that: she signs a Bank of America issued check as Breitmore. In this way, Hershman was able to create a hybrid public identity that did not affect merely her artistic life, but also her "real life." The disruption of the limits between those two supposedly distinct realities inevitably raises questions around the meaning of accountability within the capitalist mode of production.
[363] The project's website: 'Bijlmer Euro' (*Bijlmereuro.net*) <http://www.bijlmereuro.net/> accessed 26 March 2016.
[364] 'The Bijlmer Euro' (*Bijlmereuro.net*) <http://www.bijlmereuro.net/?page_id=25&lang=en> accessed 26 March 2016.
[365] 'Bijlmer Euro Visualisation' (*Bijlmereuro.net*) <http://www.graph.bijlmereuro.net> accessed 26 March 2016.

Figure 40: Christian Nold, *Bijlmer Euro* (2010)

tracing of a specific banknote, given that the stickers could be easily removed from a note and attached to another without destroying the original. Yet, what the data visualisation provided was a more transparent image about the way in which the local economy worked and, especially, about the importance of small businesses. In deprived areas like Bijlmer, such businesses may function as effective agents against gentrification – a phenomenon that is capable of changing radically a community's socioeconomic character. The outcome of the Nold's project was a total of 647 purchases with Bijlmer Euros, which meant that €4852.5 that might have left the local area were kept in the local economy. Therefore, apart from its economic function, the Bijlmer Euro also performed a social function, by enhancing the sense of economic and social interdependence within a particular geographic area.

Yet, the project's most important contribution might have had a more concealed ideological character. More specifically, this contribution can be traced to the fact that Bijlmer Euro effectively broke the capitalist "taboo" that currencies are exclusively top-to-bottom structures of circumscribing value and controlling an economy. Instead, what
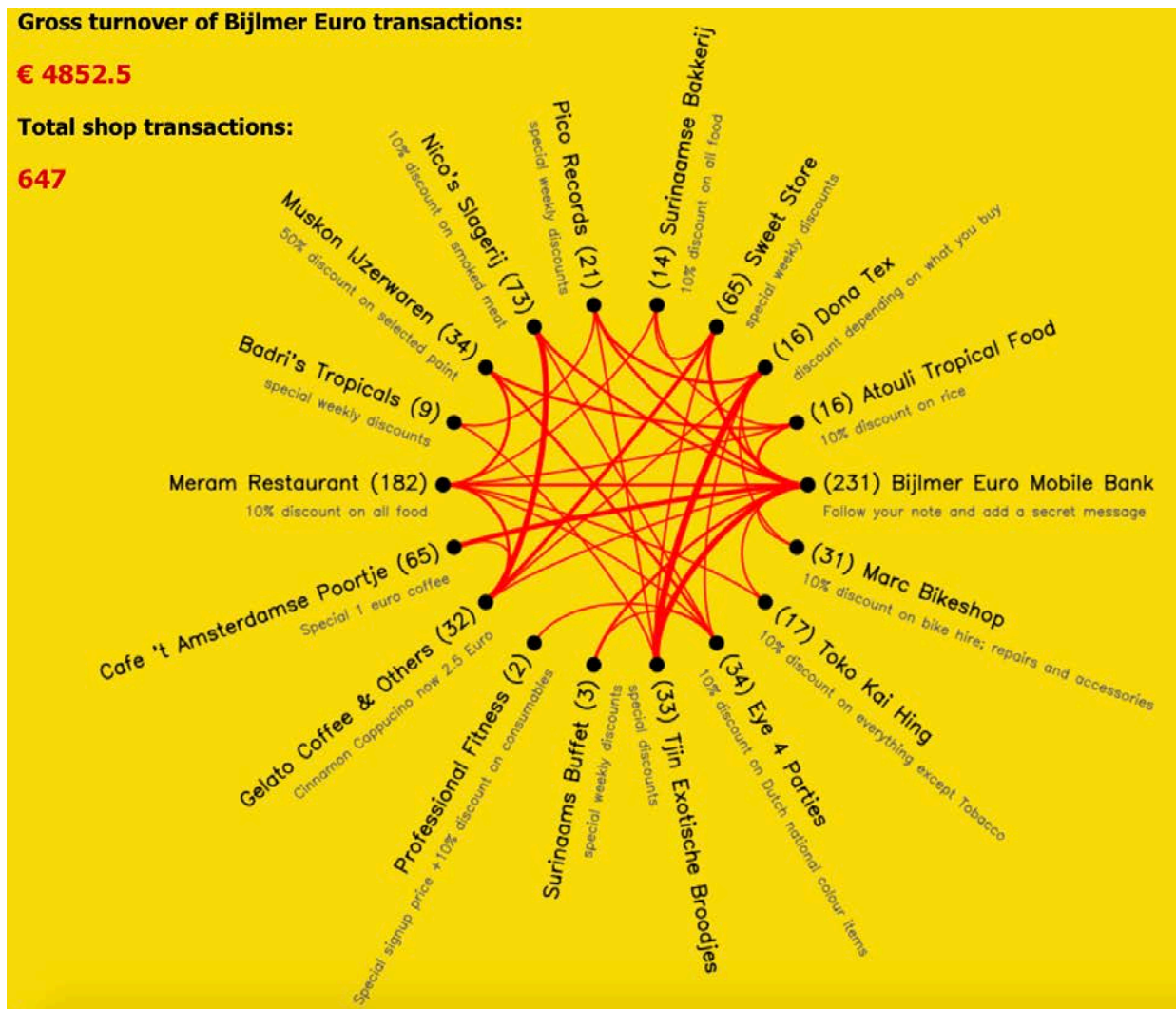
Figure 41: Christian Nold, *Bijlmer Euro* transaction flows (2010)

Nold's work suggested is that money, as a public form of exchanging value, should be directly monitored by the people and serve the needs of the people. This is, in fact, a common feature of most alternative and complementary currencies that have appeared throughout human history. Quite predictably, perhaps, the conditions generated by the financial crisis of 2008 intensified this trend, with several new complementary currencies appearing around the world. For instance, in the UK we could highlight cases such as the Lewes Pound (2008),[366] the Brixton Pound (2009),[367] or the Bristol Pound (2012),[368] all of which are currently in use and growing[369] – at least partly – thanks to their embrace of

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[366] 'The Lewes Pound' (*Thelewespound.org*) <http://www.thelewespound.org/> accessed 26 March 2016.

[367] 'The Brixton Pound' (*Brixtonpound.org*) <http://brixtonpound.org/> accessed 26 March 2016.

[368] 'Bristol Pound' (*Bristolpound.org*) <http://bristolpound.org/> accessed 26 March 2016. The Bristol mayor is paid exclusively in Bristol pounds at the moment. based on the structure of a local credit union

[369] Data as of early April 2016.

digital technologies and online media.[370] Nevertheless, Bijlmer Euro has also displayed three major advantages in comparison with other complementary currencies. First of all, it created a much stronger commitment from local users by making the flows of the transactions visible and, thus, the benefits for the local economy and the community as a whole. Secondly, on a more practical level, Bijlmer Euro's innovative RFID sticker design did not require that buyers and merchants keep two different types of currencies in their wallets and tills. This second characteristic is closely connected with the currency's third main advantage: namely, its long-term potential as "a prototype for a global, community run diaspora banking system based on the strength of social relationships between communities across the whole globe".[371] In other words, the fact that the RFID sticker can be easily reattached opens up the opportunity to complement not merely the Euro, but also other currencies. In contradistinction to a homogenising globalisation, this mode of enriched internationalisation may, thus, produce a context for fair trade around the world, whilst respecting local communities and ecological sustainability. Therefore, this form of localisation "does not mean everything being produced locally, nor does it mean an end to trade. It simply means creating a better balance between local, regional, national and international markets. It also means that large corporations should have less control, and communities more".[372]

Paolo Cirio's *P2P Gift Credit Card* (2010) pushes this model of bottom-to-top monetary control a step further, by giving to the public the ability to produce money (and value) completely independently, through a monetary system based on free universal credit without any interest.[373] The project uses counterfeit virtual money that is made available through illicit VISA credit cards, each bearing a unique number generated through the Luhn algorithm.[374] That number has been assigned in accordance with the

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[370] In the case of some complementary currencies people can use smartphone apps or text their transactions through their mobiles by using special codes (e.g. Brixtoncoin). Also, other applications of new technologies are currently being explored, such as tap & pay transactions through dedicated terminals. Furthermore, on their websites, several complementary currencies provide information about their reserves, which are usually kept in small local banks, which are based on the model of local credit unions.

[371] 'Conceptual Background' (*Bijlmereuro.net*) <http://www.bijlmereuro.net/?page_id=9&lang=en> accessed 26 March 2016.

[372] Ed Mayo and Helena Norberg-Hodge, 'Forword' in Richard Douthwaite (ed), *Short circuit: Strengthening local economies for security in an unstable world* (Green Books, Totnes 1996) p. ix.

[373] The project's website: 'P2P Gift Credit Card' (*p2pgiftcredit.com*, 2010) <http://www.p2pgiftcredit.com/> accessed 26 March 2016.

[374] The Luhn algorithm is a checksum formula used to validate identification numbers, such as credit card numbers. It was created by the IBM scientist Hans Peter Luhn and it is described in U.S. Patent No. 2,950,048 (filed on 6th January 1954 and granted on 23rd August 1960).

specification ISO/IEC 7812, which is standard for the bankcard numbering process, and, in addition, it is technologically capable of satisfying the international credit card circuit checks for transactions. Any Web user with an e-mail account or a mobile phone number can generate a P2P Gift Credit Card by visiting the project's website and, accordingly, anyone can send a card to another individual through the Web. Notably, all peers participating in this alternative financial model are given the same "Global Basic Credit", which amounts to £100. In this way, Cirio consciously highlights the concept of a guaranteed, universal minimum income, which has emphatically re-emerged as a social demand in the aftermath of the global economic crisis.[375] This comes in contradistinction to the exploitation of debt and credit by the financial system, which affects both individuals and countries. In other words, through *P2P Gift Credit Card*, Cirio "reinterprets" the principles of gift economy in order to replace it the even more radical context of "Gift Finance". At a time when banks have been considered as "too big to fail" and governments

Figure 42: Paolo Cirio, *P2P Gift Credit Card* (2010)

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[375] See: Matthew C Murray and Carole Pateman (eds), *Basic Income Worldwide: Horizons of Reform* (Palgrave Macmillan 2012); and Anne-Louise Haagh and Michael Howard (eds), 'Basic Income Studies' (*Degruyter.com*) <http://www.degruyter.com/view/j/bis> accessed 26 March 2016.

print money in order to save them, Cirio's project aims to democratise the decision of whether or not to generate money. In the case of *P2P Gift Credit Card*, the conditions of speculative lending that led to the latest crisis through a deregulated creation of credit are completely reversed: the members of the public are given the opportunity to appropriate at least some of the powers of the speculators. Finally, when the members of this P2P community reach a critical mass, the money issued by the project's Basic Credit Network would be theoretically able to replace the money issued by the banks, thus subverting the pyramidal scheme of the current financial model.
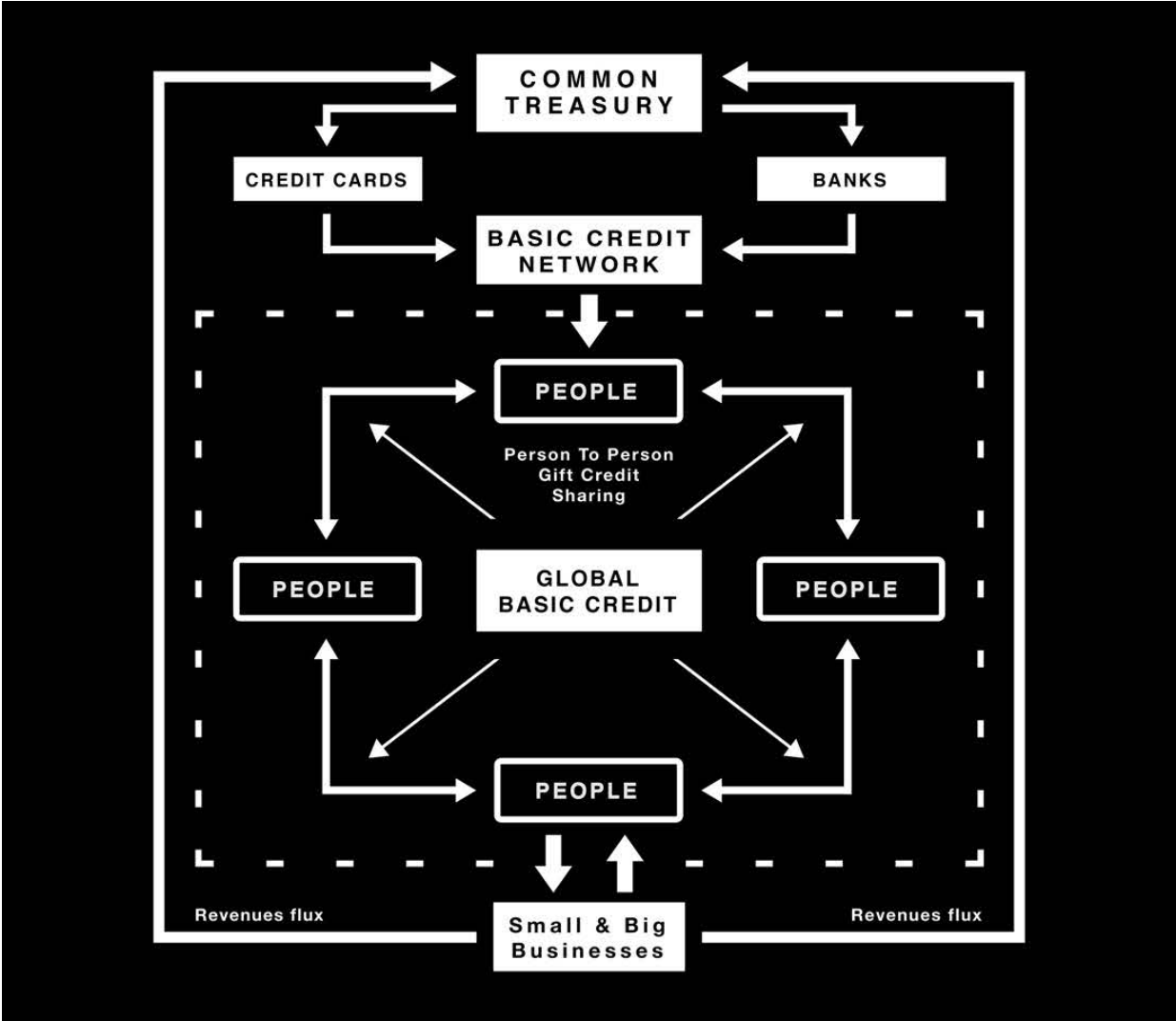
Figure 43: Paolo Cirio, *P2P Gift Credit Card* basic credit diagram (2010)

Bitcoin and its legacies

However, the most immediate and popular Web-based response against the established monetary systems has been the advent of digital currencies. The first and by far most

famous digital currency has been bitcoin, which was created in 2009 and still remains the biggest in terms of its total market value.[376] As a cryptocurrency, bitcoin uses complex cryptographic algorithms in order to create its new units and to secure all transactions.[377] The coins are managed by open source software and they are transferred from one user to another through a peer-to-peer network that does not have a central hub. The creation of bitcoin was followed by the introduction of various other digital currencies, such as Namecoin (2011), Litecoin (2011), Peercoin (2012), Mastercoin (2013) and Primecoin (2013), amongst others. Some of those cryptocurrencies have been directly connected to bitcoin or work complementary to it. This is because of the fact that bitcoin has established a variety of advantages, which clearly overcome the benefits of using traditional electronic money transfer systems, like for instance PayPal. More specifically, transactions in bitcoin can be practically anonymous, with no banking or processing fees being applied to them in the majority of cases. No state or financial institution has any direct regulatory authority over them and, therefore, bitcoin accounts can be more difficult to be seized or frozen.[378] Furthermore, the lack of state control means that bitcoin is independent and its value is not pegged to any other currency. Finally, bitcoin can also adopt a physical form, with the private keys of the tokens being printed on paper, wood, plastic or metal. In this way, bitcoins can become parts of hardware wallets that cannot be hacked, although they can be vulnerable to physical theft or loss.

Artists saw from early on the potential of using bitcoin in order to introduce a new context for selling and buying art, which could overcome the constraints imposed by the supply chain of the traditional art market. For those artists, this transition has been seen as a means to change the kinds of relationships that can be developed between artists, collectors and the general public; or, even, as a means to attract a new public altogether, which would acquire art by using novel, more democratic and open system of exchanging

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[376] Javier Espinoza, 'Is It Time to Invest in Bitcoin?' *The Wall Street Journal* (22 September 2014) <http://online.wsj.com/articles/how-to-decipher-cryptocurrencies-1411333011> accessed 28 March 2016.

[377] The bitcoin website: 'Bitcoin' (*Bitcoin.org*) <https://bitcoin.org/en/> accessed 26 March 2016.

[378] The same level of difficulty does not apply to material and immaterial assets that have been bought in bitcoins. In that case, state authorities can easily confiscate or freeze them, should the activities that are associated with the assets are judged to be illegal in a particular country or region. The most prominent case of direct bitcoin seizure has been that of the online drugs marketplace Silk Road and the 50,000 bitcoins belonging to the website's operator Ross Ulbricht, which were seized by the F.B.I. in 2013. The American government auctioned Ulbricht's bitcoins in 2015. See: Matthew Sparkes, 'US auctions 50,000 Bitcoins seized from Silk Road' *The Telegraph* (5 March 2015) < http://www.telegraph.co.uk/technology/news/11451379/US-auctions-50000-Bitcoins-seized-from-Silk-Road.html> accessed 2 November 2016.

value. Notably, one of the ideas that have emerged around this new context of ownership has been its materialisation through a unique cryptocurrency that would apply exclusively to art. Exemplifying this direction, Banksycoin was launched in the summer of 2014 as "the world's first art backed cryptocurrency",[379] with its name referencing the famous graffiti artist Banksy. Inspired by Banksy's ability to operate at the margins of the art world, while producing poignant political and social commentary through his works, Banksycoin's aim has been to radically modify the process of collecting art by allowing online users to buy artworks directly from artists or other collectors, without charging them any kind of fees. An even more radical approach to the concept of selling and owning art in the Internet Age has been put forward by theironman's *nxtdrop* (2014), "the world's first decentralised oil painting".[380] The ownership of the painting was divided into 100,000 shares on the nxt blockchain, a second-generation cryptocurrency that was launched in late autumn of 2013. Ntx is independent of bitcoin's source code and does not require a large computational power in order to "mine" new coins – it can even run on smartphones or other small devices. The previously described democratic nature of the cryptocurrency is reflected in the equally democratic ownership of the physical painting, which could be changed fractionally by dealing the ntx-based shares. Despite the fact that the painting itself cannot claim much artistic merit, its shared ownership by a dynamic online community constitutes an overt disruption of the art market's traditional structures.

All those examples indicate that in the aftermath of the global economic crisis artists have employed cryptocurrencies in order to formulate a critique against normative currencies and their established nature. This nature, as anthropologist and political activist David Graeber suggests, "has always been and presumably always will be a matter of political contention".[381] Yet, in addition, certain artists have been aiming at questioning the very concept of money and ownership, both in their physical *and* digital form. With his work, British-born, Vancouver-based artist Rob Myers addresses the context within which digital currencies function, by intervening in the proof of work blockchain of bitcoin. In order to execute a transaction in the bitcoin network, all computers have to perform a time-consuming calculation that produces a chain of data in the form of a cryptographic algorithm. The latter needs to be verified by the network so that the transaction is

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[379] 'Banksy Coin' (*Startjoin.com*) <https://www.startjoin.com/banksycoin> accessed 26 March 2016.

[380] The project's website: 'NXTdrop' (*Nxtdrop.blogspot.co.uk*) <http://nxtdrop.blogspot.co.uk> accessed 26 March 2016.

[381] David Graeber, *Debt: The First 5000 Years* (Melville House Publishing, New York 2011) p. 372.

authorised. This is a random process with low probability, so that it becomes expensive both in computational and monetary terms to record a transaction, unless the user is actually carrying one out. "Proof of work" is the output of this calculation: an identity string for the transaction data, which functions as a testament to the user's willingness to expend some resources in order complete the work (in this case, the transaction). Myers uses his interventions in the proof of work blockchain in order to investigate in more depth the concept of ownership, especially in relation to art. In *Art Market* (2014), Myers uses the Ethereum smart contract system[382] in order to register the ownership of a digital artwork contained within a specific file.[383] The digital files themselves are infinitely reproducible and capable of being "sold" for cryptocurrency. As a result, this allographic digital art produces a new form of art market, which – by being completely public and transparent in its reproducibility – stands in contradistinction to the traditional art market structures and their context of exclusivity. *Is Art* of 2014 is an Ethereum contract that can assert that it is art.[384] In an overt effort to democratise the definition of artworks, any user can change the contract's claim of being or not being art by paying a small cryptocurrency fee and a click of a mouse. Furthermore, *Art Is* (2014) expands on this idea by combining art theory and behavioural economics.[385] The work offers to anyone the opportunity to produce a particular definition of art, through a contract that allows individuals to pay as much as they like in order to create their personal interpretation. However, the more changes they wish to apply to the existing set of statements, the higher the price they would need to pay. Adopting a rather ironic point of view, Myers appropriates the market logic of bidding in order to price and allocate the "truth".

Finally, American artist Caleb Larsen produces a very literal and, hence, poignant take on some of the questions that Myers raises about the function of ownership within an economic environment defined by immaterial flows of capital. Larsen's installation *A tool to deceive and slaughter* (2009, ongoing) is a black cube that contains a computer, which has to be connected to the Internet in order for it to comply with its conditions of ownership.[386] Once the computer goes online, it immediately offers itself for sale on the eBay auction

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[382] Ethereum is a cryptocurrency and blockchain platform, using an open-source license.

[383] Rob Myers, 'Ethereum – Art Market' (*Robmyers.org*, 24 July 2014) <http://robmyers.org/2014/07/24/ethereum-art-market/> accessed 26 March 2016.

[384] Rob Myers, 'Ethereum – This Contract Is Art' (*Robmyers.org*, 22 July 2014) <http://robmyers.org/2014/07/22/ethereum-this-contract-is-art/> accessed 26 March 2016.

[385] Rob Myers, 'Ethereum – Art Is…' (*Robmyers.org*, 23 July 2014) <http://robmyers.org/2014/07/23/ethereum-art-is/> accessed 26 March 2016.

[386] Caleb Larsen, 'A Tool to Deceive and Slaughter' (*Caleblarsen.com*, 18 September 2009) <http://caleblarsen.com/a-tool-to-deceive-and-slaughter/> accessed 26 March 2016.

website, thus instantly refuting its state of ownership. If a bidder buys it on eBay, the current owner is required to send it to the new owner. Accordingly, the new owner must connect it to the Internet, at which point the cycle starts repeating itself.[387] *A tool to deceive and slaughter* could be perceived as a critique of Data Capitalism's schizophrenic transactional flux, as transactions are happening in fractions of a second and financial models "decide" when assets are being purchased and sold. In this context, the work constitutes a complete subversion of the ideas of financial exchange and ownership: it can belong to anyone and no one at once. At the same time, however, the work could also be interpreted as a critique oriented towards the catalytic role of technology in the aforementioned economic processes. As media and communication theorist David M. Berry underlines, the financialization of the society bears strong connections with its opaque softwarization – a condition evidenced by the uncritical acceptance of technological "black boxes" both in our everyday lives and in the architecture of financial markets. Accordingly, in order to confront this context, we must "seek to open up the black box of digital technologies"[388] in parallel to "the opening of the black boxes of market exchanges".[389] It would seem that Larsen shares Berry's point of view.
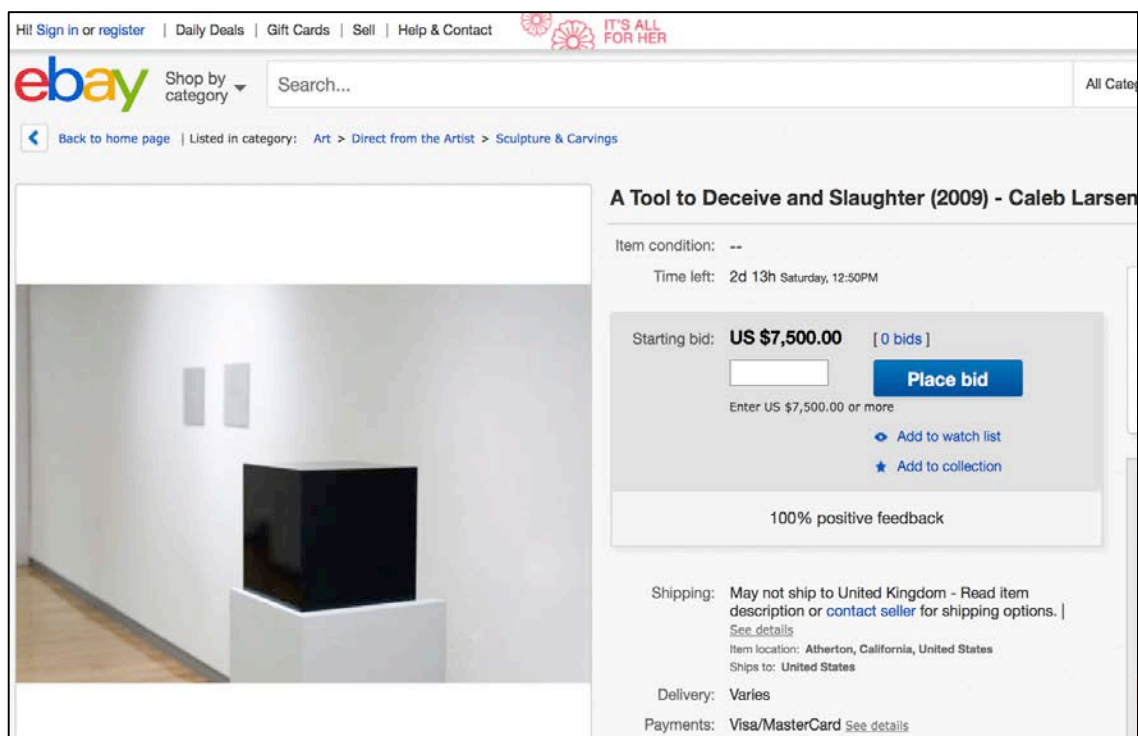
Figure 44: Caleb Larsen, *A tool to deceive and slaughter* eBay auction page (2009, ongoing)

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[387] The eBay auction of *A tool to deceive and slaughter*: 'A Tool to Deceive and Slaughter (2009) - Caleb Larsen' (*Ebay.com*, 15 July 2014) <http://www.ebay.com/itm/A-Tool-to-Deceive-and-Slaughter-2009-Caleb-Larsen-/291185893491?> accessed 26 March 2016.
[388] David M Berry, *Critical Theory And The Digital* (Bloomsbury Publishing 2014) p. 26.
[389] ibid., p. 82.

Exchange beyond money

The immateriality of flows that characterises Data Capitalism has inevitably raised questions about the ways in which value can be estimated with precision in the current historical conjuncture. On the one hand, the neoliberal ideology that dominates the globalised economy demands quantifiable results for any commercial or non-commercial endeavour; and, on the other hand, "quantity" can be rather nebulous in its conceptualisation within an increasingly immaterial economic environment. Reflecting on this dichotomy, artists have often attempted to think of new ways to capture and articulate value. Amongst them, several have been focusing on time as a form of capital and, more specifically, as capital that should be re-appropriated. As it has already been suggested through the analysis of affective labour, the context of the networked globalised economy has made the appropriation of the worker's time easier, albeit in a much more concealed way than ever before. The challenge that is produced by this context is how could time be transformed from a unit of economic exchange – as it is *culturally* portrayed at the moment – into a unit of social exchange. A very prominent response that is able to materialise the aforementioned ideological approach-question can be found in the form of time banks. In general, time banking covers a wide variety of practices through which people can exchange time and skills, instead of acquiring goods and services with money or any other kind of state-backed system of exchanging value. Not surprisingly, the right conditions for creation of time banks first emerged after the Industrial Revolution and the widespread implementation of capitalist modes of production. As a reaction to those and to the (over-) exploitation of workers, utopian theorists and practitioners such as Robert Owen (1771-1858) and Josiah Warren (1798-1874) created "time currencies" through which time became the principal measure of different goods or activities (labour). Notably, following the rise of such ideas, Marx himself proposed in 1875 a system of certification that would take into account the hours spent by workers in order to reward their labour through the use of the community's common funds.[390]

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[390] Marx claimed that "the social working day consists of the sum of the individual hours of work; the individual labour time of the individual producer is the part of the social working day contributed by him, his share in it. He receives a certificate from society that he has furnished such and such an amount of labour (after deducting his labour for the common funds), and with this certificate he draws from the social stock of means of consumption as much as the same amount of labour cost. The same amount of labour which he has given to society in one form he receives back in another." See: Karl Marx, 'Critique of the Gotha Programme' in John F Sitton (ed), *Marx today: Selected works and recent debates* (Palgrave Macmillan, New York 2010) p. 154.

This spirit of communality has been a consistent characteristic of time banks ever since the time of the Industrial Revolution. The global economic crisis revitalised this ethos, with many initiatives employing the tools offered by the Web in order to find more creative and enriching means of exchange based on the asset of time. In 2010, the interdisciplinary artistic and curatorial collective e-flux launched *Time/Bank*, an online platform that has been inspired by already existing, successful models of time banks.[391] The project's website features an extensive list of time banking advertisements that cover several countries. Online users can search on the basis of different categories and skillsets, and by registering on the website they can post advertisements of their own. Categories include art (the most extensive category), communication, education, shelter and transportation; and skills vary from drawing to graphic design, and from translation in different languages to yoga and dance classes. Furthermore, *Time/Bank* has established a network of temporary and long-term local branches in several cities around the world.[392] Those "offsprings" function as physical spaces where time-banking exchanges can take place, with a view to building

Figure 45: e-flux, *Time/Bank* listings page (2010, ongoing)

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[391] The project's website: 'Time/Bank' (*E-flux.com/timebank*) <http://e-flux.com/timebank/> accessed 26 March 2016.
[392] As of November 2014, those cities were: Berlin, Bristol, Den Haag, Frankfurt, Leuven, Ljubljana, Moscow, New York, Sherbrooke, Sydney and Warsaw.

connections between people and strengthening social cohesion in local communities thanks to the introduction of an alternative economic model.[393] In accordance with this extrovert, internationalist approach, the credit hours earned by performing a certain time banking activity can be used at any location around the world and for any service. This is possible thanks to the common framework of "Hour Notes", which are issued in half-hour, one hour, six, twelve and twenty-four hour denominations.[394] Arguably, this opportunity is of particular importance to culture at a time of extreme economic pressure. As e-flux's Julieta Aranda and Anton Vidokle emphasise, *Time/Bank* creates "a sense of worth for many of the exchanges that already take place within our field – particularly those that do not produce commodities and often escape the structures that validate only certain forms of exchange as significant or profitable".[395] Therefore, *Time/Bank* does not simply enhance the links of artists with their local communities; rather, it creates a new context of collaboration and mutual support within the artistic community itself, which is "liberated" from the conceptual and practical restraints produced by the use of normative currencies.

The connections between time banks and artistic production have also been explored in the last few years through the format of artists' residencies. A good example of such amalgamation is the *Neighbourhood Time Exchange* residency, which was initiated in autumn 2014 in West Philadelphia, USA.[396] Hosted in one of Philadelphia's most deprived areas, the Lancaster Avenue neighbourhood, the scheme provides its resident artists with a free studio space, a fee and some basic tools. In exchange, and for every hour of working in the studio, the artists are required to provide an hour of service to the local community, by working on projects that have been proposed by the residents themselves and various community-based organisations. For the realisation of those projects, artists are encouraged to make use of the often-invisible resources of the neighbourhood – namely,

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[393] For a thorough evaluation of the benefits of time banks to local communities, see: Anna Coote, Josh Ryan-Collins and Lucie Stephens, *The New Wealth of Time: How Timebanking Helps People Build Better Public Services* (New Economics Foundation, London 2008); Ed Collom, Corinne Kyriacou and Judith N Lasker, *Equal Time, Equal Value: Community Currencies and Time Banking in the US* (Ashgate Publishing, Burlington 2012); and Abby S Letcher and Kathy M Perlow, 'Community-Based Participatory Research Shows How a Community Initiative Creates Networks to Improve Well-Being' (2009) *American Journal of Preventive Medicine* vol. 37 S292.

[394] In 2009, e-flux asked a group of artists, architects, writers, activists and designers to propose a design for a symbolic currency representing the exchange of time. The full list can be found on *Time/Bank's* website: 'Project 0: TIME CURRENCY, CURRENT TIMES' (*E-flux.com/timebank*) <http://e-flux.com/timebank/project/currency> accessed 26 March 2016.

[395] 'About Time Banking' (*E-flux.com/timebank*) <http://e-flux.com/timebank/about> accessed 28 March 2016.

[396] The project's website: 'Neighborhood Time Exchange' (*Neighborhoodtime.exchange*) <http://www.neighborhoodtime.exchange> accessed 28 March 2016.

Lancaster Avenue's common wealth, in the form of public spaces, materials, objects, histories, knowledge, skills, languages, etc. In this way, *Neighbourhood Time Exchange* "offers an opportunity to explore the ways in which forms of value and exchange are identified and distributed, and the boundaries between public and private might be blurred".[397] Like Christian Nold's *Bijlmer Euro* that aimed at changing the culture of transactions in a particular area, *Time/Bank* and the *Neighbourhood Time Exchange* residency programme reinterpret the construction of micro-economies (both material and immaterial) through artistic initiatives. Moving beyond monetary value, and in their own distinct ways, they integrate the concept of the transaction with that of social change, starting from the level of the community. The latter appears to emerge "naturally", once more, as the birthplace of any transformative, or – even – revolutionary action both in politics and in art.
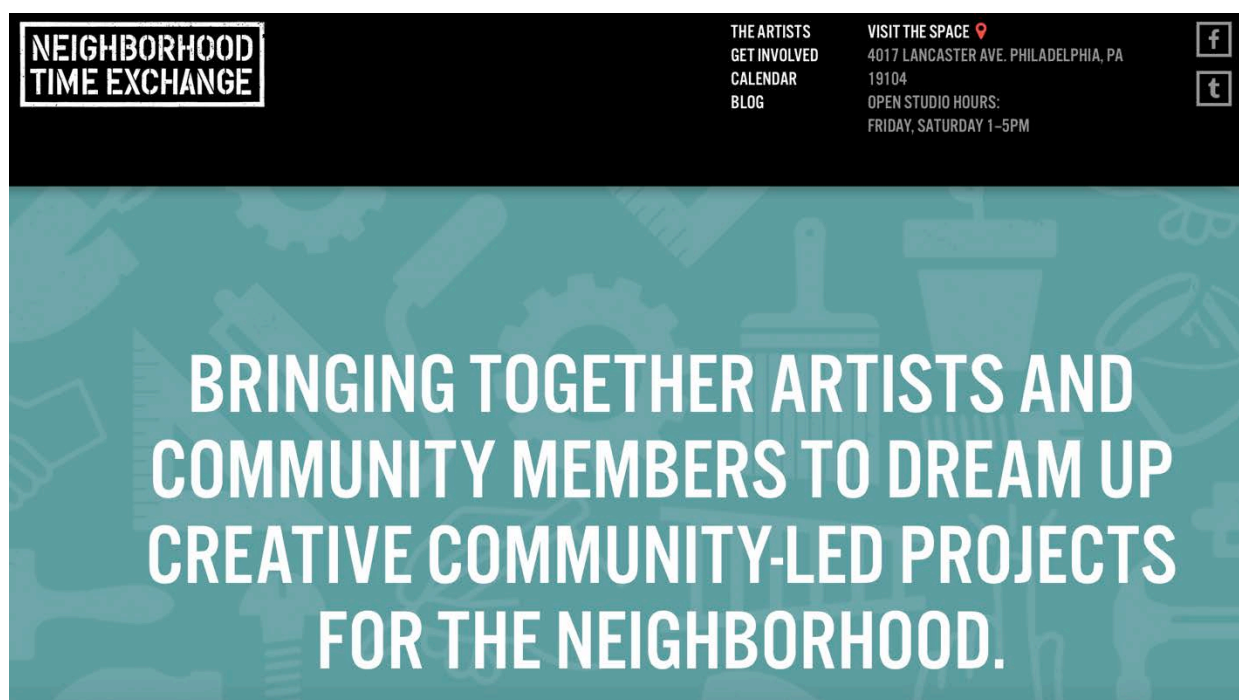
Figure 46: *Neighbourhood Time Exchange* (2014, ongoing)

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[397] 'Neighborhood Time Exchange: West Philadelphia Artist Residency' (*Muralarts*) <http://www.muralarts.org/sites/default/files/TimeExchange_FinalRFQ.pdf> accessed 3 April 2016.

Figure 47: *Neighbourhood Time Exchange* gallery event (2015)

Between the "Community" and the "Commune": Reimagining the State

In a letter sent to German politician August Bebel in 1875, Engels (who was also speaking on behalf of Marx) delineates the character of "community" in a political system based on the principles of socialism. Discussing the political platform that was adopted at the town of Gotha by the then nascent German Social Democratic Party (SPD), Engels notes that the established notion of a "free state" is directly, and before anything else, linked with the power that the state can exercise upon its citizens – a fact that renders it into a despotic entity. Accordingly, Engels suggests that true freedom and democracy would have to be looked for elsewhere:

> The whole talk about the state should be dropped [from the Gotha Program], especially since the [Paris] Commune, which was no longer a state in the proper sense of the word […] As soon as it becomes possible to speak of freedom, the state as such ceases to exist. We would therefore propose to replace the word 'state'

everywhere by the word *Geimenwesen* (community) a good old German word, which can very well represent the French word 'commune'.[398]

Despite the fact that the American translator of the quoted edition chose to translate "Geimenwesen" as "community", it is important to note that this is not the only possibility. In some cases, translators have opted for different words including "commonality", while "Geimenwesen" can also be translated as "commonwealth" or "polity". Those differences could be attributed to the fact that "Geimenwesen" connotes the integrated political function that the community performs, which inevitably poses an additional challenge for translators.[399] According to Marx and Engels, the state separates the civil and the political life of its citizens, and that is exactly what the communist version of the community (the commune) aims to dissolve. Democracy cannot be realised merely through politics: what is needed is the connection and integration of the society *with* politics.[400] At the same time, and in order to understand this definition, it is important to take into account the fact that "communism is [...] not a stable state which is to be established, an *ideal* to which reality will have to adjust itself. We call communism the *real* movement that abolishes the present state of things".[401] Thus, communism should be perceived as stateless both in the sense that the state as a political and organisational entity has been replaced, but also in the sense that this is a transformative process in constant development and evolution.

This aspiration to redefine the concept of the state on the basis of socialist principles, or even abolish it altogether as an organisational system, is – possibly – the most radical proposition that politically engaged artists could have put forward for the post-crisis era. Notably, even before the financial cataclysm of 2007-2008 that exposed the incapacity of states to control and regulate the markets, New Media Art had already developed a significant tradition in this field, both on the level of artworks as well as on the level of critical theory. A work that embodies both aspects of this tradition, and which reached its completion stage during the crisis is Natalie Bookchin's *agoraXchange* (2004-

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[398] Karl Marx, *Critique of the Gotha Programme* (CP Dutt ed, International Publishers, New York 1938) p. 31.
[399] For a more thorough investigation of the concept of "community" in Marx, see: Kenneth A Megill, 'The Community in Marx's Philosophy' (1970) *Philosophy and Phenomenological Research* vol. 30, no. 3 (March) pp. 382-393.
[400] ibid., p. 391.
[401] Karl Marx, Friedrich Engels, *The German Ideology [Die Deutsche Ideologie. English. Pascal]* (Roy Pascal ed, International Publishers 1947) p. 26.

2008).[402] The project adopted the form of online design forum focusing on the prospective production a massive multiplayer "global politics game", and it was developed by Bookchin in collaboration with political theorist Jacqueline Stevens. Bookchin chose the format of a game inspired by the fact that today's video games have "the potential to be to the twenty-first century what cinema was to the twentieth":[403] namely, a medium capable of reaching millions of people around the world, who come from a wide range of social backgrounds. Originally a commission for Tate Modern's online programme, *agoraXchange* went live in March 2004. The first phase of the game's development had a rather speculative character, since it invited Web users to answer a series of general questions that could inform its final design. For instance, the visitors of the project's website were asked, amongst other questions, "what should be the object of the game?" and "should there be points?" Thousands of responses were gathered and were, then, collated into multiple-choice questionnaires.
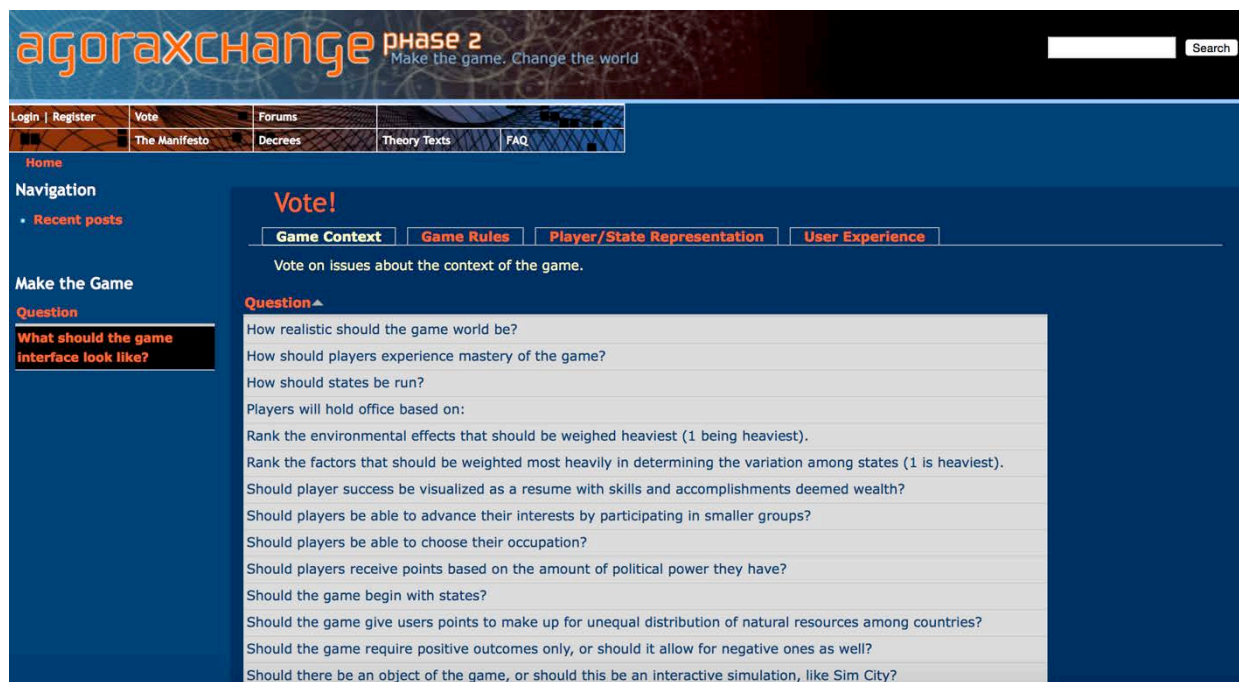
Figure 48: Natalie Bookchin, *agoraXchange* (2004-2008)

In the project's second phase, participants were able to answer those questionnaires and explore different models of social organization as alternatives to the present political order. Those options were based on the principles delineated in the project's key

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[402] The project's website: 'agoraXchange Enters Phase II BETA' (*Agoraxchange.net*) <http://www.agoraxchange.net> accessed 28 March 2016.
[403] 'FAQ' (*Agoraxchange.net*) <http://www.agoraxchange.net/faq> accessed 28 March 2016.

theoretical text, the *Recreate the State!* Manifesto. In the manifesto, Bookchin and Stevens attack state-supported institutions, and in particular the family, portraying them as the roots of inequality around the world. The manifesto goes on to declare that "our present political institutions are not natural or inevitable, but an experiment gone awry, a utopia for the paranoid".[404] Accordingly, the authors encourage people to reclaim utopianism through a wide collaboration of artists, thinkers, activists, political leaders as well as citizens. *agoraXchange* is a platform that aimed to contribute towards this goal by fostering an online environment of creativity, empathy and freedom. For the manifesto's authors, it is now imperative to move beyond the hierarchical relationships of power that have long been in place without any real consent from the people. Thus, the manifesto concludes with the assertion that the character of political communities depends on the character of the laws that govern them; and those laws *can* change over time. For Bookchin and Stevens our current legal framework creates xenophobic, selfish and materialistic communities. therefore, real justice should urgently replace such attitudes and a new context of creativity should be fostered through the tools provided by new media technologies.

During the second phase of the project, the manifesto's overarching ethos was consolidated into four distinct decrees. Those composed the fundamental political doctrines for a new prospective world system, the establishment of which has been the ultimate aspiration of *agoraXchange*. The first decree refers to the introduction of a citizenship system that would not be defined by birth, but rather by choice, and which would be accompanied by a completely free movement of people and goods around the world. The second decree rejects inheritance and calls for the posthumous redistribution of an individual's wealth for common causes like education and healthcare. The third repudiates marriage and any rule of kinship that is established or controlled by the state. And, finally, the fourth decree rejects private land rights.[405] Bookchin's ideological orientation in this project becomes even more explicit when we associate her four decrees with the ten principles of the communist state that Marx and Engels describe in *The Communist Manifesto*. Notably, Those principles include the "abolition of property in land and application of all rents of land to public purposes", the "abolition of all rights of inheritance", the "confiscation of the property of all emigrants and rebels", and the pledge

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[404] 'The Manifesto' (*Agoraxchange.net*) <http://www.agoraxchange.net/manifesto> accessed 28 March 2016.
[405] 'Decrees' (*Agoraxchange.net*) <http://www.agoraxchange.net/decrees> accessed 28 March 2016.

for providing "free education for all children in public schools".[406] Finally, one cannot ignore the fact that the second and final phase of *agoraXchange*'s development was realized after the subprime mortgage crisis in the US, with the publication of the four decrees taking place in mid 2008. Most importantly, the capacity *and* the responsibility to react to this socio-political environment was given by Bookchin directly to the people, in contradistinction to the state mechanisms that failed to protect their citizens from the crisis and its consequences.

From the Web to the ground (and back)

Not surprisingly, however, the exploration of new media activists and artists into the formation of the commune has predominantly materialised through the involvement of communities that live in poor countries, or in places where social support by the state is either completely absent or very limited. Since 2011, Mexican artist, writer and programmer Eugenio Tisselli has initiated a number of projects that make use of networked technologies in order to foster new forms of communality in deprived parts of the world. *Sauti ya wakulima* ("The voice of the farmers", 2011, ongoing) was the first one to be launched, in the Chambezi region of Tanzania.[407] As the title of the work suggests, its main goal has been to make the voices of the local farmers heard, by equipping them with smartphones with a special application through which they could capture photos, sound recordings and videos and directly upload them on the project's website. Thanks to the uploaded media, the participants were able to collaboratively produce an online "communal memory", which documented the challenges and hardships that farmers increasingly face because of global warming. Despite the fact that the original focus of *Sauti ya wakulima* has been global warming, gradually the farmers started using the smartphones beyond that scope. They started interviewing other farmers from the community, asking them questions that did not refer merely to the agricultural techniques that they use or the problems that they face with pests and the lack of water, but also to wider views and opinions about their ongoing situation. Furthermore, the participants passed the available smartphones to other members of the local community, transforming the phones into shared tools for communication. As one of the farmers noted, "The project helped me learn that phones can be used for other things besides calling people, and that

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[406] Marx and Engels, *The Communist Manifesto*, op. cit., pp. 64-65.
[407] The project's website: 'Sauti Ya Wakulima' (*Sautiyawakulima.net*) <http://sautiyawakulima.net/bagamoyo/about.php?l=1> accessed 28 March 2016.

computers can also be used to solve problems: they are not just a fancy thing for the rich people in towns".[408] Thus, *Sauti ya wakulima* expanded social relationships within a community suffering from insufficient infrastructure and poverty. Thanks to a process of mutual learning catalysed by networked technologies participants managed to – at least partly – overcome the constraints imposed by the state.

Figure 49: Eugenio Tisselli, *Sauti ya wakulima* (2011, ongoing)

A year after *Sauti ya wakulima*, Tisselli launched a similar project under the title *Los ojos de la milpa* ("The eyes of the milpa"[409]) in his home country, Mexico.[410] Tisselli chose

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[408] Ken Banks, 'From Smart Phones to Smart Farming: Indigenous Knowledge Sharing in Tanzania' *National Geographic* (30 November 2011) <http://voices.nationalgeographic.com/2011/11/30/smart-phones-meet-smart-farming-indigenous-knowledge-sharing-in-tanzania/> accessed 28 March 2016.

[409] "Milpa" is a crop-growing system formed mainly by maize, beans, chilli and squash. Maize is a Central American cereal plant that yields large grains (corn or sweetcorn) set in rows on a cob. The many varieties include some used for stockfeed and corn oil.

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the area of Santa Maria Tlahuitoltepec in Oaxaca as the project's location, inspired by the local community's difficulties in resolving the tension between the capitalist demand for increased productivity and profit, and the desire to preserve traditional agricultural techniques and products. Just like with the *Sauti ya wakulima* project, the farmers were given smartphones in order to document whatever happened in their milpas and post them online. By doing this, they were given the opportunity to share their knowledge, thoughts and concerns, gradually acquiring a more holistic image regarding the common origin of their problems. At the same time, through the artist's collaboration with the Colegio de Posgraduados en Agronomía (Postgraduate College of Agronomy), farmers were able to develop a dialogue with scientific researchers and get advice about how to maintain their traditional cultivations. This approach lies in overt opposition to the centralised development of policies, which do not take into account the local context and the needs and desires of the people.[411] The increasing unsustainability of industrialised agriculture, which has dire consequences for our ecosystems, constitutes a prominent symptom of the blind, deterministic belief in the model of constant economic expansion. *Los ojos de la milpa* reverses this idea and stresses the need to develop a bottom-to-top understanding of decision-making, not only in order to be effective, but also in order to be truly democratic.

Figure 50: Eugenio Tisselli ,*Los ojos de la milpa* (2012)

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[410] The project's website: 'Los Ojos de La Milpa' (*Sautiyawakulima.net*) <http://sautiyawakulima.net/oaxaca/about.php?l=2> accessed 28 March 2016.

[411] The project also tried to respect the language of the local people and integrate it in all outputs, as great efforts were made to translate all words in Mixe, which is the dialect spoken in the Santa Maria Tlahuitoltepec area.

It is significant to note that all software used in both *Los ojos de la milpa* and *Sauti ya wakulima*, has been open-source. As a result, users from around the world were granted the right to copy the code and processes implemented in the projects' applications. This context of universal access, unrestricted modification and free distribution has been integral to the communal character of open source. The latter negates the dominant proprietary models of production, which are defined by the transfer of knowledge from labour to machinery through the exclusivity of the code. This has been a consistent aim of the capitalist model of knowledge appropriation, which transforms the products of technological progress into mere "black boxes" by concealing their code. As political economist Steven Weber notes, the result of this approach is reflected in the fact that the labourer-user is left with a thoroughly passive and, inevitably, apolitical role to fulfil:

> The source code is basically the recipe for the binaries; and if you have the source code, you can understand what the author was trying to accomplish when she wrote the program – which means you can modify it. If you have just the binaries, you typically cannot either understand or modify them. Therefore, shipping binary code is a very effective way for proprietary software companies to control what you can do with the software you buy.[412]

Gradually, those barriers can lead from what American political economist Harry Braverman terms as "labour deskilling" to what Polish sociologist and philosopher Zygmunt Bauman calls "social deskilling;"[413] namely, from the incapacity to maintain a direct contact with technological innovation to the erosion of the skills through which people are able to expand their social relationships and networks. If we take into account the essential role that social media and technology-catalysed communication play in the formation of those relationships, then it becomes evident that open source can profoundly disrupt both the capitalist methods of production as well as its channels of propaganda. This tension between open source and exclusivity can be seen as a blueprint for any form of governance in the Digital Age, including the relationship between the citizen and the state. Artists and cultural workers have been in the forefront of this antagonism as it has

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[412] Steven Weber, *The Success of Open Source* (Harvard University Press, Cambridge, MA 2004) p. 4.
[413] See: Harry Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century* (25th edn, Monthly Review Press 1998)[1974]; and Zygmunt Bauman, *Consuming Life* (Polity Press 2007).

already been suggested by the various open source projects that have been analysed in this chapter.

The next and, perhaps, final step to be taken in the search for an alternative system of governance would have to be a move beyond the micro-level of local communities. The ambition to replace the neoliberal state with another type of organizational entity necessitates a model that could sustain the implementation of new principles of societal progress on a large scale: it is only through a critical mass of people that one would expect to catalyze some form of revolutionary action. If we were to think of such an endeavour in the context of the previously described role of open source, then, the question that inevitably emerges is whether there is a limit to the change that we can produce through the establishment of an open software culture. In other words, would it be possible to not only use open software technology, but also adopt its core principles of openness, freedom and universality in all aspects of public governance? Could cultural producers, actually, catalyse not simply the creation of open source communities, but – ultimately – the establishment of an open source society? This challenge, which may well seem of utopian proportions, inspired r0g_, the Berlin-based non-profit agency for open culture and critical transformation.[414] Founded by cultural researcher Stephen Kovats and architect Susanne Bellinghausen in 2012, the organization's aim has been "to support sustainable and hybrid forms of cultural innovation and social enterprise in regions undergoing rapid and fundamental transformation".[415] In order to achieve its mission, r0g_ employs a variety of tools ranging from open source hardware and software systems to open education and skills training; and from open governance and open urbanism to cultural hacktivism. Nevertheless, the simultaneous implementation all those unconventional or non-conformist strategies within a society that already relies on an existing model of governance may generate strong resistance. That is why the initiatives undertaken by r0g_ focus predominantly on crisis-hit and post-conflict regions of the world, where the need to make a radically "new start" is felt more strongly by the local populations.

One of those cases is South Sudan, which in 2011 became the world's newest country, having gained independence from Sudan after more than four decades of bloody conflict. Just like with any society emerging from a state of severe crisis, South Sudan had to urgently construct a civic system that would be capable of dealing not only with the

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[414] The organization's website: 'R0g_agency for Open Culture and Critical Transformation' (*r0g-media.org*) <http://r0g-media.org> accessed 28 March 2016.
[415] From the organization's mission statement: 'r0g_mission' (*r0g-media.org*) <http://r0g-media.org/mission/> accessed 28 March 2016.

problems of the past, but also with the challenges of the future. At this particular historical conjecture, r0g_ saw the opportunity of using the principles of open source culture on the ground, in order to collectively address the numerous questions that have emerged from the birth of the new nation: the formation of a political identity, the priorities of the state, its production model, the participation of citizens, the inclusivity of the system and the new country's relations with the international community, amongst others.[416] The project *#OS SOUTH SUDAN* (2012) was envisioned by r0g_ as the answer to those questions. Its purpose has been the application of Open Systems methodologies across all of the country's structures of governance, in order to benefit from the fuse of diverse social, political and cultural traditions. The first step towards the realization of this new model has been *#OSJUBA* (2012), which applied the open source principles on the governance of Juba, South Sudan's capital city. Juba was chosen for practical reasons, given that it has served as an administrative centre for many decades, as well as for its symbolic value, given that by being the country's capital it constitutes the location that physically manifests the aspirations of the new nation. r0g_ has been working with Juba's universities, students, elected officials, local NGOs, as well as with international organizations such as UNESCO, in order to introduce Open Systems governance solutions. In addition, the organization has engaged the city's artists, either individually or through its collaboration with art collectives, like the Kapital Movie Industry Corporation. Notably, this particular collective has strong links with new media technologies, as it is comprised of filmmakers and ICT professionals, "who are interested in sharing and nurturing a vibrant civil society through the power of open media".[417]

The most important, perhaps component of open source governance that has been outlined for South Sudan is *#OSBACK*, the country's Open Server Backbone. Envisioned as a network of data tools, *#OSBACK* will provide South Sudan with the capacity to fully own the data that it produces, whilst making them available through the use of public domain licenses and sharable, freely distributable software and hardware. The project will be delivered in its complete format through decentralized servers, with at least one server

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[416] Some of the questions that have been posed: "Where no uniform political entity or national infrastructure has existed in the past, what are the priorities in establishing a state? Who charts the paths and gives the people a voice in their collective destiny? How will a new, post-conflict identity, based on the hopes and aspirations of former lifelong combatants emerge? How will the new state's cultural contours form, and how will these be perceived by its neighbors and by the world at large?" See: '#OSJUBA' (*r0g-media.org*, 27 October 2012) <http://r0g-media.org/initiatives-2/os-south-sudan/osjuba/#more-61> accessed 28 March 2016.
[417] 'Kapital Corporation' (*Kapitalmovie.net*) <http://www.kapitalmovie.net> accessed 28 March 2016.

Figure 51: r0g_, *#OSJUBA* (2012)

node being located in each of the country's constituent states. By distributing data to all South Sudanese citizens through free public Internet access across all of the country's federal states, the project aspires to establish transparency models for participation and interaction with the government. As policy makers and citizens will have equal access to information, accountability may become a truly meaningful element of public service. Furthermore, thanks to the concurrent establishment of media literacy programmes that enable OER methodologies (Open Educational Resources) and peer-to-peer education, active citizenship can adopt several expressions – for instance, people are encouraged to engage in new forms of citizen-based, community or device journalism using SMS, radio and data streaming. Accordingly, local knowledge can assume a protagonist role in economic development by linking traditional and contemporary histories and skills. The fuse of information, reports and other forms of data into accessible knowledge banks is particularly useful in this context, as it can build the basis for a sustainable, transparent and cost effective management of the country's key natural resources (land, water, forests, extractives, etc.), which have been of great significance for the economy of South Sudan for generations. In contradistinction to the neoliberal model of the exclusivity, in which knowledge is controlled either by the state or – predominantly – by large corporations, *#OSBACK* will open the possibility for a more democratic mode of production

Unfortunately, however, r0g_'s mission in South Sudan has become increasingly unsustainable since December 2013, as the newly born country has been suffering from the

devastating consequences of ethnic civil conflict.[418] Despite the constraints produced by that development, the initiatives of *#OS SOUTH SUDAN* have managed to systematically explore – even within a limited period of time – the potential for the development of a radically new approach to building a country's political system, through the agency of technology. The latter allows the principles of open source governance to "develop a model of an object that can be employed both to articulate the open source cultural object, as well as make visible the structural relations inherent in an object manifesting a (digital) post-medium condition".[419] Accordingly, if we replace the adjective "cultural" with the adjective "political", it becomes evident that we are referring to a new organizational entity that may incorporate the critique of its own effectiveness by providing unrestricted visibility of the structural relations that comprise it and of their interactions. Yet, this is not materialized as an attempt of normalization, but rather as a process of continuous transformation – visibility combined with the possibility of modification and improvement. In other words, the ultimate aim is not the establishment of a deeper democratic function for the *current* political order as exemplified by the (neoliberal) state, but rather the nurturing of what we could term as a "post-state" political condition. The ability to raise people from the pre-revolutionary stage of the community to the revolutionary stage of the commune is, in Marxist terms, analogous to that condition. Notably, in their analysis of the legacy of the Parisian Commune, Marx and Engels argue in the 1872 introduction to *The Communist Manifesto*: "one thing especially was proved by the Commune, viz., that 'the working class cannot simply lay hold of the ready-made state machinery, and wield it for its own purposes'".[420] In today's historical conjuncture, networked technology is that machinery. Its transformative potentialities do not depend merely on its practical capacities, but predominantly on the ways that people – the new proletariat – can conceptualize it, change it, use it and reuse it.

The urgent character of this realization in the aftermath of the crisis has inspired one of Paolo Cirio's most recent projects, titled *Global Direct*, which was launched in

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[418] The political divisions within South Sudan's ruling SPLM party and tribal factionalism are the main factors that have led to the civil war, which has had a particularly devastating impact for Jonglei, the largest and most populous state of the country.

[419] Boris Cuckovic, 'The Open Source Cultural Object' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac*, vol. 20, no. 1 (Leonardo/ISAST, San Francisco 2014) p. 27.

[420] From the 1872 introduction to the German edition of *The Communist Manifesto*. See: Marx and Engels, *The Communist Manifesto*, op. cit., p. 86.

December 2014.[421] The work is an online platform bringing together Cirio's extensive research into the nature of the modern state and the alternative systems that we can pursue thanks to the tools offered by distributed network technologies. The artist synopsizes this research through a series of sixteen diagrams, which can be freely downloaded and printed by Internet users. The diagrams employ the paradigm of the network structure in order to display legislative, judicial and executive decision-making flows, which interconnect distinct sectors of government. By exploring the project's
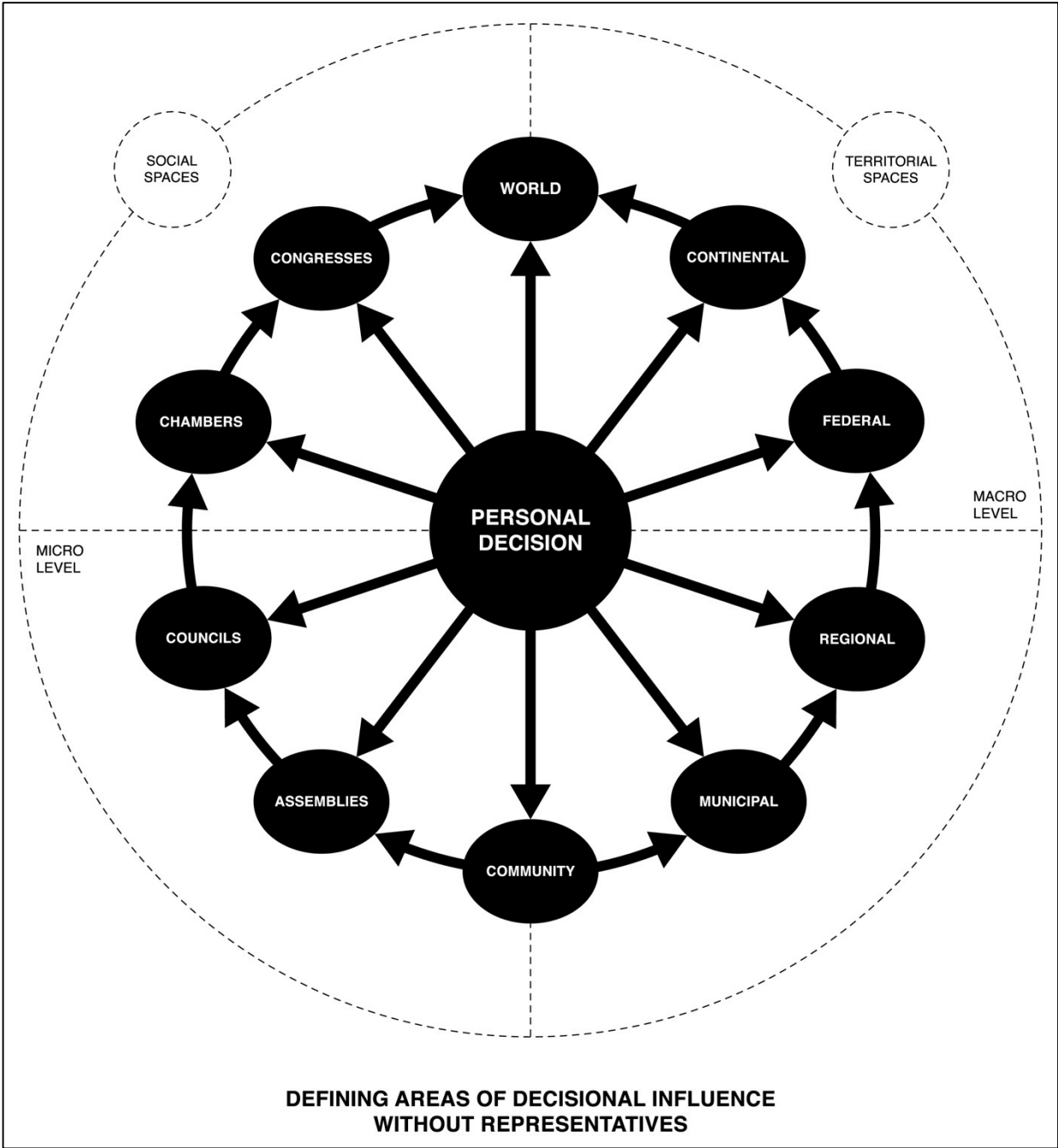
Figure 52: Paolo Cirio, *Global Direct* personal decision diagram (2014)

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[421] The project's website: 'Global Direct' (*Globaldirect.today*) <http://globaldirect.today> accessed 28 March 2016.

alternative frameworks of power, people are invited to reimagine the organograms of parliaments, courts and other public bodies of governance on the basis of three main principles: participatory decision-making, transparent accountability and civil awareness. Accordingly, the different systems that are proposed can be combined in order to generate a new form of autonomous global democracy, for they are flexible enough to accommodate local needs, whilst nurturing global interactions and exchanges through independent
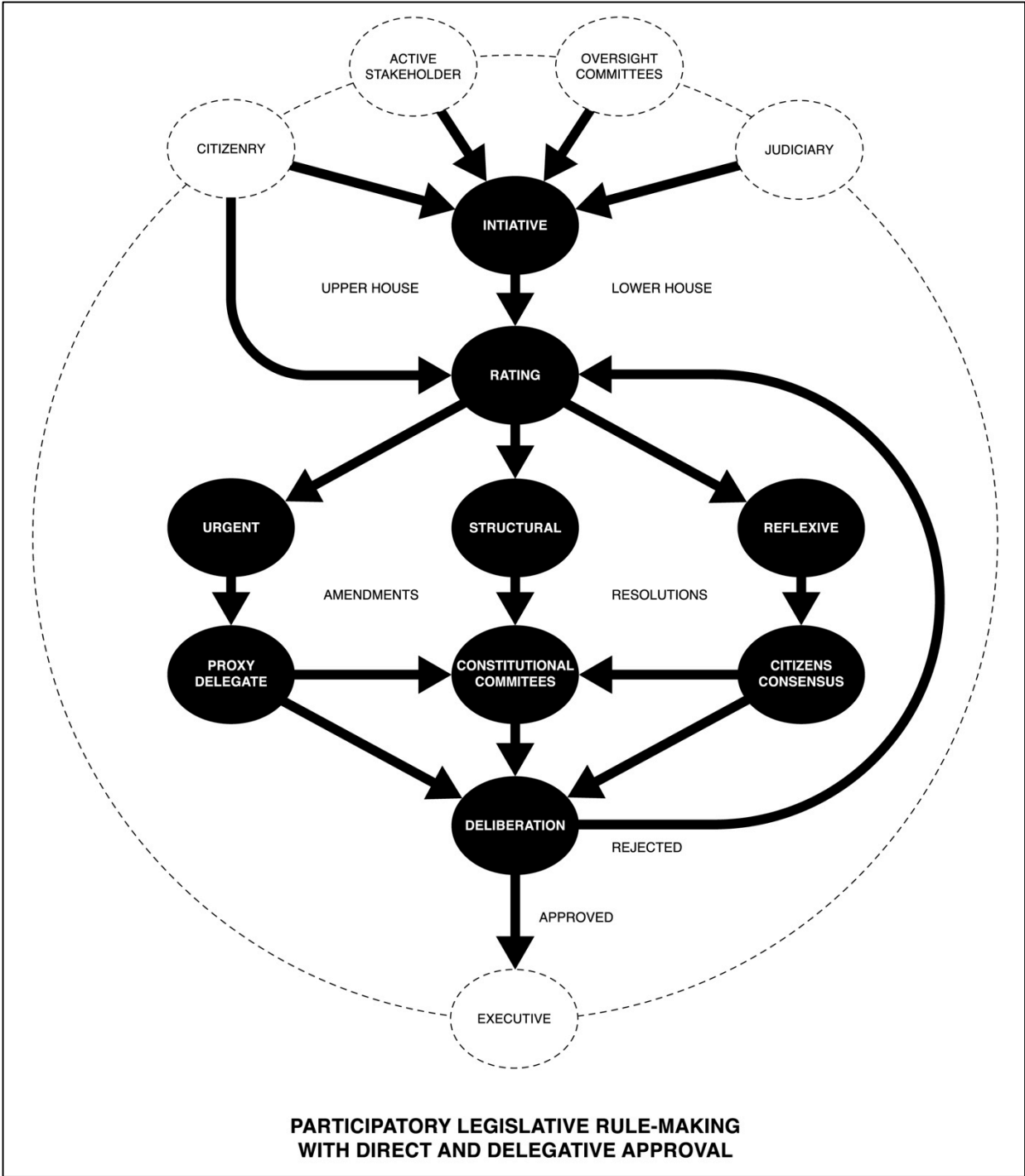
Figure 53: Paolo Cirio, *Global Direct* participatory legislative diagram (2014)

digital social network platforms. The most important, perhaps, attribute of those alternative systems is the fact that through them "policies can be created, revoked and enforced democratically by the collective voice and will of everyone without governmental or corporate interference".[422] In other words, the distributed network structure that the system adopts safeguards that the will of the people will be heard, regardless of the layers of government that might comprise the system. All sections are accountable and cannot function independent of continuous civic engagement and empowerment.

In addition to the diagrams and the critical texts that *Global Direct* presents, there is a special section on the project's website that features video interviews with politically engaged artists, writers, academics and journalists, as well as political activists.[423] Adopting the form of short manifestos, the two-minute videos propose specific policies and provide different examples of alternative models of political organization. For instance, David Moore from the Participatory Politics Foundation in the US puts forward the model of deliberative democracy, and writer and journalist Douglas Rushkoff highlights the example of the online decision-making platform Loomio.[424] The latter is based on the general assembly methodology established by the Occupy movement, in which there is real-time deliberation in order to reach any kind of resolution. Occupy is also referenced by artist Oliver Ressler, while the co-founder of the Icelandic Digital Freedom Society Smári McCarth underlines the importance of cutting the "middle-men" from decision-making though the agency of new media technologies. Finally, the Director of the Center for Civic Media of the MIT Ethan Zuckerman advocates that we should use participatory media in order to monitor the ways in which our representatives use (or misuse) power. As the title of Cirio's work suggests, the ultimate goal of all those models is to produce a system of *direct* democracy capable of dealing with *global* issues. The latter may include economic inequalities, the management of natural resources and the commons at large, global warming and climate change and, last but not least, the protection of universal freedoms and rights.

Cirio's *Global Direct* exemplifies the shift from tactics to strategy that we identified in the second chapter as the tendency that has largely defined the views of politically engaged new media theorists and cultural producers after the rise of Web 2.0. Following

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[422] 'About' (*Globaldirect.today*) <http://globaldirect.today/about/> accessed 28 March 2016.

[423] 'Statements' (*Globaldirect.today*) <http://globaldirect.today/statements/> accessed 28 March 2016.

[424] 'Collaborative Decision-Making' (*Loomio.org*) <https://www.loomio.org/> accessed 28 March 2016.

the global financial crisis of 2008, this approach has often transformed into a multifaceted defence of political utopianism, as we have seen in the mapping that has taken place in the last two chapters. For the artists, the collectives and the institutions that have created those projects, the advent of new networked technologies has facilitated the exploration of what German philosopher Ernst Bloch has called "concrete utopias" to a greater extent than ever in recent times. In his work, Bloch differentiates between "abstract utopias" and "concrete utopias", associating the latter with the possibility of generating real change in the present. Such "concrete utopias" can be perceived as intellectual devices that bridge our aspirations with reality, in order to render them directly productive. For Bloch, the actions associated with the realization of "concrete utopias" are parts of an "unfinished forward dream"; or, in other words, constituents of an unfinished reality.[425] Notably, in the post-crisis world, the possibility of completing this "unfinished reality" has emerged before anywhere else in the countries that have been more heavily hit by the crisis, as the origin of the artists and/or the projects that we have examined has indicated (e.g. Greece, Italy, Spain and Ireland). In addition, the same fertile ground has often been identified by cultural producers in traditionally poor, or troubled parts of the world (e.g. Mexico, Tanzania and South Soudan).

Accordingly, in order to promote political change across the globe through networked technologies, artists and institutions developed a variety of approaches that have aimed at connecting the harsh realities of Data Capitalism and its crisis with the potential for pursuing alternative modes of socioeconomic being inspired by the legacies of communist thought. More specifically, artists have attempted to raise consciousness around the systemic characteristics of Data Capitalism, including its mode of labour, its class structures and the new forms of proletarianization that they may engender. Furthermore, prompted by the public expressions of the people's disenchantment during the crisis, several projects have promoted the reclaiming of the commons and the activation of public spaces, while others have focused on how common wealth can be produced on a regular basis through the fostering of collaboration within new radical institutions like hackerspaces. As a result, a context for the introduction of more ambitious alternative economic practices emerged. The latter has been further exemplified by the adoption of digital currencies as well as by the Web-catalysed development of exchange systems that operate beyond money. Finally, cultural producers have formulated in their

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[425] Ernst Bloch, *The Principle of Hope*, (tr. N. Plaice, S. Plaice and Paul Knight, Basil Blackwell 1986) p. 157.

practices proposals for the use of networked technologies as the basis on which we could build new types of communities, which would follow more open and democratic modes of civic governance. This battle for a different kind of democracy, which lies at the core of many of the projects featured in this chapter, is according to Marx and Engels "the first step in the revolution", as winning it would raise the proletariat to the position of the ruling class.[426] In that sense, what artists like Cirio and Bookchin, and collectives like Hackitectura, e-flux and Furtherfield have produced during the crisis are maps of the battlefront, which delineate the different paths that could be potentially followed in order to break the enemy lines. The next chapter of this thesis will analyse some of the main barricades, traps and ambushes that the opponents of Data Capitalism might encounter in their effort to win this complex war through new media (and) art.

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[426] Marx and Engels, *The Communist Manifesto*, op. cit., p. 63.

Chapter 5

Between Myth and Reality: The Limits of the Political Web

"It's the Economy, Stupid"[427]

Any new art form is prone to generate several debates around its aesthetic value, social relevance and ideological orientation, until it becomes capable of finding a certain place within its contemporary art scene. This status of "approval" may become even more difficult to attain when artistic expression is combined with technological innovation, as in those cases, artists have to additionally address – directly or indirectly – the questions associated with the new instruments of communication that they have chosen to employ in their practices. Accordingly, a variety of conceptions and misconceptions, facts and speculations may arise around this process of hybridisation between art and technology. For instance, it took video a few decades before it managed to overcome its depiction as a technological innovation that only functioned "parallel" to film and television. As curator Sylvia Martin notes,

> when video established itself in the art context at the end of the 1960s, cinema had meant that viewers' perceptions had already become accustomed to moving pictures for more than half a century. Public and private television stations had been making their programmes available throughout Europe and the USA since the 1940 and the 1950s. Moving pictures and their electronic transfer were a well-tried media construct.[428]

As a result, even major museums around the world did not start collecting video art until the mid 1990s – a decade during which a more systematic engagement with the exhibition

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[427] The phrase "It's the economy, stupid" was coined by James Carville, a campaign strategist of Bill Clinton's successful US presidential campaign in 1992. In the years that have followed, the phrase became a reference to the power of economic issues and factors to define not only the outcome of elections, but also socio-political developments at large.

[428] Sylvia Martin, *Video Art* (Taschen, London 2006), p. 6.

and preservation of video started to. This challenging set of circumstances has also been pertinent to the adoption of the Internet as a distinct platform for the development and dissemination of new artworks and art practices. Notably, less than a decade after the introduction of Mosaic (1993), the first visual browser for the World Wide Web, new media scholar and curator Jon Ippolito published an article tilted "Ten Myths of Internet Art" (2002).[429] In his article, Ippolito attempts to deconstruct the common misconceptions associated with Internet Art and its capacities. In order to address those fallacies, the author organises his arguments in the form of a list, which covers different aspects of Internet Art with a view to thoroughly explaining "the difficulties museums and others have understanding what it means to make art for the Internet".[430]

Despite the fact that the list touches upon various attributes of Internet Art, four out of the ten myths that Ippolito identifies display an explicitly economic character. More specifically, they refer to the cost of making Internet art (myths number 3 and 4 – "To make Internet art requires expensive equipment and special training" and "Internet art contributes to the 'digital divide'" respectively); the capacity to collect art that exists online (myth number 8 – "Internet art is impossible to collect"); and the saleability of artist-created websites (myth number 9 – "Internet art will never be important because you can't sell a Web site"). In addition, even within the rest of the myths, we can recognise economic factors, agents and processes. For instance, in the discussion of the first myth, Ippolito attempts to refute the idea that the Internet is merely a distribution tool for other art forms. And, in myths number 2 ("Internet art is appreciated only by an arcane subculture") and number 10 ("Looking at Internet art is a solitary experience"), his focus is placed on the potentiality of online art to attract mass audiences, which could surpass the number of people who visit galleries and auction houses. In view of those facts, we could claim that Ippolito's list proves less exhaustive than what it first appears to be. However, we should not forget that myths always have some basis in reality. In other words, the myths that Ippolito is aiming to refute in his analysis are grounded on real obstacles, or – at least – on sets of factors that may have a negative impact on Internet Art's autonomy and, accordingly, on its cultural and social role. Regardless of the fact that Internet's applications are today considerably different from those of 2002, the economic agents, factors and processes that Ippolito highlights still play a very significant part in defining the context within which contemporary artists can employ networked media. And although in

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[429] Jon Ippolito, 'Ten Myths of Internet Art' (2002) *Leonardo* vol. 35, no. 5 pp. 485 – 487.
[430] ibid., p. 485.

Ippolito's paper Internet Art's potential relationship with economic instruments is presented largely as an "enabler" for its expansion, today – in the context of Data Capitalism – the same relationship could be regarded as the main source of the obstacles that confront political Web-based art.

The fifth chapter of this thesis will attempt to locate those obstacles, which may hinder the ability of the art projects that were analysed in the previous chapter to materialise their social and political ambitions. In particular, the chapter considers the multiple ways in which some of the main economic, political and cultural agents related to Data Capitalism have been able to delimit or neutralise the utopian impulse that was born online following the global financial crisis of 2008. Some of those tools and strategies refer specifically to cultural production, while others play a much wider role, which also encompasses the production and/or communication of art. More specifically, those agents include the various institutions and instruments associated with the contemporary art market, such as commercial galleries, auction houses, art fairs, biennials, collectors and museums, and their expanding relationship with the Web; social media platforms and their corporate networks; online mega-corporations, such as Web portals, search engines, cloud computing companies and electronic retailers; financial institutions and fiscal policy bodies, including commercial banks and Central Banks; and, finally, governments and transnational institutions with regulatory powers over the Internet. Through this investigation the thesis will be able to highlight the interests of Data Capitalists in cultural production and the kinds of restrictions and measures that they adopt in order to safeguard them. Accordingly, the chapter will examine the methodologies through which the aforementioned agents have been able to exert strong practical as well as ideological pressure on the Internet, by appropriating and/or manipulating the very tools that are employed by politically engaged artists and cultural producers. This capacity will be traced in phenomena such as the commercialisation of the Web and online art; the rise of online corporate monopolies; the development of modes of online disinformation and/or censorship; and the fierce institutional control of the Internet's architecture on a national as well as on a transnational level. All of those barriers are in a position to radically delimit the effectiveness of online anti-capitalist initiatives, including the effectiveness of politically engaged Web-based art across its various methodologies and concepts as set out in the last two chapters. The collective "goal" of the obstacles has been simple: to transform the subversive potentialities of post-crisis art into mere myths.

Post-Internet Art and the Fable of the Apolitical Web

In recent articles, books, panel discussions and exhibitions "post-internet art" has been put forward as the "ism" label that could, possibly, best describe the current dispositions of contemporary art. [431] The category predominantly encompasses artworks that are influenced by, mimic, or fully adopt visual elements of the Internet, in order to, then, remediate them in the context of the gallery's "white cube". Those elements are often assembled together in mixed-media installations, which are based either on images and sounds directly drawn from the World Wide Web, or on the aesthetics of the image manipulation and presentation techniques that abound in online media and in popular pieces of software (e.g. copying and pasting, layering, cutting, hypertext links, etc.). For instance, this is particularly evident in the practices of artists like Oliver Laric, Artie Vierkant, Katja Novitskova, and Seth Price, and their colourful multi-layered installations, which largely attempt to synopsise "the image of the Anthropocene" – an epoch defined by

Figure 54: Artie Vierkant, *Image Object Thursday 4 June 2015 12:53PM* (2015)

[431] The term "post-internet art" is attributed to artist Marisa Olson. See: Gene McHugh, *Post Internet* (LINK Editions, Brescia 2011) p. 5.

Figure 55: Katja Novitskova, *Mars Potential (Cat)* (2015)

the global impact of human civilisation (and, in particular, networks) on Earth's image and ecology.[432] Furthermore, even when post-internet artists use the Web as a creative platform (like, for instance, in the cases of Petra Cortright and Jon Rafman), their works often follow a rather "self-referential" trajectory, as they are still mainly inspired by the aesthetics of the Internet and the tools used for digital imaging. In the context of such

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[432] Kirsty Bell, 'Silicon Wafer Weapons and Mars Missions' *Frieze* no. 166 (2014) pp. 232-233.

practices, it is worth noting that apart from their online artworks, many of the artists additionally produce physical objects that evidence the previously described aesthetic. Moreover, the practices of "post-internet art" may also incorporate the communication devices used for networked communication (e.g. smartphones, tablets, High-Definition screens, etc.), which are used as exclusive or partial display formats for their works (e.g. Ed Fornieles). Finally, post-internet art has also been associated with painting and the work of artists like Alex Ruthner, Joe Bradley and Mary Ramsden, who adopt the visual language of Web browsers and software in the context of the most traditional artistic medium.

Figure 56: Alex Ruthner, *(B) RUSH* (2015)

However, post-internet art is not predominantly a movement that has been born as an art historical proposition from "bottom-to-top", as it has been often suggested;[433] rather, the proliferation of post-internet artworks has been a proposition made by a certain group

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[433] See: Morgan Quaintance, 'Right Shift' *Art Monthly* vol. 387 (June 2015) pp. 5-8.

of art critics and curators, who have been promoting it through their books, articles and exhibitions.[434] More specifically, in his book *Post Internet* (2011) art writer Gene McHugh describes the environment within which post-internet art operates, suggesting that regardless of an artist's intentions, all artworks now find a space on the World Wide Web and, as a result, "[...] contemporary art, as a category, was/is forced, against its will, to deal with this new distribution context or at least acknowledge it".[435] Accordingly, the "lack of will" that McHugh identifies would appear, at first, like a strong oppositional force directed against the mainstream art world, which has rarely acknowledged the Internet as a distinct artistic platform.[436] However, further down in the same page in which McHugh writes about the potentially "disruptive" effect of the Internet on contemporary art, he goes on to characterize contemporary art's engagement with networked media as a constituent part of the much larger "game" that is played by commercial galleries, biennials, museums and auction houses. This assertion is confirmed – to some extent, at least – by the fact that all of the artists that we have referenced so far in this section are represented by significant commercial galleries, and they exhibit and sell their works regularly in some of the most prominent international art fairs.

Accordingly, there are inevitable contradictions and challenges in the role that post-internet art is called to fulfil as a movement and/or as a status of cultural production.[437] Firstly, there is an easily identifiable "anxiety" to categorise and historicize a phenomenon that is very much in progress: the Internet is changing so rapidly, that if we think of the online landscape ten years ago, this would be radically different from our present experience of it. Furthermore, the post-internet theorization of contemporary art runs the

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[434] Post-internet art has often been associated with the blog "The New Aesthetic" of British artist, writer and technologist James Bridle. Although his blog has featured post-internet artists, Bridle himself has rejected that his heterogeneous collection of artists and designers should be considered as a movement. As he notes, "the New Aesthetic may be considered a work, a conversation, a performance, an experiment, and a number of other things (although, please, not a movement)". See: 'The New Aesthetic And Its Politics | Booktwo.Org' (*Booktwo.org*, 2016) <http://booktwo.org/notebook/new-aesthetic-politics/> accessed 10 April 2016.
[435] McHugh, op. cit., p. 6.
[436] For instance, as art writer and critic Julian Stallabrass notes, in one of the most important art encyclopaedias published in the last decade, *Art Since 1900: Modernism, Antimodernism, Postmodernism* (2005), net art is completely absent. See: Julian Stallabrass, 'Can Art History Digest Net Art?' in Dieter Daniels and Gunther Reisinger (eds), *Net Pioneers 1.0: Contextualizing Early Net-Based Art* (Sternberg Press, Berlin 2010) pp. 165 – 179. Stallabrass refers to the book Hal Foster and others, *Art since 1900: Modernism, Antimodernism, Postmodernism* (Thames & Hudson, London 2005).
[437] See also: Bill Balaskas, 'Changing the Game: Towards an "Internet of Praxis" (Editorial Statement)' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac*, vol. 20, no. 1 (Leonardo/ISAST, San Francisco 2014) pp. 13 – 15.

danger of aestheticizing (or over-aestheticizing) a context that goes well beyond the borders of art: in the same way that we could talk about post-internet art, we could also talk about post-internet commerce, post-internet dating, post-internet travel, post-internet journalism, etc. Thus, the role and the identity of the post-internet artist are not independent of a much wider set of social conditions. This flawed notion of "autonomy" is quite easy to recognize if we think, for instance, the potential content of neologisms such as "post-radio art" or "post-television art" or – even – "post-videogames art", and their inherent structural and conceptual limitations. In this context, it is particularly useful to consider that if post-internet art arrives after ("post") a movement, then, the direct historical link that should be established would have to be with net art.[438] Nevertheless, such a decision would assign net art to a status of "legitimization", towards which major museums, curators and art fairs have shown a rather consistent hostility. The latter is rather easy to explain if we take into account the fundamentally different economic models that mainstream art and the new media scene propose: on the one hand, "the production of rare or unique, expensively made objects, protected by copyright and curatorial scruple, appearing in exclusive and controlled environments, and purchased by the mega-rich;" and, on the other hand, "the dissemination of digital works, of which no one copy is better than any other, which may appear in many places at once, which may run out of the control of artists and curators, and which are given as gifts".[439] However, it is not merely the economic nature of net art that places it outside the mainstream art world; more than anything else, it is its content. Apart from the already referenced historical examples of net art projects that have attacked capitalism, many net artists have addressed a variety of other political issues, ranging from the freedom of expression and censorship to surveillance, and from the oppression of ethnic and racial minorities to gender equality. Thus, in the case of connecting post-internet art with net art, the investigation of History becomes a foe, for it would refute a "neutral" ideological relationship of the Internet with art.[440]

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[438] Christiane Paul and Malcolm Levy, 'Genealogies of the New Aesthetic' in David M. Berry and Michael Dieter (eds), Postdigital Aesthetics: Art, Computation And Design (Palgrave Macmillan, 2015) p. 33.

[439] Julian Stallabrass, *Net Pioneers 1.0: Contextualizing Early Net-Based Art,* op. cit., 172.

[440] Notably, in the 2016 exhibition *Electronic Superhighway*, hosted by Whitechapel Gallery, in London, this political aspect of net art is almost entirely absent. In particular, the section dedicated specifically to net art ("The Performative Archive of Net Art") presented a "media archaeology", which aimed to highlight "how the nature of the work itself is altered through the evolution of browser-based different hardware and software". Once again, we can identify an interest in the

Most importantly, however, any kind of aestheticization may readily become a very effective tool of de-politicization. The idea of distributing images, sounds and words that merely form part of a pre-existing system of power (as McHugh appears to suggest when he theorises the context of post-internet art), inescapably eradicates the political significance of distribution. The subversive potentiality inherent in the characterisation of a network as "distributed" was gradually undermined during the 1990s and the 2000s, due to the ideological pervasiveness of neoliberal capitalism over the same period. Distribution – not to mention, *equal* distribution – could have enjoyed a much more prominent role as an integral element of the Web and, accordingly, as a contributing factor to any investigation of digital art. In this context, one cannot ignore the crucial fact that apolitical, "beautiful" art is much easier to enter the art market and play the "game" of institutionalization (and vice versa), as Stallabrass has suggested in his analysis of digital art's strong non-commercial dispositions. In addition, the fact that the term "post-internet art" was born and grew parallel to the Great Recession of 2009 and the global crisis of Data Capitalism is particularly revealing. The latter seems to be embraced as a "natural" state of things by the majority of post-internet artworks, which often appear to communicate a fascination with the aesthetic qualities of our big data culture, where data might include images, sounds, texts, videos, etc. Thus, they seem to ignore their function as products (economic aspect), or elements of ideology (socio-political aspect). Accordingly, we could claim that the emergence of the new movement within the previously described contexts have collectively operated as a kind of "ideological barrier" for the Web-based art that has been produced since 2008 as a response to the crisis and its origins. Finally, it is worth noting that none of the artworks that have been analysed in the previous chapter have been included in any of the recent major exhibitions that have aimed at investigating the relationship between the Internet and art.[441]

Nevertheless, the "suppression" of those initiatives' voices and the – conscious, or unintended – concealment of their connections with the political tradition of net art have not grown in a complete void. Rather, the ideological neutrality with which the Internet is often portrayed by post-internet art has much deeper roots, which can be traced in more established theorisations of contemporary culture. A prominent example can be found in

aesthetic aspect of the Internet as a creative platform, rather than in its ideological potentialities. See: Omar Kholeif (ed), *Electronic Superhighway* (Whitechapel Gallery, London 2016) p. 32.

[441] In this context, some of the most high-profile exhibitions in recent years include: *Electronic Superhighway* (Whitechapel Gallery, London, 2016); *Art Post-Internet* (Ullens Center for Contemporary Art, Beijing, 2014); and *Raster Raster* (Aran Cravey Gallery, Los Angeles, 2014), which was curated by Marisa Olson.

Relational Aesthetics (1998), in which Nicolas Bourriaud argues that, "it seems more pressing to invent possible relations with our neighbours in the present than to bet on happier tomorrows.[442] Notably, Bourriaud associates his proposal with the establishment of "microtopias" – temporary transformations in the social relations of a community, which are enacted or precipitated by artworks or artistic interventions.[443] Quite evidently, this approach stands far from the universalism that Bourriaud advocates in his *Altermodern Manifesto* (2009) as a direct result of new technologies, networked media and globalization.[444] As it has already been suggested in the first chapter of this thesis, Bourriaud has been very much aware of new media's revolutionary communicational potentialities. Yet, by connecting new technologies to his assertion that grand narratives (and mainly Marxism) have effectively died, he minimized any real political role that new media might be able to undertake.[445] At a time when capitalism was entering its worst ever crisis, Bourriaud ended up largely ignoring this context and, as a result, he based the 4th Tate Triennial exhibition of 2009 ("Altermodern") on a concept that is rather apolitical and counter-utopian. Post-internet art appears to follow a comparably dangerous trajectory, which undermines the role of the Internet as a platform for the production and dissemination of political art, thus negating its socially transformative potentialities.

In conclusion, we could claim that the case of post-internet art exemplifies to a considerable extent the twofold direction in which the obstacles for political Web-based art may operate. First of all, post-internet art constitutes a conceptual and/or ideological obstacle engendered by those agents of the art world (mainly curators, gallery owners and collectors) who are over-theorising and promoting a predominantly aesthetic phenomenon as the sole meaningful connection between contemporary artistic production and the Internet. In consequence, they overlook the rich historical relationship between the Internet and art, which (as we have already suggested) is characterised by explicit political characteristics, which are antithetical to corporate culture. And, secondly, post-internet art constitutes an economic obstacle, for it produces a new "genre"/product, which is contributing to the commodification of art, the expansion of art market practices, and the accumulation processes of Data Capitalism at large. In spite, however, of this multifaceted

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[442] Nicolas Bourriaud, *Relational Aesthetics* (Simon Pleasance, Fronza Woods and Mathieu Copeland trs, Les Presses du réel, Dijon 2002) p. 45.

[443] ibid., p. 13.

[444] For the full manifesto text visit: Nicolas Bourriaud, 'Altermodern Explained: Manifesto' (*Tate.org.uk*) <http://www.tate.org.uk/whats-on/tate-britain/exhibition/altermodern/explain-altermodern/altermodern-explained-manifesto> accessed 28 March 2016.

[445] See: Bourriaud (ed), *Altermodern: Tate Triennial 2009*, loc. cit.

impact, in strict financial terms, post-internet art only comprises a small part within a much larger operation. As it will be indicated in the next section of this chapter, this operation consists in the gradual transformation of cyberspace into a marketplace for all types of cultural products indiscriminately.

Expanding Online: The Web as a Marketplace

In the sixth chapter of her book *Big Bucks: The Explosion of the Art Market in the 21st Century* (2014), art market specialist Georgina Adam investigates the relationship between the Internet and selling art. Adam concludes her analysis with the prediction that clicking away on a computer will never be able to replicate "the pleasure of being wooed by the auction-house specialists, the fun of the fairs, rubbing shoulders with other high-octane players in the art world and the testosterone-fuelled excitement of the actual auction".[446] Nevertheless, the fact that a renowned journalist, with almost four decades of experience as an art market correspondent, chose to dedicate a whole chapter of her book to the Internet is by itself rather revealing. As I will attempt to demonstrate in this section, it is indicative of the fact that the art market has been increasingly employing the Web as an important tool for conducting business with a view to generating larger profits. This has been particularly true in the aftermath of the global economic crisis, which has produced the need to expand in new markets in order to secure the financial viability of many galleries and other companies related to art trading. In this context, Adam synopsises some of the main advantages that the Internet is offering to art dealers, by highlighting the speed with which they can reach potential buyers, the unprecedented geographical reach that the Web provides, the easiness of buying or bidding for a work online, as well as the fact that through the Internet commercial galleries can approach non-traditional audiences, which would normally hesitate to enter an art space.[447] The documentation techniques that have been developed through new media technologies, like high definition photography and video, can provide a good sense of artworks even when potential collectors are not familiar with them. In addition, researching for an artist online becomes even more convenient, and the same applies to comparing auction and art fair prices, collections, curatorial trends and market developments at large. Finally, it is worth mentioning that maintaining an website

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[446] Georgina Adam, *Big Bucks: The Explosion of the Art Market in the 21st Century* (Lund Humphries Publishers, Farnham 2014) pp. 127-128.
[447] ibid., pp. 121-122.

costs much less than maintaining an actual gallery space, especially in the major hubs of the global art market, like London, New York, Los Angeles, Paris, Berlin and Hong Kong.

Those advantages have prompted the emergence of numerous platforms that are dedicated to selling art on the Web, as well as monitoring the art market and providing information to art professionals and collectors alike. The most successful case to date of such a platform is Artsy, whose stated mission is "to make all the world's art accessible to anyone with an Internet connection".[448] However, and despite the fact that the website does feature 200,000 images of art, architecture, and design by 25,000 artists, Artsy is actually a profit-driven business that charges between $400 and $1400 as a monthly subscription fee. The website's launch in June of 2011, in Basel, secured the backing of prominent international investors who operate in the fields of technology and contemporary art.[449] Since then, Artsy has been both a huge database, as well as an online gallery offering for sale more than 135,000 works, with their prices ranging from $100 to $1,000,000.[450] Those works often originate from some of the leading commercial galleries from around the world, while the platform also collaborates in some of its activities with major museums such as Guggenheim and the British Museum. Furthermore, the platform provides specialist advice to collectors and keeps them up-to-date with all developments in the art market by sending electronic alerts regarding new works and shows. One of the most interesting features of Artsy is its "Art Genome Project", which is a classification system using more than a thousand individual characteristics ("artists' genoming"). Those characteristics are assigned to each artwork and are, then, processed in order to connect works on the basis of subject, style, movement, period, influences, etc. Accordingly, the website uses the data produced by its users in order to predict consumer behaviour and, thus, increase profit by advertising specific works to the right kind of collectors. Being fully integrated in the operational framework of Data Capitalism, the processing of data by Artsy becomes of crucial importance to its success: the monitoring of the flows of money not only produces forecasts about the future of individual artists, or – even – entire markets; in addition, it has the potential to create those conditions of exclusivity of knowledge that would allow the manipulation of the market. Notably, by March 2016, Artsy had developed

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[448] 'About' (*Artsy.net*) <https://artsy.net/about> accessed 28 March 2016.
[449] The investors included Twitter founder Jack Dorsey, Google executive chairman Eric Schmidt, and the founder of the Garage Center for Contemporary Culture and art collector Dasha Zhukova. Also, gallerists Larry Gagosian (Gagosian Gallery) and Marc Glimcher (Pace Gallery) have served as advisors to the website.
[450] 'Artsy' (*Artsy.net*) <https://www.artsy.net/> accessed 28 March 2016.

partnerships with 57 international art fairs as a provider of exclusive information and sales.[451]
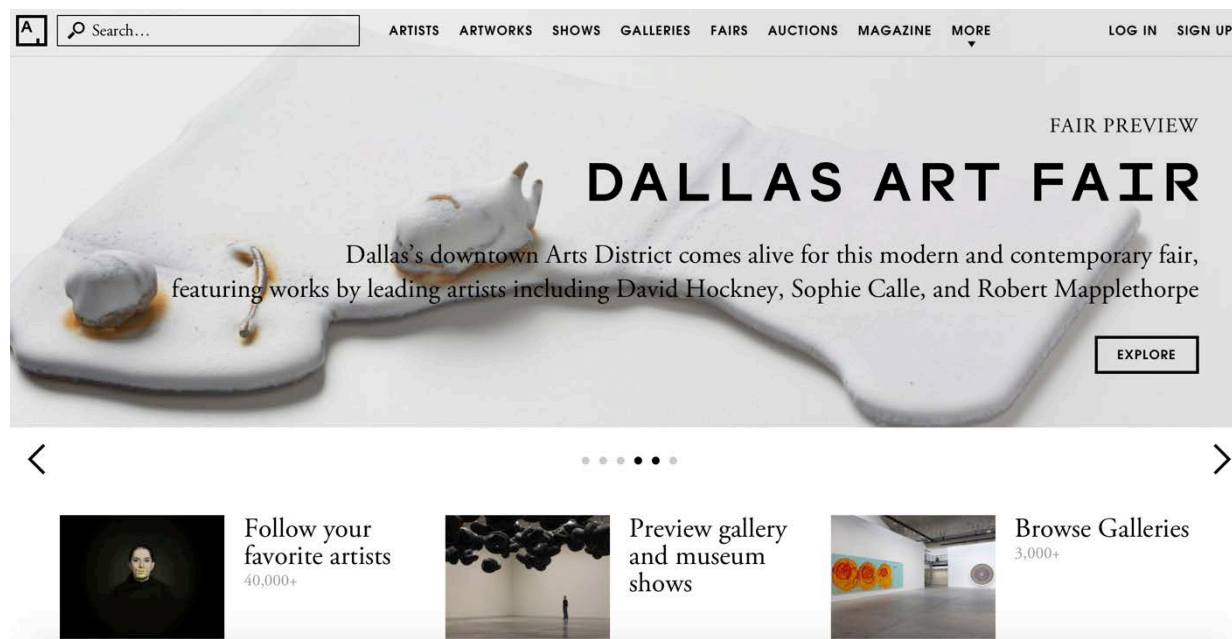
Figure 57: Artsy

Other prominent examples of websites offering similar services include Artnet,[452] Artspace[453] and Paddle8, a secondary-market online auction house hosting virtual showrooms for its auctions.[454] As Paddle8's co-founder Aditya Julka points out, bringing the business of selling art on the Web has proved successful, because people feel increasingly confident about online transactions. At the same time, the rise of "global collectors" has created the need to seek new opportunities for investing on art around the world. In times of volatility for globalised capitalism, such a move insulates the collectors' portfolios, and the art market as a whole, and makes it more adaptable to change.[455] Notably, in November 2015, Paddle8 announced that it would invest 34 million US dollars

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[451] 'Preview 60+ Top Art Fairs on Artsy' (*Artsy.net*) <https://www.artsy.net/art-fairs> accessed 28 March 2016.

[452] 'Artnet' (*Artnet.com*) <http://www.artnet.com/> accessed 28 March 2016.

[453] 'Artspace' (*Artspace.com*) <http://www.artspace.com/> accessed 28 March 2016.

[454] 'Paddle8' (*Paddle8.com*) <https://paddle8.com/> accessed 28 March 2016.

[455] Rob Sharp, 'The Online Art Revolution Gathers Steam — but What Does It Mean?' *BLOUIN ARTINFO* (1 July 2013) <http://www.blouinartinfo.com/news/story/923231/the-online-art-revolution-gathers-steam-but-what-does-it-mean> accessed 28 March 2016.

in developing its services.[456] The Auctionata platform takes the format of the online auction a step further by offering live streaming from its Berlin studio alongside a variety of other services,[457] while The Auction Room features different departments whose specialisms range from Middle Eastern contemporary art to jewellery, and from watches to tribal and Japanese art.[458] Newbloodart offers a different area of specialism by selling original works of early career artists for relatively low prices,[459] and Eyestorm focuses on limited edition works by both emerging and established artists.[460] However, not all business models that have been transferred from physical space to the Web have proved equally successful. The most prominent case of failure has been that of the VIP Art Fair, which was launched online in 2011 by art dealers James and Jane Cohan and investors Jonas and Alessandra Almgren. The fair adopted the same format with actual art fairs, through having a VIP opening with limited access and allowing direct communication between collectors and art dealers. Although it attracted most of the internationally leading commercial galleries, it faced important technical problems in 2011, and in 2012 sales were not large enough in order to secure a third edition. As a result, Artspace acquired the platform of the virtual art fair in 2013.[461]

Quite predictably for such a dynamic industry, the business of selling art on the Web has not catalysed merely the appearance of new businesses in the art market; it has also mobilised and attracted already existing businesses, originating from both online commerce and the traditional art world. In the former field, Ebay features in its catalogue a separate category for collectibles and art, increasingly trying to target the higher end of the contemporary art market by introducing more successful artists and, thus, attracting more serious collectors.[462] At the same time, Amazon has added a similar category to its own

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[456] Mostafa Heddaya, 'High Tech Cash, Low Art Model? A Closer Look at paddle8' *BLOUIN ARTINFO* (5 November 2015) <http://blogs.artinfo.com/artintheair/2015/11/05/high-tech-cash-low-art-model-a-closer-look-at-paddle8/> accessed 28 March 2016.

[457] 'Auctionata' (*Auctionata.com*) <http://auctionata.com/> accessed 28 March 2016. In October 2015, Auctionata announced the buy of the London-based valuation company, ValueMyStuff. See: Marion Maneker, 'Auctionata Buys ValueMyStuff' *Art Market Monitor* (28 October 2015) <http://www.artmarketmonitor.com/2015/10/28/auctionata-buys-valuemystuff/> accessed 28 March 2016.

[458] 'The Auction Room' (*Theauctionroom.com*) <http://theauctionroom.com/> accessed 3 April 2016.

[459] 'NewBloodArt' (*Newbloodart.com*) <http://newbloodart.com/> accessed 28 March 2016.

[460] 'Eyestorm' (*Eyestorm.com*) <http://www.eyestorm.com/> accessed 28 March 2016.

[461] Andrew Russeth, 'Artspace Acquires VIP Art' (*Observer*, 2013) <http://observer.com/2013/04/artspace-acquires-vip-art/> accessed 6 April 2016.

[462] 'Collectibles & Art' (*Ebay.com*) <http://www.ebay.com/rpp/collectibles-art> accessed 28 March 2016.

catalogue (2013).[463] Despite the fact that the website has not been collaborating so far with any of the big gallery names, its huge customer basis (250 million registered users) alongside its established name and reliability make its turn to contemporary art a very important development.[464] Amazon had already developed a vivid interest in entering the art market by the late 1990s, when it announced a joint venture with Sotheby's. The collaboration did not progress much and, finally, ended in October 2000;[465] however, it emphatically proved the mutual interest of online retailers and major auction houses in expanding their services and building new online markets. Christie's has been particularly active in this field, with a special part of its website being dedicated exclusively to online auctions.[466] The works offered for bidding vary from photographs to prints and from memorabilia to ceramics, in an attempt to mainly attract a younger clientele who are investigating the prospect of becoming more serious collectors. Furthermore, in one of its most prominent moves, Christie's joined forces with the Andy Warhol Foundation in 2012, offering on sale 20,000 items from the artist's estate.[467] Although some of the items have been merely discarded materials from the artist's studio, Christie's initiative forms part of its strategy to transform the Web into a high-end market for modern and contemporary art. Finally, we should not ignore the fact that several big galleries themselves, like Gagosian,[468] Hauser and Wirth,[469] or the White Cube[470] (amongst others), have been offering more and more limited edition items produced by the artists that they are representing through their online shops. This model has proved particularly successful in

[463] 'Art' (*Amazon.com*) <http://www.amazon.com/Art/b/ref=nav_shopall_fine_art?ie=UTF8&node=6685269011> accessed 28 March 2016.

[464] Julia Halperin, 'Amazon to Launch Virtual Art Gallery' *The Art Newspaper* (27 June 2013) <http://old.theartnewspaper.com/articles/-Amazon-to-launch-virtual-art-gallery/29989> accessed 5 April 2016.

[465] 'Amazon, Sotheby's Closing Jointly Operated Auction Site' *CNET* (2 January 2002) <http://news.cnet.com/Amazon,-Sothebys-closing-jointly-operated-auction-site/2100-1017_3-246863.html> accessed 28 March 2016.

[466] 'Online Auctions of Luxury Watches, Handbags & Art' (*Christies.com*) <http://www.christies.com/onlineonly> accessed 29 March 2016.

[467] 'Andy Warhol at Christie's' (*Christies.com*) <http://warhol.christies.com/> accessed 29 March 2016.

[468] 'Gagosian Shop' (*Gagosian.com*) <http://www.gagosian.com/shop/> accessed 29 March 2016.

[469] 'Shop' (*Hauserwirth.com*) <http://www.hauserwirth.com/shop/> accessed 29 March 2016.

[470] 'Limited Edition Prints and Publications' (*Whitecube.com*) <http://whitecube.com/shop/> accessed 29 March 2016.

certain cases, with the director of Saatchi Gallery Rebecca Wilson claiming that the institution sells more online within a month than most real galleries sell in a year.[471]
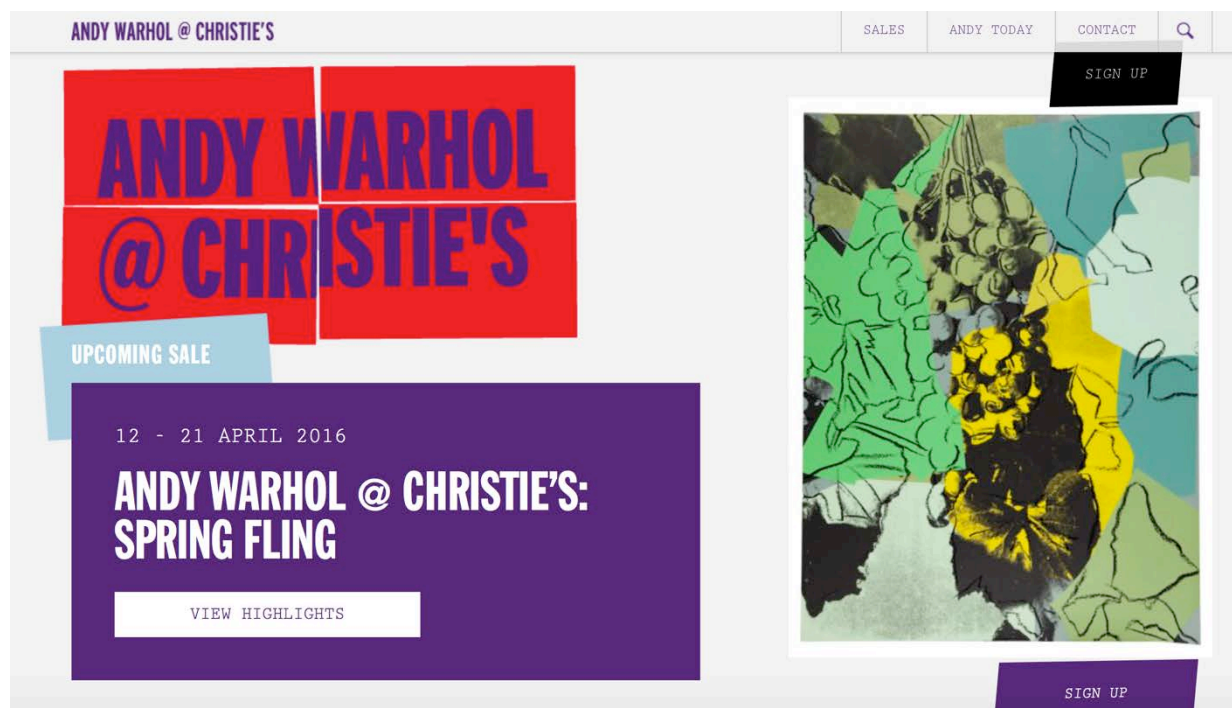
Figure 58: The Andy Warhol Foundation at Christie's

However, when it comes to the exploitation of the Web by the art market, the most significant developments should be looked for within the Internet's most closely related art forms: digital and online art. In the last few years, several websites have emerged as online exhibition platforms that present new projects by artists who use the Internet as a primary tool in their practice. Several of those platforms, including Bubblebyte,[472] Barmecidal Projects[473] and STATE,[474] operate outside the commercial art circuit, presenting curated solo and group exhibitions throughout the year, in a similar manner to the one traditionally adopted by publicly funded galleries or museums. The success of those websites prompted the exploration of the possibility to employ the same model in order to establish an "actual" commercial gallery online. A prominent example of such an endeavour is Fach & Asendorf Gallery, which was launched in 2010 by architect and artist Ole Fach and media artist Kim

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[471] Alex Hudson, 'Art "Sold More Online than in Galleries"' *BBC News* (27 June 2013) <http://www.bbc.co.uk/news/technology-23054641> accessed 29 March 2016.

[472] 'Bubblebyte' (*Bubblebyte.org*) <http://bubblebyte.org> accessed 29 March 2016.

[473] 'Barmecidal Projects' (*Barmecidalprojects.com*) <http://barmecidalprojects.com> accessed 29 March 2016.

[474] 'State' (*Thestate.tumblr.com*) <http://thestate.tumblr.com> accessed 29 March 2016.

Asendorf.[475] The gallery's *GIF Market* project is one of the strategies its founders have employed in order to sell digital files to collectors and make net art a commercially viable product.[476] The project features 1,024 minimalist animated GIFs, with a price inscribed below each one of them. In addition, in the case that the GIF has already been bought, the name of the buyer is also displayed under the image. An algorithm determines the asking prices, which rise every time that another GIF is purchased, so that the final one would end up costing $23,350. Yet, this form of patronage is not the only one that can be employed in
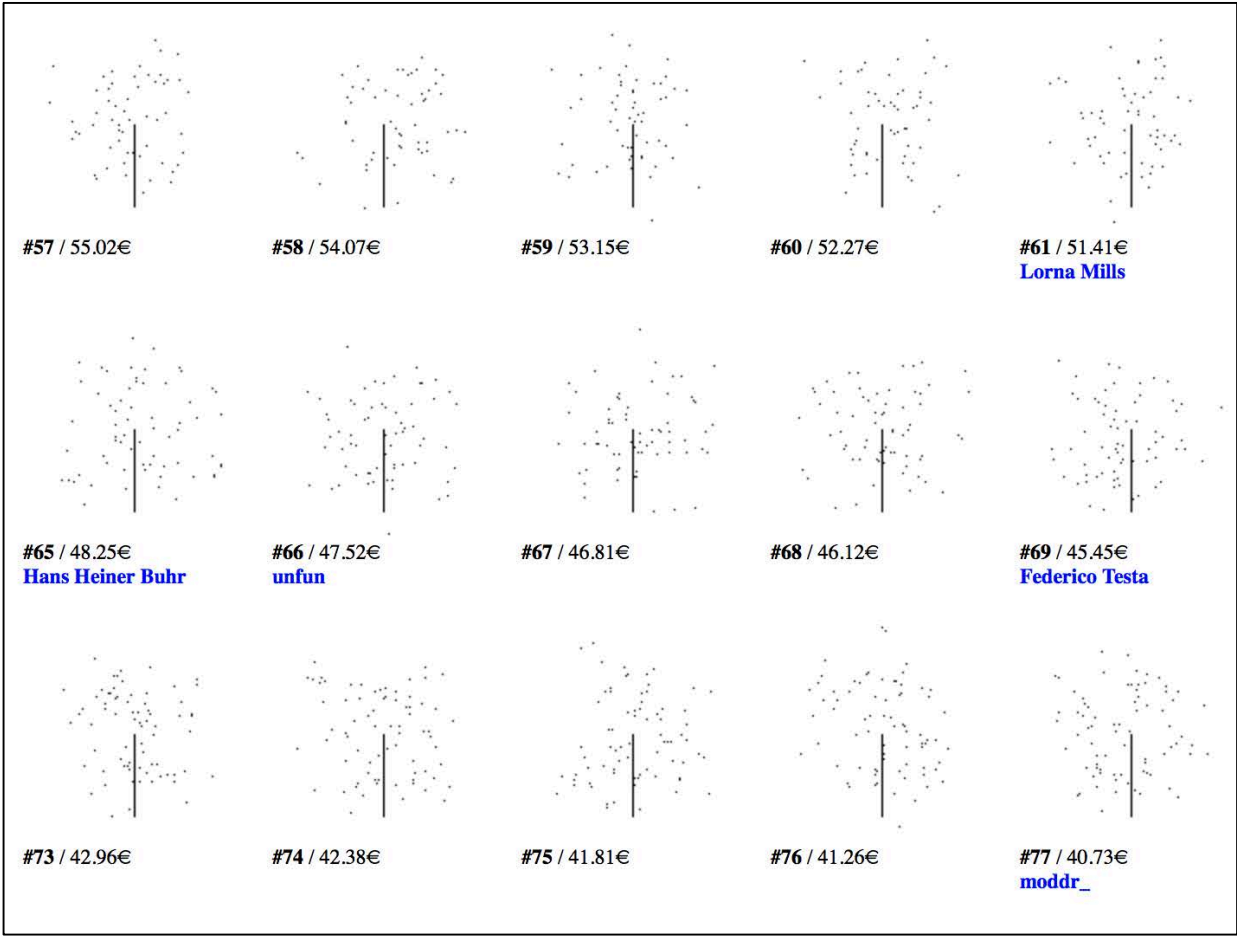
Figure 59: Fach & Asendorf Gallery's GIF Market

order to monetize online art. Artist Rafael Rozendaal creates unique animated websites, each one of which is offered for patronage through a particular system that the artist describes in his Art Website Sales Contract.[477] According to the contract, the buyer has his/her name added to the website and acquires certain rights to the work, while the site

[475] 'F&AG' (*Fa-g.org*) <http://fa-g.org> accessed 29 March 2016.
[476] 'GIF Market' (*Gifmarket.net*) <http://gifmarket.net> accessed 29 March 2016.
[477] Rafaël Rozendaal 'Art Website Sales Contract' (*Artwebsitesalescontract.com*) <http://www.artwebsitesalescontract.com> accessed 29 March 2016.

itself remains publicly accessible. The collector receives all of the website's offline exhibition files, as well as the source code and stewardship of the website's domain name. Also, collectors are given the right to exhibit and sell the work on the basis of Rozendaal's conditions, which are also binding for future owners. Under these conditions, Rozendaal's work was sold in the most commercial context within which the contemporary art market operates – an art fair (Rhizome's booth at the 2011 Armory Show). Finally, one of the most recent initiatives in this field has been Daata Editions, a platform that was launched in May 2015.[478] Daata Editions commission new artists' video, sound and online artworks, which are available for sale in limited editions.
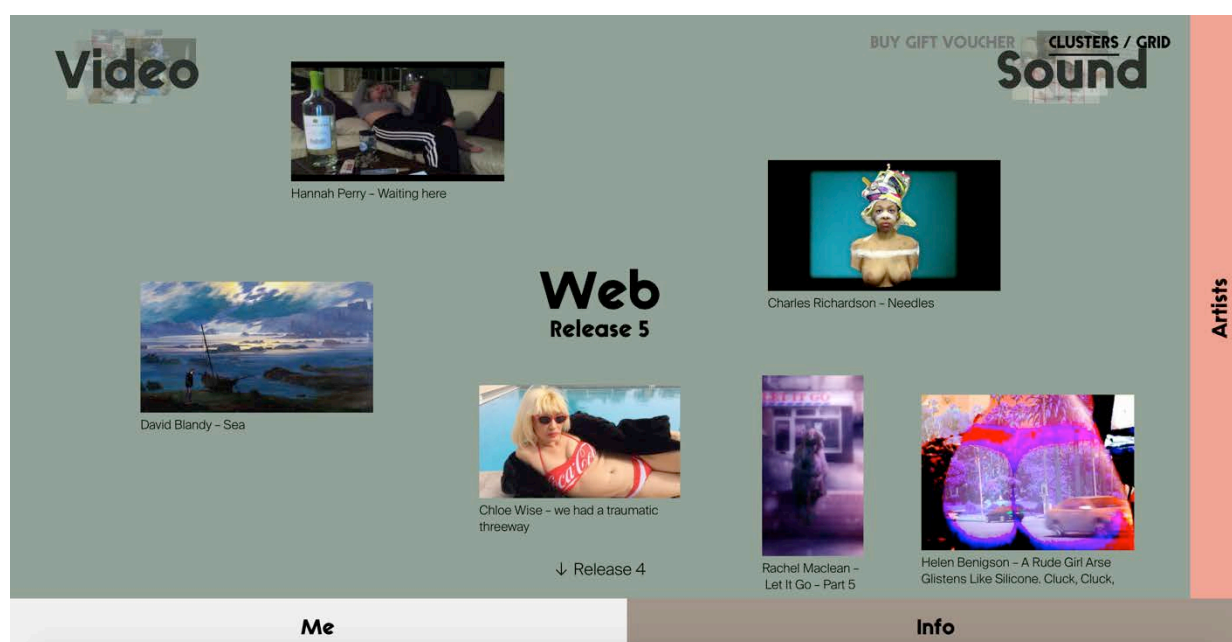
Figure 60: Daata Editions

Another form of "mass patronage", is that of artist-created apps that can be downloaded on smartphones for a certain price. In this case, the artist has to collaborate – directly or indirectly – with large corporations in order to make the work accessible through an app store, like for example the Apple store. Inevitably, then, the work would become part of the store only if it fully complied with the store's content and distribution policies – a fact that raises questions about the amount of freedom that an artist would have, especially as regards promoting politically engaged practices. However, it is worth noting that any form of patronage, or mass sale through apps can merely provide *some* access to the art market, and even less so to the market's high end. As it has already been

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[478] 'Daata Editions' (*Daata-editions.com*) <https://daata-editions.com> accessed 29 March 2016.

suggested in the case of post-internet art, one of the most successful and increasingly popular ways to monetize online art is to overcome its immateriality by turning the works into physical objects, like for instance, prints or sculptures/installations. This strategy creates easily monitored scarcity, a characteristic that is absolutely essential for the art market to maximize its profits, as decreased supply leads to an increased demand. The ultimate model of fabricating scarcity is by taking a work offline, so that the collector can have it locally. In this case, the work would only exist in the collector's own drive space and, as a result, the lack of any kind of presence in the public domain would clearly put under question its very nature as a work of net art.

Finally, we should not ignore the fact that the commercialization of the Web by the art market also has other dark sides. More specifically, it can create an even more non-transparent market, given that sales take place privately. As a result, there is much more limited access to price information in comparison with other forms of sales, like auctions. At the same time, there are many grey areas regarding taxation, as some auction websites charge sales tax, whereas some others do not. And, even in the case that a website charges tax, there is still the question of what location the work is delivered to and, accordingly, what kind of tax rate applies to that specific country or region.[479] Therefore, the possibility of taxation loopholes used by a particular market and by a particular elite comes into view. As Georgina Adam notes in her book, the art market is an opaque and unregulated business, with money laundering and tax evasion being two of its most prominent traits. It would seem that parts of the art market see the Internet as a tool to "safeguard" those profitable characteristics, and – if possible – expand them. All those developments testify to the effort of the art market to integrate digital art and, in particular, net art into the commercial circuit. Inevitably, the commodification of online artistic expression does function as an ideological barrier "blocking" the renewed spirit of political activism that has emerged thanks to new media technologies. The capacity of Web-based art to express social demands might still remain open; however, in the current historical conjuncture, the previously described strategies impair its potential to raise a distinct voice against a socioeconomic system for whose perpetuation the mainstream (i.e. commercial) art world has long been a strong proponent.

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[479] For example, Paddle8 charges sale tax, while Christie's charges online sales tax or VAT "based on the location of the property at the time of the sale and subsequent final delivery address". See: Adam, op. cit., p. 126.

Art as Data as Profit

The previously analysed examples of how art (including online art) is being commoditised, sold and bought online constitute only one part of the strategies through which the agents of Data Capitalism are in a position to exploit cultural production. The other part of this economic field can be identified if we expand our investigation into wider expressions of cultural engagement, which are not directly, or – even – not at all associated with the art market. Accordingly, in order to locate the most prominent case within this second part, we will have to look at the relationship with art and culture of the largest Internet company in the world – Google.[480] Google's multifaceted "embracement" of cultural production started, in effect, in 2004, when its Google Books project was officially launched (the project's initial name was "Google Print").[481] Since then, the company has digitised millions of books, with the purpose of entering a market with huge worldwide demand. Google's free dissemination of content through Google Books constitutes today a fierce competitor for Amazon, which has long been the leader in the market of online bookstores.[482] Focusing on the ownership and processing of data and advertising, rather than on profiting directly from sales, Google has succeeded so far in sidestepping all legal concerns that have been raised over the years around its breaches of copyright. It has managed to win its legal battles with both the Association of American Publishers, in 2012 (the Association requested a settlement), and the Authors' Guild, in 2103, by successfully claiming that its book-scanning project falls into the category of "fair use" under the American legislation.[483] Yet, this has only been for Google a win in a battle that now encompasses all forms of cultural production, not just books.

The main "weapon" that Google has developed in order to win the war of exploiting cultural data is Google Cultural Institute (GCI), which was officially unveiled in 2011.[484] Its

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[480] Google is the company that has by far the largest market capitalization in the world when it comes to Internet corporations. As of 15th March 2016 its capitalization was 510 billion US dollars. See: 'Alphabet Inc: NASDAQ: GOOG' (*Google.com*, 2016) <https://www.google.com/finance?cid=304466804484872> accessed 29 March 2016.

[481] 'Google Books History' (*Books.google.com*) <https://books.google.com/intl/en/googlebooks/about/history.html> accessed 29 March 2016.

[482] As of 15th March 2016, Amazon's capitalization was 273 billion US dollars. See: 'Amazon.com, Inc.: NASDAQ: AMZN' (*Google.com*, 2016) <https://www.google.com/finance?cid=660463> accessed 29 March 2016.

[483] Thomas Claburn, 'Google Wins Book Scanning Case' *Information Week* (14 November 2013) <http://www.informationweek.com/applications/google-wins-book-scanning-case/d/d-id/1112240?> accessed 29 March 2016.

[484] 'Google Cultural Institute' (*Google.com*) <https://www.google.com/culturalinstitute/home> accessed 29 March 2016.

purpose has been to "make important cultural material available and accessible to everyone and to digitally preserve it to educate and inspire future generations",[485] a mission statement surprisingly similar to the one of the online art dealer platform Artsy ("to make all the world's art accessible to anyone with an Internet connection"). Interestingly, the first announcement of Google's intention to digitise all great artefacts of human culture had taken place two years before the official launch of CCI, in the aftermath of a real war. In November 2009, Google Executive Chairman Eric Schmidt announced from the National Museum of Iraq, in Baghdad, that Google intended to use its resources in order to digitise the museum's treasures and make them available online.[486] Schmidt's announcement took place in the presence of then-US Ambassador to Iraq, Christopher Hill, and it came after a worldwide reaction against the American forces' failure to protect the museum and other sites of cultural significance from looting after Iraq's invasion. Therefore, from the very beginning, GCI was promoted by Google as a tool of protection, documentation, preservation and global access to humanity's cultural heritage.[487] In the years that have followed this first project, some of the most important museums around the world have made their exhibits, special collections and archives available to GCI's "Art Project": from the Metropolitan Museum of Art in New York to the Hermitage in St Petersburg, and from the Uffizi in Florence to the National Gallery in London, Google has so far digitised thousands of artefacts. In addition, GCI's "Historic Moments" project uses an even more extensive collection of documents, photographs, videos and personal accounts in an attempt to "restage" important moments of human history. Those range from the first Australian expeditions to the two World Wars, and from the Nelson Mandela collection to the rise of Korean Pop (K-pop) over the last two decades. Finally, GCI's "World Wonders" project uses Google's Street View technology in order to bring online ancient and modern world heritage sites, including Pompeii, Hiroshima, Versailles, and the Grand Canyon.

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[485] JungHyun Anna Park and Sang-Yeal Han, 'Google DevArt: Following the Success of Google's Android Market in the Visual Arts?', *Arts and Technology: Fourth International Conference, ArtsIT 2014, Istanbul, Turkey, November 10-12, 2014, Revised Selected Papers* (Springer, New York 2015) pp. 13 – 19.
[486] Andrew LaVallee, 'Google CEO: A New Iraq Means Business Opportunities' *The Wall Street Journal* (24 November 2009) <http://blogs.wsj.com/digits/2009/11/24/google-ceo-a-new-iraq-means-business-opportunities> accessed 29 March 2016.
[487] 'War and Occupation in Iraq - Destruction of Cultural Heritage' (*Globalpolicy.org*, June 2007) <https://www.globalpolicy.org/component/content/article/168/37146.html> accessed 29 March 2016.
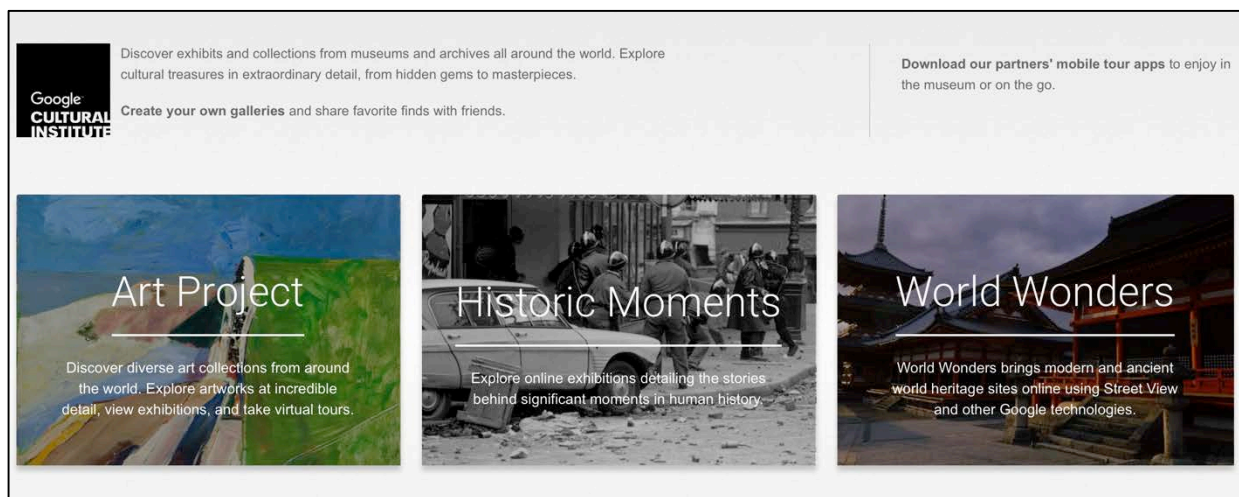
Figure 61: Google Cultural Institute

This comprehensive expansion of Google into the field of cultural data has been facilitated by two important conditions: one (primarily) cultural and one (entirely) financial. The cultural condition that we could identify is associated with the modern and postmodern fascination with the methodologies of the archive. The rise of the archive in the modern era as the main means through which historians, anthropologists, theorists and cultural workers collect, organise and communicate memory has been followed by the adoption of the archive by contemporary artists, who gradually transformed it into a distinct genre.[488] As art historian Hal Foster notes in his 2004 essay *The Archival Impulse*, "archival art" can be defined as a genre whose artists "seek to make historical information, often lost or displaced, physically present. To this end they elaborate on the found image, object, and favor the installation format".[489] This phenomenon has been particularly evident in the practice of artists such as Glenn Ligon, Douglas Gordon, Mark Dion, Thomas Ruff, Liam Gillick, Andy Warhol, Thomas Hirschhorn, Tacita Dean, Stan Douglas, Susan Hiller, Renee Green and Philippe Parreno, amongst others. In addition, there has been an equally enthusiastic embracement of archives by the curators of major exhibitions, including the most recent editions of the Venice and Whitney Biennales (2015 and 2014 respectively), as well as Documenta 13 (2012), which often place archives at the epicentre of their curatorial framework. Consequently, the projects of GCI fit in to a considerable extent with this cultural context that celebrates the archive. At the same time, we should not fail to note that all of the artists mentioned above, as well as the museums that host their exhibitions, have contributed to the growth of a genre that has an important

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[488] Charles Merewether (ed), *The Archive* (Whitechapel Gallery, London 2006).
[489] Hal Foster, 'An Archival Impulse' (2004) *October* Fall no. 110 p. 3.

economic aspect – the works of "archival artists" are being sold today in the most important international art fairs and they are featured in major private and public collections. Yet, it is actually the lack of lack of state funds to support cultural institutions that has pushed Google's expansion even further. As information and communication historian Dan Schiller notes, "GCI would be unlikely, even unthinkable, absent the chronic and politically induced starvation of publicly funded cultural institutions even throughout the wealthy countries. States' withdrawal or reallocation of resources to fund and operate the apparatus of cultural provision is its essential condition of possibility".[490] The global economic crisis has made the financial situation of most museums and cultural institutions even more difficult and volatile,[491] while the economic environment for other sectors, including technology, has remained positive during the same period. Those conditions have allowed private companies to use the resources of public organisations with long-term benefits, whilst merely offering short-term financial support in exchange.

For Google, those benefits do not refer only to the addition of new "cultural data" to GCI's portfolio, but also to the company's wider strategy of "colonising" the open Web. In order to map the museums that are part of GCI's "Art Project" Google has used a very similar technology to the one that it has employed for Google Earth and Google Maps: users can tour the participating museum's room-by-room and floor-by-floor, zooming in and out of particular exhibits.[492] Furthermore, by using their smartphones whilst being in the museum, art lovers can add an extra layer to their experience, as their networked devices may function as guides for the exhibitions, events and products offered by the museum, as well as for any other service that could be connected not just to art, but also to the particular location of the cultural institution that they are visiting. This "extra layer" may, actually, be one of the most profitable elements of Google's "Art Project", given that both the creators and the visitors of museums and art galleries predominantly originate from the most privileged strata of society – the middle and the upper classes.[493] Those "alluring

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[490] Dan Schiller and Shinjoung Yeo, 'Powered by Google: Widening Access and Tightening Corporate Control' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac*, vol. 20, no 1 (Leonardo/ISAST, San Francisco 2014) p. 48.
[491] For instance, in the UK, the 2010 Spending Review reduced the budget of Arts Council England by almost 30%.
[492] A study published in September 2015 by Southern Methodist University's National Center For Arts Research (NCAR) has indicated that the overall digital engagement at Art Museums has been growing fast. See: 'NCAR Releases New Edition of Data' (*Mcs.smu.edu*, 9 September 2015) <http://mcs.smu.edu/artsresearch2014/articles/blog-white-papers/ncar-releases-new-edition-data> accessed 29 March 2016.
[493] Fiona McLean, *Marketing the Museum* (Routledge, London 1997) p. 24.
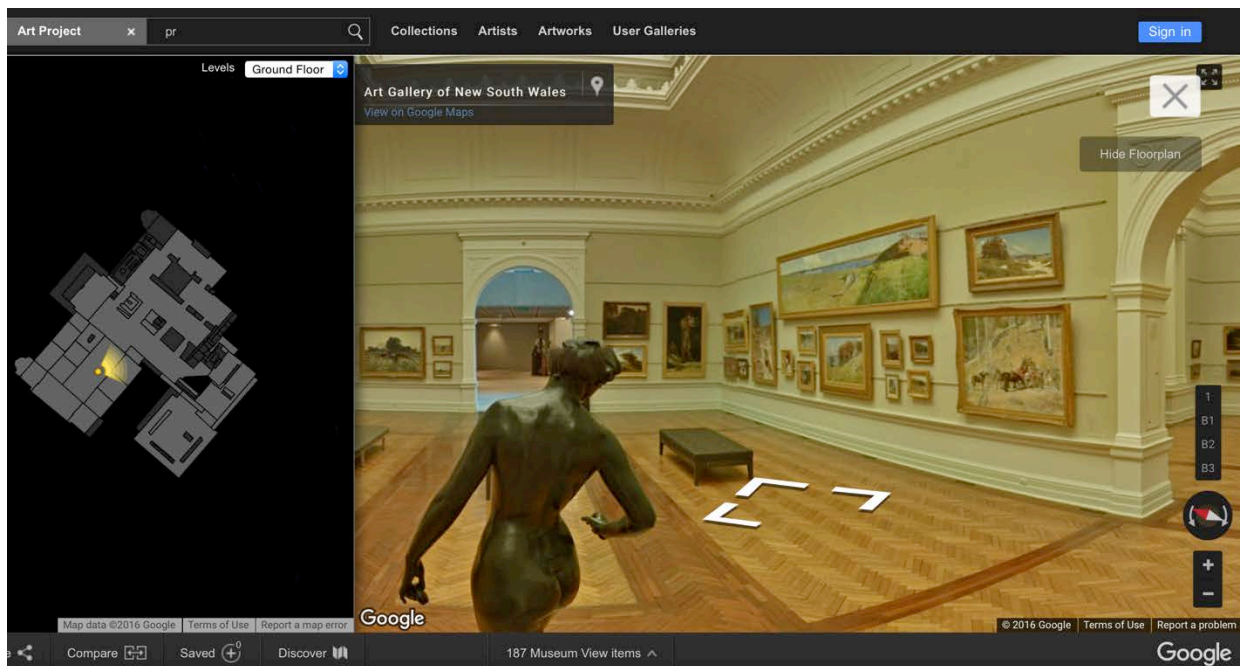
Figure 62: Google Cultural Institute's "Art Project"

demographics" render the data produced by museumgoers even more important, as their discretionary income can be "directed" by Google towards a variety of "spending destinations" – namely advertisers and their promoted products. Google is in a position to monitor which exhibitions and artworks are the most popular (both online and in real spaces) and incorporate this data into the user-consumer profiles that its adverting tools are producing. Notably, the same data can inform its search algorithm and its Web ad-placement programme. At the same time, through GCI Google is able to secure that its competitors won't be able to have equal access to the datasets that Google is able to use. This is, of course, a slow process. As the director of GCI Steve Crossan has emphasized, "having good content on the Web, in open standards, is good for the Web, is good for the users. If you invest in what's good for the Web and the users, that will bear fruit".[494] Google's size grants it the luxury of time. Quite ironically, perhaps, as activists were occupying cultural institutions at the height of the crisis in order to protest about their elitist character and the financialization of their modus operandi,[495] GCI has been silently occupying the same institutions through its own activities.

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[494] Eric Pfanner, 'Quietly, Google Puts History Online' *The New York Times* (20 November 2011) <http://www.nytimes.com/2011/11/21/technology/quietly-google-puts-history-online.html?pagewanted=all&_r=0> accessed 30 March 2016.
[495] Whitney Kimball, 'Professors, Artists, Workers, and Activists Rally inside MoMA' *Art F City* (16 January 2012) <http://artfcity.com/2012/01/16/professors-artists-workers-and-activists-rally-inside-moma/> accessed 30 March 2016.

In the end, the previously described combination of defensive and offensive elements in GCI's strategy has been capable of building a wider pool of opportunities for extracting (cultural) data and, accordingly, raising advertising revenue. As Schiller and Yeo note, "This is a full-scale commodification drive, and it exhibits a modal form: the 'public-private partnership.' One partner typically possesses the cultural 'assets'; the other, the capital required to 'monetize' them".[496] Of course, such partnerships, and arts patronage at large, are not new to the field of cultural production. It is worth noting that recent sponsors of the Victoria & Albert Museum, in London, include technology giants such as Apple, Samsung and Toshiba, whilst even centralised state-funded entities engage in "public-private partnerships" in order to support their operations. For instance, The John F. Kennedy Library, which is part of the US National Archives and Records Administration system, developed a partnership with IBM and EMC Corporation,[497] and the US Government Accountability Office partnered with Thomson West.[498] In this context, the initiation of new partnerships by Google with the purpose of producing *new* art can be considered as one of the numerous implementations of its monopolist model of constant diversification, which aims to encapsulate the full range of outputs produced by the creative industries.[499] This specific field of expansion is particularly useful for our analysis, as it brings to light the multiple ways in which art – both in the form of web-based art and of artworks merely presented online – can be transformed into programmable data, whose ultimate output is financial profit.

Out of all of Google's projects, DevArt is, probably, the initiative that synopsizes in the most lucid way the previously described business strategy.[500] DevArt was launched as a partnership between Google and the Barbican Centre in London in July 2014, in the context of the "Digital Revolutions" touring exhibition. It consisted in commissioning "some of the most progressive interactive artists"[501] working around the world today to produce new

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[496] Schiller and Yeo, op. cit., p. 51.

[497] 'Digitization Partnerships - Digitization at the National Archives' (*Archives.gov*) <http://www.archives.gov/digitization/partnerships.html> accessed 30 March 2016.

[498] Cory Doctorow reposting of Carl Malamud, 'Did the US Gov't Sell Exclusive Access to Its Legislative History to Thomson West?' *Boing Boing* (17 March 2008) <http://boingboing.net/2008/03/17/did-the-us-govt-sell.html> accessed 30 March 2016.

[499] For an introduction to the influence of corporations on the arts and the adoption of the free-market ethos by cultural institutions over the last three decades, see: Chin-Tao Wu, *Privatising Culture: Corporate Art Intervention since the 1980s* (Verso Books, London 2002).

[500] The project's website: 'Devart. Art Made With Code.' (*Devart.withgoogle.com*, 2016) <https://devart.withgoogle.com> accessed 11 April 2016.

[501] 'Digital Revolution' (*Barbican.org.uk*, 2014) <http://www.barbican.org.uk/digital-revolution/explore/dev-art/> accessed 30 March 2016.

artworks made with code. However, there was an important condition in order for artists to receive the £25,000 commission: all of the new artworks were required to use at least one of Google's technologies, be it in the form of programming languages, platforms, toolkits or Application Programme Interfaces (APIs).[502] As a result, in the case of DevArt, the structural imbalance of power that characterises the "public-private partnerships" in the aftermath of the global economic crisis becomes even more acute and, accordingly, a matter of basic freedom of expression. As artist Paolo Pedercini has argued, DevArt "as a
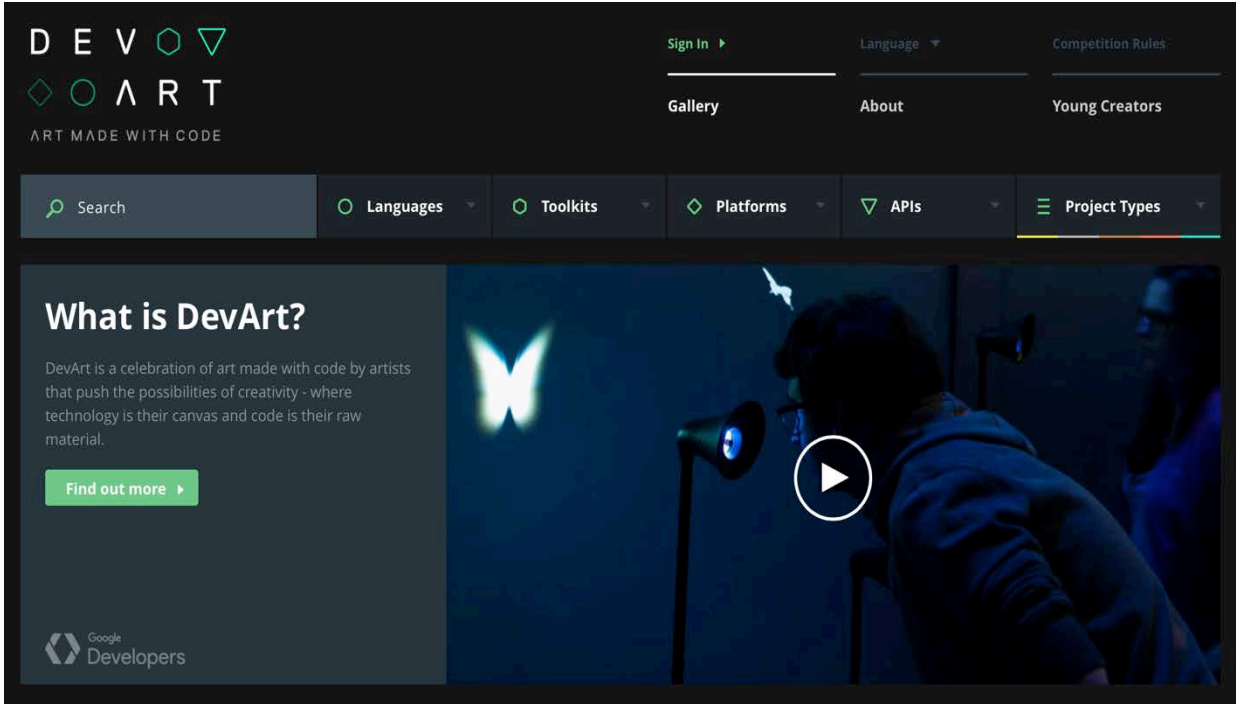
Figure 63: Google's DevArt

new artistic movement could be seen as an attempt to steer digital art away from its current practitioners who interrogate aspects of the networked society, and towards a form where it is intrinsically linked with Google itself and aesthetically pleasing installations", given that Google did not allow any content to appear online that could be

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[502] Four projects were commissioned by DevArt: *Wishing Wall* by Varvara Guljajeva and Mar Canet, which transforms spoken words into butterflies projected on a gallery wall; *Co(de)factory* by Karsten Schmidt, which employs a set of custom developed in-browser 3D modeling tools in order to bring creators together and allow them to individually and collaboratively design (and later fabricate) physical artifacts; *Play the world* by Zach Lieberman, which invites gallery visitors to perform with a keyboard that finds samples with the same note in realtime from web radio stations from around the world; and, finally, *Les métamorphoses de Mr. Kalia* by Cyril Diagne and Béatrice Lartigue, which is an interactive animation installation and website that invites the audience to participate in the adventures and metamorphoses and its main character, Mr. Kalia.

deemed by the company inappropriate, indecent, sexual or profane.[503] Above anything else, however, DevArt constitutes a new economic model for the development of art, in which supporting specific kinds of art projects leads to the production of specific kinds of applications, which in turn produce specific kinds of consumer behaviours and data. In other words, with DevArt Google attempts to own all levels of artistic creation, by owning the tools, structures and outputs of the artists' work. This form of "hard data channelling" – namely, the process of actively circumscribing the economic role of data from their very "birth" – is, perhaps, the most aggressive part of Google's data business strategy.[504] As we will see in the next section of this chapter, the direction and manipulation of data towards specific destinations-owners ("soft data channelling") constitutes the larger aspect of Google's effort to build an online informational monopoly.

From Globalisation to Googlization: The Rise of New Monopolies

The navigation across the interconnected and over-layered flows of information that comprise the World Wide Web is one of the challenges that we face every day as its users. Particularly during the last two decades, it would seem that "the so-called information revolution has flipped into a flood of disinformation".[505] This flood is the inevitable result of data over-production – a condition within which "the ability to select information […] becomes more and more important, to the point where learning without selecting becomes virtually impossible".[506] In other words, regardless of whether we produce the online information flood actively (e.g. by posting a photo on a social media platform), or passively (e.g. by simply browsing the Web and moving from website to website), in order for data to become useable, someone has to undertake the process of adding to them qualitative identifiers. The latter would render choosing the right amounts and the right kinds of data

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[503] Georgina Voss, 'DevArt: Google's Powerful New Move to Arts Patronage' *The Guardian* (28 February 2014) <http://www.theguardian.com/science/political-science/2014/feb/28/devart-googles-powerful-new-move-to-arts-patronage> accessed 30 March 2016.

[504] HyunYoung Choi and Hal Varian, 'Predicting the Present with Google Trends' (2012) *Economic Record* vol. 88 pp. 2-9; and Tobias Preis, Helen Susannah Moat and H Eugene Stanley, 'Quantifying Trading Behavior in Financial Markets Using Google Trends' (2013) *Scientific Reports* vol. 3 1684 <http://www.nature.com/srep/2013/130425/srep01684/full/srep01684.html> accessed 30 March 2016.

[505] Geert Lovink, 'The Society of the Query and the Googlization of Our Lives - A Tribute to Joseph Weizenbaum' [2008] *Eurozine* <http://www.eurozine.com/articles/2008-09-05-lovink-en.html> accessed 30 March 2016.

[506] Maria Ledzińska and Sławomir Postek, 'The Role of Metacognition in C-Learning Curriculum', *Problems of Education in the 21st Century*, vol. 23 pp. 137 – 145.

meaningful to a user. It is always worth remembering that in reality "the signals inside the computer are not information. They are not more than signals. There is only one way to turn signals into information, through interpretation".[507] As the amount of data and its complexity increases, this task has to be carried out at the very source of information; namely, at the level of the "flat Web" – a Web *before* the application of any kind of semiological hierarchy. Search engines are the tools that promise to carry out this challenging task – to interpret the entirety (if possible) of the data that comprise the World Wide Web in a non-biased manner.

Google is the search engine that has managed more than any other to integrate all those multifaceted objectives not only into its operation, but also into its public image. The information empire that constitutes Google is not based simply on the fact that more than two out of three searches that take place online happen through its famous and highly secretive algorithm;[508] it predominantly emanates from the company's expansion into all possible applications of the Web, an indication of which has already been given in the examination of Google's relationship with the arts and cultural institutions. This complex phenomenon has been synopsised in the neologism "Googlization",[509] which describes the totalising effect of Google on our personal information, habits, opinions, and judgments because of its dominance in the fields of online advertising, software, geographic services, e-mail, publishing, and Web commerce.[510] Google's engine offers a wide variety of specialised search areas, which are automatically activated by entering specific "trigger words". Those special search features instantly provide Web users with any kind of practical information that might be useful to them in their everyday lives: from weather conditions to stock exchange prices; from sport scores to unit and currency conversion; from dictionaries to film screening times; and from travel data to package tracking. In addition those search functions, Google powers numerous software applications, such as Google Maps. The latter is a characteristic example of how Google is accumulating user-generated data, given that it offers much more than traditional geographic information like street names. Rather, Google Maps is a multifaceted navigator that provides real-time

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[507] Lovink, loc. cit.

[508] 'comScore Releases April 2014 U.S. Search Engine Rankings' (*Comscore.com*, 16 May 2014) <http://www.comscore.com/Insights/Market-Rankings/comScore-Releases-April-2014-US-Search-Engine-Rankings> accessed 30 March 2016.

[509] The term "Googlization" was first used by Alex Salkever on the Businessweek website, in late 2003. See: Kerric Harvey (ed), *Encyclopedia of Social Media and Politics* vol. 3, (SAGE, London 2013) p. 1105

[510] See: Siva Vaidhyanathan, *The Googlization of Everything: (and Why We Should Worry)* (University of California Press, Berkeley, CA 2011).

driving, biking and walking directions, traffic data, an embedded street-view mode, recommendations regarding local businesses, details about cultural sites and natural parks, or even emergency information like nearby vaccination centres, as it happened during the 2009 H1N1 pandemic.[511]

The previously described focus on collecting, combing and redistributing data is further evidenced by Google's investment not only in the production of convergent applications like Google Maps, but also in the development of operating platforms into which such applications can be integrated. This objective has been achieved in an emphatic way with the company's near-absolute dominance in the field of smartphone operating systems. In October 2013, an impressive 81.3% of all smartphones around the world were using Android, Google's operating system;[512] and even in countries in which Google's main competitor, Apple, has a strong presence (like, for example, in USA), Android still remains the market leader.[513] Notably, apart from smartphones and tablets, Google has also developed specialized user interfaces for televisions (Android TV), cars (Android Auto), and watches (Android Wear). One of the most important characteristics that has made Android such a successful operating system across different platforms is the fact that it has adopted a hybrid system regarding the access to its source code: the Android source code is open, however, if device manufacturers wish to use the Android trademark, then, they can only receive the license by negotiating an individual contract with Google.[514] Last but definitely not least, Google has been particularly active in the field of social media, beyond the launch of its own social networking service, Google Plus, in June 2011.[515] The most prominent initiative in Google's social media strategy has been the acquisition of YouTube,

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[511] 'Finding Flu Vaccine Information in One Easy Place' (*Googleblog.blogspot.co.uk*, 10 November 2009) <https://googleblog.blogspot.co.uk/2009/11/finding-flu-vaccine-information-in-one.html> accessed 30 March 2016.

[512] 'Android Tops 81 Percent of Smartphone Market Share in Q3' (*Engadget.com*, 31 October 2013) <http://www.engadget.com/2013/10/31/strategy-analytics-q3-2013-phone-share/> accessed 30 March 2016.

[513] In April 2014, the market share of Android in USA was 52.5%. See: 'ComScore Reports April 2014 U.S. Smartphone Subscriber Market Share' (*Comscore.com*, 3 June 2014) <http://www.comscore.com/Insights/Press-Releases/2014/6/comScore-Reports-April-2014-US-Smartphone-Subscriber-Market-Share> accessed 30 March 2016.

[514] 'Frequently Asked Questions' (*Source.android.com*) <https://source.android.com/source/faqs.html> accessed 30 March 2016.

[515] After just two years in operation, Google Plus had already passed the 500 million active users benchmark. The service's website: 'Google+' (*Plus.google.com*) <https://plus.google.com/> accessed 30 March 2016.

in November 2006, for 1.65 billion US dollars.[516] With more than 1 billion unique users each month, over 6 billion hours of video being watched in the same period, and more than 100 hours of video uploaded every minute, YouTube dominates a huge market not only in terms of its economic value, but also in terms of its ideological, political and cultural influence.[517] Finally, it is worth mentioning another important subsidiary of Google, the blog-publishing service Blogger,[518] which is currently ranked as the 18th most popular site on the World Wide Web.[519]

The pervasiveness of this impressive expansion has been vividly reflected even in the impact that Google has had on the English language: in June 2006 the verb "google" was added to the Oxford English Dictionary, and in July 2006, the same happened with the eleventh edition of the Merriam-Webster Collegiate Dictionary. Quite remarkably, during the years that have followed those first additions, the new verb rapidly increased its popularity, ending up to signify any online search, regardless of whether the searcher is actually using Google's engine or not. The expression "Just google it!" has become synonymous with the encouragement to use the Internet in order to find out something; or, more precisely, it has become an invitation to discover, clarify or confirm absolutely anything by simply typing a word in a Web browser, or by asking a question to a smartphone's "intelligent personal assistant" application. Yet, the truly illuminating term in the aforementioned popular phrase is not the verb "google", but rather the adverb "just". The particular frame of mind that it alludes to, suggests that when it comes to using the Internet in order to find *and* interpret information (typically through Google's search engine), things are simple, quick and clear.

There are several facts, however, that would not justify such a level of confidence and trust in Google's monopoly. Rather, the company's pursuit of profit is guided by an ideological disposition of absolute control, which is much more concealed and complex than what the company's mission statement suggests. The ten-paragraph text, which explains Google's philosophy, values and goals, is titled "Ten things we know to be true". According to its second paragraph, "It's best to do one thing really, really well. We do

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[516] The Associated Press, 'Google Buys YouTube for $1.65 Billion' *NBC News* (10 October 2006) <http://www.nbcnews.com/id/15196982/ns/business-us_business/t/google-buys-youtube-billion/#.UbECrBG9KSM> accessed 30 March 2016.

[517] 'Statistics' (*Youtube.com*) <https://www.youtube.com/yt/press/en-GB/statistics.html> accessed 30 March 2016.

[518] The service is hosted at the subdomain blogspot.com.

[519] 'The Top 500 Sites on the Web' (*Alexa.com*) <http://www.alexa.com/topsites> accessed 30 March 2016.

search".[520] Quite obviously, Google's diverse activities refute this statement. Rather, Google's search service has become over the years a growing veil behind which a whole informational empire can be found. Interestingly, in aesthetic terms, we could claim that Google's obscurity begins with the very design of its home page, whose practically exclusive features are the Google logo and a simple search box – namely, a truly minimalist approach. Yet, in response to the question "Is Google simple?", Don Norman, the director of The Design Lab of the University of California, argues:

> No. Google is deceptive. It hides all the complexity by simply showing one search box on the main page. The main difference is that if you want to do anything else, the other search engines let you do it from their home pages, whereas Google makes you search through other, much more complex pages. Why aren't many of these just linked together? Why isn't Google a unified application? Why are there so many odd, apparently freestanding services?[521]

In financial terms, the initial answer to Norman's question is rather simple: diversification. By diversifying its portfolio of products and services, Google is capable of reducing the non-systematic risk of individual activities-assets. The wide variety of the assets that Google possesses entails that the company can afford to expand in fields that might pose higher risks, or might not be able to offer immediate returns. If one sector fails, it is very unlikely that the company as a whole will face any serious problem, given that it is practically impossible that all different sectors will fail simultaneously. The more Google expands, the smaller its overall risk becomes, and the higher its revenue from its main source of income, which is advertising.[522] Therefore, the real question that should be posed is why Google wants to conceal the connections within its portfolio. In this case, we could replace the adverb "apparently" in Don Norman's last question with the adverb "seemingly", and ask: "Why are there so many odd, *seemingly* freestanding services?"

The answer can be found in the very way in which revenue is produced for Google through online advertising. Over the years, Google has developed a variety of tools in order

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[520]   'Ten   Things   We   Know   to   Be   True'   (*Google.com*) <http://www.google.com/about/company/philosophy/> accessed 30 March 2016.

[521]   Don   Norman,   'The   Truth   about   Google's   so-Called   "Simplicity"'   (*Jnd.org*) <http://www.jnd.org/dn.mss/the_truth_about_goog.html> accessed 30 March 2016.

[522] Tim Peterson, 'Google Finally Crosses $50 Billion Annual Revenue Mark' *Adweek* (22 January 2013)   <http://www.adweek.com/news/technology/google-finally-crosses-50-billion-annual-revenue-mark-146710> accessed 30 March 2016.

to be able to identify consumer behaviour, associate it directly with specific websites and specific pages, and – finally – sell its services and know-how to companies. By using Google AdWords, advertisers can buy space amongst results of Google searches that are relevant to the product of field of the advertised company.[523] And, through Google AdSense, companies can earn money by displaying targeted ads created by Google in their own websites.[524] Quite evidently, however, and despite the fact that those two tools provide Google with revenue, they do not generate the amount of data needed in order to be able to recognise patterns of online behaviour and, thus, be able to lead the market of online advertising. Without much larger and diverse amounts of data it would have been impossible for services like Google's Display Network to position or direct the right kind of ads to the right kind of online spaces.[525] In this context, the most important move in terms of consolidating Google's advertising strategy came in 2007, when the company bought the Web advertising network DoubleClick for $3.1 billion,[526] thus producing "the most sophisticated and far-flung Internet advertising infrastructure in existence".[527] DoubleClick is capable of producing user profiles on the basis on their online interactions, with its most impressive characteristic being the fact that the service is operating in real time: buyers participate in a continuous bidding system that enables them to leverage their proprietary data and algorithms, in order to increase efficiency and effectiveness when targeting a particular market. DoubleClick has been combined with Google Analytics,[528] Google's powerful home-grown tool for tracking and reporting website traffic, which accounts for more than 80% of the traffic analysis' market.[529] As interrelated parts of Google's advertising platform, all those tools are capable of fully monitoring users' actions by tracking IP addresses, cookies, web beacons, clicks, mouse hovers, webpages' content and sever requests, amongst other elements. All those methodologies bring Google a step closer

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[523] 'AdWords' (*Google.co.uk*) <http://www.google.co.uk/adwords/> accessed 30 March 2016.

[524] 'AdSense' (*Google.com*) <http://www.google.com/adsense/start/> accessed 30 March 2016.

[525] 'Google Display Network' (*Google.com*) <http://www.google.com/ads/displaynetwork/> accessed 30 March 2016.

[526] 'DoubleClick by Google' (*Google.com*) <https://www.google.com/doubleclick/> accessed 30 March 2016.

[527] Schiller and Yeo, op. cit., p. 46.

[528] 'Google Analytics' (*Google.com*) <http://www.google.com/analytics/ce/nrs/> accessed 30 March 2016.

[529] 82.2% as of 11th June 2015. See: 'Usage Statistics and Market Share of Traffic Analysis Tools for Websites, March 2016' (*W3techs.com*) <http://w3techs.com/technologies/overview/traffic_analysis/all> accessed 30 March 2016.

to what Google's chief economist Hal Varian calls "nowcasting" – predicting trends in real time.[530]

Google's orientation towards strengthening its tracking methods has been consistent, with a view to continuously multiplying the amount of data that the company is capable of extracting.[531] Notably, this pool of data even includes groups such as children under 13 years old, as it was unveiled in December 2013. More specifically, Google announced that it intended to create child-friendly versions of some its applications, thus targeting "an age group hitherto considered off-limits for marketing purposes and data collection".[532] As Pavni Diwanji, Google's vice president of engineering, noted: "We expect this to be controversial, but the simple truth is kids already have the technology in schools and at home. So the better approach is simply to see to it that the tech is used in a better way".[533] Yet, this monopoly of access to users' data has raised a variety of concerns that go well beyond the economic aspect of Google's power. In January 2014, almost a year before Google's decision to target children, France's data protection watchdog CNIL (Commission Nationale de l'Informatique et des Libertés), fined Google with 150,000 €, as the company ignored a three-month ultimatum to start operating in line with the country's privacy laws. In its public statement, the independent body identified that

> The company does not sufficiently inform its users of the conditions in which their personal data are processed, nor of the purposes of this processing. They may therefore neither understand the purposes for which their data are collected, which are not specific as the law requires, nor the ambit of the data collected through the different services concerned. Consequently, they are not able to exercise their rights, in particular their right of access, objection or deletion. The company does not comply with its obligation to obtain user consent prior to the storage of cookies on their terminals. It fails to define retention periods applicable to the data which it

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[530] Steven L Scott and Hal R Varian, 'Bayesian Variable Selection for Nowcasting Economic Time Series' (*People.ischool.berkeley.edu*, 2014) <http://people.ischool.berkeley.edu/~hal/Papers/2012/fat.pdf> accessed 30 March 2016.

[531] In another prominent move of expansion, Google bought in 2011 the advertising optimization platform AdMeld, for $400 million. See: Michael Arrington, 'Google Acquires AdMeld for $400 Million' *TechCrunch* (9 June 2011) <http://techcrunch.com/2011/06/09/google-acquires-admeld-for-400-million/> accessed 30 March 2016.

[532] Cahal Milmo, 'Fears for Children as Google Targets under-13s' *The Independent* (5 December 2014) <http://www.independent.co.uk/life-style/gadgets-and-tech/news/fears-for-children-as-google-targets-under13s-9907313.html> accessed 30 March 2016.

[533] Victor Luckerson, 'Google Wants to Launch Kid-Friendly Services for Users under 13' *Time* (3 December 2014) <http://time.com/3617009/google-products-for-kids/> accessed 30 March 2016.

processes. Finally, it permits itself to combine all the data it collects about its users across all of its services without any legal basis.[534]

The case against Google was triggered by the company's decision in March 2012 to merge 60 distinct privacy policies into one, a fact that has allowed it to easily collect and combine data originating from all of its platforms, including Gmail, YouTube, Google Plus, Picasa, Google Maps, Google Drive, Google Docs, Google Maps and – last, but not least – the Google Search Engine. Notably, Google offered to users no means of opting out from individual services or platforms.[535]

However, the most worrying fact regarding the way in which Google takes advantage of its monopolist position is the manipulation of the search results produced by its Engine. In April 2015, after a five-year investigation, the European Commission sent to Google a Statement of Objections with the allegation that "the company has abused its dominant position in the markets for general internet search services in the European Economic Area (EEA) by systematically favouring its own comparison shopping product in its general search results pages".[536] This has been a particularly useful strategy for Google, especially as regards markets in which its products face strong competition from a number of alternative providers. As specified in the Commission's Statement, Google Product Search and Google Shopping seem to be systematically favoured by Google's Search Engine, thus resulting in having a negative impact on consumers' choices and innovation.[537] At the same time, the Commission announced that it was opening another formal investigation against Google in relation to its Android mobile operating system, which is supposedly open-source. However, in practice, most mobile and tablet manufacturers use Android "in combination with a range of Google's proprietary applications and services",[538] because of

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[534] 'The CNIL's Sanctions Committee issues a 150 000 € monetary penalty to GOOGLE Inc.' (*Cnil.fr*, 8 January 2014) <http://www.cnil.fr/english/news-and-events/news/article/the-cnils-sanctions-committee-issues-a-150-000-EUR-monetary-penalty-to-google-inc/> accessed 3 April 2014
[535] 'UPDATE 1-France Fines Google over Data Privacy' *Reuters* (8 January 2014) <http://www.reuters.com/article/2014/01/08/france-google-fine-idUSL6N0KI3A320140108> accessed 30 March 2016.
[536] 'Antitrust: Commission Sends Statement of Objections to Google on Comparison Shopping Service; Opens Separate Formal Investigation on Android' (*Europa.eu*, 15 April 2015) <http://europa.eu/rapid/press-release_IP-15-4780_en.htm> accessed 30 March 2016.
[537] 'Fact Sheet - Antitrust: Commission Sends Statement of Objections to Google on Comparison Shopping Service' (*Europa.eu*, 15 April 2015) <http://europa.eu/rapid/press-release_MEMO-15-4781_en.htm> accessed 30 March 2016.
[538] 'Antitrust: Commission Opens Formal Investigation against Google in Relation to Android Mobile Operating System' (*Europa.eu*, 15 April 2015) <http://europa.eu/rapid/press-release_MEMO-15-4782_en.htm> accessed 30 March 2016.

the contracts that they have to sign with Google in order to have full access to its services. Given that most people switch from Web browsers to apps when using their mobile phones,[539] the manipulation of the search results has a domino effect on the apps that are linked up with Google. Google may emphasize that the algorithm that conducts its searches is "unbiased, anchored in scientific computational methods, and uniformly aimed at helping its users. A bright line is said to separate its "organic" or "natural" search results from advertiser-purchased links. All this is difficult to corroborate, however, because the algorithm is a closely guarded secret".[540] Inevitably, then, it becomes rather difficult to distinguish where Google's "information empire" ends and where its "disinformation empire" begins. As a result, given that the vast majority of artists and audiences alike are using – directly, or indirectly – Google's services, plausible questions may arise: to what extent do political Web-based artworks have the power of overcoming the dangers of "disinformation" in order to promote effectively their own "information"? And, is there a way to avoid contributing to what is – possibly – the most impressive rise of a global corporate monopoly in human history?

Institutional Control, Legal Constraints and the Limits of Online Freedom

In spite of its highly influential role, Google is only one of the agents whose activities relate to an issue of pivotal importance for the character of the Internet as a public sphere: net neutrality. The concept of net neutrality was introduced in 2003 by Columbia University media law Professor Tim Wu, who suggested that there should be no quantitative or qualitative bias in the way that Internet providers and governments treat data.[541] In other words, Internet providers should allow the same online access to all users, regardless of where they live, what income they have, what social group they might belong to, and what kind of hardware or software they might be using. Most importantly, perhaps, the principle entails that Internet providers may not favour or block particular products or websites in order to serve their own interests, or the interests of third parties to which they might be related. For instance, an Internet provider might violate net neutrality by associating the speed with which a user can access a webpage, with the amount that the page has paid to

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[539] Alastair Macdonald and Julia Fioretti, 'EU Accuses Google of Hurting Consumers, Competitors in Web Search Case' *Reuters* (15 April 2015) <http://www.reuters.com/article/2015/04/16/us-google-eu-idUSKBN0N610E20150416> accessed 30 March 2016.
[540] Schiller and Yeo, op. cit., p. 46.
[541] Tim Wu, 'Network Neutrality, Broadband Discrimination' (2003) *Journal on Telecom and High Tech Law* vol. 2 pp. 141-175.

the provider in order to be granted a higher uploading or downloading speed; or, the same function might depend on the amount that the user himself has paid for his Internet service, in which case the quality of Internet access acquires explicit class-based characteristics. The association of online corporations, including social media platforms, with the dangers posed against net neutrality becomes more evident when we take into account the fact that the activities of such corporations have been increasingly expanding beyond their role as providers of particular online services.

This condition was exemplified with the launch of Internet.org, a highly controversial initiative that was announced in 2013 by the CEO and founder of Facebook Mark Zuckerberg. Internet.org constitutes a partnership of various technology corporations led by Facebook[542] "with the goal of bringing Internet access and the benefits of connectivity to the two-thirds of the world that doesn't have them".[543] Three major projects are being fostered under the umbrella of Internet.org: Firstly, "Free Basics by Facebook", which provides smartphone access to what Facebook considers to be the Internet's "basic websites", in partnership with specific mobile phone operators, which have agreed that no data charges will incur for accessing those particular websites ("zero-rating"). Secondly, "Connectivity Lab" focuses on developing technologies that would ultimately provide Internet access to all communities around the world, regardless of their geographical location, by using devices such as high-altitude long-endurance planes (drones), satellites and lasers, which are developed by Facebook.[544] And, finally, "Express Wi-Fi by Facebook" aims to offer widespread Wi-Fi connectivity in partnership with carriers, ISPs and local entrepreneurs, through the use of software designed and provided by Facebook. This set of initiatives caused important reactions by Internet activists over its breaches of net neutrality principles.[545] Accordingly, those reactions led to the decision of several technology companies to pull out of Internet.org's "Free Basics" programme in India in April 2015,[546] as well as to a ruling of the Telecom Regulatory Authority of India

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[542] The initiative also involves Samsung, Ericsson, MediaTek, Opera Software, Nokia and Qualcomm.

[543] 'Our Mission' (*Info.internet.org*) <https://info.internet.org/en/mission/> accessed 30 March 2016.

[544] Aviva Rutkin, 'Facebook Unveils Drone for Beaming Internet Access from the Sky' *New Scientist* (5 August 2015) <https://www.newscientist.com/article/dn28003-facebook-unveils-drone-for-beaming-internet-access-from-the-sky/> accessed 30 March 2016.

[545] See: 'Mark Zuckerberg Wants to Control What 3 Billion People Do Online' (*Nofakeinternet.org*) <https://nofakeinternet.org/> accessed 30 March 2016.

[546] Matt Weinberger, 'Indian Tech Companies Are Pulling out of Facebook's Internet.org Campaign over Net Neutrality Violations' *Business Insider* (16 April 2015) <http://uk.businessinsider.com/indian-tech-companies-are-pulling-out-of-facebooks-internetorg-campaign-over-net-neutrality-violations-2015-4?r=US&IR=T> accessed 30 March 2016.
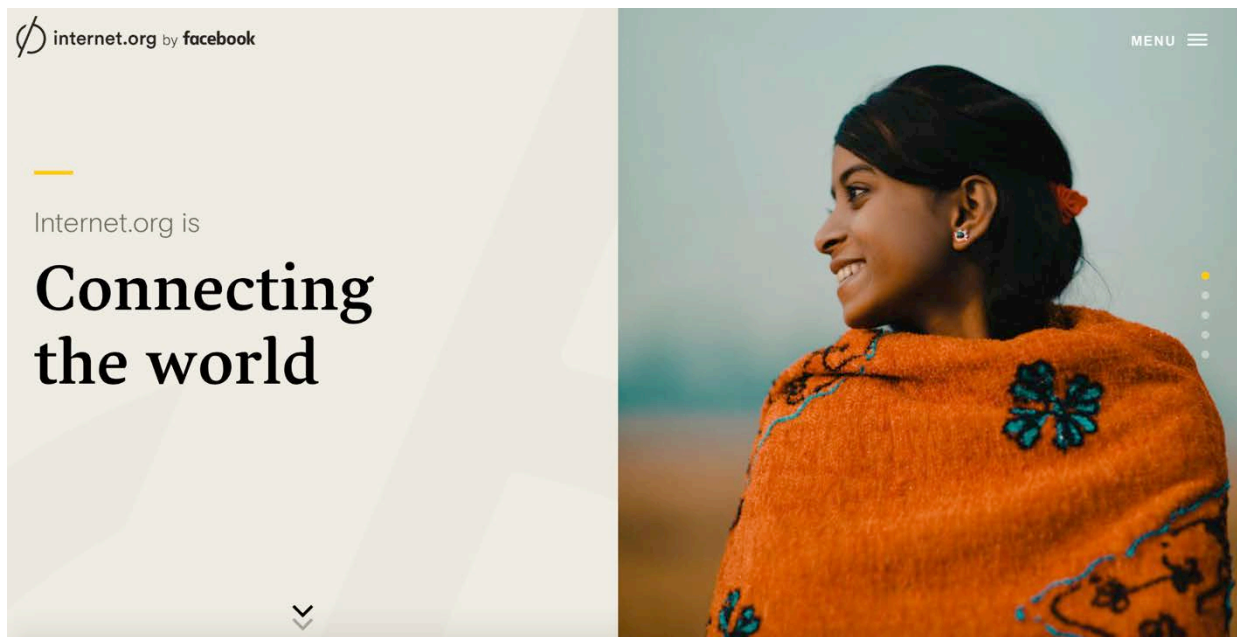
Figure 64: Internet.org

(TRAI) against differential pricing of data services and content. As a result, "Free Basics" became inactive in India in February 2016.[547] The concerns on which those decisions were based were caused by the fact that Facebook would act, in effect, as a "gatekeeper" of what kind of Internet access millions, or – potentially – billions of people would have.[548] This privileged role of Facebook would occur on top of the company's capacity to determine the overall Web-based services that would be provided – for instance, Facebook-owned Whatsapp can be perceived as the "basic" instant messaging application included in the package.[549] Furthermore, Facebook even added important technological characteristics as

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[547] 'TRAI Order Effect: Facebook Free Basics Shuts down for India' *The Indian Express* (11 February 2016) <http://indianexpress.com/article/technology/tech-news-technology/facebook-free-basics-india-shut-down/> accessed 30 March 2016.

[548] As of March 2016, "Free Basics" had been available in the following countries (the mobile operators are included in the parentheses): Angola (Movicel), Benin (MTN), Cape Verde (Unitel), Democratic Republic of the Congo (Airtel, Tigo), Gabon (Airtel), Ghana (Airtel), Guinea (Cellcom), Guinea-Bissau (MTN), Kenya (Airtel), Liberia (Cellcom), Malawi (Airtel & TNM), Mauritania (Mauritel), Mozambique (Mcel), Niger (Airtel), Rwanda (Airtel), Senegal (Tigo), Seychelles (Airtel), South Africa (Cell C), Tanzania (Tigo), Zambia (Airtel), Bangladesh (Grameenphone & Robi), Cambodia (Smart Axiata), Indonesia (Indosat), Iraq (Korek), Maldives (Ooredoo), Mongolia (G-Mobile, Mobicom & Skytel), Pakistan (Telenor & Zong), Philippines (Globe & Smart), Thailand (DTAC & TrueMove), Timor-Leste (Telkomcel), Vanuatu (Telecom), Bolivia (Viva), Colombia (Tigo), Guatemala (Tigo), Mexico (Virgin), Panama (Digicel), and Peru (Entel). See: 'Where We've Launched' (*Info.internet.org*) <https://info.internet.org/en/story/where-weve-launched/> accessed 30 March 2016.

[549] Ingrid Lunden, 'WhatsApp Is Actually Worth More than $19B, Says Facebook's Zuckerberg, and It Was Internet.org That Sealed the Deal' *TechCrunch* (24 February 2014) <http://techcrunch.com/2014/02/24/whatsapp-is-actually-worth-more-than-19b-says-facebooks-zuckerberg/> accessed 30 March 2016.

prerequisites for future participation of websites in its "Free Basics", through which it excluded websites that would employ JavaScript, video, large images and Flash.[550] Notably, on the basis of those technical criteria, none of the artworks and artist-led projects that we examined in the previous chapter would ever become accessible to the users of Facebook's "Free Basics".

Unsurprisingly, perhaps, Google has been also active in the field of controlling the Internet both as a service *and* as an infrastructure. More specifically, in June 2013 the company announced the launch of *Project Loon*, a research and development programme that aims to provide Internet to remote areas around the world through the use of special balloons flying in the stratosphere.[551] As it is stated in the project's website – and identically to Internet.org's proclamation – "two-thirds of the world's population does not yet have Internet access" and this is a gap that *Project Loon's* balloons aspire to fill. Quite evidently, such a move would radically increase the potential market for Google, whilst securing its monopolist status in several Web-related products and services. Furthermore, in April 2014 Google acquired Titan Aerospace, a drone manufacturer specialising in the production of high-altitude solar-powered drones, which are capable of flying for years at a time without any need to refuel or land. And, finally, in June 2014 Google paid 500 million US dollars in order to buy Skybox Imaging, a company that builds tiny satellites that can shoot high-definition photographs and videos of the Earth, whilst recording a variety of other geographical analytics. However, Google has not been looking merely towards the skies in order to expand its infrastructure network. Utility poles have been used since March 2013 in Kansas City in order to connect households with Google Fiber, Google's ultra-high-speed broadband network.[552] Kansas City was selected as the first Google Fiber city in the US out of 1,100 municipalities that applied for the privilege to get Internet access more than 100 times faster than what most Americans currently enjoy.[553] Google confirmed in February 2014 that another 34 American cities would potentially get Google

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[550] 'Technical Guidelines - Free Basics - Documentation' (*Developers.facebook.com*) <https://developers.facebook.com/docs/internet-org/platform-technical-guidelines> accessed 30 March 2016.

[551] The project's website: 'Project Loon' (*Google.com*) <http://www.google.com/loon/> accessed 30 March 2016.

[552] Google's announcement on its blog: 'Ultra High-Speed Broadband Is Coming to Kansas City, Kansas' (*Googleblog.blogspot.co.uk*, 30 March 2011) <http://googleblog.blogspot.co.uk/2011/03/ultra-high-speed-broadband-is-coming-to.html> accessed 30 March 2016.

[553] The project's website: 'Google Fiber' (*Fiber.google.com*) <https://fiber.google.com/about/> accessed 30 March 2016.

Fiber in the near future, including Atlanta, Nashville, Phoenix, Portland, Salt Lake City, San Antonio and San Jose.[554]

Of course, all those developments, which threaten the principles of net neutrality, could not have occurred without the involvement of other agents: more specifically, the de facto privatisation of the Internet could not have opened as a possibility without the consent of states. The latter are in the unique position to allow (or prevent) the monopolisation of the Internet either in the form of specific online markets, or thoroughly, in the form of geographical access across the areas that they control. However, this is a twofold process: the state might permit Internet corporations to expand their economic activities, or – even – monopolies, yet, it also aims at ensuring the continuation and the legitimisation of its own role. That is why alongside the freedoms that the state provides to online corporations, it also assigns to them the responsibility of serving some of the "social values" that it is supposedly protecting. In recent years, this process of negotiation has been particularly salient in the case of counterterrorism and the fight against the online propaganda of the "Islamic State" (ISIL). In one of the most high-profile initiatives related to this fight, the White House called in January 2016 a summit with Silicon Valley executives in order to discuss the participation of all major technology firms in the efforts to combat terrorist propaganda online.[555] This meeting was the culmination of a series of other initiatives focusing on the same issue, including the United Nations Leaders' Summit on Countering Violent Extremism, which took place in September 2015.[556] In all those forums, the constant demand expressed by states has been that Internet providers act as censors on the basis of the policies followed by the states. However, given that "terrorist

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[554] Google's announcement on its blog: 'Exploring New Cities for Google Fiber' (*Googleblog.blogspot.co.uk*, 19 February 2014) <http://googleblog.blogspot.co.uk/2014/02/exploring-new-cities-for-google-fiber.html> accessed 30 March 2016.

[555] The four main discussion areas of the meeting were: "a. How can we make it harder for terrorists to leveraging the internet to recruit, radicalize, and mobilize followers to violence? b. How can we help others to create, publish, and amplify alternative content that would undercut ISIL? c. In what ways can we use technology to help disrupt paths to radicalization to violence, identify recruitment patterns, and provide metrics to help measure our efforts to counter radicalization to violence? d. How can we make it harder for terrorists to use the internet to mobilize, facilitate, and operationalize attacks, and make it easier for law enforcement and the intelligence community to identify terrorist operatives and prevent attacks?" See: Danny Yadron, 'Agenda for White House Summit with Silicon Valley' *The Guardian* (8 January 2016) <http://www.theguardian.com/technology/2016/jan/07/white-house-summit-silicon-valley-tech-summit-agenda-terrorism> accessed 30 March 2016.

[556] 'Growing Threat of Violent Extremism Demands Unified Response, UN Chief Tells Summit' *UN News* (29 September 2015) <http://www.un.org/apps/news/story.asp?NewsID=52041#.Vu8KOceDAla> accessed 30 March 2016.

activity" is a notion that may cover a very diverse set of conducts and materials in different countries (and under different circumstances), what states have been doing, in effect, is the promotion a primarily *domestic* agenda of censorship.[557] For instance, an artwork that criticises surveillance might be considered as antithetical to the counterterrorist policies of a particular government and, accordingly, censored by a social networking website that has been assigned with the duty of safeguarding such policies. In this case, the supposedly "universal" character of the counterterrorist combat would acquire very specific domestic characteristics. This gradual move from public control to private control of the Internet may produce serious questions around the protection of net neutrality across all of its levels (services and infrastructures) and expressions (public and private).

In all of the cases that we have referenced, the most important – perhaps – element is that online censors operate under conditions of complete anonymity, and bear no accountability to the users of networking platforms. Such practices of content moderation lie in contrast with the principles of transparency that are supposed to characterise any democratic regulatory framework. The paradoxical character of this modus operandi becomes even more evident when we consider the gap between social media's corporate motives and the fact that their officially stated objectives are defined by the effort "to give people a place to share and connect freely and openly, in a safe and secure environment".[558] Therefore, given that social media platforms are corporations *before* being online communities, it would seem quite reasonable that all of their employees (including the censors) are accountable to their stakeholders above any other form of public accountability. Notably, when Twitter published its new Terms of Service in January 2012, it justified the decision to update its censoring practices by referring not only to the platform's responsibilities as an online community, but also to its need to expand into new territories-markets.[559] Finally, it is worth noting that most of the content moderators working for social media platforms are based thousands of miles away from the companies' headquarters. By outsourcing the content moderation processes to newly industrialised countries (NICs), like the Philippines, social networking websites are in a position to save

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[557] Courtney C Radsch, 'Privatizing Censorship in Fight against Extremism Is Risk to Press Freedom' (*Cpj.org*, 16 October 2015) <https://www.cpj.org/blog/2015/10/privatizing-censorship-in-fight-against-extremism-.php> accessed 30 March 2016.
[558] 'Explaining Our Community Standards and Approach to Government Requests' (*Newsroom.fb.com*, 15 March 2015) <https://newsroom.fb.com/news/2015/03/explaining-our-community-standards-and-approach-to-government-requests/> accessed 30 March 2016.
[559] 'Tweets Still Must Flow' loc. cit.

very large amounts of money[560] – a fact that also lends to the censors' work an evident class-based character.

In most cases, however, the state prefers to keep the role of the ultimate censor for itself. This is particularly evident in the cases in which governments come to the conclusion that social media and other networking platforms may damage their political interests. Notably, this has not happened only in cases of countries that have had a long-standing negative record on freedom of speech (e.g. China, Iran, Russia and Turkey), or in the countries of the Arab Spring (e.g. Egypt, Tunisia and Libya), but also in countries that are considered as fully functioning liberal democracies. The most high-profile case, which exemplifies this context, has been the censorship of the WikiLeaks platform. More specifically, following the mass release of diplomatic cables by the website on 28 November 2010, the Obama administration banned hundreds of thousands of federal workers from having access to the website, starting from 3 December 2010. Two days later, the main server of WikiLeaks in France also went offline, after the country's Industry Minister proclaimed that hosting the website could damage France's diplomatic relations with the rest of the world. Notably, even before the November 2010 revelations, countries had already started taking steps against WikiLeaks – for instance, Australia had banned the website as early as in May 2009.[561] Interestingly, the Australian government's move took place less than two months after WikiLeaks had published what appeared to be the complete list of the 2,395 websites banned by the Australian Communications and Media Authority (ACMA).[562] Beyond those individual cases of censorship, however, the WikiLeaks disclosures have managed to highlight what the senior counsel of the Electronic Frontier Foundation David L Sobel has described as "two longstanding and related problems that hinder the public's right to know about governmental activities – the overclassification of information and the failure of transparency laws to operate in an effective manner".[563] As Sobel underlines, both of those elements "contribute to an environment in which unauthorised disclosures are more like to occur". As a result of those conditions, we have

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[560] Adrian Chen, 'The Laborers Who Keep Dick Pics and Beheadings out of Your Facebook Feed' *Wired* (23 October 2014) <http://www.wired.com/2014/10/content-moderation/> accessed 30 March 2016.

[561] For a comprehensive list of cases, see: Jo Glanville (ed), *The Net Effect: The Limits of Digital Freedom*, Index on Censorship vol. 40 (SAGE Publications 2011) pp. 110 – 120.

[562] Oliver Luft, 'Wikileaks Taken Offline after Publishing Australia's Banned Websites' *The Guardian* (19 December 2009) <http://www.theguardian.com/media/pda/2009/mar/19/wikileaks-banned-australian-websites> accessed 30 March 2016.

[563] David L Sobel, 'The Urge to Classify' in Jo Glanville (ed), *The Net Effect: The Limits of Digital Freedom*, Index on Censorship vol. 40 (SAGE Publications 2011) p. 30.

been "trapped" in a vicious circle of constantly increasing regulation, control and surveillance, which is directed against some of the most basic democratic principles: transparency and accountability.

Therefore, control over the Internet has not been simply a response to "extraordinary" conditions, such as information leaks, but rather, the consistent aim of the regulatory frameworks that have been applied on a national as well as on a transnational level. In this context, Australia's Senate passed in June 2015 a highly controversial anti-piracy website-blocking law, whose lack of definitions and specificity in the description of who is to be prosecuted in cases of online copyright violations has left room for diverse and potentially dangerous interpretations for freedom of speech in the country.[564] Notably, the passing of the law came after several years of pro-filtering campaigning from many government officials,[565] although such initiatives have rarely had targeted and, thus, successful results.[566] Furthermore, since 2010 lawmakers in France have taken considerable steps towards increasing online filtering and forcing ISPs to filter Internet traffic, even making provisions for wiretapping Internet networks and phone lines.[567] And, at the same time, important EU officials, like the Germany's Justice Minister, have expressed concerns over the Internet policies followed in Europe, which cultivate an online "blocking culture" that might create mistrust between people and their elected governments.[568]

However, the country that continues to determine to a large extent the global trends on Internet regulation is USA.[569] In one of the most controversial pieces of legislation

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[564] Ben Grubb, 'Australian Senate Passes Controversial Anti-Piracy, Website-Blocking Laws' *The Sydney Morning Herald* (22 June 2015) <http://www.smh.com.au/digital-life/digital-life-news/australian-senate-passes-controversial-antipiracy-websiteblocking-laws-20150622-ghuorh.html> accessed 30 March 2016.

[565] Glanville (ed), *The Net Effect: The Limits of Digital Freedom*, op. cit., p. 110.

[566] In one of the most infamous cases in recent years, the Australian Securities and Investments Commission (ASIC), blocked in 2013 over 250,000 websites in its attempt to block just one fraudulent site, as it targeted the server on which the website was hosted, rather than simply its URL. See: Ben Grubb, 'How ASIC's Attempt to Block One Website Took down 250, 000' *The Sydney Morning Herald* (5 June 2013) <http://www.smh.com.au/technology/technology-news/how-asics-attempt-to-block-one-website-took-down-250000-20130605-2np6v.html> accessed 30 March 2016.

[567] Glanville (ed), *The Net Effect: The Limits of Digital Freedom*, op. cit., p. 114.

[568] ibid.

[569] One of the first attempts to control the Internet in the US came with the 1996 Communications Decency Act (CDA), whose aim was to impose standards of online decency and to make punishable the circulation of material that could be deemed as "offensive". In June 1998, the US Supreme Court declared the Act unconstitutional. Just a few years later, the US Patriot Act of 2001 and The Homeland Security Act of 2002, which were drafted as a response to the terrorist attacks of 9/11, even contained the suggestion that ISPs should read their customers' emails. See: Chris Atton, *An*

proposed in recent history, the US House of Representatives and Senate considered passing in 2012 the Stop Online Piracy Act (SOPA) and its sister bill, the PROTECT IP Act (PIPA).[570] The two pieces of legislation would have given the right to the U.S. Department of Justice and copyright holders to request from Internet service providers (ISPs) the full blocking of websites that facilitated, in some form, piracy. This power would apply to websites originating both from the U.S. and abroad, and it would – at least partly – privatize the enforcement of copyright legislation. In addition, the two laws would radically expand the definition of what constitutes copyright infringement and they would allow the full blocking of websites even when piracy took place without them being directly responsible. Therefore, a strong context of user surveillance and self-censorship would become necessary for any website to avoid the danger of being blocked. On 18 January 2012, thousands of websites including Wikipedia, coordinated a full service blackout in order to highlight the dangers posed by SOPA and PIPA to free speech, or even the very stability of the Internet as a structure, through DNS (Domain Name System) filtering.[571] As a result, the proposed legislation was withdrawn two days later by the House Judiciary Committee (20 January 2012). However, the pressure towards adopting the direction of SOPA and PIPA still remains strong: notably, in 2014, the powers of the International Trade Commission were extended, so that the quasi-judicial agency is permitted to rule not only on the importation of physical products, but also data.[572]

Finally, this orientation towards merging the legal status of products and data is exemplified by a decision taken by the US Commodity Futures Trading Commission (CFTC) in September 2015. More specifically, following a legal battle against a bitcoin exchange, CFTC managed to rule that bitcoin and all digital currencies constitute commodities and,

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Alternative Internet: Radical Media, Politics and Creativity (Edinburgh University Press, Edinburgh 2004) p. 16.

[570] Jenna Wortham, 'Public Outcry over Antipiracy Bills Began as Grass-Roots Grumbling' *The New York Times* (19 January 2012) <http://www.nytimes.com/2012/01/20/technology/public-outcry-over-antipiracy-bills-began-as-grass-roots-grumbling.html?pagewanted=1&ref=technology> accessed 5 April 2016.

[571] 'Dear Congress, It's No Longer OK to Not Know How the Internet Works' *Motherboard* (16 December 2011) <http://motherboard.vice.com/blog/dear-congress-it-s-no-longer-ok-to-not-know-how-the-internet-works> accessed 30 March 2016.

[572] Russell Brandom, 'The MPAA Has a New Plan to Stop Copyright Violations at the Border' *The Verge* (2 January 2015) <http://www.theverge.com/2015/1/2/7481409/the-mpaa-has-a-new-plan-to-stop-copyright-violations-at-the-border> accessed 30 March 2016.

thus, fall under its own jurisdiction.[573] The legitimacy of this decision was based on an actual problematic characteristic of bitcoin, which is its hybrid nature as a commodity-currency. However, what the decision of CFTC entails is that cryptocurrencies are fully deprived of their role as currencies and have to be treated *exclusively* as non-financial entities, just like crude oil or wheat.[574] Although the full consequences of this set of conditions on the prospects of cryptocurrencies cannot be fully evaluated yet, the CFTC decision constitutes an important element of pressure on the potentialities that many activists and politically engaged cultural producers diagnosed in the proliferation of cryptocurrencies.

As we have already noted, Marx and Engels underline in *The Communist Manifesto* that as a response to any economic crisis the instruments of capitalist production attempt to either expand into new markets, or exploit further the already existing ones. In the context of Data Capitalism and its relationship with intellectual and cultural production, it becomes evident that the main vehicle in order to materialise these goals is an all-encompassing process of datatization, which is realised through a variety of corporate tools. In the case of search engines and online platforms, this function might be rather easy to identify, as artists are confronted with processes that are implemented on the World Wide Web as a whole (e.g. Googlization and online censoring policies). This modus operandi applies even when the strategy of online corporations has to be "modified" in order to capture the data of *all* cultural products as subsections of a rapidly expanding Web (e.g. Google Cultural Institute). However, in the case of intellectual devices such as post-internet art, the previously described process is considerably more complex, given that an artwork has to be successfully "depoliticised" before it becomes datatized and quantified as a product of the art market. This particular area of expansion is, perhaps, one of the few fields within which Data Capitalism can still seek a "new" material *and* immaterial market to capture. Nevertheless, even within the relatively underexploited field of new media cultural production, it would seem that the polyvalent control of the Internet by corporations, with the blessing of sovereign states and (trans-)national regulatory institutions, has largely set the limits within which socially and politically engaged artists

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[573] 'CFTC Orders Bitcoin Options Trading Platform Operator and Its CEO to Cease Illegally Offering Bitcoin Options and to Cease Operating a Facility for Trading or Processing of Swaps without Registering' (*Cftc.gov*, 17 September 2015) <http://www.cftc.gov/PressRoom/PressReleases/pr7231-15> accessed 30 March 2016.

[574] Luke Kawa, 'Bitcoin Is Officially a Commodity, according to U.S. Regulator' *Bloomberg* (17 September 2015) <http://www.bloomberg.com/news/articles/2015-09-17/bitcoin-is-officially-a-commodity-according-to-u-s-regulator> accessed 30 March 2016.

can operate as agents of change. This context is particularly pertinent to tools with (at least some) subversive in systemic terms potentiality. For instance, in the case of digital currencies, the main agents of Data Capitalism have managed to either appropriate them (e.g. Amazon and other online mega-corporations have created their own digital currencies and/or have adopted already existing ones); or, when this has not been possible, they have taken advantage of the structural shortcomings of crytpocurrencies in order to thoroughly delimit their function (e.g. through the decisions and operational frameworks set by regulatory bodies).

As a result of this multifaceted paradigm of "economic institutionalisation", the already established modes of wealth accumulation are kept secure and our dematerialised cultural milieu maintains an undisrupted connection with the context of quantification that defines our current economic model. Therefore, the obstacles that have been analysed in this chapter have collectively indicated that Data Capitalism does not constitute simply a mode of production whose main raw material and output is information, as we claimed in the first chapter of this thesis; rather, Data Capitalism constitutes an economic system whose main raw material and output is *corporate-owned* information. This entails that those politically engaged artists who base their practices on networked media have to acknowledge the fact that their works may begin their online lives from a rather unprivileged ideological and – often – practical position. Even if we consider that such works are still in a position to materialise at least some of the aspirations of their creators, the challenges that they have to face in order to fully develop their capacities are significant. The next chapter of this thesis will attempt to define with more precision the scale of those capacities, by locating them within the ideological spectrum of Marxist and post-Marxist thought. Through this process, the thesis will propose a methodology that could support and strengthen the role of political Web-based practices in the current historical conjuncture and, possibly, in the future.

<center>Chapter 6</center>

Changing a Changing World: Art Within Endless Crisis

The *Manifesto* Criterion

In their seminal manifesto, Marx and Engels make no reference to the future of art in the context of communism. Nevertheless, they clearly position culture as an element that is largely defined by the dominant mode of production, thus portraying it as a tool that supports the perpetuation of the economic system from which it was born. With regard to bourgeois culture, the manifesto's authors accentuate its highly uncritical and enslaving character, making the assertion that, "just as, to the bourgeois, the disappearance of class property is the disappearance of production itself, so the disappearance of class culture is to him identical with the disappearance of all culture. That culture [...] is a mere training to act as a machine".[575] To a certain extent, the role of art in a future communist society is investigated in some of the two authors' other writings, like – for instance – in *The German Ideology*, in which the totally open, democratic and "distributed" character of communist cultural production is highlighted.[576] However, all those traits are supposed to materialize *well after* the communist revolution has taken place. What remains unclear is the role and the character of art in the period leading to the revolution, and during the revolution itself. Unsurprisingly, in the case of the *Communist Manifesto*, the lack of a detailed description for cultural production becomes almost a necessity, if we take into account the succinct nature of the manifesto and its strict political focus. Yet, the question of what kind of art can be considered as revolutionary art persists. In view of this thesis' scope, we could ask: could the art that has been analysed in the previous chapters foster a socio-political revolution? Or, is it – at least – capable of contributing to its formulation in the terms that Marx and Engels set out? In the end, what is the real political potential of Web-based art in the context of Data Capitalism?

Marx and Engels might not provide us with any "instructions" in their manifesto as regards the character of revolutionary art, but they give a much clearer description of the

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[575] Marx and Engels, *The Communist Manifesto*, op. cit., p. 58.
[576] Marx and Engels, 'The German Ideology', op. cit., 206.

political responses that can be considered as truly revolutionary (i.e. communist), and those that cannot. In the third part of the manifesto, their analysis of "Communist and Socialist Literature" sets out this ideological context, as it identifies three main categories: Reactionary Socialism, Conservative or Bourgeois Socialism and, finally, Critical-Utopian Socialism and Communism. Within Reactionary Socialism, Marx and Engels first locate the tradition of Feudal Socialism, which describes the conditions in France and England in the 1830s. During this period, the Aristocracy attempted to rally the working classes against the rising bourgeoisie, "pointing out that their mode of exploitation was different to that of the bourgeoisie".[577] Petty-Bourgeois Socialism is the second tradition identified, and it encompasses the clash between the old "middle" classes and the modern bourgeoisie (the new middle class) in their effort to secure a better socioeconomic position. Finally, the third manifestation of Reactionary Socialism is German or 'True' Socialism, which refers to the incapacity to implement a set of socialist ideas (transferred from France to Germany) without, at the same time, reproducing the existing social conditions. In this case, theoretical investigation becomes an agent for the perpetuation of the status quo, as it does not lead to any action – political change and social transformation remain academic issues merely discussed by the intelligentsia of a particular nation (Germany in the analysis of the manifesto).

Conservative or Bourgeois Socialism is the second main category of Socialist Literature that Marx and Engels examine. In this case, the members of the working class are not asked to become allies with the Aristocracy, but rather with the bourgeoisie in order to survive in the new capitalist landscape. As the two authors note, "economists, philanthropists, humanitarians, improvers of the condition of the working class, organisers of charity, members of the societies for the prevention of cruelty to animals, temperance fanatics, hole-and-corner reformers of every imaginable kind"[578], altogether aim at preserving the existing relations between capital and labour. Thus, they generated "a bourgeoisie without a proletariat"[579], as they nurtured a set of social conditions from which the notion of class struggle had been exiled. This outcome was secured through the implementation of closely controlled reforms. The final category in this section of *The Communist Manifesto* is Critical-Utopian Socialism and Communism, within which Marx and Engels address the attempts by Henri de Saint-Simon, Charles Fourier and Robert Owen (amongst others) to establish utopian societies, or modes of social being. The main

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[577] ibid., p. 68.

[578] Marx and Engels, *The Communist Manifesto*, op. cit., p. 76.

[579] ibid., p. 76.

contribution of those efforts has been their recognition of the proletariat as the most suffering and unprivileged class. In addition, their critical character is exemplified by the fact that they attack the constituent principles of existing societies and they, accordingly, propose actions such as "the abolition of the distinction between town and country, of the family, of the carrying on of industries for the account of private individuals, and of the wage system".[580] However, the aforementioned initiatives were all "doomed to fail", for they considered themselves as "superior to all class antagonisms".[581] In other words, instead of promoting revolutionary action against the bourgeoisie, they appealed to the whole of society without making any distinction of class. As a result, by not advancing specifically the political causes of the working classes, and by adopting only non-confrontational means, their role gradually became identical to that of reactionary or conservative socialists.

Accordingly, if we were to position the Web-based artworks and interventions that we have examined in this thesis within the ideological framework that Marx and Engels delineate, practically all of them could face the accusation of being "doomed to fail". Firstly, by not being able to foster the creation of a revolutionary proletariat during, or in the aftermath of the crisis, they have failed to produce the most important "ingredient" for a communist revolution.[582] In addition, what this failure entails is that all artworks may ultimately promote a theoretical or "diagnostic" rather than practical approach to class struggles, which is falsely projected as the sole mode of resistance to capitalist expansion.[583] As a result, the "intoxicating effects of self-deception"[584] could be diagnosed within the social body, leading to the perpetuation of the political and economic enslavement of its majority to the classes that possess and control the instruments of production. In certain types of technocultural initiatives, this reactionary, or conservative position with regard to the mode of production is rather eloquent. For instance, the proliferation of hackathons in major cities around the world can be considered as a phenomenon with a potentially strong alienating dimension. The latter stems from the very composition of hackathons, as events that regularly "merge" the art world and the corporate world by bringing together programmers, software developers, as well as designers and artists with a vivid interest in networked technologies. The objective of such

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[580] ibid., p. 80.
[581] ibid., p. 79.
[582] ibid., p. 68.
[583] ibid., p. 73.
[584] ibid., p. 71.

groups is to collaborate within a limited period of time (typically between a few hours and a week), in order to produce a specific outcome, which might vary from a new smartphone application for city navigation to a new online video game, or a downloadable digital artwork. Most importantly, at the end of the process, the outcomes of all individual groups are presented in demonstrations, during which the participants may attract the interest of investors, such as start-up businesses and venture capitalists. Therefore, despite adopting as a starting point the sharing of knowledge, skills and creative ideas, hackathons often employ those commons in order to lead to the production of new corporate-owned wealth.

Nevertheless, it is worth noting that even when we consider Web-based anti-capitalist initiatives with an explicitly aggressive character against the socioeconomic and political establishment, it still remains rather difficult for them to avoid being characterised as either "reactionary" or "conservative" modes of political expression. This incapacity of fulfilling the *Communist Manifesto's* rigid criteria of revolutionary action is distinctly exemplified in the work of the hacktivist group Anonymous. Notably, the online interventions of the group constitute a paradigm of dissent that has influenced many artists in the aftermath of the crisis, like for example, the hacking-based projects of Paolo Cirio, or – even – several of the hacking-inspired interventions of artists and artistic collectives in public spaces. The principal aim of Anonymous is not to attack all aspects of the World Wide Web; rather, the members of the group are focusing their attacks on the online presence of government agencies, organizations and corporations that they consider to be violating human rights, equality and democracy. Through their distributed denial-of-service attacks (DDoS), Anonymous usually interrupt or suspend services of a host connected to the Internet, thus temporarily disrupting their normal operation. In other words, Anonymous do not pose a threat to the infrastructure of the Web, but rather to specific manifestations of Internet's exploitative control by corporations and governments.

This limited – in Marx's revolutionary terms – scope may also be recognized in the activities of several politically engaged artists, who aim to formulate an anti-systemic cultural paradigm capable of replacing that of Data Capitalism. The artworks and initiatives of such artists attack the cultural products that might be considered as systemic, however, they rarely have an impact on the function of the World Wide Web as the infrastructure that gives birth to those products and sustains them. This particular critique can be addressed against the artistic initiatives that have aimed at building on the legacy of tactical media during the crisis, like – for instance – Dmytri Kleiner's Telekommunisten Network. In addition to this set of criticisms, however, the Network's ideological approach

also possesses another trait that may place tactical media artivists outside the Marxist framework: their envisioned mode of political organization. As literary theorist and linguist Zac Zimmer notes, Kleiner "tellingly does not title this document 'The Manifesto of the Telekommunist Party', after Engels and Marx's original, because for Kleiner, there is no party. [Rather, he calls it 'The Manifesto of the Telekommunisten Network'] The TKM 'forks' Marxism away from the Party and towards anarchism, and Kleiner's manifesto is, ultimately, an anarchist proposal against both state and party".[585] Therefore, it comes as no surprise that the Telekomunisten Network ultimately prioritizes self-organization over revolution, in an overt deviation from the "orthodox" political course described by Marx and Engels.[586]

Exploring the Shades of "Red"

The "shortcomings" that we have highlighted above constitute rather easily identifiable deviations from the rigid principles that Marx and Engels set out in the *Communist Manifesto*. However, a more dispassionate assessment of the artworks and initiatives examined in this thesis would have to take into account the fact that at no point in history has an artwork ignited a revolution by itself. Quite simply, the expectation from an artist, or a group of artists, to produce such radical socio-political change merely through the cumulative effect of their works and public interventions would seem like a highly naïve presumption, which ignores the much wider synergies of social and political groups that are required. Therefore, another kind of evaluative framework would have to be found in order to determine with more precision the relationship between Marxist thought and the ideological scope of the anti-capitalist Web-based art that has been produced since the financial crisis of 2008. An initial answer to this question can be given by attempting to locate the artistic practices that we have analysed within the work of post-Marxist theorists whose main focus has been technology's ideological nature. A categorization that may facilitate an investigation of this nature can be found in Nick Dyer-Witheford's book *Cyber-Marx* (1999), in which three major schools of post-Marxist thought are identified: scientific socialists, neo-Luddites, and post-Fordists. Since the publication of Dyer-Witheford's book,

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[585] Zac Zimmer, 'Manifesting the Internet: A Review of Dmytri Kleiner's the Telekommunist Manifesto' (2013) *Política Común* vol. 4 <http://quod.lib.umich.edu/p/pc/12322227.0004.014?view=text;rgn=main> accessed 3 April 2016.
[586] Kleiner, op. cit., p. 27.

several complimentary approaches have been developed, which will also be taken into account in order to delineate the relevance of Marx's theorizations to the socio-political impact of new technologies.

As it has already been suggested in several parts of this thesis, this impact has been largely portrayed in negative, neo-Luddite terms, given that for several thinkers, networked media have only contributed to the development of even harsher "versions" of Late Capitalism. In this context, Kevin Robins and Frank Webster systematically demythologise in their works the notion of the "Information Revolution",[587] suggesting that it has been an intellectual device for the concealment of Cybernetic Capitalism. The latter should be perceived as a more effective phase of Late Capitalism, "in which everyday, and apparently insignificant, activities, deportment, and interchanges are disciplined and controlled", through the extensive use of new media technologies.[588] A similar claim is made by Manuel Castells, who notes that Informational Capitalism is the product of a "capitalist perestroika",[589] which is driven by a relentless search for profit through the bringing together of information technology and the technology of information.[590] The Internet is the child of this "marriage", and according to Dan Schiller, it "comprises nothing less than the central production and control apparatus of an increasingly supranational market system".[591] Schiller rejects any kind of "messianic" perspective on Digital Capitalism – a point of view that is shared by Nick Dyer-Witheford, who vehemently refutes the utopian promises of information technologies in the context of what he term as "High Technology Capitalism".[592] In overt contrast to any kind of utopian claims, Dyer-Witheford argues that "there is now widespread acceptance even on the left that aspirations for proletarian autonomy have met a technological nemesis – that capital may have succeeded in achieving its age-old goal of emancipation from the working class".[593] As it has already been suggested, Italian philosopher Maurizio Lazzarato defines immaterial labour as the

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[587] Kevin Robins and Frank Webster, *Times of the Technoculture: From the Information Society to the Virtual Life* (Routledge, London 1999).

[588] Kevin Robins and Frank Webster, 'Cybernetic Capitalism: Information, Technology, Everyday Life' in Vincent Mosco and Janet Wasko (eds), *The political economy of information* (University of Wisconsin Press, Madison 1988) p. 71.

[589] Manuel Castells, *The Rise of the Network Society: The Information Age: Economy, Society and Culture* (Blackwell, Oxford 1996), p. 18.

[590] ibid., p. 160.

[591] Dan Schiller, *Digital Capitalism: Networking the Global Market System* (The MIT Press, London 2000) p. xiv.

[592] Nick Dyer-Witheford, *Cyber-Marx: Cycles and Circuits of Struggle in High-Technology Capitalism* (University of Illinois Press, Chicago 1999).

[593] ibid., p. 79.

source of the proletariat's enslavement,[594] which becomes an instrument of intense depoliticization. The latter is considered by political theorist Jodi Dean as main feature of Communicative Capitalism – a theorisation of Late Capitalism characterised by the dominance of fantasy and technology fetishism, which together exploit and manipulate emotion, through the various modes of online affective labour.[595] Finally, Bernard Stiegler locates this process of depoliticization in the context of what he term as "Cognitive Capitalism" – a socioeconomic system defined by the lack of knowledge of the prospective proletariat that emanates from its lack of memory. As Stiegler explains, "their memory has passed into the machine that reproduces gestures that the proletariat no longer needs to know – they must simply serve the reproductive machine and thus, once again, they become serfs".[596]

On the other side of the post-Marxist ideological spectrum, we may locate less hostile approaches to new media technologies. Those have been formulated by theorists who have either seen the rise of networks through the lens of technological determinism (scientific socialists), or through a post-Fordist perspective that has attempted to negotiate the positive aspects of living with a networked capitalist milieu. In the former case, we can find theorists who have been largely influenced by the work of Ernest Mandel, who claimed that "capitalism is incompatible with fully automated production in the whole of industry and agriculture"[597]. As Mandel explained, due to technological innovation "in the long run the fall in the average rate of profit is inevitable",[598] and this entails that an economic crisis is much more likely to occur. Accordingly, with every new crisis (as Marx and Engels have argued in the *Communist Manifesto*), the capitalist system of accumulation comes a step closer to its collapse. Following the events of 2008, several political economists have connected the crisis with Marx's law of the tendency of the rate of profit to fall (TRPF), which occurs due to the advances in technology.[599] Despite the opposite view, which has

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[594] Maurizio Lazzarato, 'Immaterial Labor' in Paolo Virno and Michael Hardy (eds), *Radical Thought in Italy: A Potential Politics* (University of Minnesota Press, Minneapolis 1996).

[595] Jodi Dean, 'Communicative Capitalism, Circulation and the Foreclosure of Politics' in Megan Boler (ed), *Digital Media and Democracy: Tactics in Hard Times* (The MIT Press, Cambridge MA 2008) pp. 101 – 121.

[596] Stiegler, *For a New Critique of Political Economy*, op. cit., p.35.

[597] Ernest Mandel, *Late Capitalism* (New Left Books, London 1975) p. 110.

[598] Ernest Mandel, *An Introduction to Marxist Economic Theory*, (Pathfinder Press, New York 2011) p. 70.

[599] Marx analyses the tendency of the rate of profit to fall (TRPF) in chapter 13 of *Das Kapital*'s third volume.

been expressed even by Marxist economists,[600] theorists like Alan Freeman (the principal economist for the Greater London Authority from 2000 to 2011) have largely managed to demonstrate that the rising rate of profit since the economic crisis of the 1970s has been a myth. More specifically, in his study of the US and the UK economies (the countries with two of the most powerful financial centres in the world – New York and London), Freeman notes that the documented rise in the rate of profit over this period is the result of a miscalculation, as economists have been misleadingly avoiding to take into account the capital tied up to marketable financial instruments (particularly securitized instruments) *in addition* to commercial and landed capital.[601] Accordingly, Freeman calls for a correction in the traditional measure of profit rate, which – once applied – proves the accuracy of Marx's theorization.[602] This confirmation can be directly associated with the rise of the new technological instruments of production over the last three decades, as other theorists, like Andrew Kliman, have argued.[603] Therefore, within this deterministic context, one could readily assert that there is not much need for political mobilization, given that our capitalist system is heading towards more self-generated crises, which shall ultimately bring it to its collapse.

Finally, in contrast to the overtly antagonistic neo-Luddite perspective, and far from the determinism of scientific socialists, post-Fordists (or, additionally, "postmodernists" in

[600] See: Fred Moseley, 'Some Notes on the Crunch and the Crisis' (2008) *International Socialism* no. 119 <http://www.isj.org.uk/index.php4?id=463&issue=119> accessed 3 April 2016; Fred Moseley, 'The U.S. Economic Crisis: Causes and Solutions' (2009) *International Socialist Review* no. 64 <http://www.isreview.org/issues/64/feat-moseley.shtml> accessed 3 April 2016; Gérard Duménil and Dominique Lévy, *Capital Resurgent: Roots of the Neoliberal Revolution* (Derek Jeffers tr, Harvard University Press, Cambridge, MA 2004); and Gérard Duménil and Dominique Lévy, 'The Profit Rate: Where and How Much Did It Fall? Did It
Recover? (USA1948-1997)' (*Jourdan.ens.fr*, 2005) <http://www.jourdan.ens.fr/levy/dle2002f.pdf> accessed 3 April 2016.
[601] Alan Freeman, 'The Profit Rate in the Presence of Financial Markets: A Necessary Correction' (2012) *Journal of Australian Political Economy* no. 70 pp. 167-192.
[602] As Freeman notes in his conclusions, "once credit becomes a marketable instrument it competes with all other uses of capital for a share of surplus value, and therefore bears down on the profit rate every bit as much as commerce, landownership, or industrial production. The differences inform us only that this is a very peculiar and special *kind* of claim on surplus value, one on whose voracity the market sets no limits. For this reason the correction seems to me fully valid, consistent with Marx, and worthy of much more systematic attention than the Marxists, or anybody else for that matter, has so far paid it". (ibid., p. 189.)
[603] American Marxist economist Andrew Kliman notes: "Since 1982, the ratio of surplus-value to advanced capital seems to have fallen in relationship to the rates of profit derived from official government data, because of a marked increase in depreciation due to obsolescence (moral depreciation) resulting from increased employment of computer technology". See: Andrew Kliman, *The Persistent Fall in Profitability Underlying the Current Crisis: New Temporalist Evidence* (The Marxist- Humanist Initiative, New York 2010) p. 101.

Dyer-Witheford's categorisation) have argued for some form of reconciliation, within our existing economic paradigm, between networked technologies and leftist social demands. In 1997, media culture theorist Douglas Kellner rejected both technophilic and technophobic approaches associated with new media technologies, opting instead for a more "open-ended" theorization.[604] As he noted, "computers, like broadcasting, can be used for or against democracy" and, as a result, the rise of new technologies requires a new generation of intellectuals who will define the content of the online public spheres that are under formation. Their goal should be "to increase the dissemination of critical and progressive ideas" in order to counterbalance the negative elements of the "ultracommodified world of technocapitalism". The significance of this mission becomes even more salient in his 1998 essay "New technologies, the welfare state, and the prospects for democratization", in which Kellner underlines that we are undergoing a "Great Transformation", and "as the new technologies become ever more central to every domain of everyday life, developing a progressive technopolitics in the new public spheres will become more and more important".[605] This interest in the notion of the online public sphere has been shared by media theorist Mark Poster, who also appears to leave wide open their exact character. As he explains, "in the absence of a coherent alternative political program the best one can do is to examine phenomena such as the Internet in relation to new forms of the old democracy, while holding open the possibility that what might emerge might be something other than democracy in any shape that we may conceive it given our embeddedness in the present".[606]

Interestingly, the distinctions between the post-Marxist approaches to technology that we have briefly analysed above became increasingly complex during the global financial crisis and – to an even greater extent – in the years that have followed it. This is vividly reflected in the fact that many of the theorists who have been leading the discourses in this field have attempted to re-evaluate their positions in view of the crisis and the socio-political changes that it has, or has not produced. More specifically, in *Aftermath: the*

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[604] Douglas Kellner, 'Intellectuals, the New Public Spheres and Techno-Politics' (*Pages.gseis.ucla.edu*) <https://pages.gseis.ucla.edu/faculty/kellner/essays/intellectualsnewpublicspheres.pdf> accessed 3 April 2016.

[605] Douglas Kellner, 'New Technologies, the Welfare State, and the Prospects for Democratization' in Andrew Calabrese and Jean-Claude Burgelman (eds), *Communication, Citizenship, and Social Policy: Rethinking the Limits of the Welfare State* (Rowman & Littlefield, Lanham 1999) p. 253.

[606] Mark Poster, 'CyberDemocracy: Internet and the Public Sphere' (*Humanities.uci.edu*, 1995) <http://www.humanities.uci.edu/mposter/writings/democ.html> accessed 3 April 2016.

cultures of the economic crisis (2012), Manuel Castells asserts that "we are entering a world with very different social and economic conditions from those that characterized the rise of global, informational capitalism in the preceding three decades".[607] Castells recognizes that the structural contradictions that were exposed by the crisis have produced a fertile ground for the blossoming of alternative economic practices, especially in the worst hit countries (e.g. Spain, Portugal and Greece). This is a development that has been possible thanks to the use of new communication and information technologies, such as free Wi-Fi networks, free radio stations, HackLabs, free software and programming initiatives, global peer-to-peer networks and the online collaboration of hacktivists.[608] Notably, Castells connects directly those blossoming economic practices with the rise of alternative cultural activities, which have been gradually embraced by all forms of art – from theatre and filmmaking to music, plastic arts and poetry.[609] Furthermore, Nick Dyer-Witheford argues in *Cyber-Proletariat* (2015), and more specifically in the chapter that shares the title of Castells' book ("Aftermath"), that the 2011 revolts might have passed, however, the system's resilience is still highly questionable.[610] Dyer-Witheford attributes such questions to "the explosive proletarianization and re-proletarianization that arises as huge tranches of the global population are rendered surplus to requirements by an increasingly automatic capitalism".[611] This updated view on the role of the proletariat and the limits of High Technology Capitalism is evidently different from his assertions made in *Cyber-Marx* (1999) regarding the irreversible emancipation of capital from the working class. Instead, given that "the 'general intellect' is now in the process of automating itself",[612] new class tensions and, thus, windows for socio-political changes may arise. As the author underlines, the "first step along this brick road is [...] for communists to acknowledge the new conditions of class composition".[613]

When applied to cultural production, however, both the old and the new post-Marxist theorizations that we have described fail to provide us with a holistic and summative view on what has been the common ideological direction of political Web-based

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[607] Manuel Castells, Gustavo Cardoso and João Caraça (eds), *Aftermath: The Cultures of the Economic Crisis* (Oxford University Press 2012) p. 1.
[608] ibid., pp. 220-221.
[609] ibid., p. 221.
[610] Nick Dyer-Witheford, *Cyber-Proletariat: Global Labour in the Digital Vortex* (Pluto Press, London 2015) p. 168.
[611] ibid., p. 184.
[612] ibid.
[613] ibid., p. 205.

art of the crisis. Quite evidently, we cannot claim that the artworks and cultural initiatives that we have examined are inspired by the principles of scientific socialism, as they do not adopt a deterministic stance on networked technologies, whose prospective evolution will supposedly lead to the automatic collapse of capitalism. On the contrary, cultural producers have consistently embraced, or – even – appropriated the means of communication offered by new media, with a view to actively generating socio-political change. At the same time, however, it is difficult to categorize their works as distinctly neo-Luddite, or post-Fordist. On the one hand, most of them attack explicitly what could be considered as the main systemic characteristics of Data Capitalism; and, on the other hand, artists regularly employ in their practices the corporate-owned technological tools through which the aforementioned negative characteristics materialize.

Therefore, the incapacity to collectively classify the Web-based art that has been produced since 2008 should not be attributed merely to the important ideological agitations generated by the crisis, as exemplified by the evolution of post-Marxists approaches to networked technologies that we have highlighted. Rather, our incapacity should be associated with the fact that in the case of politically engaged Web-based art, several contradictory elements of empowerment often co-exist within the same work. As media artist, theorist and net activist Pit Schultz notes,

> To be productive, her [i.e. the power user's] contributions, private or public, critical or affirmative, need to remain free gifts to generate the surplus on which other advanced services and enclosures can be built upon. The ambiguity of this low end info-communism in the eye of the hurricane of world wide integrated capitalism, has become one of the major resources of the neo-liberal knowledge economy and can be described as both revolutionary and reactionary.[614]

The ambiguity described by Schultz entails that if we wish to be more accurate in our assessment, we have to move beyond the rather obvious overarching ideological context that defines the works: namely, their expression of an anti-capitalist critique, which often attempts to find alternative modes of socioeconomic being that would successfully defy

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[614] Pit Schultz, 'The Producer as Power User', *Engineering Culture: On 'The Author as (Digital) Producer'* (Autonomedia 2005) p. 115.

Data Capitalism. Accordingly, in order to determine with precision the common strategic goals of the artists included in this thesis, and start forming a more complete image about the political role of Web-based art, we have to adopt a paradigm capable of overcoming the delimiting aspects of post-Marxist theorizations of new technologies. Therefore, instead of moving from a given political theorization (in our case, communist utopianism) to the evaluation of networks' nature and their use, we should attempt to follow the opposite route: namely, we should start from the artists' conceptualization of networks and, then, identify the overall relationship that they seek to develop between them and political ideology.[615]

From the Ideology of Networks to the Ideology of the Multitude

In his book *Networks and States* (2010), information political economist Milton L. Mueller provides a paradigm that fulfils the previously delineated characteristics.[616] His model puts forward an alternative conceptualization of the political spectrum, which is based specifically on the ideologies associated with Internet governance and their implications. In order to illustrate his premise, Mueller creates a diagram that features two axes: the horizontal axis ("nation-state axis") refers to the relationship between communication governance and national sovereignty; and the vertical axis ("networking-hierarchy axis") refers to the level of hierarchy on the basis of which the Internet should be governed.

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[615] Notably, a similar position is expressed by Walter Benjamin in "The Author as Producer". Benjamin notes that "instead of asking: what is the relationship of a work of art to the relationships of production of the time? Is it in accord with them, is it reactionary or does it strive to overthrow them, is it revolutionary? – in place of this question, or in any case before asking this question, I would like to propose another. Before I ask: how does a literary work stand in relation to the relationships of production of a period, I would like to ask: how does it stand in them? This question aims directly at the function that the work has within the literary relationships of production of a period. In other words, it aims directly at a work's literary technique". Available at: 'Walter Benjamin: The Author as Producer' (1970) *New Left Review I/62* <https://newleftreview.org/I/62/walter-benjamin-the-author-as-producer> accessed 3 April 2016.

[616] Milton L Mueller, *Networks and States: The Global Politics of Internet Governance* (The MIT Press, Cambridge MA 2010) pp. 253-271.
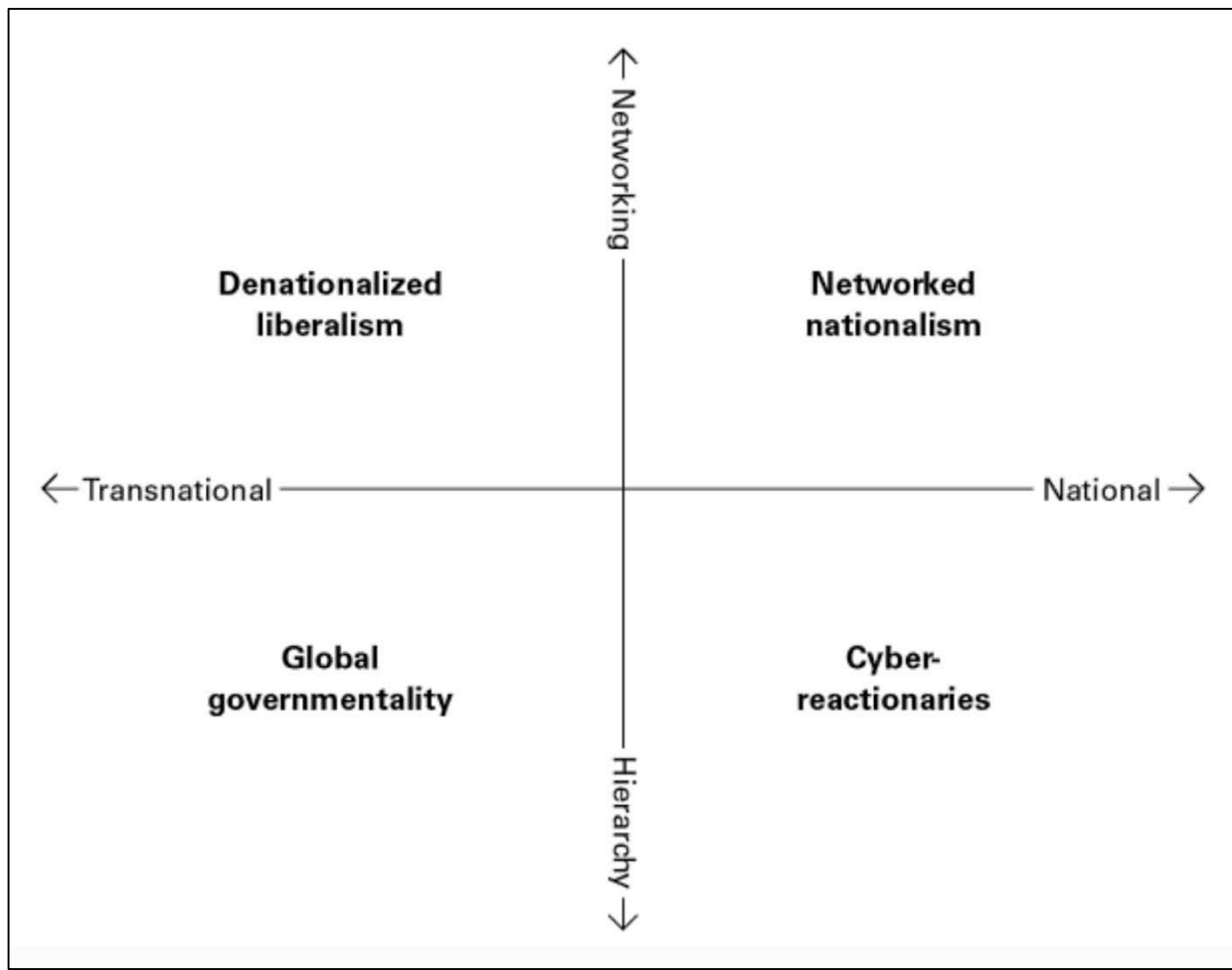
Figure 65: The quadrants of the political spectrum of Internet governance

On the nation-state axis, the right favours national political institutions, whereas the left advocates the establishment of new transnational institutions, which engage with the Internet as a geographically distributed entity. And, on the networking-hierarchy axis, the right favours highly hierarchical mechanisms of decision-making, whilst the left allows unilateral decisions to connect or disconnect, which would lead to a form of "peer governance". As a result of those two axes, the quadrants that are created can be associated with four distinct types of polity: denationalized liberalism, global governmentality, cyber-nationalism (networked nationalism), and cyber-conservatism (cyber-reactionaries). Accordingly, if we were to collectively connect the artworks and artist-led projects that we have examined with this "revised" political spectrum, we could relatively easily locate most of them lying closer to the upper-left quadrant of denationalized liberalism. As Mueller notes, a denationalized liberal governance of the Internet "recognizes the individual network participant, not states or corporations, as the fundamental source of legitimate global Internet governance and proposes to create new governance institutions around

them".[617] Correspondingly, most of the political Web-based artworks that have been produced since 2008 proclaim that emergent forms of social, political and economic control may only emerge from globally networked communities.[618]

Nevertheless, this initial categorization of cyber-libertarianism does not come without considerable structural problems. As Mueller himself recognizes, the kind of liberalism that he refers to would not be able to contribute to a redistribution of wealth, given that such an initiative "would require an overarching hierarchical power that would be almost impossible to control democratically" in the context of a completely open peer-to-peer model.[619] Most of the cultural producers whose practices we have analysed in this thesis do implicitly or explicitly acknowledge this danger when they propose potential structures of social, political and economic organization (e.g. in Paolo Cirio's *Global Direct*, Natalie Bookchin's *agoraXchange*, or e-flux's *Time/Bank*). In those cases, we could identify elements of global governmentality coexisting with liberalism in the artists' ideological scope. Therefore, it would be more accurate to conceptualize the position of post-crisis art on Mueller's diagram not as a *stable* spot in the quadrant of denationalized liberalism, but rather as a *"pendulum"* that oscillates between denationalized liberalism and a form of global governmentality that is based on the principles of socialism.

The previously described challenge emanates from the fact that online libertarianism can readily be either left-wing, or right-wing, depending on the path that our imaginary pendulum might ultimately follow. Quite predictably, perhaps, the most influential element that is capable of defining this path is the mode of public participation that a particular networked polity cultivates. As the composition and the evolution of the crisis' movements has demonstrated, the ideological axes of "nation-state" and "networking-hierarchy" can develop a rather antagonistic relationship, which may put under question the kind of collectivities "Occupy", "Indignados" or "Aganaktismeni" have actually been: have they been social movements, political movements, protest movements, all of those categories at once, or none of the above? In the largest part of the bibliography that has attempted to answer those questions, the main point of reference remains Negri and Hardt's proposition of the "multitude". However, as I will demonstrate, the dependence on the notion of the multitude creates even more problems to the ideological direction of the pendulum of networked polity than the ones that it resolves.

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[617] ibid., pp. 258-259.
[618] ibid., p. 269.
[619] ibid., p. 270.

Negri and Hardt (re-) define the multitude as a new kind of proletariat, which – however – refutes any kind of classification on the basis of demarcating the/a "working class" in contradistinction to the other socioeconomic classes.[620] Rather, Negri and Hardt's proletariat is one that possesses no uniform identity: "Insofar as the multitude is neither an identity (like the people) nor uniform (like the masses), the internal differences of the multitude must discover the common that allows them to communicate and act together. The common we share, in fact, is not so much discovered as it is produced".[621] The question that can be easily raised from this definition is how can the multitude create a new political and economic order, without the need to nurture the consciousness that is implied by the act of the discovery? In other words, is (class) consciousness a redundant prerequisite for the development of the new proletariat and, accordingly, for the initiation of revolutionary action in the current historical conjuncture?

In this case, the multitude is presented by Negri and Hardt as a "given" – a de facto formation within today's networked societies, rather than a dynamic stage in the development of a particular historical phenomenon. The two authors' "horizontalist" interpretation of the multitude lies in harmony with the "horizontal" character of the Web. And it entails accepting multitude's condition of multiplicity "as also automatically defining collective action, rather than as the point of departure for a complex process of social re-composition and symbolic articulation, facilitating the 'fusion' of individuals into a new collective agent".[622] However, this assertion comes in direct contrast with the very condition within which the multitude is called to operate in the first place: the Empire. As Negri and Hardt explain, the multitude functions both as the source of the Empire *and* against it: "The deterritorializing power of the multitude is the productive force that sustains Empire and at the same time the force that calls for and makes necessary its destruction".[623] Therefore, the two authors see Empire as a transitional state towards a new order of things, just like Marx and Engels see capitalism as an inescapable historical

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[620] Negri started exploring an expanded notion of the proletariat in the 1970s, and in 1982 he formulated for the first time an analytical context for "a new working class" composed of "social workers" whose role "now extended throughout the entire span of production and reproduction". See: Antonio Negri, 'Archaeology and Project: The Mass Worker and the Social Worker', *Revolution Retrieved: Writings on Marx, Keynes, Capitalist Crisis, and New Social Subjects (1967–1983)* (Red Notes, London 1988).

[621] Michael Hardt and Antonio Negri, *Multitude: War and Democracy in the Age of Empire* (Penguin, New York 2004) p. xv.

[622] Paolo Gerbaudo, *Tweets and the Streets: Social Media and Contemporary Activism* (Pluto Press, London 2012) p. 29.

[623] Hardt and Negri, *Empire*, op. cit., p. 61.

stage towards the realization of communism.[624] At the same time, however, Negri and Hardt theorize the multitude as a contradictory-yet-*stable* entity within the body of the Empire; similar, perhaps, to a liquid mixture that is incapable of changing its form by evaporating or solidifying, regardless of what is happening in its environment. Thus, what Negri and Hardt seem to be claiming is that the Empire might seize to exist, but the multitude may very well go on. The question to pose here is "as what?"

The main difficulty in contextualizing the previously described "gap" in the political character of the multitude emanates from the fact that the main element that defines its function is neither direction, nor focus – it is power. In his book *Insurgencies: Constituent Power and the Modern State* (1999), Antonio Negri argues that "the relationship between multitude and strength determines the meaning of history".[625] For Negri, the two concepts are inseparable, as the potentiality mediated by the multitude is, in fact, limitless: "the clash between revolutionary becoming and political constructions does not regard only a phenomenology of the historical process but reveals the incommensurability of the expression of the strength of the multitude".[626] Accordingly, the multitude has the capacity to radically change the course of history by merging "not only the strength of 'much' but also the strength of 'many,' that is, the strength of singularities and differences".[627] The latter do not constitute, according to Negri, a barrier for multitude's function and effectiveness, as its strength is "both unstoppable *and* aleatory".[628]

The foremost expression of this incommensurable power in today's networked milieu can be found in multitude's "swarm intelligence". Negri and Hardt borrow the term from cellular robotic systems and artificial intelligence in order to describe the complex way in which multitude's collective behaviour is the result of a decentralized-yet-creative structure. Starting from the original observation of swarm intelligence in nature, the two thinkers extend its relevance by noting that

> when a distributed network attacks, it swarms its enemy: innumerable independent
> forces seem to strike from all directions at a particular point and then disappear
> back into the environment. From an external perspective, the network attack is

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[624] Marx and Engels, *The Communist Manifesto*, op. cit., p. 51: "What the bourgeoisie therefore produces, above all, are its own grave-diggers. Its fall and the victory of the proletariat are equally inevitable".

[625] Antonio Negri, *Insurgencies: Constituent Power and the Modern State* (Maurizia Boscagli tr, University of Minnesota Press, Minneapolis 1999) p. 321.

[626] ibid., p. 318

[627] ibid., p. 308

[628] ibid., p. 305

described as a swarm because it appears formless. [...] The swarm model suggested by animal societies [...] assumes that each of the agents or particles in the swarm is effectively the same and on its own not very creative. The swarms that we see emerging in the new network political organizations, in contrast, are composed of a multitude of different creative agents. This adds several more layers of complexity to the model. The members of the multitude do not have to become the same or renounce their creativity in order to communicate and cooperate with each other. They remain different in terms of race, sex, sexuality, and so forth. What we need to understand, then, is the collective intelligence that can emerge from the communication and cooperation of such a varied multiplicity.[629]

Quite evidently, Negri and Hardt's description of multitude's intelligence does not comply with our traditional understanding of how (political) knowledge can be accumulated and, most importantly, how political consciousness can be developed.[630] It would seem that for the two thinkers communication alone is capable of fulfilling the political "agenda" of the multitude. In this context, it is worth noting that the two philosophers reference the French poet Arthur Rimbaud in an attempt to explain in more depth the nature of their premise: "Perhaps when we grasp the enormous potential of this swarm intelligence we can finally understand why the poet Arthur Rimbaud in his beautiful hymns to the Paris Commune in 1871 continually imagined the revolutionary Communards as insects. [...] This is a new kind of intelligence, a collective intelligence, a swarm intelligence, that Rimbaud and the Communards anticipated".[631]

The use of Rimbaud's poetry as a vehicle to understand the revolutionary condition that is nurtured by multitude's networked intelligence is particularly revealing, for it hints at what Negri and Hardt consider as the actual origin of multitude's power – love. Rimbaud's symbolist and highly suggestive works gave us a poetry driven by the senses. The fact that his poems influenced significantly the Surrealist movement is indicative of this radical approach, as Rimbaud rejected all established formal conventions in favour of a new literary technique that conveyed a fevered and "unmediated" passion for life.

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[629] Hardt and Negri, *Multitude: War and Democracy in the Age of Empire*, op. cit., p. 91.
[630] Negri and Hardt were not the first post-Marxist thinkers to theorise new social movements in the aforementioned terms. Notably, in their book *Hegemony and Socialist Strategy*, Ernesto Laclau and Chantal Mouffe reject "the confluence of struggles into a unified political space" (p. 152), privileging instead "the plurality of diverse and frequently contradictory position" (p. 84). See: Ernesto Laclau and Chantal Mouffe, *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics* (Verso Books, London 1985).
[631] Hardt and Negri, *Multitude: War and Democracy in the Age of Empire*, op. cit., p. 92.

Correspondingly, Negri identifies the power of the multitude with the power of the affect and the vehemence of passion that characterizes multitude's public expressions.[632] In *Insurgencies: Constituent Power and the Modern State*, Negri repeatedly uses the Latin word "cupitidas" (desire) in order to describe the basis on which multitude's constitutive power lies: "The strength of the multitude, the different degrees of a constitutive cupiditas [desire], and the transformation of this density and complexity of processes in union and love are thus the determinations that constitute an always new social being".[633] The constant expansion of this desire is what will drive the formation of the new political institutions of the multitude.

However, Negri and Hardt do not merely anchor their own perspective to the affect-love, but they also imbue love with a strong messianic character, by claiming that "both God's love of humanity and humanity's love of God are expressed and incarnated in the common material political project of the multitude".[634] Their "theological" rhetoric is also reflected in the apocalyptic terms in which they describe their faith in "the point of crisis and negativity around which, within sudden, untimely events and radical discoveries of different temporalities, the multitude comes to recognize its own strength".[635] This recognition will finally initiate *real* events, which will affirm the political character of the multitude as the social force that will attack Empire.[636] However, in order for the multitude to realize the previously described historical role, the two philosophers claim that "we need to recover today this material and political sense of love, a love as strong as death".[637] The notion of a certain historical "recovery" is crucial as the main challenge that we face in the current historical conjuncture; and it becomes particularly evident when Negri and Hardt theorise the social struggles that we are facing in terms of a "déjà vu". As they assert, "there is a sense of déjà vu when we see the reappearance of the struggles that have continually been passed down from those origins [the first humanist revolution]".[638]

Notably, Negri and Hardt underline in *Empire* that the most important survival strategy of capital is "changing the very composition of the proletariat".[639] In a rather ironic turn of events, it would seem that their interpretation of the multitude ends up doing exactly that. And, as it has already been suggested, the same claim could be made about

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[632] Negri, *Insurgencies: Constituent Power and the Modern State*, op.cit., p. 304.
[633] ibid., p. 305.
[634] Hardt and Negri, *Multitude: War and Democracy in the Age of Empire*, op. cit., pp. 351-352.
[635] Negri, *Insurgencies: Constituent Power and the Modern State*, op.cit., p. 321.
[636] Hardt and Negri, *Empire*, op. cit., p. 411.
[637] Hardt and Negri, *Multitude: War and Democracy in the Age of Empire*, op. cit., p. 352.
[638] Hardt and Negri, *Empire*, op. cit., p. 90.
[639] ibid., p. 268.

several social media platforms and networked participatory initiatives, both artistic and non-artistic. Those tools, on whose basis a variety of artivist practices have been developed, may – intentionally or unintentionally – nurture a monosemous interpretation of our socioeconomic environments, which is informed exclusively, or predominantly, by the affect; namely, a largely apolitical version of "cupitidas". The latter might be responsible for powerful expressions of public mobilisation, yet "in the [complete] absence of a formal organizational structure, collective action is always structured by the forms of communication responsible for 'setting the scene' for its display".[640] In other words, what appears to dominate the function of today's multitude is the *image* of its public expression. This process of spectacularization may produce a schism between the publicness of the intellect (as expressed in swarm intelligence) and the public sphere. As a result, instead of the creation of a revolutionary class, what we could identify here is the formation of a "pseudo-proletariat" – an entity that bears many of the formal characteristics of the proletariat, without, however, having a solid political structure. Such a political entity, which lacks a solid organizational and ideological basis, is much more likely to be led by ideologies of cyber-conservatism, or cyber-nationalism. This danger is highlighted by Italian philosopher Paolo Virno, who argues that "the public intellect which the multitude draws upon is the point of departure for *opposing* developments".[641] Virno describes the rupture between multitude's potentialities and actual outcomes as a "terrifying effect", explaining that when the general intellect is not articulated within a political space, it "translates into an unchecked proliferation of hierarchies as groundless as they are thriving".[642]

Procedural Sublimity and the "Society of Non-Spectacle"

As it has already been suggested, in our networked public lives, social media constitute one of the most prominent channels through which our desires and anxieties are communicated. In addition, online platforms have been of crucial importance in expressing the desires of the socio-political movements that were born in the aftermath of the global financial crisis of 2008. Those two facts are inextricably interwoven in light of Negri and Hardt's theorization of the multitude, because they foreground a problematic that goes well

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[640] Gerbaudo, op. cit., p. 21.
[641] Paolo Virno, *A Grammar of the Multitude* (Isabella Bertoletti, Andrea Casson and James Cascaito trs, Semiotext(e), Los Angeles 2004) p. 40.
[642] ibid., p. 41.

beyond the rather obvious connections between social media platforms and the proliferation of Affective Capitalism. This problematic refers to the deeper nature of social media as a new "public sphere" that is not primarily defined by content anymore, but rather by the *processes* that their users experience. More specifically, every "like" and every comment on a post,[643] every uploaded item (photo, video, music piece, etc.), every tweet or re-tweet, and every addition of a contact, follower, or friend generates new content for the online platforms. Yet, the crucial fact for the users is not that they *produce* those posts; rather, the most important element of their interaction is the fact that they *manage* their uploaded "items" as well as the "items" that other users have uploaded (e.g. by "liking" or "sharing" them). Therefore, content itself has a predominantly *ephemeral* function for social media users, as the most important aspect of maintaining an online presence is the ability to *repeatedly* interact with *new* content.[644] This is the element that generates desire (Negri's "cupitidas"). Notably, new content becomes old almost immediately, as the platforms' interfaces have been designed in such a way so that constant updates constitute an organic part of their modus operandi (e.g. Facebook's Timeline, or the notifications received for new tweets). As I will indicate, however, the procedural sublimity of social media has gradually led to the cultivation of a "gamified" and, thus, highly uncritical public sphere, which contradicts the nominal function of online communities at large.

The concept of the "procedural sublime" may be understood as the ability of complex computer-based systems to present an awe-inspiring range of potentialities, regardless of the aesthetic forms through which those possibilities are being manifested.[645] Notably, this phenomenon is particularly relevant to contemporary video games, which combine extraordinary computational power with a high level of interactivity – a paradigm for the way in which the procedural sublime functions in general in today's networked media.[646] Considerations of the sublime in video games have orientated around the aesthetic, as they have often focused on the connections of virtual landscapes with

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[643] Dave Lee, '"Dislike" Button Coming to Facebook' *BBC News* (18 September 2015) <http://www.bbc.co.uk/news/technology-34264624> accessed 3 April 2016.
[644] Of course, as data, the uploaded content has a much more long-term role for the social media platforms and service providers, who can use them for marketing purposes and for generating advertising revenue, as we have already seen in the case of Google in the previous chapter.
[645] For a thorough investigation of the social construction of technology and its relation to the notion of the sublime, see: David E Nye, *American Technological Sublime* (MIT Press 1994).
[646] Alenda Y. Chang, 'Playing Nature: The Virtual Ecology Of Virtual Environments' (PhD, University of California, Berkeley 2013) pp. 82-86.

romantic painting and elements of the pastoral and the gothic.[647] As digitally modelled complexity appears infinite in its scale, so do the landscapes that video game players are able to navigate through, experience, or actively generate through their decisions.[648] This notion of procedurality is associated with the fact that gaming content is generated in real time, through a set of algorithms that produce unique iterations of a general "concept". Lying closer to Kant's theorization of the mathematical sublime,[649] this type of procedural potentiality is, thus, capable of fostering a new kind of seductive beauty, which is based on randomization.

Inevitably, however, the procedural sublime cannot live up to its truly expansive remit. A key irony of much digital design – including games – is that its seemingly limitless choice and potential are delivered through an extremely rule-bound and systematic medium, which allows for little or no breaking of its foundational logics. In this sense, the procedural sublime may operate as an extension of Debordian spectacle: the ability to exercise apparent freedoms within a delimited and controlled illusion is a fundamental form of alienation.[650] Therefore, procedurality should be understood as a tool of capitalist sublimation that is achieved through the emotional investment of the users in a system with a thoroughly predetermined character. This context reflects an emerging technocultural order, whose spectacular-yet-alienating nature is not exclusively based on the "visual" or the "aesthetic", as was the case in Debord's original theorization. For instance, this is vividly reflected in agriculture-themed games like *FarmVille* (2009),[651]

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[647] See: Eugénie Shinkle, 'Video Games and the Technological Sublime' (*Tate.org.uk*) <http://www.tate.org.uk/art/research-publications/the-sublime/eugenie-shinkle-video-games-and-the-technological-sublime-r1136830> accessed 3 April 2016; and the recent exhibition "Under the clouds: From paranoia to the digital sublime" at the Serralves Museum, in Portugal (2015). See: 'Under the Clouds: From Paranoia to the Digital Sublime' (*Serralves.pt*, 2015) <http://www.serralves.pt/en/activities/under-the-clouds-from-paranoia-to-the-digital-sublime/?menu=249> accessed 3 April 2016.

[648] A good example of such a game is *Minecraft* (2011), in which players can build constructions by using textured cubes in a 3-D procedurally generated world. Notably, in the game's "creative mode" players are given unlimited resources, which means that there is no restriction to the size of the world that they might choose to produce.

[649] See: Immanuel Kant, *Critique of Judgement* (Nicholas Walker ed, James Creed Meredith tr, Oxford University Press, New York 2007).

[650] See: Guy Debord, 'Society of the Spectacle' (*Marxists.org*) <https://www.marxists.org/reference/archive/debord/society.htm> accessed 3 April 2016. Debord notes in thesis 8: "Lived reality is materially invaded by the contemplation of the spectacle while simultaneously absorbing the spectacular order, giving it positive cohesiveness. Objective reality is present on both sides. Every notion fixed this way has no other basis than its passage into the opposite: reality rises up within the spectacle, and the spectacle is real. This reciprocal alienation is the essence and the support of the existing society".

[651] *FarmVille* is developed by Zynga, and is available as an Adobe Flash application via Facebook and Microsoft's MSN Games.

whose graphics can only be considered as basic in comparison with the exponential development of game design capacities in recent years. In the case of *FarmVille*, the player not only has control over the landscape, but – most importantly – he/she has to exert this control in real time in order to succeed. That means that the player has to invest time while performing regular farm management activities, such as ploughing the land, planting, watering the plants, collecting the fruits, raising livestock and trading with other producers. The counter-pastoral aesthetics of the game seem to be "balanced" by its capacity to encapsulate a certain cultural nostalgia for returning to country life, whilst combining it with the fundamental principles of capitalist production. Notably, between 2009 and 2011 *FarmVille* was the most popular game on Facebook.[652]

Figure 66: Farmville

The power of procedural sublimity has been evident even in cases in which cultural producers have attempted to criticise its negative influence on our engagement with networks. A prominent such example can be found in the release on Facebook of *Cow*

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[652]   'Facebook   Apps   Leaderboard'   (*Appdata.com*) <http://www.appdata.com/leaderboard/apps?metric_select=mau_estimate&style=classic> accessed 3 April 2016.

Clicker (2010), a game produced by video game artist and researcher Ian Bogost.[653] The game featured the image of a "Farmvillesque" cow, which had to be clicked every six hours so that the player could earn more future clicks as a reward. Furthermore, the player could add the cows of his friends to his pasture in order to receive even more "clicks", and, finally, a currency known as "Mooney" allowed the player to purchase cows of different designs and skip the six-hour interval between his clicks. *Cow Clicker* was intended by Bogost to function as a parody that would deconstruct recent gaming trends, as well as the application of game-design elements and principles in non-game environments for economic reasons (gamification). This process is closely associated with affective labour – an organic element in most online platforms, as we have suggested in the previous chapter. Affective labour functions, in effect, as a catalyst of gamification, for "it frustrates the practice of game design and reduces playing to a stimulus-response experience".[654] Therefore, "gamification has little to do with the design of games (or an allegedly salvific process), and much more with the exploitation of consumers".[655] Despite those elements of critique towards social media's processes of alienation, however, (and to Bogost's surprise) *Cow Clicker* became an online hit, not only in terms of publicity, but also in terms of the number of registered players who regularly enjoyed experiencing its satirical ludic labour.[656] More specifically, the game had 5,000 users soon after its launch in late July 2010; 20,000 a few weeks later; 50,000 by early September and 56,000 in October.[657]

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[653] Ian Bogost, 'Cow Clicker' (*Bogost.com*) <http://bogost.com/games/cow_clicker/> accessed 3 April 2016.

[654] Mathias Fuchs and others, *Rethinking Gamification* (meson press by Hybrid Publishing Lab 2014), p. 10.

[655] For a more thorough investigation of the economic nature of gamification, see: Karen Robson and others, 'Is It All a Game? Understanding the Principles of Gamification' (2015) *Business Horizons* 58 (4) pp. 411–420; Juho Hamari, 'Transforming Homo Economicus into Homo Ludens: A Field Experiment on Gamification in a Utilitarian Peer-to-Peer Trading Service' (2013) *Electronic Commerce Research and Applications* 12 (4) pp. 236 – 245; and Byron Reeves and Leighton J Read, *Total Engagement: How Games and Virtual Worlds Are Changing the Way People Work and Businesses Compete* (Harvard Business Review Press 2009).

[656] The free micro-labour of their users is, perhaps, the most important element that defines the relationship between spectacle and alienation in social media. The strength of this aspect transforms social media platforms into "factories" of commons-based peer production, which are capable of generating the exact same alienating effect of a physical factory. In his book *Digital Labour and Karl Marx*, Christian Fuchs deconstructs in depth this effect and identifies four types of alienation that are produced on social media platforms through the exploitation of users' digital labour. More specifically, users: "in relation to subjectivity (a) are coerced by isolation and social disadvantage if they leave monopoly capital platforms (such as Facebook), in relation to the objects in labour; (b) their human experiences come under the control of capital, in relation to the instruments of labour; (c) the platforms are owned not by users but by private companies that also

Figure 67: Ian Bogost, Cow Clicker (2010)

Bogost's experiment emphatically reveals the deep ideological effects of what writer and curator Matteo Pasquinneli calls the "financialization of the bios" – namely, the transformation of all aspects of our lives into mere credit lines, though the active, or

commodify user data, and in relation to the product of labour; (d) monetary profit is individually controlled by the platform's owners". See: Fuchs, op. cit., p. 260.

[657] Jason Tanz, 'The Curse of Cow Clicker: How a Cheeky Satire Became a Videogame Hit' *WIRED* (20 December 2011) <http://www.wired.com/2011/12/ff_cowclicker/all/1> accessed 4 April 2016.

passive production of data.[658] Pasquinneli notes that this function is particularly strong within "the new forms of business running on digital networks, whose 'strategy of over' is precisely to use the rhetoric of digital collectivism (network cooperation, peer production, free culture, creative commons, etc.) to hide the accumulation of value".[659] Apart from its hidden economic function, however, procedural love also impacts the very core of political discourse. As Virno notes, "the boundaries between pure intellectual activity, political action, and labor have dissolved. [...] The world of so called post-Fordist labor has absorbed into itself many of the typical characteristics of political action; and [...] this fusion between Politics and Labor constitutes a decisive physiognomic trait of the contemporary multitude".[660] Virno goes on to argue that "political action now seems, in a disastrous way, like some superfluous duplication of the experience of labor, since the latter experience, even if in a deformed and despotic manner, has subsumed into itself certain structural characteristics of political action".[661] In this context, the assumption that "the interplay of commodities is merely a distraction from a fundamentally aniconic structure [the capitalist mode of production]"[662] does not stand anymore – in Data Capitalism the image *is* the structure. Spectacle is so thoroughly embedded in the multiple media interfaces that we are using in our everyday lives, that it is not visible anymore. As philosopher Boris Groys ironically notes, "if contemporary society is [...] still a society of spectacle, then it seems to be a spectacle without spectators".[663]

Nevertheless, Groys' assertion does not entail that "traditional" forms of spectacle do not remain important components of Data Capitalism. On the contrary, politically engaged artists often identify spectacle as an overt obstacle that accompanies technology-based artworks and interventions. Notably, in an interview about his collaboration with the Tanzanian farmers in *Sauti ya wakulima* ("The voice of the farmers", 2011), artist Eugenio Tisselli recognized the great challenges raised by the spectacularization of new technologies and their inherent connections with consumerist culture. In response to a comment from one of the farmers-participants of his project regarding the impressive

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[658] Matteo Pasquinelli, 'Communism of Capital and Cannibalism of the Common: Notes on the Art of Over-Identification' in Lanfranco Aceti and others (eds), *Red Art: New Utopias in Data Capitalism, Leonardo Electronic Almanac*, vol. 20, no 1 (Leonardo/ISAST, San Francisco 2014) p. 75.
[659] ibid., p. 76.
[660] Virno, *A Grammar of the Multitude*, op. cit., p. 50.
[661] ibid., p. 51.
[662] Sven Lutticken, *Idols of the Market: Modern Iconoclasm and the Fundamentalist Spectacle* (Sternberg Press, Berlin 2009) p. 125.
[663] Boris Groys, 'Comrades of Time' [2009] *e-flux* <http://www.e-flux.com/journal/comrades-of-time/> accessed 4 April 2016.

capabilities of computers and the fact that smartphones "are not just a fancy thing for the rich people in towns", Tisselli notes:

> in the quote, there is an explicit comparison between the (poor) farmers living in remote areas and 'the rich people in towns.' Moreover, the fact that smartphones are explicitly considered as fancy devices points towards issues which need to be handled very carefully. In every part of the world, technological gadgets are quickly becoming symbols of social status. Currently, I am working in a rural zone in southern Mexico where cellphone coverage was nonexistent only two years ago. But as soon as the first antennas were installed, young people in those communities started buying smartphones, and now there is an open competition to see who has the fanciest one. A similar thing happens in Bagamoyo [the site of *Sauti ya wakulima*]. So, of course, smartphones can be useful tools, but they can also bring more consumerism into poor communities. This is very dangerous.[664]

Although Tisselli's aim has been to implement a "bottom-to-top" structure of social empowerment through the use of smartphones, it would seem that the process of nurturing a networked version of the commune might have found a "natural" barrier in the form of new technologies' spectacularized character, which encompasses both hardware and software.

Finally, it is worth noting that this dangerous context does not apply only to Tisselli's project, but to all types of interaction that take place within a community. In the case of online communities, this context is also present, through the generation of an almost "nostalgic" milieu, which catalysed by the fact that our data do not refer only to cyberspace, but also to the real spaces that we inhabit (e.g. by "tagging" people and places, or by "checking in" at specific locations through social media applications).[665] Therefore, through a meticulously constructed attachment to the affect, online platforms perform a

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[664] Marc Garrett, 'Community Memory through Appropriated Media: An Interview with Eugenio Tisselli' (*Furtherfield.org*, 30 November 2012) <http://www.furtherfield.org/features/interviews/community-memory-through-appropriated-media-interview-eugenio-tisselli> accessed 4 April 2016.
[665] Paolo Virno notes that "antiquarian historiography applies its own typical methods to actuality: everything that happens is treated as suggestive *evidence*, while it is still happening; the current moment is consumed by *nostalgia*". See: Paolo Virno, 'Déjà Vu and the End of History' [2015] *e-flux* <http://www.e-flux.com/journal/deja-vu-and-the-end-of-history/> accessed 4 April 2016. For a more extensive analysis of the subject by Virno see: Paolo Virno, *Déjà Vu and the End of History* (David Broder tr, Verso Books, London 2015).

"colonization" of social entities such as "community" and the "commons".[666] In the context of Data Capitalism, those elements become mere tools for the accumulation of (immaterial) capital, which is also being managed by its producers until it is ready to be fully exploited by its actual proprietors – the corporations that own the online platforms and their data (both uploaded and generated). Therefore, the return of the "commons" as a component of online media may promote a "pseudo-materialism", which remains hidden behind the density of the processes through which "communality" is experienced by the users. This leads to what Turkish curator Vasif Kortun has recently termed as "powerless socialization"[667] – a context of spectacularized isolation, which cannot have a real transformative effect on society. To a large extent, our love for networks is a love for accessibility, which sees exclusion as its only enemy. However, the real enemy is not exclusion – it is exploitation. This fact remains thoroughly concealed in the context of the "Society of Non-Spectacle", in which spectacle is nowhere and everywhere at once.

From Abstraction to the "Unstable Equilibrium of Compromise"

In the end, the fully integrated and, thus, "abstract" spectacularization of networked media through procedural sublimity functions as an "enabler" of what Italian Marxist philosopher Antonio Gramsci has termed as the "unstable equilibrium of compromise".[668] Within his

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[666] In a recent interview, philosopher Zygmunt Bauman argues that "the difference between a community and a network is that you belong to a community, but a network belongs to you. You feel in control. You can add friends if you wish, you can delete them if you wish. You are in control of the important people to whom you relate. People feel a little better as a result, because loneliness, abandonment, is the great fear in our individualist age. But it's so easy to add or remove friends on the internet that people fail to learn the real social skills, which you need when you go to the street, when you go to your workplace, where you find lots of people who you need to enter into sensible interaction with. […] Real dialogue isn't about talking to people who believe the same things as you. Social media don't teach us to dialogue because it is so easy to avoid controversy… But most people use social media not to unite, not to open their horizons wider, but on the contrary, to cut themselves a comfort zone where the only sounds they hear are the echoes of their own voice, where the only things they see are the reflections of their own face. Social media are very useful, they provide pleasure, but they are a trap". See: Ricardo de Querol, 'Zygmunt Bauman: "Social Media Are a Trap"' *El Pais* (25 January 2016) <http://elpais.com/elpais/2016/01/19/inenglish/1453208692_424660.html> accessed 4 April 2016.
[667] Julie McCalden and Mark Robinson, 'No Boundaries Arts Symposium: Two Views from Bristol and Manchester' (*a-n.co.uk*, 2 October 2015) <https://www.a-n.co.uk/news/no-boundaries-arts-symposium-two-views-from-bristol-and-manchester> accessed 4 April 2016.
[668] See: Antonio Gramsci, *Selections from the Prison Notebooks of Antonio Gramsci* (Quintin Hoare and Geoffrey Nowell-Smith eds, Lawrence & Wishart, London 1971); and Antonio Gramsci, *Selections from Political Writings 1910-1920* (Quentin Hoare ed, John Mathews tr, Lawrence and Wishart, London 1977).

analytical study of Gramsci's work, Greek political sociologist Nicos Poulantzas attempted to clarify the ideological condition encapsulated in this particular concept. More specifically, Poulantzas focuses on theorising the "unstable equilibrium of compromise" as the fundamental tool for the prolongation of the capitalist system. Accordingly, he elucidates the scope of Gramsci's premise by defining in detail its three constituent terms – an endeavour that reveals the relations of power that the equilibrium is fostering:

> 1. Compromise: in the sense that this power corresponds to a hegemonic class domination and can take into account the economic interests of certain dominated classes even where those could be contrary to the short-term economic interests of the dominant classes, without this affecting the configuration of political interests; 2. Equilibrium: in the sense that while these economic 'sacrifices' are real and so provide the ground for an equilibrium, they do not as such challenge the political power which sets precise limits to this equilibrium; and 3. Unstable: in the sense that these limits of the equilibrium are set by the political conjuncture.[669]

Poulantzas' conceptualisation of the "unstable equilibrium of compromise" refers to the role of the state in the context of the capitalist system: the state is for him (as it was originally for Gramsci) the principal institution that naturalises and implements the compromise.[670] The latter is diachronically presented by the elites as a necessary and valuable concession – in effect, a new form of "social contract" that shall allow things to "go on" – even more so, following a crisis of some form (e.g. in the case of the IMF/EU bailout programmes in the Eurozone). Yet, in reality, the concessions made through the new contract are valuable only for one part of the society. Interestingly, it is this benefited part that has to be initially convinced about the usefulness of the previously described strategy, as its long-term *and* "invisible" character comes in contrast to the capitalist urge for *immediate* accumulation:

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[669] Nicos Poulantzas, *Political Power and Social Classes* (Timothy O'Hagan tr, Verso Books, New York 1975) p. 192.

[670] It is particularly easy to recognise this process, if we apply it to today's post-crisis context. In our case, the "struggle" of governments and administrations around the world to achieve an increasingly *abstract* notion of economic balance – especially with regard to the management of public finance – has ended up preserving in full the social, political and, of course, economic relationships that were established in the pre-crisis period.

The notion of the general interest of the 'people', an ideological notion covering an institutional operation of the capitalist state, expresses a real fact: namely that this state, by its very structure, gives to the economic interests of certain dominated classes guarantees which may even be contrary to the short-term economic interests of the dominant classes, but which are compatible with their political interests and their hegemonic domination.[671]

This seeming "anomaly" in the short-term function of the state is explained in *Empire*, by Negri and Hardt, who "complement" Poulantzas' analysis by identifying spectacle as the "glue that sticks together the diverse functions and bodies of the hybrid constitutions"[672]. In today's world, the latter are not predominantly defined by the state anymore, as we move further away from the Foucauldian "author state" and closer to the Deleuzian "body-without-organs state".[673] Rather, today's "hybrid constitutions" are the agents that we have identified in the previous chapter as some of the cornerstones of Data Capitalism: search engines, social media platforms, financial markets and their national and transnational regulatory bodies. Collectively, those agents have replaced the role of the state, although they almost always include it as a constituent of their activities (most often as a "façade" of democratic legitimization whenever needed). In other words, we might have moved from Poulantzas' monopolist role of the state to the multi-factor world of the Empire; however, this "expansion" has been accompanied by an unprecedented elevation of spectacle in our networked public spheres, which "unifies" and conceals the persistent reality that the Greek political sociologist was describing in his writings four decades ago. As Dmytri Kleiner rightly observes in his *Telekommunist Manifesto*, the Internet has disappeared behind the (spectacular) Web 2.0, which constitutes, through its optimization for user input and social media, a mechanism of "private capture of community-created value".[674] Within those conditions, it is not only "the open terrain of political exchange and

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[671] Poulantzas op. cit., p. 191.

[672] Hardt and Negri, *Empire*, op. cit., p. 321. Notably, Guy Debord writes in the third thesis of *Society of the Spectacle*: "The spectacle appears at once as society itself, as a part of society and as a means of unification. As a part of society, it is that sector where all attention, all consciousness, converges. Being isolated – and precisely for that reason – this sector is the locus of illusion and false consciousness; the unity it imposes is merely the official language of generalized separation". Debord, loc. cit.

[673] Jerry Everard, *Virtual States: The Internet and the Boundaries of the Nation-State* (Routledge, London 2000) p. 45.

[674] Kleiner, op. cit., p. 17.

participation"[675] that may completely evaporate due to spectacle's impact; it is, potentially, *any* political initiative and action, public *and* private.

Finally, it is not surprising that the erosive power of "integrated spectacle" starts and finishes with the same agent: the proletariat. Notably, although Negri and Hardt recognize the counter-revolutionary power of spectacle, in the end, they seem to underestimate its impact on the multitude as their proposed "reincarnation" of the proletariat. More specifically, by predominantly associating spectacle's effects with "the impossibility of traditional forms of struggle", they are suggesting that the *new* forms and means provided by networked media will allow the multitude to escape from it.[676] However, as it has been proven during the crisis and its aftermath, accessibility and connectivity do not entail the automatic cultivation of a more fertile ground for the development of the proletariat as the foremost revolutionary instrument. Rather, the opposite: the totalitarian enactment of the accessible and interconnected image that fuels contemporary spectacle, within a condition of endless crisis (as Italian philosopher Giorgio Agamben calls the post-2008 socio-political status),[677] has been functioning as the most important refuge of an economic model that is under threat from its own structural impasses.

Systemic Instability and the Rise of "Cybertopos"

However, the spectacularized abstraction of the "unstable equilibrium of compromise" does not conceal only its content, but also its very nature and architecture. Interestingly, the elucidation of this nature is provided by Poulantzas himself in one of his later writings. More specifically, in his article titled "The Capitalist State: A Reply To Miliband and Laclau" (1976), which was published just a few months after *Political Power and Social Classes*, Poulantzas argues that the realisation of the "unstable equilibrium of compromise" is, in fact, an issue of appearance and surface in more than one ways. As he points out, it is not only the socioeconomic compromise that it mediates that is forged, but also the absolute power of its enabler – the mastery of the state:

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[675] Hardt and Negri, *Empire*, op. cit., p. 321.
[676] ibid., pp. 323-324.
[677] 'The Endless Crisis as an Instrument of Power: In Conversation with Giorgio Agamben' (*Versobooks.com*, 4 June 2013) <http://www.versobooks.com/blogs/1318-the-endless-crisis-as-an-instrument-of-power-in-conversation-with-giorgio-agamben> accessed 4 April 2016.

The various organs and branches of the state (ministries and government offices, executive and parliament, central administration and local and regional authorities, army, judiciary, etc.) reveal major contradictions among themselves, each of them frequently constituting the seat and the representative – in short, the crystallization – of this or that fraction of the power bloc, this or that specific and competing interest. In this context, the process by whereby the general political interest of the power bloc is established, and whereby the state intervenes to ensure the reproduction of the overall system, may well, at a certain level, appear chaotic and contradictory, as a 'resultant' of these inter-organ and inter-branch contradictions.[678]

However, if this systemic instability is an accurate depiction of reality, the question that convincingly emerges is, "why has not the system collapsed yet?" Quite evidently, the answer to the question is of particular important for those citizens who stand against the capitalist model adopted by the system; namely, those who locate themselves at the Left side of the political spectrum, including the cultural producers whose works we have explored in this thesis. As Milton Mueller observes, their opposite political pole, the Right, "now consists of an increasingly strange combination of market liberalism in economics, religious-based social conservatism, and extreme nationalism in international and military affairs. Policy toward Internet governance tends to be dominated by the nationalist element. The Internet has always posed a problem for the right and its bundle of barely compatible tendencies and constituencies".[679] Therefore, if we "update" Poulantzas' analysis in view of the current historical conjuncture, we can ask: why Right-wing policies have not been defeated yet, given what the crisis of 2008 revealed so many of Data Capitalism's inter-organ and inter-branch impasses?

If we wish to find a comprehensive response to those questions, then, we should, perhaps, focus not only on the remarkable power of the tools that Data Capitalism is employing in order to survive, like spectacle, but, also, on the modes of resistance that we need to develop as cultural producers as well as citizens in order to effectively confront such tools. In the context of the post-crisis world, Matteo Pasquinelli associates those practices of resistance with the very notion that lies at the core of Data Capitalism's

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[678] Nicos Poulantzas, 'The Capitalist State: A Reply To Miliband and Laclau' (1976) *New Left Review* 95 pp. 65-83 quoted in Nicos Poulantzas, *The Poulantzas Reader: Marxism, Law, and the State* (Martin James ed, Verso Books, London/ New York 2008) p. 285.
[679] Mueller, op. cit., p. 262.

architecture: the paradox. As Pasquinelli claims,

> exodus must be established in an intensive and paradoxical way. Resistance must set itself *inside* and *against* the structure of capitalism, as Mario Tronti was suggesting already in the '60s (and not just *inside* and *against* its ideological code, as a Lacanian new-wave is back to suggest today). Post-utopianism is to be replaced by *endo-utopianism*. Where to find an intensive yet practical line of flight behind the ideological spectacle of capitalism? Far from psychoanalysis, looking to the mundane chronicles close to us, it is in the very financial crisis of 2009 that we can find an example of an intrinsic breach affecting the system. The political diagram of *endo-utopianism* should be found along that "systemic risk" of capitalism that has been only recently acknowledged by financial institutions.[680]

Pasquinelli's "map" for an exodus from Data Capitalism is, thus, defined by three major elements: Firstly, "paradox" should be viewed as a resistance strategy, rather than merely as a "weapon" that can be claimed exclusively by the dominant economic system. Secondly, the practical use of those strategies should adopt an outward-looking perspective, which would be positioned opposite the tendency of the Left towards ideological introspection. And, finally, the strategy should accentuate the systemic incapacities that have already been revealed and acknowledged during the crisis, even by financial institutions themselves. Accordingly, if we take into account the reliance of Data Capitalism on networks' immateriality, then the foremost paradox that could fuel the resistance of "endo-utopianism" would be its principal formulation *not* from the point of view of networks, but rather from that of *physical* spaces. This suggestion might appear to come in contrast with the famous assertion of Manuel Castells that the network society is defined by the space of flows, rather than the space of places.[681] However, the proposed "reversal" could be justified if we consider the fact that the space of flows has been thoroughly dominated by capital in the historical context of Data Capitalism. As a result, our capacity to exert sustained political pressure within the network society, still depends significantly on the notion of "place" – the other pole in Castells' binary,[682] which we seem to have "forgotten" due to the seductive spectacularization of networks.

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[680] Pasquinelli, op. cit., p. 74.
[681] Castells, loc. cit.
[682] Fuchs, op. cit., p. 316.

In order to elucidate further this "paradoxical" proposition, we have to consider that one the most important objectives of the socio-political movements that were engendered by the financial crisis of 2008 has been the effort to "reclaim" and "re-appropriate". This aspiration referred not only to economic resources, but also to social roles, democratic functions, human rights, and – of course – urban spaces. Syntagma Square in Greece, Puerta del Sol in Madrid, Zuccotti Park in New York, as well as some of the most iconic public locations around the world saw diverse, or even seemingly "irreconcilable" in their ideological composition crowds gather to demand change. Within the reality of Data Capitalism and its multiple self-generated crises, people increasingly felt that they have now been totally deprived of a place – "topos" in ancient and modern Greek. This feeling might be associated with the deprivation of a social "topos", due to the lack of equal opportunities; the negation of a political "topos", because of the lack of adequate democratic representation; or, even, the denial of a literal "topos", due to the lack of access to public space, as the latter is being progressively privatized, gentrified and commodified – especially in urban areas. It is worth remembering that Thomas More, the coiner of "utopia", which literally means "no place", chose an island as the location where he placed his ideal society.[683] Any island constitutes a geographic formation that privileges the development of highly individual traits, through a natural process of "appropriation". This encompasses both the material and the immaterial environments, as expressed in the landscape, the biology of the different organisms, and – most relevant to the subject of this thesis – culture. Without this process of "appropriation", which transforms a "space" into a "topos", space would have remained "neutral", or – more accurately – "empty". For example, in simple geographic terms, we could claim that through the process of appropriation, "a major piece of land surrounded by water, west of the country known as 'France'" (space), becomes "Great Britain" (topos). Quite evidently, when referring to "Great Britain", we are not evoking merely its physicality, but also its people, languages, traditions, habits, architecture, religions and artistic production, amongst others.

Accordingly, if we were to formulate the challenge of this process in socioeconomic terms, then we could claim that an "empty space" should be understood, before anything else, as an alienated "space" – a "space" whose nature is defined by the elites. Even when the ruling classes do not own, or are not able to directly profit from a particular "space", they are in a position to superimpose a particular meaning on it – a meaning that delimits

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[683] Thomas More's *Utopia* was first published in 1516, in Belgium.

the ways in which it can be conceptualized and, thus, used by the rest of the social body.[684] Quite predictably, the most direct way of using art in order to re-imbue space with subjectivity is by occupying it with politically engaged artworks or cultural initiatives, as several of the artists referenced in this thesis have demonstrated (e.g. Maurice Benayoun's *Occupy Wall Screens* in New York, or the multiple projects that "hacked" the streets of Dublin in the context of Science Gallery's *Hack the City* exhibition). In the post-crisis historical context, such an attempt to expose capitalism's function in public is naturally akin to the different forms of protest that have been employed by social movements around the world. As digital media theorist Paolo Gerbaudo argues, "contemporary popular movements are marked by a stress on unity and the adoption of practices of 'centring'[685] which strongly resonate with Laclau's description of populism".[686] What is interesting to note about the work of Argentine political theorist Ernesto Laclau is the fact that he focuses on defining populism's significance not in terms of its content, but rather in terms of its form – namely, through the division that it draws between "the people" and "the institutional system",[687] or the "institutionalized 'other'".[688] In the case of the protests that have come to define the early 2010s, the tactic of the mass sit-in in central squares and on the streets in front of major financial institutions could be perceived as a material-physical version of a "people's consensus" directed against the immaterial ideological consensus imposed by the financial and political elites of Data Capitalism, who caused the crisis. This antagonistic binary was overtly expressed in the main slogan used by the Occupy movement, "We are the 99%". In other words, the movement's mass sit-ins translated the opposition against the ideological dominance of neoliberal capitalism and its division of wealth into a physical entity: the huge majority of the "have-nots" (99%) finally occupied the space controlled by the tiny minority of "haves" (1%).

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[684] In *The Production of Space*, French Marxist philosopher and sociologist Henri Lefebvre asserts that the representations of space "are tied to the relations of production and to the 'order' which those relations impose, and hence to knowledge, to signs, to codes, and to 'frontal' relations" (p. 33). For Lefebvre, "social space is produced and reproduced in connection with the forces of production (and with the relations of production)". These "forces […] are not taking over a pre-existing, empty or neutral space, or a space determined solely by geography, climate, anthropology…" (p. 77). What the abstract space of capitalism is aiming to conceal is homogenization, hierarchization, and social fragmentation. See: Henri Lefebvre, *The Production of Space* (Donald Nicholson-Smith tr, Blackwell Publishers, Oxford 1991).

[685] In architecture, "centring" signifies the framing used to support an arch or dome while it is under construction.

[686] Gerbaudo, op. cit., p. 11.

[687] Ernesto Laclau, *On Populist Reason* (Verso Books 2005) p. 73.

[688] ibid., p. 117.

Accordingly, if we tried to connect the spatial dimension of such political action with the cultural paradigm of Web-based art, we should not focus merely on the lack of physical space as articulated through cyberspace; rather, as we have already suggested, we should address the juxtaposition of "topos" with a potentially "empty" and alienated space. The most important, perhaps, gesture in order to bridge those two entities is to add to the dematerialized notion of space, which defines the Internet, elements of identity and direction, which would make its "ownership" not only possible, but also socially and politically meaningful. This is the sole way in which the time that we spend navigating the Internet would be in a position to counteract the "empty" and "homogenous" time of "powerless socialization" that largely dominates our relationship with the networked media developed in the context of Data Capitalism. Interestingly, in *On the Concept of History* Benjamin ascribes to the action of fighting this particular kind of time a truly revolutionary character, which lies at the very core of History's transformation. As he claims, "History is the object of a construction whose place is formed not in homogenous and empty time, but in that which is fulfilled by the here-and-now [Jetztzeit]". Notably, "Jetztzeit" connects structurally the notions of space and time. As a result, the proposition made by Benjamin on the basis of this connection entails that in order to escape the continuum of homogenous and empty time and reclaim History (revolution),[689] we also need to escape the continuum of institutionalized space.

Therefore, what emerges as an important prerequisite for the exploitation of the potentialities opened by networked media is the transition from cyberspace to another type of spatial entity that would be capable of functioning as an agent of ideological appropriation. I will call this entity "cybertopos". In many respects, the proposition for the creation of cybertopos could be regarded as a resolution to the conundrum of the "ideal" relationship between cybernetics and communism, which has underpinned the entirety this thesis. In order to understand this "conciliatory" role of cybertopos, we can turn to Nick Dyer-Witheford's most recent book *Cyber-Proletariat* (2015), in which two diametrically different responses to the question "how much cybernetics communism needs" are identified.[690] On the one hand, pro-cybernetic accelerationism expresses the desire to employ networked technologies to such unfathomable, omnipresent extent, and with such speed, that capitalist pathologies will not be able to manifest themselves as

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[689] As we have noted in the first chapter of this thesis, Benjamin directly connects "Jetztzeit" with "the consciousness of exploding the continuum of history [that] is peculiar to the revolutionary classes in the moment of their action". (Walter Benjamin, *On the Concept of History*, Thesis XV).
[690] Dyer-Witheford, *Cyber-Proletariat: Global Labour in the Digital Vortex*, op. cit., p. 197.

concrete barriers produced by the system's governance structures.[691] And, on the other hand, anti-cybernetic localism constitutes a reaction to the pervasiveness of capitalist automation – a "halt" to capitalism's spatio-temporal expansion through the restriction, or rejection of technological expansion. Dyer-Witheford connects the two seemingly opposite directions on the historical timeline by making the suggestion that, "the most likely result of the acceleration of capital's current technological tendencies is an involuntary localism brought about by social, geopolitical and ecological disasters that disintegrates the subsuming processes of globalization".[692] In other words, Dyer-Witheford sees this correlation as the unwanted result of a catastrophe, or – in the best-case scenario – as a traumatic compromise generated by the global economic crisis.

In direct contrast, the formation of cybertopoi constitutes a *consciously* aimed for outcome, which is in a position to produce a much more proactive context of ideological engagement. The latter could be associated with the original signification of "crisis" in ancient Greek, in which the word is associated (amongst others) with the ability to distinguish (Aristotle), decide (Aeschylus) and fight (Herodotus).[693] In other words, cybertopos expresses an intentional-conscious focus on the locale catalysed by networked technologies, rather than a retreat of the defeated into some kind of geographical and ideological margins. It should, thus, be conceptualised as the principal tool of a third tendency to be added to the two identified by Dyer-Witheford, which we could name "pro-cybernetic localism". However, in contradistinction to concepts like Bourriaud's microtopias, which are looking "inwards", the cybertopoi of pro-cybernetic localism are produced through the engagement with the distinctiveness of physical spaces, in order to then look "outwards". This extroversion becomes possible only thanks to the capacities of interconnectivity offered by contemporary technological networks. Therefore, if we were

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[691] In left-wing political theory, the most prominent text relevant to the concept of accelerationism published in recent years is the 2013 *#ACCELERATE MANIFESTO for an Accelerationist Politics*, by Alex Williams and Nick Srnicek. The main argument expressed by the two authors is that "Accelerationism pushes towards a future that is more modern, an alternative modernity that neoliberalism is inherently unable to generate". See: Alex Williams and Nick Srnicek, '#ACCELERATE MANIFESTO for an Accelerationist Politics' (*Criticallegalthinking.com*, 14 May 2013) <http://criticallegalthinking.com/2013/05/14/accelerate-manifesto-for-an-accelerationist-politics/> accessed 4 April 2016. For a critique of Williams and Srnicek's proposed "politics at ease with a modernity of abstraction, complexity, globality and technology", see: Nina Power, 'Decapitalism, Left Scarcity, and the State' [2015] *Fillip* <http://fillip.ca/content/decapitalism-left-scarcity-and-the-state#notes> accessed 4 April 2016.

[692] Dyer-Witheford, *Cyber-Proletariat: Global Labour in the Digital Vortex*, op. cit., p. 197.

[693] 'Epitome of the Great Dictionary of Ancient Greek Language' (*Greek-language.gr*) <http://www.greek-language.gr/Resources/ancient_greek/tools/liddel-scott/search.html?lq=κρίσις%5Bῐ%5D> accessed 4 April 2016.

to position cybertopos within Milton Mueller's axes, then, we could claim that the full development of cybertopoi constitutes a prerequisite in order for the pendulum of denationalised liberalism and global governmentality to reach some kind of productive balance, which could, then, be given a more concrete political direction.

On the level of artistic practice, several of the projects that we have examined in chapter two display elements of pro-cybernetic localism. This is the case – to different extents – in the interactive maps of Istanbul designed by Burak Arikan; the mapping platforms of the National Museum of Contemporary Art in Athens; the circulation of Christian Nold's *Bijlmer Euro* in Amsterdam; or, the various artist-led time bank projects that have emerged in neighbourhoods around the world thanks to networked media. Nevertheless, an additional project to which we could turn in order to locate most of the previously analysed characteristics of cybertopos informing each other in a harmonious balance is *NAMAland* (2010) by the Irish new media artist and academic Conor McGarrigle.[694] *NAMAland* was an Augmented Reality (AR) smartphone application, which used open data in order to visualize the Irish financial crisis, following the collapse of the country's property market. More specifically, McGarrigle's application over-layered Dublin with information regarding the properties in the city reportedly owned by NAMA, the National Asset Management Agency. NAMA was created in late 2009 by the Irish government in order to acquire property development loans from the country's banks in return for government bonds, acting – in effect – as a "bad bank"[695]. However, NAMA failed in its original mission and additional support was needed from the EU and the IMF, which came in the form of a bailout in November 2010. By the end of 2011, a total of €74 billion in loans had been transferred to NAMA.[696] Quite surprisingly, however, it was not until 14 April 2015 that NAMA became subject to Ireland's Freedom of Information Act.[697] Until then, the organization's dealings and assets remained semi-published, and it was only thanks to the efforts political activists and cultural producers like McGarrigle that some information could be verified in the years that preceded this inclusion. More than 120

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[694] 'NAMAland' (*Walkspace.org*) <http://www.walkspace.org/namaland/> accessed 4 April 2016.
[695] A "bad bank" is a corporate structure set up to isolate illiquid and high-risk securities by buying the bad loans of a bank's nonperforming assets at market price. By transferring the bad assets of an institution to the "bad bank", the bank is able to clear its balance sheet of toxic assets, although it is also forced to take write downs. Shareholders lose money from this solution and not the depositors. However, when the state undertakes this role and bails out a bank, the shareholders are – in effect – all citizens.
[696] 'NAMA: Key Financial Figures' (*Nama.ie*) <https://www.nama.ie/financial/key-financial-figures/> accessed 4 April 2016.
[697] 'NAMA: Freedom of Information' (*Nama.ie*) <https://www.nama.ie/freedom-of-information/> accessed 4 April 2016.

properties were listed in McGarrigle's application, and they were revealed to the users of the application by a "Monopoly Man" figure, who appeared "over" the building when users approached it. Notably, the application attracted more than 45,000 users, who downloaded the application on their smartphones (Apple or Android), and even the poignant title of the project, *NAMAland*, managed to enter into general usage as a signifier for the consequences of the bank bailouts and the post-crisis situation of Ireland at large.

Figure 68: Conor McGarrigle, NAMAland (2010)

In his awarded academic article titled "Augmented Resistance: the possibilities for AR and data driven art",[698] McGarrigle analysed in depth not only *NAMAland*, but also the wider possibilities opened by the hybrid use of digital and physical spaces. McGarrigle begins his article by noting that "situated interventions offer powerful new methods for the political activation of sites which enhance and strengthen traditional non-virtual approaches and should be thought of as complementary to, rather than replacing, physical

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[698] Conor McGarrigle, 'Augmented Resistance: The Possibilities for AR and Data Driven Art' in Lanfranco Aceti and others (eds), *Not Here, Not There, Leonardo Electronic Almanac*, vol. 19, no. 1 (Leonardo/ISAST 2013) pp. 106 – 115. The article received the 2014 Leonardo Award for Excellence by Leonardo/The International Society for the Arts, Sciences and Technology (Leonardo/ISAST).

intervention".[699] This is particularly true in the case of interventions with strong political aspirations, for the combination of virtual interventions with physical actions can radically multiply the effectiveness of a project. In the case of *NAMAland*, the launch of the application was accompanied by regular guided walks, whose routes were carefully selected by the artist, in order to maximize their impact. Those gatherings functioned as "walking forums", in which participants were able to discuss the issues that were raised by NAMA's role and the composition of its portfolio of properties.[700] In combination with the

Figure 69: Conor McGarrigle, NAMAland participatory event/walk (2010)

artist's public speaking engagements, wide media coverage and individual interventions by users of the application (e.g. activists), the project raised public awareness of NAMA's dealings and opened up previously unavailable data. As a result, *NAMAland* managed to connect data with the fabric of the city, thus visualizing "a complex system of abstract financial dealings [and] transactions which have become disconnected from everyday understanding, but yet have significant and very real consequences".[701] Finally, it is worth noting that, following the project, Dublin's authorities negotiated with NAMA getting access to the vacant properties of its portfolio in order to host cultural activities. As McGarrigle notes, "if augmented reality interventions are to be successful it's important that they

[699] ibid., p. 107.
[700] ibid., p. 113.
[701] ibid., p. 113.

operate as spatial interventions first and avoid becoming overly technology focused. Work that is enacted in space needs to be effective at this level, with the technology augmenting the primary spatial experience".[702] Through ubiquitous network access, the location awareness that McGarrigle refers may become a truly powerful tool in the hands of politically engaged artists.

Post-net Participation: Towards a "Value-driven Demos"?

As we have already suggested, the most important lesson that new media artists can learn from the crisis' modes of civic mobilization is that, in order to be effective, cyberspace should become part of a strategy that combines physical and online spaces, whilst taking into account the individual traits of both. This has been indicated not only by the relatively recent mobilization initiatives of Occupy, but also by other activist movements that have preceded it.[703] Therefore, the open and broadly distributed character of networked media applications should be employed as a means to augment personal social and political contexts – be it activist, or artistic. As a result of this process, personal identity narratives are offered the opportunity to "replace collective social scripts as the bases for social order. These narratives become interpersonal linkages as network organization begins to displace hierarchical institutions as primary membership and social recognition systems for individuals".[704] Personal identity is, thus, transformed into a starting point in the attempt to communicate issues that may have a particular significance for the initiator-individual, but also display a wider relevance to the initiator's immediate or – even – wider social milieu. This strategy of deconstructing and, then, reconstructing the hierarchies of social signifiers[705] has to be carried out by using both online and offline relationship-building tools.[706] In this context, "relationships" constitute not only a phenomenon developing

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[702] Lanfranco Aceti and Richard Rinehart, 'Interview with Conor McGarrigle' in Lanfranco Aceti and others (eds), *Not Here, Not There, Leonardo Electronic Almanac*, vol. 19, no. 1 (Leonardo/ISAST 2013) p. 117.

[703] See: Wim van de Donk and others (eds), *Cyberprotest: New Media, Citizens, and Social Movements* (Routledge, New York 2004); and Donatella Della Porta and Mario Diani (eds), *Social Movements: An Introduction* (2nd edn, Blackwell Publishing, Oxford 2006).

[704] Lance Bennett, 'Communicating Global Activism: Strengths and Vulnerabilities of Networked Politics' in Wim van de Donk and others (eds), *Cyberprotest: New Media, Citizens and Social Movements* (Routledge 2004) p. 112.

[705] Donald A Norman, 'The Way I See It: Signifiers, Not Affordances' (2008) *Interactions* vol. 15, no. 6, p. 18.

[706] Lance Bennett, 'Social Movement Beyond Borders: Organization, Communication, and Political Capacity in Two Eras of Transnational Activism' in Donatella Della Porta and Sidney G Tarrow

between humans, or humans and places, but also an expanded condition that incorporates the means of communication that we employ – in our case, networked media applications. The integration of online-digital and offline-physical interaction – as exemplified, for instance, by McGarrigle's *NAMAland* – should aim at forging the aforementioned relationships, with a view to generating a context of trust, credibility and, last but not least, commitment to a common cause. The latter is *fostered* within particular channels of communication and is *mediated* by them at the same time.

In technocultural terms, the necessity expressed through this combination constitutes – at least partly – a departure from the developing discourses around the "Internet of Things" and the "Internet of Places".[707] Alternatively, or *additionally*, what is proposed here is the institution of an "Internet of Praxis", which would embrace all types of human activity, including artistic praxis. Notably, the progression from the Internet of Things to the Internet of Places represents a vision in which it is not simply physical items that become "smart objects" equipped with sensors that can be remotely controlled; rather, within the Internet of Places we can identify a more holistic approach to the development and utilization of the capacities offered by Web 2.0. Through the introduction of a spatial dimension to what the Internet of Things can do, the Internet of Places expresses the aspiration to become an omnipresent technological and social agent. However, if we take into account the economic aspect of such capacities and their commercial exploitation, then, the political potentialities of the previously described spatial expansion can be easily "downgraded": if a place is to be perceived merely as another "thing" that produces financially exploitable data, then, its subversive potentiality is inevitably lost. Therefore, the Internet of Places needs to adopt characteristics of topology that go beyond data generation and transmission. In other words, the *distributive* character of both the Internet of Things and the Internet of Places (in terms of distributing data, which may be exploited by the corporations that dominate the Web) has to become *distributed* (in terms of its openness to modification, personalisation and, in the end, ownership). As we have already

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(eds), *Transnational Protest and Global Activism* (Rowman & Littlefield Publishers 2004) pp. 203 – 226.

[707] For an account of the Internet of Things, see Friedemann Mattern and Christian Floerkemeier, 'From the Internet of Computers to the Internet of Things' (2010) *Informatik-Spektrum* 33, no. 2 pp. 107-121; Friedemann Mattern and Christian Floerkemeier, 'From the Internet of Computers to the Internet of Things' (*Vs.inf.ethz.ch*, 2010) <http://www.vs.inf.ethz.ch/publ/papers/Internet-of-things.pdf> accessed 4 April 2016. For an account of the Internet of Places, see: Giuseppe Conti and others, 'Enabling the "Internet of Places": A Virtual Structure of Space-Time-Tasks to Find and Use Internet Resources', *Proceedings of the 2nd International Conference on Computing for Geospatial Research & Applications* (ACM, New York 2011) p. 9.

suggested in the previous chapter, the political potentialities of the Internet as a distributed network have been largely concealed by the ideological pervasiveness of Data Capitalism, which is vividly reflected in the multifaceted corporate control exerted on the World Wide Web. Thus, in many ways, the proposition for an "Internet of Praxis" constitutes and invitation to re-engage with the idea of the Internet as a distributed entity. Such a gesture requires the subversion of the Internet of Things and/or Places as top-down mega-infrastructures of interconnected every-things, with a view to articulating viable bottom-up alternatives.[708]

The viability of this proposition is closely connected with the term "praxis", which points towards the role of the human agent. We should not forget that the creation of cybertopos is impossible without the human agency – namely, without the introduction of personal-"unique" elements to the dialogue developed between the online space and the physical space. The enabler of this amalgamation can only be a different kind of engagement with *both* of them, which I will term as "post-net participation". Post-net participation consists in the development of the socio-political participatory potentialities of the Web *in combination* with our perception of physical reality, which might (or might not) materialize in a set of concurrent actions taking place online and offline. In other words, post-net participation is the tool that "bridges" our online initiatives with the "reality on the ground", by enriching them with the "added value" provided by the recognition of the capacities *and* the limitations of both. This process of recognition, or consciousness-raising, should not be equated with the consciousness of the proletariat; however, it can be understood as a significant prerequisite for its formation.

Accordingly, if we accept that the main element that defines Data Capitalism is the "financialization of bios", then, post-net participation may be conceptualised as the tool that will allow us – at least partly – to refute this process. More specifically, the role of post-net participation lies in bringing "bios" and "zoē" next to each other, with the aim of re-evaluating them and – ultimately – proposing a new kind of "bios". This function becomes salient when we take into account the interpretation of those two Greek words that is provided by Giorgio Agamben in the introduction of his book *Homo Sacer* (1998). Agamben elaborates on the political signification of "bios" and "zoē", in order to illuminate their deep differences. As he notes,

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[708] 'Reprogramming the Internet of Things' (*Transmediale.de*, 5 February 2016) <http://2016.transmediale.de/content/reprogramming-the-internet-of-things> accessed 4 April 2016.

the Greeks had no single term to express what we mean by the word "life". They used two terms that, although traceable to a common etymological root, are semantically and morphologically distinct: *zoē,* which expressed the simple fact of living common to all living beings (animals, men, or gods), and *bios,* which indicated the form or way of living proper to an individual or a group. When Plato mentions three kinds of life in the *Philebus,* and when Aristotle distinguishes the contemplative life of the philosopher (*bios theōrētikos*) from the life of pleasure (*bios apolaustikos*) and the political life (*bios politikos*) in the *Nichomachean Ethics,* neither philosopher would ever have used the term *zoē.*[709]

The transition from the financialized "bios" to "zoē" and, then, back to a new "bios" constitutes a "focal practice"; namely, a practice that "re-centres" us by giving us a better sense of our location within the world.[710] Notably, this function of providing orientation and direction is akin to the origin of the term "cybernetics" in Greek – the word kybernētēs (κυβερνήτης), which means steersman, as well as leader, ruler and governor. The attainment of socio-political "focus" and "direction" constitutes the ultimate goal of the development of cyber-topoi – a relationship whose basis is also highlighted by Paolo Virno in *A Grammar of the Multitude*, where the philosopher brings to our attention the derivation of the word "topic" from "topos".[711]

However, the previously described relationship of post-net participation with space and the development of cybertopos is only one part of its political function. In addition to that, post-net participation should also be identified as a civic modus operandi that aims to nurture a new understanding of what is "political constitution" in the context of a networked society. Over the last two decades, an undeniable contribution of new media technologies to the transformation of the public sphere has been the fact that they have allowed a "strong expression of autonomy by the individual and collective productive subjectivities"[712]. In its political dimension, this expression of freedom can be positioned against "the strategy of equilibrated and regulated participation, which the liberal and imperial mixed constitutions have always followed"[713]. Nevertheless, as it has already been

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[709] Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life* (Daniel Heller-Roazen tr, Stanford University Press, Stanford 1998) p. 9.

[710] Albert Borgmann, *Technology and the Character of Contemporary Life: A Philosophical Inquiry* (University of Chicago Press, Chicago 1984).

[711] Virno, *A Grammar of the Multitude*, op. cit., p. 35.

[712] Hardt and Negri, *Empire,* op. cit., p. 321.

[713] ibid.

suggested in this chapter, the opportunities that are opened by this condition cannot be pursued through self-defeating ideological constructs, like Negri and Hardt's multitude. For, the multitude might seem – or might actually be in many cases – unregulated; however, its function is *fully equilibrated* due to the unresolved interpretation and, accordingly, use of the tools through which it constitutes itself. Therefore, instead of following multitude's largely "theological" approach, our focus should be placed on alternative schemata, which could, perhaps, be reminiscent of what Professor of Law J.H.H. Weiler terms as "variable geometry". Despite the fact that "variable geometry" originally refers to the prospective structure of the European Union and the relationship that it may produce as a supranational entity between "demos" and "polity", the origins of civic action that Weiler identifies in his premise lie very close to the context within which we should locate post-net participation. Weiler asks: "Can we not define membership of a polity in civic, non-organic-cultural terms? Can we not separate ethnos from demos? And can we not imagine a polity whose demos is defined, understood and accepted in civic, non-organic-cultural terms, and would have legitimate rule-making democratic authority on that basis?"[714]

Notably, Weiler's variable geometry has been mainly associated with the idea of a "multi-speed Europe", in which different countries may choose to integrate into the European Union to different extents and at various speeds. In the case of the networked political economy, however, we could conceptualise the variable geometry encouraged by post-net participation as a metro map: we are not only traveling on distinct networks that intersect ("lines" in the case of the metro), but, also, different lines may be part of one or more common fare zones. Correspondingly, if we think of the networks-lines as courses of Web-based action that deal with specific issues ("stations") and the fare zones in terms of shared ideologies and values, then, the adoption of Weiler's paradigm starts becoming a useful guide for the formulation of a new type of civic engagement with the Internet *and* through the Internet. Thanks to online networks' wide geographical reach this process can be both vertical (on the basis of countries and regions) and horizontal (on the basis of political ideas, aesthetic values, sexual orientation, race, etc.). As a result, such a mode of engagement may allow the development of what Weiler describes as a "contemporaneous membership in a national ethno-cultural *demos*, and in a supranational civic, value-driven

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[714] Joseph HH Weiler, 'The State "Über Alles": Demos, Telos and the German Maastricht Decision' (*Jeanmonnetprogram.org*, 1995) <http://jeanmonnetprogram.org/archive/papers/95/9506ind.html> accessed 4 April 2016.

demos".[715] This type of rights-based supranationalism lies at the core of post-net participation's view of our globalised world.

The variable geometry of the value-driven demos could be explored further through the lens of Bauman's concept of "multiple democracies",[716] which signifies the capacity to formulate multiple translations of the same principle. Bauman bases his premise on the concept of the agora and its "two-way translation between the language of individual/familial interests and the language of public interests".[717] Bauman sees this translation as the ultimate outcome that we should be aiming for, rather than as a fully predetermined process. As he notes,

> the degree of democracy of a political regime may therefore be measured by the success and failure, smoothness and roughness of that *translation*: to wit, by the degree to which its principal objective has been reached, rather than, as is often the case, by staunch obedience to one or another *procedure*, viewed wrongly as the sufficient condition of democracy, of democracy *as such*.[718]

Notably, Bauman connects this capacity with the role of the dominant economic system, by making a short historical analysis in which he identifies two important secessions in the development of capitalism: the first one is the separation of business from household – an idea that he "borrows" from German sociologist and philosopher Max Weber.[719] This secession is related to "the emancipation of business interests from all extant socio-cultural institutions of ethically inspired supervision and control".[720] The second secession that Bauman recognises is the emancipation from the nation-state, which was gradually assigned the status of the "household".[721] The combined outcome of those two secessions has been the "divorce between power and politics", for – as Bauman notes – "we now have *power free from politics*, and *politics devoid of power*. Power is already global; politics stays

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[715] Joseph HH Weiler, Ulrich R Haltern and Franz C Mayer, 'European Democracy and Its Critique' in Jack Hayward (ed), *The Crisis of Representation in Europe* (Frank Cass Publishers 1995) p. 23.

[716] Zygmunt Bauman, *Collateral Damage: Social Inequalities in a Global Age* (Polity Press 2011) p. 11.

[717] ibid.

[718] ibid.

[719] See: Max Weber, *Economy and Society: An Outline of Interpretive Sociology* (Guenther Roth and Claus Wittich eds, University of California Press 1978).

[720] Bauman, *Collateral Damage: Social Inequalities in a Global Age*, op. cit., p. 21.

[721] ibid., p. 22.

pitifully local".[722] The proposition of cybertopos is that before trying to make politics global, we should first make power local; yet, this should happen *without* ignoring the wider (i.e. global) potentialities opened by our actions (pro-cybernetic localism). The "value-driven demos" is the subject of this translation, or negotiation between the global and the local agora,[723] whose aim is to secure that the new forms of political movements and social alliances can be both flexible *and* resilient. Therefore, the emergence of a culture of post-net participation is the emergence of a culture in which online media transcend physical spaces by *consolidating* them, instead of merely "augmenting" them.

According to the pioneer theorist of tactical media David Garcia, the people who will materialise the previously described "translation" are the "neo-pragmatists of the Web". Garcia grounds his "search" for them on the conclusion that we have now irrevocably moved "from the heroic pioneering days of the net when only radicals and geeks participated to the era of the social web".[724] However, this is not a development that has to be viewed from a negative perspective, given that the most important element that leads to political mobilisation remains the *content* of the political proposition and its capacity to *implicate* the public – not the mobilisation around specific affinity groups, or – even – political parties.[725] In this context, Garcia notes that in spite of the forces that seek to domesticate the Web, new media activists and cultural producers alike

> have had the vision to step out of the established conception of how to do democratic politics and into the new hybrid spaces that combine the virtual and the street, which inevitably entails risk and contradiction. It is only from this actual practice including a willingness to fail and fail again that the vital renewal of democratic politics immanent to the age of networks will emerge.[726]

This prospect is already becoming evident in several artistic projects taking around the world, ranging from the emergence of artist-led hackerspaces in the countries that have been most heavily hit by the economic crisis, to the increasingly important role of the

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[722] ibid., p. 23.
[723] Paolo Gerbaudo proposes "an alternative understanding of the process of mobilisation, based on the notion of 'assembling' or 'gathering' rather than 'networking'". The action of "assembling" alludes not only to democratic organisational structures, like the national, regional or other kinds of Assemblies, but – above anything else – to the very origins of democracy in the agora. See: Gerbaudo, op. cit., p. 21.
[724] Garcia, 'From Tactical Media to the Neo-pragmatists of the Web', op. cit., p. 133.
[725] ibid., p. 132.
[726] ibid., p. 134.

"commons" in the works and actions that socially and politically engaged artists pursue. In all such initiatives, the death of cyberspace as the "pure" and "autonomous" utopian entity of the World Wide Web's first two decades does not entail the death of utopianism as a technology-catalysed pool of potentialities. The death of messianic Web is not the death of revolutionary Web. Rather, it is its liberation and its emphatic connection with the social and political struggles of everyday physical reality.

Conclusion

"The way to heaven out of all places is of length and distance"
Thomas More, *Utopia*, 1516

In order to mark the quincentenary from the publication of Thomas More's *Utopia*, Somerset House, in London, commissioned British conceptual artist Jeremy Deller and the Fraser Muggeridge studio to design a flag that would encapsulate the notion of "utopia" and celebrate 2016 as a "Year of Imagination and Possibility".[727] The flag that the artist and the studio's graphic designers came up with featured a large "smiley face", very similar to the emojis that we use every day when exchanging messages on our smartphones, tablets and laptops. For a whole year, the flag overlooked London's impressive skyline, which is increasingly defined by the presence of skyscrapers that (mainly) host international financial firms and banks. Although the flag's face is widely perceived as a symbol with a positive connotation, the most important question to be asked about its meaning refers neither to its emotional character, nor to the geographical direction towards which the smile is oriented (i.e. whether it is facing the City's skyscrapers in the east, or the Houses of Parliament in the west, etc.); rather, the most pertinent question is associated with the flag's relation to time: is the face featured in the flag smiling to a future utopia, or is it smiling to a past one?

In the *Communist Manifesto*, Marx and Engels break emphatically with the long-established idea that utopia belongs to a lost "Golden Age", turning – instead – their attention to the future. In this way, they refute a well-known "occupational disease of historians", as English broadcaster and historian A. J. P. Taylor has called the prevalence of the past in utopianism's association with time.[728] As it is exemplified by the *Communist Manifesto*, this orientation towards the future is of particular importance for the political character of utopianism, as it lends to it elements of a distinct political methodology – a blueprint on *how* to produce a better world. In her book *Utopia as Method: The Imaginary*

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[727] 'UTOPIA 2016' (*Utopia2016.com*) <http://utopia2016.com> accessed 4 April 2016.
[728] A. J. P. Taylor, 'Introduction', in Karl Marx and Friedrich Engels, *The Communist Manifesto* (Penguin Books, UK 1967) p. 12.

Reconstitution of Society (2013), British sociologist Ruth Levitas elaborates on the character of utopia as a methodology,[729] by noting that it

> provides a critical tool for exposing the limitations of current political discourses about economic growth and ecological sustainability. It facilitates genuinely holistic thinking about possible futures, combined with reflexivity, provisionality, and democratic engagement with the principles and practices of those futures. And it requires us to think about our conceptions of human needs and human flourishing in those possible futures. The core of utopia is the desire for being otherwise, individually and collectively, subjectively and objectively. Its expressions explore and bring to debate the potential contents and contexts of human flourishing. It is thus better understood as a method than a goal.[730]

Levitas complements this definition by identifying three key modes for the "imaginary reconstitution of society"[731]. First of all, the archaeological mode of reconstitution focuses on the "excavation of fragments and shards" from the past, which may belong to utopian traditions in politics, literature, or the arts. The aim of the "excavator" is not only to reveal those utopian accounts, but also to combine them into a coherent whole. Secondly, there is the ontological mode, which is concerned with the subjects and agents of utopia – namely, the ways in which utopianism may encourage people to change their social, political and cultural behaviours. Finally, Levitas identifies the architectural mode, which focuses on the organisational and/or institutional structures that could facilitate the creation of a different and better society.

Collectively, the art projects that we have examined in this thesis fulfil all three aspects of "utopia as a method": they "rediscover" and, then, combine political and artistic traditions of utopianism; they propose new forms of socioeconomic and cultural being; and they identify potential organisational structures through which such forms might be realised. However, the additional characteristic that defines them is their shared ambition to bring together the three modes of social reconstitution by regularly employing the

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[729] Levitas largely builds her analysis on Fredric Jameson's theorization of utopianism, according to which "utopias have something to do with failure, and tell us more about our own limits and weaknesses than they do about perfect societies". See: Fredric Jameson, 'Comments' (1988) *Utopian Studies* vol. 9 no. 2, p. 74.

[730] Ruth Levitas, *Utopia as Method: The Imaginary Reconstitution of Society* (Palgrave Macmillan 2013) p. xi.

[731] ibid., p. xvii.

legacies of communist utopianism as a connecting web. Therefore, the challenge that they are called to address is how to render the role of Marxist thought productive *and* sustainable, in an effort to achieve a reconstitution of society that would not be merely "imaginary" as the title of Levitas' book suggests. In other words, if we turn our attention back to the geographical aspect of Thomas More's fictional world, the question that post-crisis political art is called to answer is: if Utopia were indeed an island, as More suggested 500 years ago, what would be the coastline of a *socialist* Utopia? To wit, how big is the ideological territory that communist utopian thought might be able to occupy in the current historical conjuncture?

Quite evidently, this is a far broader and more complex question than the one of identifying the key characteristics of a group of politically engaged cultural practices. That is why the objective of this thesis as a mapping exercise has not been merely to organise artworks and projects on the basis of their commonalities, but, also, to delineate and analyse the conditions under which they have been produced, disseminated and experienced, with a view to determining their transformative potential. Through this multifaceted approach, the thesis has been able to cover a significant scholarly gap that refers to the reaction of New Media Art and, in particular, Web-based art to the global financial crisis of 2008. As it has been indicated in the introduction of the thesis, following the crisis, a wide range of academics, cultural theorists, curators, activists and artists have published works that have aimed at determining the impact of the global economic turmoil on contemporary art. However, in the vast majority of cases, the exploration of those scholars has not encompassed online and Web-based practices, examining, instead, anti-capitalist projects that have been deployed through various offline media. This choice has produced a general overview of the connections between contemporary art and political activism, which has largely ignored the very rich reservoir of new media artworks and cultural initiatives. As a result, very few of the artists whose projects have been examined in this thesis are referenced in the books that belong to the previously described body of research. Consequently, the existing scholarship has generated a rather fragmented and partial image as regards the political role of Web-based art in the post-crisis world – the very subject of this thesis. In addition to covering this scholarly gap, the multifaceted evaluation of Web-based practices that has (mainly) taken place in the previous chapter has allowed the thesis' contribution to knowledge to transcend the realm of Web-based art and address online communication at large. Most notably, this has been evidenced through the introduction, or elucidation of several key terms and concepts. Those began from the

field of economics (Data Capitalism); they continued with contemporary art produced and/or disseminated through new data-based technologies (the distributed art object); and ended up delineating a new kind of hybrid engagement with online and physical spaces, which brought together Marxist theory and ICTs (cybertopos, pro-cybernetic localism, post-net participation and the Internet of Praxis).

In order to support and systematise this new theoretical framework, the answers provided to the four research questions of the thesis were used as the key "building blocks" of its structure. Accordingly, the first part of the thesis has addressed the question of the historical and technocultural context within which the global financial crisis of 2008 occurred, in order to establish the relevance of alternative political imaginaries and, in particular, those inspired by communist thought. As indicated in the first chapter of the thesis, the most important element of the crisis' milieu has been Data Capitalism – a distinct and highly exploitative phase in the evolution of our globalised economic model. The main catalyst for the rise of this new phase has been the development of the World Wide Web in the early 1990s, while its maturity began with the widespread introduction of Web 2.0 applications in the mid 2000s, which altered the balance in the principal agent of economic expansion from consumption to production (user-generated data and content). In this context, Data Capitalism can be understood as an economic system whose main raw material and output is information, the vast majority of which belongs to, or is controlled by corporations. However, the system's overdependence on data as expressed through the algorithmic control of the economy has been a prominent cause of the global financial crisis (e.g. high-frequency trading). Alongside the quantification of everyday life through a process of constant datatization, they constitute two of the main elements against which Web-based cultural producers reacted after 2008.

This reaction was built on a rich cultural tradition of new media artistic practices, whose main focus has been the formulation of anti-capitalist social and political demands. The origins of this tradition can be traced in tactical media pioneers like Polish artist Krzysztof Wodiczko and his public projections, as well as in the public interventions staged by the tactical media collective Critical Art Ensemble (CAE). Most importantly, however, post-crisis artists have been able to build on the legacies of political net art – namely, the practices of groups like ®™mark, Etoy and Electronic Disturbance Theater (EDT), and the work of individual artists, like Natalie Bookchin. Finally, it is worth noting the significant contribution of online activist platforms that have taken advantage of the new potentialities opened by Web 2.0 in order to influence public opinion on a truly global scale

(MoveOn.org, Avaaz, Change.org, SumOfUs.org, GetUp, 38 Degrees, Campact, 350.org and WikiLeaks, amongst others). Thanks to the focused "issue-based" approach of the aforementioned artistic practices and alternative channels of public advocacy, a fertile online ground for the revitalisation and promotion of anti-capitalist ideas was already in place by 2008.

Communist thought and its multiple traditions functioned as a unifying agent that brought together the evolutionary paths of the economy and culture that we have described above. The critical framework of this agency was investigated in the second chapter of this thesis, which identified the Internet's "organic" connections with communist utopianism through the examination of the work and legacy of Walter Benjamin. The study of Immanuel Kant by Benjamin has been able to reveal the two philosophers shared interest in the notion of "justice", which largely shaped Benjamin's work in the field of art under the influence of Marx. The main element that links those two aspects of Benjamin's work is "possession" – a capacity that is negated through the mechanical reproduction of the art object. In today's context, digital and online reproduction defy to an even greater extent the power of aura and historicization that mechanical reproduction first attacked. The passage from the singular-unique to the distributed art object, and from an "auratic" to a more democratic mode of cultural production can, thus, become a natural enabler in our struggle to gain "recognition" as equals (Hegel). Most importantly, perhaps, the formulation of new revolutionary demands may focus on the power of "here-and-now" (Benjamin's "jetztzeit"), as we increasingly live in a world of real-time networks. Those political potentialities have been truly inspirational for new media theorists and artists who use the World Wide Web. As the reinterpretations of Benjamin's work in the context of the Internet Age suggest, in the period preceding the crisis there was a distinct shift of focus from the potential of the *medium* to transform the individual (Douglas Davis, 1995) to the potential of the *individual* to transform the medium (Geoff Cox and Joasia Krysa, 2005). This gradual metamorphosis of the Internet into a much more personal and, thus, political tool of expression has been employed by politically engaged cultural producers as an antidote to the anti-utopian spirit that defined the two decades that preceded the global financial crisis of 2008. As a result, alternative political imaginaries inspired by communist thought managed to survive the rise of Data Capitalism and, then, thrived after the crisis, as artists identified the subversive political potentialities residing in art's online creation and distribution.

The practical evidence of this proliferation is provided through the answer to the second research question of this thesis, which refers to the identification of the main formal and conceptual characteristics of the political Web-based art that was produced between 2008 and 2015. By examining a wide range of projects as well as artists' practice statements, manifestos, articles, academic papers and interviews, the thesis has been able to produce an inclusive "navigation map" of such practices, which have been divided into two distinct categories. The first broad category of works, which was analysed in the third chapter, has included projects that deconstruct the modus operandi of Data Capitalism and protest against the social, economic, political and cultural conditions that it nurtures. The common goal of those practices has been the activation of citizens' political consciousness and the development of a new understanding of their class position as an "online proletariat". In order to achieve that, politically engaged Web-based artists exposed in their works the complex architecture of Data Capitalism (a system of invisible "flows"); its privileged mode of labour (immaterial and affective labour); the class divisions that it produces and/or accentuates; and, finally, the impact of the crisis on artistic creation and cultural institutions (devalorisation and underfunding). At the same time, many artists were influenced by the modes of protest and civic mobilisation in public spaces that appeared after the events 2008. The practices of such artists have been characterised by a strong focus on the notion of the "commons" and, more specifically, on their appropriation by Data Capitalism and the necessity to reclaim them.

In spite of the anti-capitalist political dispositions of many of the initiatives belonging to this first category, however, their often-ephemeral character as exhibitions, performances or public interventions delimited their ability to formulate more practical, long-term propositions. Accordingly, the second broad category of post-2008 works has reflected the need to find more strategic responses to the new conditions produced by the crisis. In this context, a significant number of Web-based artists, museums, independent art spaces, collectives and cultural agencies created projects whose goal has been the establishment of alternative modes of socioeconomic being that strongly reflect the legacies of Marxism. Those projects, which have been analysed in the fourth chapter, have systematically promoted the creation of new radical institutions, such as hackerspaces – places where new modes for the production of common wealth could be nurtured. At the same time, a range of digital currencies were created by artists, or adopted by them in their projects. This group of works has been indicative of the effort of politically engaged artists to produce and/or support alternative economic models, which could defy the main agents

of Data Capitalism on a permanent basis. And, finally, several artists and cultural institutions created projects that have radically reimagined community and the state as the dominant modes of societal constitution and governance. Through the use of the Internet, those cultural producers have aimed at replacing the existing capitalist state with a new kind of civic entity based on the principles of openness, accountability, equality and communality. Consequently, the crisis functioned as a two-fold catalyst for politically engaged Web-based art. On the one hand, it revitalised a strong utopian spirit inspired by socialist ideals, which has materialised as a public denunciation and deconstruction of Data Capitalism and its modes of wealth accumulation. And, on the other hand, many artists and cultural workers gradually adopted a more strategic view on the Internet, in order to propose novel and radical modes of social being, with long-term ambitions.

However, as demonstrated through the answer to the third research question of the thesis, the political power of the Internet as a subversive technocultural tool does have important limitations. This reality is highlighted in the thesis' fifth chapter, which explores the question of the interests of global capitalist elites in art and the Internet, and the restrictions that they have imposed on the political use of the Web in order to safeguard them. The agents who have undertaken this safeguarding "mission" include the different institutions and instruments associated with the contemporary art market, such as commercial galleries, auction houses, art fairs, biennials, collectors and museums; social media platforms and their expanded corporate networks; online mega-corporations, such as Web portals, search engines, cloud computing companies and electronic retailers; financial institutions and fiscal policy bodies, including commercial banks and Central Banks; and, finally, governments and transnational institutions with restrictive regulatory powers over the Internet. In harmony with the Marxist theorisation of capitalism's strategic reaction to its own structural weaknesses, global elites have seen both the Internet and culture as emerging fields of economic expansion and deeper exploitation. This perspective has been crucial for minimising the ramifications of the crisis, whilst providing new opportunities to generate profits.

The main instrument that has been used in order to materialise the goals of online economic expansion and exploitation is datatization – namely, the transformation of all aspects of our lives into data. This function is accompanied by totalising processes of commodification and control, which have at their core search engines and social networking platforms. Because of those processes, Web-based creative production and dissemination is confronted with significant obstacles that are applied to the Web as a

whole – be it in the form of online monopolies following the Googlization model of dada centralisation, or the censoring policies of social media corporations that aim for complete control over data generation. Notably, this mode of exploitation also incorporates the "niche" area of cultural data, as arts and culture constitute today an important subsection within a rapidly expanding Web (e.g. Google Cultural Institute). As an economic system whose main raw material and output is corporate-owned information, Data Capitalism aims to integrate all types of cultural information-data into its quantification practices. Yet, this is merely the most visible aspect of the obstacles imposed by Data Capitalism on the political Web. In the case of new curatorial and academic trends such as the rise of the post-internet art movement, the previously described process is considerably more complex. This is due to the fact that an artwork has to be thoroughly "depoliticised" by "deleting" its association with the political background of net art, before it can become datatized and quantified as a product. Such an approach is indicative of the capitalist need to find or construct new markets. Most importantly, all those limits have been set by appropriating and/or manipulating, in some form, the very tools that are employed by politically engaged artists and cultural producers. Therefore, Data Capitalism sees the Internet through the prism of a multifaceted paradigm of "economic institutionalisation", in order to perpetuate the already established modes of wealth accumulation.

Accordingly, the fourth and final research question that emerges from the previously described obstacles and limitations is: how can we consider them in relation to the subversive qualities of post-crisis Web-based art, in order to reach an overall evaluation of such practices as a paradoxical combination of capitalism's products (networked media) and communism's visions (alternative and anti-capitalist modes of political organisation, social being and cultural production)? As we have seen in the sixth chapter, an evaluation based on the strict principles set out by Marx and Engels in *The Communist Manifesto* would readily position all of the artworks and initiatives examined in chapters three and four outside the ideological realm of communism. By not advancing *exclusively* the political causes of the working classes, they have not been able to produce a revolutionary proletariat; and by adopting largely non-confrontational means, their role could be characterised as merely reactionary, or – even – conservative. This dual difficulty can be attributed to the systemic ideological barriers produced by Data Capitalism. More specifically, due to the procedural sublimity of networked media (as expressed – for instance – by our emotional and intellectual attachment to the constant updates of social media timelines), we have become incapable of recognising the alienating dimension

embedded in the interfaces that mediate our communication. Instead, we fully immerse ourselves in a seductive "Society of Non-Spectacle", whose ultimate outcome is a "gamified" and, thus, highly uncritical public sphere. The latter is increasingly determined by an abstract perspective on the social body's political function, which is exemplified by attractive, yet counter-productive intellectual devices like Negri and Hardt's postulation of the multitude. The incapacity of such conceptual approaches to provide a specific political direction is indicative of the inability of many post-Marxist thinkers to grasp the complex and highly contradictory ideological nature of new media.

As it has been suggested in the final part of the thesis, in order to find an antidote to this impasse, we should take a step away from political theory and follow the opposite path in our analysis: namely, we should start from assessing the ideology of networks and only *then* examine the ideology of the art that can may be produced through them. Accordingly, the main proposition of this thesis has been the evaluation of Web-based art by looking into the ideological space between networks' denationalised liberalism and global governmentality. Interestingly, the opportunities for social, political and cultural change engendered by the investigation of this space are based on the embrace of one of Data Capitalism's major characteristics: the paradox. According to theorists like Matteo Pasquinelli, the contradictory nature of our capitalist system could successfully function as a blueprint for articulating a reaction against its own modus operandi. In this context, the paradox adopts the form of a reaction grounded on the potentialities of *physical* space rather than the potentialities of *online* space. More specifically, the thesis has called for the cultivation of a new, more strategic understanding of the relationship between cyberspace and physical space, which has been synopsised in the notion of "cybertopos". The materialization of this relationship requires the activation of a physical space's distinct traits through *and* in parallel to the use of networked media. Accordingly, the development of a culture of "pro-cybernetic localism" could function as an answer to the depoliticised conception of networked media that characterises many of today's technology-driven discourses (e.g. "Internet of Things" and "Internet of Places"). Such approaches should be replaced by the proposition for an "Internet of Praxis", within which the ethos of "post-net participation" that first appeared within the crisis' social and artivist movements could flourish. The subject of this new mode of political participation is a "value-driven demos", whose scope lies beyond the "theological" and abstract approaches to proletarianization that still dominate leftist thought. By allowing different levels and types of civic engagement, which are – however – both collectively *and* individually directed against the

Web's modes of powerless socialisation (e.g. social media), the praxes of the new "demos" are in a position to challenge Data Capitalism's processes of accumulation.

In spite, however, of the detailed answer provided to the final research question of this thesis, the premises on which the answer has been built are – inevitably – both analytical *and* speculative. In other words, this investigation might have been able to demonstrate that the political Web-based art produced between 2008 and 2015 has been indeed the product of a paradoxical combination of capitalism's products and communism's visions. Nevertheless, when it comes to defining the *extent* to which the forces of communist utopianism, or the forces of capital have been the most influential in shaping the works' ultimate effect, this largely remains an open-ended question. Just like the flag that was placed on the top of Somerset House to mark 2016 as the "Year of Imagination and Possibility", the "ideological winds" of contemporaneity might make the works' impact face one direction or another, for longer or shorter periods of time. This conclusion becomes even more pertinent if we take into account some of the "unimaginable" and "impossible" political events that have defined 2016 – "Brexit" and the election of Donald Trump as the 45th President of the US. The growing volatility of globalised politics, as exemplified by such developments, and the role of networked media in the rise of a "post-truth" world, render the work of politically engaged artists more complex than ever in recent times.[732] Within an unstable environment, the proliferation of alternative political imaginaries in Web-based art does not automatically entail their proliferation as attainable goals within the consciousness of our societies. Yet, what we can assert with much more certainty is that this is a question that is addressed to the future – not a question addressed to the past. As the crisis of globalised capital continues in various forms, as the catastrophic results of its mode of production become increasingly evident in the planet's ecological imbalance, and as technological advances nurture highly complex conditions that allow better communication *and* wider disinformation and control, the question of what might come next is calling for our attention. Artists have often been amongst the first to respond to this call. And, as this thesis has indicated, they appear eager to continue being amongst the first.

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[732] "Post-truth" was pronounced "word of the year" by Oxford Dictionaries in November 2016, particularly because of its use in the phrase "post-truth politics". The adjective has been defined as "relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief". See: 'Word Of The Year 2016 Is... | Oxford Dictionaries' (Oxford Dictionaries | English, 2016) <https://en.oxforddictionaries.com/word-of-the-year/word-of-the-year-2016> accessed 30 December 2016.

Glossary

Affective labour | A type of labour that is based on producing, or manipulating affects. This is particularly relevant to Data Capitalism's modes of wealth accumulation as exemplified by users' engagement with social media platforms ("prosumption") and online marketing.

Aura | The conceptual distance produced by the uniqueness of a cultural object. Aura controls our relationship with the work of art by imposing on it a specific "reading", which is perpetuated through tradition. Walter Benjamin calls for the "liberation" of the art object from aura through its mechanical reproduction.

Algorithmic trading | The automated creation and execution of trading orders by computers using complex mathematical formulas and high-speed programs, which take specific actions in response to varying market data (time, price, volume, etc.).

Altermodern | A new cultural paradigm that has succeeded postmodernism, and is characterised by increased communication, travel and migration. According to Nicholas Bourriaud, this "new universalism" is catalysed by translation, subtitling and generalised dubbing that take place in new media.

Behavioral Finance | A subfield of Behavioral Economics, which analyses the influence of psychological, social, cognitive, and emotional factors on the decisions of financial agents (individuals and institutions). Its main premise is that there are limits to the rationality of "homo economicus" ("economic man").

Big Data | Extremely large data sets, whose size and complexity makes traditional data processing applications inadequate to analyse them. Once analysed computationally, they can reveal current as well as predicted patterns, trends, and associations, especially relating to human behaviour and interactions.

Commons | The natural, cultural and technological resources accessible to all members of a society, which are held in common and not owned privately. Those include the natural environment and its materials; cultural products; public goods, in the form of infrastructures, education, healthcare, and digital information and communication resources.

Communist and Socialist Literature | The third chapter of Marx and Engels' *Manifesto of the Communist Party* (1848), in which the two authors critique three main strands of socialist and communist thought: Reactionary Socialism, Conservative or Bourgeois Socialism, and Critical-Utopian Socialism and Communism. Marx and Engels use this part of their manifesto in order to explain in detail the failures of all

	three approaches, which then allows them to draw clearer distinctions with their own political propositions.
Cryptocurrency	A digital currency using encryption techniques in order to regulate the generation of its units and verify the transfer of funds through secure transactions. Cryptocurrencies use decentralized control as opposed to centralized electronic money, or centralized banking systems (e.g. Central Banks).
Cybertopos	The hybrid conceptualisation and use of physical and online spaces, by taking into account the unique qualities (advantages and disadvantages) of both. Cybertopos can be understood as the object of pro-cybernetic localism.
Data Capitalism	An economic system whose main raw material and output is programmable, corporate-owned information (data). It constitutes a particular stage in the development of Late Capitalism, catalysed by the launch of the World Wide Web in the 1990s (early phase) and the introduction of Web 2.0 in the mid 2000s (maturity). Its main characteristics are datatization, the algorithmic control of the economy and the passage from consumption to production as the principal agent of economic expansion (user-generated content and data).
Datatization	The translation of all types of information into readable, sharable and comparable data, which may, then, become commodities.
Distributed art object	The art object that is created, reproduced and disseminated through the distributed network that is the Internet.
End of History	The idea that following the end of the Cold War we reached the completion point of mankind's ideological evolution, through the universalization of Western liberal democracy as the final form of human government. According to Francis Fukuyama and his "conclusive" version of human development, the free market is a key component of this optimum form of social organization.
Financialization	The increase in size and influence of financial markets and institutions, which subordinates the traditional processes of production (industrial economy and agricultural economics) to the accumulation of profits in financial systems.
Gamification	The application of game-design elements and game principles to non-game contexts. Gamification is often used as an online marketing technique in order to encourage engagement with products or services.
Googlization	The totalising effect of Google on our personal information, habits, opinions, and judgments because of its dominance in the fields of online advertising, software, geographic services, e-mail,

publishing, and Web commerce.

Grand narrative (or Metanarrative)	An overarching narrative about narratives of history, experience and knowledge, which provide a structure for people's beliefs, and give meaning to their experiences through the anticipated completion of a (as yet unrealized) master idea.
Hacktivism	The subversive and unauthorised use of computers and computer networks in order to further social or political ends.
Hackerspace	A community-operated, usually "not-for-profit" workspace, where people with a common interest in computing and technology can meet to collaborate on projects, while sharing ideas, equipment and knowledge.
High-frequency trading	A type of algorithmic trading in which large volumes of financial products (equities, futures, options, currencies, etc.) are bought and sold automatically, continuously and at very high speeds, capturing with each transaction very small amounts of money that accumulate quickly.
Homo Economicus	The figurative human being who is characterized by the infinite ability to make rational decisions.
Internet governance	The development and application of shared principles, norms, rules, decision-making processes and programmes that shape the evolution and use of the Internet. According to Milton L. Mueller, there are four distinct approaches to Internet governance: denationalized liberalism, global governmentality, cyber-nationalism (networked nationalism), and cyber-conservatism (cyber-reactionaries).
Internet of Places	The interconnection via the Internet of computing devices situated in different locations, which allows the exchange of data relating to local conditions (e.g. weather) and a variety of community assets and services (e.g. schools, libraries, transportation systems, hospitals, power plants, water supply networks, waste management, law enforcement, etc.).
Internet of Praxis	The combination of the distributive and distributed functions of the Internet in order to fully actualise its transformative potentialities. The distributive function is exemplified by the Internet of Things and the Internet of Places (distributing/ exchanging data), and the distributed function refers to the Internet's architecture as a distributed network (openness to modification, personalisation and ownership).
Internet of Things	The interconnection via the Internet of computing devices embedded in everyday physical items, which renders them "smart" objects capable of exchanging data and being remotely controlled in real time.

Jetztzeit	The notion of "here-and-now" according to Walter Benjamin, which defines "the consciousness of exploding the continuum of history [that] is peculiar to the revolutionary classes in the moment of their action".
Laissez-faire	An economic paradigm in which governments totally abstain from interfering in the workings of the free market through any kind of regulations, privileges, tariffs and subsidies.
Multiple democracies	The capacity to formulate multiple translations of the same democratic principle. According to Zygmunt Bauman, this process is expressed through the negotiation between "the language of individual/familial interests and the language of public interests", which originates from the oikos-agora binary.
Multitude	A new type of collective subject within networked societies, which despite sharing some of proletariat's traits, refutes its uniformity, a common identity and its definition on the basis of class antagonisms.
Neo-Luddism	A philosophical strand that opposes many forms of new technologies and their applications. In the context of post-Marxist thought and networked media, Neo-Luddites believe that the Internet is merely an instrument for the development of new, better concealed, yet more aggressive forms of Late Capitalism. The name of the strand originates from the British Luddites, who were active as an anti-technology movement between 1811 and 1816.
Net Art	Digital art that is created for the Internet and distributed through networked media.
Net neutrality	The absence of any quantitative or qualitative bias in the way that Internet service providers and governments regulate access to the Internet and treat online data.
New Media Art	Artworks that combine traditional media-based practices (e.g. video, animation and experimental film) with practices based on new technologies, which do not necessarily have a media-related component (e.g. electronic art, robotic art and bio art).
Post-Fordism	The dominant production model in most industrialized countries, which is characterised by specialisation in production and labour, economies of scope, the introduction of new Information and Communication Technologies (ICTs), and the development of the services sector. This paradigm constitutes a departure from the large-scale mass-production methods pioneered by Henry Ford.

Post-Internet Art	A group of artworks that are influenced by, mimic, or fully adopt aesthetic elements of the Internet, in order to remediate them, predominantly in the gallery's "white cube".
Post-net participation	A mode of participatory action that takes into account the capacities and limitations of both the online milieu and the physical spaces that relate to the action. This joint conception of online and offline realities does not necessarily materialize as activities taking place concurrently online and offline, but always considers the traits of both.
Post-truth politics	A political culture in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief.
Powerless socialization	The context of spectacularized isolation dominating the function of social media platforms, which cannot have a real transformative effect on individuals and the society.
Pro-cybernetic localism	The intentional focus on the locale through networked media, which aims at activating the political, social, economic and cultural potentialities of a particular physical space, whilst enabling links with other locales on cyberspace.
Procedural sublime	The ability of complex computer-based systems to present an awe-inspiring range of potentialities, regardless of the aesthetic forms through which those possibilities are being manifested.
Prosumption	The blurring and merge of the actions of production and consumption through the use of new media technologies. This is particularly relevant to Internet users, who are constantly engaged in creative activities, communication, building online communities and producing content.
Pure Gewalt	A type of transcendent violence/power exerted by the proletariat at the time of its revolution against unjust possession. According to Walter Benjamin's reinterpretation of Kantian philosophy, pure Gewalt should be used with prudence and as a kind of "gift", for it constitutes a stage towards the realization of the category of justice.
Scientific Socialism	The strand of socialist thought based on scientific methodology, in whose context observation is essential to developing or amending elements of political theory. Scientific socialists believe that due to technological innovation and increasing automation the fall in the average rate of profit is inevitable, and this entails that more capitalist crises are likely to occur (technological determinism).
Society of Non-Spectacle	The development of a society in which new media procedural sublimity makes it impossible to distinguish between spectacle as content and the technological interfaces through which it is

mediated. This fully "integrated" spectacle renders gamification a constituent part not only of everyday communication, but also of political and social constitution.

Struggle for recognition	The struggle of humans to be recognised by other humans as the catalyst of any historical process. According to G.W.F. Hegel, we can gain self-consciousness as autonomous subjects only by interacting with and being recognised by other autonomous subjects. The effort to do so is our "struggle for recognition".
Tactical Media	A set of activist media art practices, which intervene temporarily in public spaces in order to express a critique of the political, economic and cultural order.
Unstable Equilibrium of Compromise	The calculated, short-term sacrifices made by a capitalist state's ruling classes, which – however – do not challenge in any way the established relationships of power. According to Nicos Poulantzas, the "unstable equilibrium of compromise" is a fundamental tool for the prolongation of the capitalist system.
Value-driven demos	The supranational civic demos produced by the implementation of a "variable geometry" political structure.
Utopianism	The belief in, or pursuit of a society in which everything is perfect, through the establishment of political, economic, social and cultural structures that are considered as ideal.
Variable geometry	A polity whose demos is defined, understood and accepted in civic, non-organic cultural terms, which go beyond the construct of nation and allow different levels and types of civic engagement. The concept originally refers to the structure of the European Union and, according to J.H.H. Weiler, it consists in the idea that different countries should integrate at different levels and pace depending on their political, economic and social conditions ("multi-speed Europe").
Web-based Art	A subset of New Media Art that includes artworks using the World Wide Web as their exclusive medium of creation and dissemination (net art); and artworks that might exist in physical spaces, but also have important online components that are necessary for the communication of their creators' aesthetic and ideological aims.

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