

International Research Forum
26-28 January 2017

DATA { PUBLICS }

PROGRAMME

Under the auspices of modernity, the public sphere was largely elaborated through spatial analogies that foreground a physically tangible division between the public and the private, between rights of ownership, control and usage. The contemporary public sphere of data can no longer be comprehended in such terms – as a static, albeit progressively opaque, environment that we simply traverse. Rather, today’s data publics bring with them a profound blurring of the capacities, roles and motivations of different actors. Traditional power apparatuses are now being confronted with a citizenry that is increasingly tasked with self-servicing of the social, cultural and infrastructural fabric of the societies they inhabit. Within these new spatial coordinates any notion of social capital is now joined to an affective economy powered by desire, identification, fear and rejection. The fate of the public of these new data publics is thus both generated and implicated in new technologies of governance and their associated digital economies that presently traverse into and beyond the realm of data.

The acceleration of data constitutes one of the most powerful transformative forces in the world today and is radically changing both the way we live our daily lives and processes operating on a global scale. The international research forum DATA PUBLICS {*Goldsmiths 26–28 January 2017*} takes as its starting point an active understanding of the participation of today’s populations in data generation and the shaping of new public spheres. It seeks to dynamically explore the political implications of hybridised data environments in which individual, commercial and governmental agendas and actions are becoming increasingly blurred. Through both theoretical and artistic explorations it inquires into the impact of a “*data mentality*” on our expectations and articulations of public spheres, experiments with new visual and cultural modes of binary transgression within the digital public realm and speculates on new models of governance in the context of self-generating data publics. At a time when governments become increasingly private and citizens increasingly public, we argue that it is vital to look into the critical pluralities of both data and publics.

www.datapublics.org

Forum convenors:

Peter Mörtenböck
Helge Mooshammer
Stephanie Polsky

Department of Visual Cultures
Goldsmiths, University of London

PROGRAMME**Thursday, 26 January 2017**

Location: Goldsmiths, University of London, Professor Stuart Hall Building, room LG02

7:00pm-9:00pm: Opening Keynote

Lev Manovich (CUNY): *“how i edit my instagram”*: big data, algorithms, and the study of global visual culture

Q&A chaired by **Peter Mörtenböck** and **Helge Mooshammer** (TUW & Goldsmiths)

Friday, 27 January 2017

Location: Goldsmiths, University of London, Professor Stuart Hall Building, room LG01

11:00am-11:30am: Opening Remarks

11:30am-1:00pm: Panel 1: “From Data Capitalism to a Data Commons: Towards a More Humane Datasphere”

Luciana Parisi (Goldsmiths): *Statistical Intelligence and Data Capitalism*

Ignacio Valero (California College of the Arts): *The Emotariat, Accelerationism, and the Republic of Data: An Inquiry into an EcoDomic Aesthetic(s) of the Common(s)*

Chaired by **Bev Skeggs** (Goldsmiths)

Within the scope of data capitalism, we inhabit publics where post-equality, post-ethical, post-truth, post-ecology, post-government populist and neo-fascist regimes appear to freely reign. Now is the time to revise our understanding of the political possibilities of techno-logics, beyond today’s polarised views about data appropriation and data refusal. We need to reposition those views to allow us to become much more involved in the generation of new forms of sociality beyond the limits of what public data has heretofore been able to provide for us. The current manipulation of data has become massively unsustainable, as has the neoliberal/capitalocene project, which allows it to materialise massive inequality throughout the world. As the industrial proletariat and the new data cognitariat both become more aware of the neocolonial financial, machinic, techno-sphere that binds them to a narrow capitalistic ideology, the more emancipatory and humane alternatives will come into view to reveal a world that actively requires engaged social movements and social practices to emerge, wherein we can “come to our senses,” and be newly creative, building and rebuilding our future as “communities of sense;” all of us belonging within a broader “data commons”.

1:00pm-2:00pm: Lunch break

2:00pm-3:20pm: Panel 2: “Surveying, Surveilling and Sensing Data: Creaturing Data from Google Earth to Deep Space”

Stephen Graham (Newcastle University): *Enigmatic Presence: Vertical Satellite Geographies and Data Publics*

Jennifer Gabrys (Goldsmiths): *Sensing Air and Creaturing Data*

Chaired by **Louis Moreno** (Goldsmiths)

Regimes of power organise themselves through various scientific data systems to produce violence, inequality, and injustice in the world. These are often intimately interwoven with the production of visual cultures aimed at, or around the Earth’s terrestrial surface. Such visualisations pose difficulties for our understanding through their enigmatic presence in our environment, whether it is an immediate, or a distanced sense. Moreover satellites and other space systems are constantly on and exploring our world. They do so through devices that generate a complex visual politics through sensing, mapping and visualizing practices which together surround us as part of a ‘Google-able’ Earth. Critical scholars and activists are now working to render these often arcane and secretive worlds of data more visible, contestable, and perhaps to some degree more transparent to a variety of publics. Such a potentially may be found within citizen-sensing scientific projects, where data is intended to be collected in ways that

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complement, reroute, circumvent, and challenge the usual institutions and practices that monitor environments and manage scientific data. Such practices have the potential to “create” data and therein may also form alternative modes of evidence presented in contestation of scientific fact. This raises the potential for generating creaturely rather than universal arrangements of data to ultimately complement what data publics at varying geolocalities can do.

3:20pm-3:40pm: Tea break

3:40pm-5:00pm: Panel 3: “From Plastic Publics to Data Activists: New Strategies to Balance Data Supremacy”

Matthew Fuller (Goldsmiths): *In Praise of Plasticity*

Paolo Gerbaudo (King’s College): *Fighting Against Data Monopoly Capitalism*

Chaired by **Evelyn Ruppert** (Goldsmiths)

Aggressive forms of capitalism are inimical to political community strategies as they are currently being developed. As we struggle under the dominance of cyber libertarianism, a credible strategy of counter-attack against digital monopoly capitalism remains possible should we engage a messier, loosely correlated kind of data as publics who have become similarly disaggregated. Publics that may now be seen to coagulate around various kinds of quasi-cognitive debris, may use their dispersal to redress the giants of capitalism in ways that hitherto only provided their material means of coming into being. We must ask, what conditions of plasticity, and possibilities for construction do the particular scaffolds of computational media provide that may prove opportune to shifting that balance of power? Could the current state of subjective dissolution and present condition of plasticity within the datasphere be used to mount a credible strategy of counter-attack? Constructivist approaches in cybernetics and anarchism, amongst other currents, anticipate such a shift in power when it comes to grappling with digital monopoly capitalism, as we now know it.

5:00pm-5:15pm: Tea break

5:15pm-7:00pm: Evening Keynote

Ravi Sundaram (The Sarai Programme, CSDS Delhi): *Everyday Disjunctions: Public Expression After the Mobile Phone*

Q&A chaired by **Irit Rogoff** (Goldsmiths)

Saturday, 28 January 2017

Location: Gasworks, 155 Vauxhall Street, London SE11 5RH

12:00pm-12:30pm: Opening Remarks

12:30pm-1:15pm

Dani Admiss (CRUMB, University of Sunderland) and **Cecilia Wee** (Royal College of Art):

Co-Building Worlds: Data-Discourses and Other Stories

1:15pm-2:00pm

Autogena Projects - Lise Autogena and Joshua Portway (Sheffield Hallam University):

Formulating New Aesthetics for a Data-Saturated World

2:00pm-2:15pm: Tea break

2:15pm-3:00pm

Simon Yuill (Goldsmiths): *The “Values and Value” of Algorithmic Time*

3:00pm-3:45pm

Plenary discussion with presenters chaired by **Ayesha Hameed** (Goldsmiths)

3:45pm-4:00pm: Closing Remarks

ABSTRACTS**Luciana Parisi** (Goldsmiths, University of London)*Statistical Intelligence and Data Capitalism*

As machine learning AI has replaced symbolic logic with statistical reasoning, no longer can the means or instruments of capital be associated with teleological metaphysics and ontological totalities. Whilst some arguments against the digital infrastructure of neoliberalism point out that the cognitive capacities of machines are a manifestation of an affective order of governance, others have instead defined intelligent machines as instruments of the war machine of Capital (in the form of debt) and the State against populations (organic and inorganic life). This paper discusses these views in light of a profound transformation in the history of machine intelligence demarcated by the automation of learning developed in the fields of cybernetics and computation. The paper suggests that a critique of data capitalism, as involving the self-generation of socialities (through the use data for health, security, logistics, the self, etc.) may be in need of a closer re-envisioning of the political possibilities of technologies in order to unpack the underlying limits of today's polarised views about data appropriation and data refusal.

Ignacio Valero (California College of the Arts)*The Emotariat, Accelerationism, and the Republic of Data: An Inquiry into an EcoDomic Aesthetic(s) of the Common(s)*

Neoliberalism, as Capitalocene, is “undoing the demos” and the planet. It has become a fundamental enabler of a synergistic convergence of deeply destructive political, economic, ecological, racial, religious, patriarchal and xenophobic forces. This is an epochal “legitimation crisis” which seems to be accelerating across the globe, under emerging or consolidating post-equality, post-ethical, post-truth, post-ecology and post-government populist and neo-fascist regimes. These falling geopolitical dominoes are availing themselves of an entire arsenal of authoritarian tools, including the manipulation of public data, that involve the intentional systematic destruction of liberal democratic institutions and legal traditions, going all the way back to the Greek Polis, the European Enlightenment, the French Revolution, and the American New Deal.

The internal contradictions of bourgeois liberalism, hijacked by the vast expansionary wave of a runaway neoliberalism, seem to be at the limit of their elasticity, preparing a super-toxic, new round of “creative destruction” on the backs of a global precariat, toiling under merciless inequality, where 62 multi-billionaires “own the same as half the world.” (Oxfam Davos Report, 2016) – In this Data Publics Forum, I emphasise three areas: 1) What I call an emotariat condition, or the emotional exploitation of “affective labour,” more recently expressed in the fierce worldwide explosion of an angry, disoriented, and enraged precarity, signaling an unsustainable neoliberal/capitalocene project imploding in the face of massive inequality, ecological devastation, fanaticism, political chaos, war, consumerism, nihilism and psychological fragility. It is a new intense level of suffering where the Lacanian “graph of desire,” accelerates to an undecidable topology, a kind of schizoid “particle and wave,” strange attractor, gravitating along the physical exhaustion of the industrial proletariat and the new data cognitariat. This implosion seems to be giving birth to a janus-faced, contradictory, neofascist and decolonial dialectic, frightening but possibly liberating. The strenuous tension that this situation is creating can lead us anew into the jaws of a Reichian “mass psychology of fascism,” where a sort of Jungian “collective unconscious” is devoured by the void of a massive capitalist shadow – Yet, potentially, it may lead us also to an empowering re-birth of human agency and the Common(s), Spinoza, Marx, Negri, etc. 2) Accelerationism, stemming from the above, becomes that “quasi-Marxist strategy where the ‘cure is posed as more of the disease,’ or more of the disease than capitalism can stand.” (John Russell) – Paradoxically opening avenues to new forms of hybrid capitalisms and post-capitalisms, hopefully transforming capitalism's neocolonial financial, machinic, techno-sphere and ideology into more emancipatory and humane world alternatives. Different interpretations of these historical process may go as far back as Marx's “Fragment On Machines,” Fedorov, Veblen, Benjamin and the Frankfurt School, Lyotard, Deleuze & Guattari, to the “speed and politics,” accelerationist theoretics of Virilio, Fisher, Williams & Srnicek, Terranova, Land, Noys, Shaviro, Mackay & Avanessian, and others. 3) “The

Republic of Data,” would be a suggested alternative praxis to the accelerationist “shared economy” of cognitive capitalism and big data. I envision that elements of my Eco-Domics concept could be inscribed within an ongoing “representative democracy of data” – facilitated through an “ecoDomic aesthetic(s) of the common(s).”

For, under a democratic data publics regime, new human agencies are urgent and necessary, as we are ever reduced to post-truth netizens and consumers, and postgovernment subjects. We must be aware, resist, and explore beyond the straight jacket of this monetised exponential data tsunami, where the pathological dissociation of real embodied life and virtual disembodied numeracy, constantly splits and represses the fluid connectivity of affect and emotion, and cunningly becomes the all consuming fuel of commodity fetishism, banality, rabid discrimination, hate speech, fake news and outrageous propaganda, monopoly capital accumulation, ecological destruction, and tyranny, degrading us to a neo-medieval precariat serfdom, made of an always expanding dispossessed emotariat, cognitariat, and proletariat. One possible avenue I suggest is to return to more joyful and compassionate sensible ecologies of life, or aesthetic(s) of the common(s) – actively engaged social movements and social practices, where we can “come to our senses,” and be newly creative, building and rebuilding our future ecoDomic “communities of sense” and data commons.

Stephen Graham (Newcastle University)

Enigmatic Presence: Vertical Satellite Geographies and Data Publics

At the margins of the Earth’s atmosphere and the threshold of the vast realms of space, we enter a world of orbits. At this point we start to encounter the crucial but neglected manufactured environment of satellites and space junk. As part of a bigger project on the political aspects of the vertical dimension, this review-style paper reflects on the pivotal but enigmatic roles of this fast-expanding array of around 950 active satellites to the data publics, which are increasingly pivotal to the organisation, experience – and destruction – of contemporary life on the Earth’s surface. Emphasising how regimes of power organised through satellites and other space systems are intimately interwoven with production of violence, inequality, injustice and visual cultures on or around the terrestrial surface, discussion begins by exploring the difficulties involved in visualising and understanding satellites’ enigmatic presence. In such a context, the bulk of the paper then centres on exploring the tactics through which critical scholars and activists are working to render the often arcane and secretive worlds of satellite-based data publics more visible, contestable and (to some extent) transparent. Discussion centres, in turn, on discourses of national security through space and satellite power; efforts by artists, activists and scholars to contest the secretive (geo)politics of national security surveillance satellites; and the complex visual politics which surround the complex of sensing, mapping and visualising practices which surround Google Earth.

Jennifer Gabrys (Goldsmiths, University of London)

Sensing Air and Creaturing Data

In citizen-sensing projects, more extensively and democratically gathered data are typically presented as “the reasons for measuring air pollution,” since it is through collecting data that everything from enhanced participation in environmental issues to changes in policy are meant to be achieved. The impetus to monitor and gather data is bound up with established (and emerging) processes of understanding environments as information-based problems. Within citizen-sensing projects, data are intended to be collected in ways that complement, reroute or even circumvent and challenge the usual institutions and practices that monitor environments and manage environmental data. Data are seen to enable modes of action that are meant to offer effective ways to respond to those problems. With more data, potentially more accurate data, and more extensively distributed data, environmental problems such as air pollution are anticipated to be more readily and effectively addressed. Data are intertwined with practices, responses to perceived problems, modes of materializing and evidencing problems, and proposals for political engagement. But how are air-quality data constituted, whether through expert or citizen practices? How do differing practices of environmental monitoring inform the character and quality of data gathered, as well as the possible trajectories and effects of those data? What are the instruments, relations, and experiences of air-quality data generated through these distinctive engagements with environments and technology? And in what ways do environments become

computational through the use of low-cost air-pollution monitoring technologies? In this presentation, I consider how citizen-sensing practices that monitor air pollution experiment with the tactics and arrangements of environmental data. Drawing on Whitehead, I suggest that these monitoring experiments might be approached as practices that “creature” data in particular ways, where the actual environmental entities that come together are creations that materialize through distinct ways of perceiving and participating in environments. These creatures may have scientific legitimacy. Or they may form as alternative modes of evidence presented in contestation of scientific fact. But in either or both capacities, they are creaturely rather than universal arrangements of data.

Matthew Fuller (Goldsmiths, University of London)

In Praise of Plasticity

What has happened to data? Firstly, things that were not considered quantifiable, that were always in excess of description or enumeration, are now at least generative of data that can, with greater or lesser acuity, stand in for such things. Secondly, what counts as useful, significant, or ‘clean’ data is now of a much messier, loosely correlated kind. Something similar has happened to publics, that may now be seen to coagulate around various kinds of quasi-cognitive debris as much as the ‘grand issues’ that hitherto provided their visible means of coming into being. What results from this seems incoherent, but it is systematically so; and with the conditions of plasticity, and possibilities for construction that the particular scaffolds of computational media provide this may be opportune. This talk will aim to examine some of the basic elements of logic and mathematics in computing that give it this quality and to address some of the constructivist approaches in cybernetics and anarchism, amongst other currents, that anticipate such a condition.

Paolo Gerbaudo (King’s College, London)

Fighting Against Data Monopoly Capitalism

The rise of large digital companies such as Google, Amazon, Facebook, Apple and Microsoft sometimes described as the Big Five constitutes one of the major political economy developments in recent years and one of the most troubling for the purposes of economic justice and democracy. These companies, which now feature among the largest for market capitalisation, are the clearest manifestation of the new data-driven business model also visible in so-called sharing economy companies as Uber and AirBnB incarnate a highly aggressive form of capitalism, which is inimical to political communities on a number of levels. First, these companies’ business model revolves around the disruption of pre-existing markets and economic activities, and the installing of a monopoly system within small market niches, which puts all other companies at a serious disadvantage. Second, these companies are well known for their tax avoidance practices, and the way they use their internet-based character as an excuse to transfer their profit to locations that are most convenient for tax purposes. Up until now there has been very little success in counteracting the rise to dominance of these digital giants. Alternative grassroots projects have for the most only managed to construct marginal areas of resistance, but have been unable to challenge the dominant position of the Big Five.

In my presentation, I will discuss the strategies that are currently being developed in response to the rise of large digital companies, the dominant position they have acquired in the economic system, and the negative effect they play on competitors and on tax revenues. I will argue that action against these companies has been made ineffective by the lack of sufficient resolve from state authorities both at local and national level who have often been surprisingly slow in punishing serious corporate malpractice committed by digital companies. This reluctance is a result of the dominance of cyberlibertarianism which pervades digital culture and its suspicion towards government intervention and its predilection for grassroots action as seen for example in the context of platform co-ops as an ethical alternative to corporate companies. Furthermore, it is a reflection of the fact that in order to seriously challenge the dominant position of the Big Five quite illiberal measures would need to be taken including IP and DNS filtering of companies not abiding by tax regulation or licensing laws, tactics that are the same of those used by authoritarian countries such as China and Iran against political opponents. This tragic bind thus raises serious dilemmas for any politics that aims at mounting a credible strategy of counter-attack against digital monopoly capitalism.

Ravi Sundaram (The Sarai Programme, CSDS Delhi)

Everyday Disjunctions: Public Expression After the Mobile Phone

A growing plurality of populations in Asia, Africa and Latin America have now got regular access to mobile devices. In India, Internet access is now increasingly mediated through mobile networks. Unsurprisingly, this has produced great challenges for postcolonial power, now confronted by media-enabled populations previously seen only as social political actors. Today, mobile media objects attach themselves to shifting platforms of political-aesthetic action while disrupting older partitions of postcolonial governance. As in the rest of the world, media periodically overflow from one channel to another leading to unanticipated consequences: the expose of a police atrocity or political secrets, a leaked intimate video. The transformation of public speech and expression in contemporary data infrastructures open up questions of collectivity in ways unimagined but a decade ago in the postcolonial world.

In this lecture I look at volatile incidents involving street crowds broadcasting in real time through mobile applications like Whatsapp. The blurring of street crowds and online agglomerations, private chat networks and public expression raise all kinds of questions – for media theory as well as the performance of postcolonial sovereignty.

Cecilia Wee and Dani Admiss (University of Sunderland and Royal College of Art)

Co-Building Worlds: Data-Discourses and Other Stories

#Data-Capitalism; #Curating; #Collaborative-storytelling; #Data-Discourse. This performance-based research and praxis presentation presents the curatorial project. “PostHuman Unit for NeuroCapitalism’ (PHUNC), a research and design unit engaged in co-creating new visions of post-consumer and post-producer subjectivities through community-based neuro and data-capitalist research. Against a backdrop of new neuros (Pykett) and largescale technoscientific information structures forming super-advanced capitalism’s new frontiers for growth (Neidich), PHUNC proposes that the challenge for those working in arts, technology and social change today is to design interventional acts of ‘radical sensing’ that expand on ‘representational forms that enable articulations of change’ (Rossiter) embracing an experimental process of curating as world-building, a way of taking on personal entanglement and global complexity (Haraway) in response to the normative economic and epistemic goals outlined by data capitalism.

Over the next two months, the curators will collate reports from a worldwide network of PHUNC researchers working in arts and cultural contexts, as well within think-tanks, policy-based organisations and higher education. We will ask PHUNC researchers to reflect on how data works in relation to local agency, the identities produced through globalised work and consumption, and the negotiations materialising for people operating in opposition to dominant frameworks of data-discourses within the Capitalocene (Moore). This highly specific evidence will form the basis of a collaborative performative narrative to be presented to the forum audience: emerging worldviews from a variegated set of lived geographic and socio-economic realities under the umbrella of ‘data capitalism’. Bookending the presentation, the curators will discuss evolving methods to working with complex, contradictory and chaotic subject matters in the arts and analyse this specific technique of collaborative storytelling.

Autogena Projects – Lise Autogena and Joshua Portway (Sheffield Hallam University)*

Formulating New Aesthetics for a Data-Saturated World

All data lives within a frame of reference. Data is meaningless outside the system, which encodes it. When we’ve worked with data it’s always been in the service of thinking about these underlying structures and systems rather than the data itself. In this talk we’ll mainly be talking about three projects: *Untitled* (superorganism), *Black Shoals* and *Most Blue Skies* – each of which, in their way, chronicle our changing ideas about the relationships between capitalism, nature and technology, and the ways in which we might respond to them.

Black Shoals (1999, 2015) is ostensibly a visualisation of the global financial system, in which the flows of global capital are represented by a planetarium in which every star represents a company traded on the

world's stock markets. Amongst the stars live a colony of artificial life creatures who feed on the movements of capital. The project was, in part, a reaction to the naturalisation of the system of global capitalism in which the market is increasingly perceived as a mysterious force of nature rather than an artefact of culture. Since the seventies the language of complexity theory has built a bridge between biological ecologies and financial systems that has served to reinforce the legitimacy and the "naturalness" of the market. The emergence of complex behaviour from dynamic systems has become the dominant touchstone of "nature". Adam Smith's Invisible Hand is now recognised as a feedback property of a self-organising ecology, and this seems to position it as a comparably fundamental force. We used a similar feedback effect as part of the work we produced in response to the "Monument to the Anthropocene" exhibition; "*Untitled (Superorganism)*". The project was a re-creation in the gallery of an "ant mill" – a phenomenon in which hundreds of thousands of army ants lose their pheromone trail and begin to follow each other in an endlessly rotating circle until exhaustion and death.

Most Blue Skies is an attempt to come to some sort of peace with the very problematic idea of nature and its relationship to the technological and social systems in which we're embedded. The project is a quixotic attempt to answer a simple childhood question – where is the bluest sky in the world? We approached the problem using the most advanced resources available to us, including satellite sensing, atmospheric modelling, real time sensor networks and radiative transfer models developed by NASA. There is an apparent paradox between the simple prelapsarian beauty of the blue sky and the disproportionate complexity of the technology we employ to try to answer the question. The work struggles to resolve this paradox in a synthesis, which hopefully emerges as a more optimistic aesthetic for a data-saturated world.

*presentation by Joshua Portway

Simon Yuill (Goldsmiths, University of London)

The "Values and Value" of Algorithmic Time

There has been a great deal of interest in how capital has intervened in almost every area of life, leading some to propose new forms of labour and capital e.g. 'immaterial labour' and 'emotional capitalism', and others to suggest that processes of valuation are now the major method for understanding the social world. This has become particularly evident in the processes through which social media platforms, such as Facebook, generate immense financial value from the exchange of what for some people appears to be often mundane and value-less information. The relation between time and value (defined in various ways) is integral to the accumulation of capital in this context and it is evident that algorithms play an important mediating role. Analysis of this, however, has often been largely speculative due to the difficulties of obtaining empirical data. Furthermore, despite being a medium that is engaged with over time, and one that is often intimately intertwined with the rhythms of its users' daily lives, platforms such as Facebook have rarely been studied from a temporal perspective.

As part of a study of the transformation of personal value into financial value through social media, the Values & Value project has developed a set of custom software tools that combine several intersecting perspectives of temporal activity across participants' use of Facebook, how they are tracked by Facebook as they browse the web, and how it fits within their daily routine. The project has been able to gather forms of empirical data not previously utilised in such research. In analysing this, we propose that platforms such as Facebook effect an attunement between different temporal activities, from personal social interactions to speculative investments in advertising and the circulation of capital within financialisation. Capital is captured from interventions within these circulations rather than from direct production. This suggests a different relation between time, technicity and capital from that of the industrial factory and recent concepts of the social factory. This relation between time, technicity and capital as attunement is analysed through concepts drawn from Lefebvre's rhythmanalysis in which different rhythms interact with one another in ways that do not simply correlate but are rather conflictual and overdetermining. In doing so the project seeks to make more explicit the ways in which algorithms intervene in and constitute processes of the capture of value and circulation of capital. In this talk, Simon Yuill will present the custom software tools that were created for the project, the approach to visualisation used within these, and how they relate to the larger themes of our analysis.

BIOGRAPHIES**Speakers**

Lev Manovich is one of the leading theorists of digital culture worldwide, and a pioneer in the application of data science for the analysis of contemporary culture. Manovich is the author and editor of ten books including *Cultural Analytics* (forthcoming 2017), *Instagram and Contemporary Image*, *Data Drift*, *Software Takes Command*, *Soft Cinema: Navigating the Database* and *The Language of New Media*, which was described as “the most suggestive and broad ranging media history since Marshall McLuhan.” Manovich is a Professor of Computer Science at The Graduate Center, CUNY, and a Director of the Cultural Analytics Lab. Lab’s projects were funded and commissioned by Google, Twitter and the New York Public Library, among others. His digital art projects were shown in over 100 group and personal exhibitions worldwide. The lab’s most recent projects were commissioned by MoMA, New Public Library, and Google. *Selfcity* won Golden Award in Best Visualization Project category in the global competition in 2014; *On Broadway* received Silver Award in the same category in 2015. Manovich is in demand to lecture on digital culture around the world. Since 1999 he presented 550 lectures, seminars and master classes in North and South America, Asia, and Europe.

Luciana Parisi is Reader in Cultural Theory, Chair of the PhD Programme (Centre for Cultural Studies), and co-director of the Digital Culture Unit (Goldsmiths, London). She has written *Abstract Sex: Philosophy, Biotechnology and the Mutations of Desire* (2004, Continuum Press) and *Contagious Architecture. Computation, Aesthetics and Space* (2013, MIT Press). She is currently researching the philosophical consequences of logical thinking in machines.

Ignacio Valero has a PhD in Latin American/Environmental Studies/Cultural Geography/Intellectual History from the University of California at Berkeley, a Diploma in Development/Natural Resources from the ITC-UNESCO Centre/ Faculty of Geo-Information Science and Earth Observation, University of Twente, Enschede, The Netherlands; a MAT in Sociology/Development/Education from the University of Florida and a B.S. in Economics/Sociology from the Missouri State University. He is currently Associate Professor, Humanities and Sciences in Critical Studies/Diversity Studies/Design/Fine Arts at the California College of the Arts – CCA/San Francisco. Professor Valero’s current research interests include: EcoDomics/Political Economy/Political Ecology/Cultural Geography/Affective Labor/Biopolitics/Governmentality/Post-Government Governance; Commodity Aesthetic(s)/Media/Social Media/Epistemology of the Image/Post-Truth, Propaganda, Public Relations, and the Society of the Spectacle/Design Thinking; Science Fiction as Social Criticism/Social Movements/Aesthetic(s) of the Common(s). He is the author of numerous publications, one of the most recent of which is “EcoDomics: Life Beyond the Neoliberal Apocalypse” in *Informal Market Worlds Reader: The Architecture of Economic Pressure*, Eds. Peter Mörtenböck, Helge Mooshammer, Teddy Cruz and Fonna Forman (Rotterdam: nai010 Publishers, 2015).

Stephen Graham is Professor of Cities and Society at Newcastle University’s School of Architecture, Planning and Landscape. He has an interdisciplinary background linking human geography, urbanism and the sociology of technology. Since the early 1990s Prof. Graham has used this foundation to develop critical perspectives addressing how cities are being transformed through remarkable changes in infrastructure, mobility, digital media, surveillance, security, militarism and verticality. Professor Graham’s work has been extremely influential across a wide range of urban, technological, social and political debates across the world. It has been translated into twenty languages. His ten books include *Splintering Urbanism*; *Telecommunications and the City* (both with Simon Marvin); *The Cybercities Reader*; *Cities, War and Terrorism*; *Disrupted Cities: When Infrastructures Fail*; and *Infrastructural Lives* (with Colin McFarlane). Professor Graham’s 2011 book *Cities Under Siege: The New Military Urbanism* was nominated for the Orwell Prize in political writing and was the Guardian’s book of the week. His latest research focuses on the political aspects of verticality and develops an explicitly three-dimensional perspective on the politics of geography and materiality both above and below the earth’s surface. Professor Graham’s major new book on this theme – *Vertical: The City From Satellites to Bunkers* (Verso) – was published in November 2016. Another Guardian book of the week, it was in the books of the year lists of both the FT and the Observer.

Jennifer Gabrys is Reader in the Department of Sociology at Goldsmiths, University of London, and Principal Investigator on *Citizen Sense*, a project funded by the European Research Council (2013-2017). Her books include a techno-geographical investigation of environmental sensing, *Program Earth: Environmental Sensing Technology and the Making of a Computational Planet* (University of Minnesota Press, 2016); and a material political analysis of electronic waste, *Digital Rubbish: A Natural History of Electronics* (University of Michigan Press, 2011). Together with Gay Hawkins and Mike Michael, she has co-edited an interdisciplinary collection on plastics, *Accumulation: The Material Politics of Plastic* (Routledge, 2013). Prior to joining the Department of Sociology, she was Senior Lecturer and Convenor of the MA in Design and Environment in the Department of Design at Goldsmiths. She completed a PhD in Communication Studies at McGill University in Montreal, during which time she was engaged as a research fellow on the *Culture of Cities and Digital Cities/Mobile Digital Commons* projects. While in Montreal, she was also Researcher in Residence at the Daniel Langlois Foundation for Art, Science, and Technology, where she focused on archives from Experiments in Art and Technology (E.A.T.). Her work can be found at citizensense.net and jennifergabrys.net.

Matthew Fuller is the author of the forthcoming, *How to Sleep, in art, biology and culture*, (Bloomsbury, Autumn 2017) and *How to be a Geek, essays on the culture of software* (Polity, Spring 2017). Other titles include *Media Ecologies, materialist energies in art and technoculture* (MIT), *Behind the Blip, essays on the culture of software* and *Elephant & Castle* (both Autonomedia). With Andrew Goffey he is co-author of *Evil Media* (MIT). He is editor of books including *Software Studies, a lexicon* (MIT), and is a co-editor of the journal *Computational Culture* (<http://www.computationalculture.net>). He is Professor of Cultural Studies and Director of the Centre for Cultural Studies, Goldsmiths, University of London.

Paolo Gerbaudo is a cultural and political theorist looking at the transformation of social movements and political parties in a digital era. He is the Director of the Centre for Digital Culture at King's College London and the author of *Tweets and the Streets: Social Media and Contemporary Activism* (Pluto, 2012), and of the forthcoming volume *The Mask and the Flag: Populism, Citizenism and Global Protest* (Hurst/OUP, 2017).

Ravi Sundaram is a Professor at the Centre for the Study of Developing Societies (CSDS), Delhi. In 2000 he founded the well-known Sarai programme at the CSDS along with Ravi Vasudevan and the Raqs Media Collective. Since then, Sarai grew to become one of India's best-known experimental and critical research sites on media, spanning local and global sites. Sundaram is the author of *Pirate Modernity: Media Urbanism in Delhi and No Limits: Media Studies from India* (Delhi, 2013). Sundaram has co-edited the Sarai Reader series, *The Public Domain* (2001), *The Cities of Everyday Life* (2002), *Shaping Technologies* (2003), *Crisis Media* (2004). His recently edited *No Limits: Media Studies from India* came out in 2015. Sundaram's essays have been translated into various languages in India, Asia, and Europe. He is currently finishing his next book project, *Events and Affections: post-public media circulation*.

Dr **Cecilia Wee** FRSA is an independent curator, researcher and Tutor in the School of Communication, Royal College of Art. Cecilia produces projects that investigate the role of art and design in creating a more equitable society, particularly working with experimental sound, performance, visual art and design practices. Her research interests span cultural understandings of public space, financial and economic systems, relationships with technology, environmental change, organisational behaviour, security and dialogue. Cecilia is Chair of the Live Art Development Agency, trustee of Resonance FM and part of the core group behind the Radical Renewable Art and Activism Fund.

Dani Admiss is a London based independent curator and researcher. Her projects focus on the exchange between art, design, technology and sociocultural production. She is an AHRC researcher with CRUMB, a network for those who 'exhibit' new media art, at the faculty for Art and Design at Sunderland University. Her research explores emerging types of curatorial practice, focusing on the phenomena of 'world-building', in the context of knowledge production, new subjectivities and critical infrastructures. Recent curatorial projects include, *AI in Asia* at Digital Asia Hub, Hong Kong, *Big Bang Data* at

Somerset House, London, *Digital Revolution* at the Barbican Centre, London, and ‘*The Institute Effect*’ at ‘Close, Closer’, the 2013 Lisbon Architecture Triennale, Portugal.

Joshua Portway is a UK-born artist and computer programmer and **Lise Autogena**, a Danish-born artist and Professor of Cross-Disciplinary Art at the Cultural Communication and Computing Research Institute (C3RI) at Sheffield Hallam University. Based in London, they have worked together since the early 90’s using custom built technology and visualisations of global real-time data to develop large scale multimedia installations, site-specific works and performances, usually in collaboration with organisations, communities and experts across many specialised fields. Their most recent projects include: *Kuannersuit; Kvanefeld*, a film investigating the challenges of siting a uranium mine in Greenland, the difficult decisions and tradeoffs faced by a culture seeking to escape a colonial past and define its own identity in a globalised world (Bildmuseet, Sweden 2016), *Cities like Plants*, a robotic installation exploring how the regulatory systems underlying plant growth relate to principles of city planning (Cambridge University, 2016), *Black Shoals; Dark Matter*, a long term exploration into data visualisation and financial belief systems, visualising the financial markets as a planetarium, where stars representing companies on the world markets form constellations and galaxies depending on the movements on the markets. www.autogena.org

Dr **Simon Yuill** is an artist, programmer and researcher with Sociology, Goldsmiths, developing custom research software and working in the fields of Software Studies and Digital Sociology. He was the inaugural winner of the Vilém Flusser Theory Award (Berlin, 2008), has been a Research Resident at the Piet Zwart Institute (Rotterdam, 2005), Visiting Fellow at the University of Warwick (2013), and is a Visiting Research Fellow with the Digital Culture Unit at Goldsmiths College. Values & Value website: <https://values.doc.gold.ac.uk>

Chairs

Beverley Skeggs is Professor of Sociology at Goldsmiths, University of London. She has published *The Media; Issues in Sociology* (1992); *Feminist Cultural Theory* (1995); *Formations of Class and Gender* (1997); *Class, Self, Culture* (2004); *Sexuality and the Politics of Violence and Safety* (2004, with Les Moran) and *Feminism after Bourdieu* (2005, with Lisa Adkins), and with Helen Wood, *Reacting to Reality TV: Audience, Performance, Value* (2012) and *Reality TV and Class* (2012).

Louis Moreno is a lecturer in the Department of Visual Cultures and Centre for Research Architecture, Goldsmiths, University of London. He is also a member of the curatorial collective freethought who were one of the artistic directors of the 2016 Bergen Assembly in Norway.

Evelyn Ruppert is Professor of Sociology at Goldsmiths, University of London. She studies the sociology of data specifically in relation to how different kinds of digital data are constituted and mobilised to enact and govern populations. Evelyn is PI of a five-year European Research Council funded project, *Peopling Europe: How data make a people* (ARITHMUS; 2014-19). She is also Founding and Editor-in-chief of a SAGE open access journal, *Big Data & Society: Critical Interdisciplinary Inquiries*, launched in June 2014. Recent books are *Being Digital Citizens* (authored with Engin Isin) published in April 2015 (RLI International) and *Modes of Knowing* (edited with John Law) published in August 2016 (Mattering Press).

Irit Rogoff is a writer, teacher, curator and organiser. She is Professor of Visual Culture at Goldsmiths London University, a department she founded in 2002. Rogoff works at the meeting ground between contemporary practices, politics and philosophy. Curatorial projects have included A.C.A.D.E.M.Y. in Hamburg, Antwerp and Eindhoven and “De-Regulation with the work of Kutlug Ataman” (Antwerp, Tel Aviv, Berlin) and “Summit—Non Aligned Positions in Education Culture” in Berlin. Rogoff has written extensively on contemporary participatory arts practices and on arts expansions into the social through educational, activist and epistemological incursions. Her book on *Seriousness* (co-authored with Gavin Butt, Sternberg Press) appeared in 2015. Her current work is on new practices of knowledge production and their impact on modes of research, under the title of *The Way We Work Now* (forthcoming 2017).

Ayesha Hameed is an artist whose work explores contemporary borders and migration, critical race theory, Walter Benjamin, and visual cultures of the Black Atlantic. Recent presentations and performance lectures include *Black Atlantis* at ICA London (2015), *Labour in a Single Shot*, conference at Haus der Kulturen der Welt, Berlin (2015), at *The Chimurenga Library* at the Showroom, London (2015), *Oxford Programme for the Future of Cities*, Oxford (2015), Edinburgh College of Art (2015), at Goldsmiths MFA Lectures (2016), and *Empire Remains* (2016). *A Rough History (of the destruction of fingerprints)* has been screened or presented at Forensic Architecture at the House of World Cultures (Berlin) in 2014, at *Social Glitch* at Kunstraum Niederösterreich Vienna (2015), at Pavilion, Leeds in 2015, at Qalandiya International Palestine Biennial (2016), at Ashakal Alwan/Homeworks Space Programme, Beirut (2016) and the Bartlett School of Architecture (2016). She is currently the Joint Programme Leader in Fine Art and History of Art at Goldsmiths.

Forum Convenors

Peter Mörtenböck is Professor of Visual Culture at the Vienna University of Technology and Research Fellow at Goldsmiths, University of London. His research focuses on the development of theoretical frameworks around the emergence of networked ecologies and collaborative forms of spatial production vis-à-vis the current dynamics of geopolitical conflict and urban transformation. In recent projects such as Networked Cultures (2005–2013, www.networkedcultures.org), Other Markets (2010–2015, www.othermarkets.org) and World of Matter (2011–2017, www.worldofmatter.org) he has collaborated with a worldwide network of artists, architects, planners, curators, cultural and media scholars to investigate the interaction of spatial practices with resource ecologies, network creativity, global economies and informal urbanism. Mörtenböck previously served as Professor of Media Aesthetics at the University of Paderborn, and as an affiliated faculty member of the Royal College of Art, London. He is the founding director of the Visual Culture Unit at the Vienna University of Technology's Faculty of Architecture and Planning.

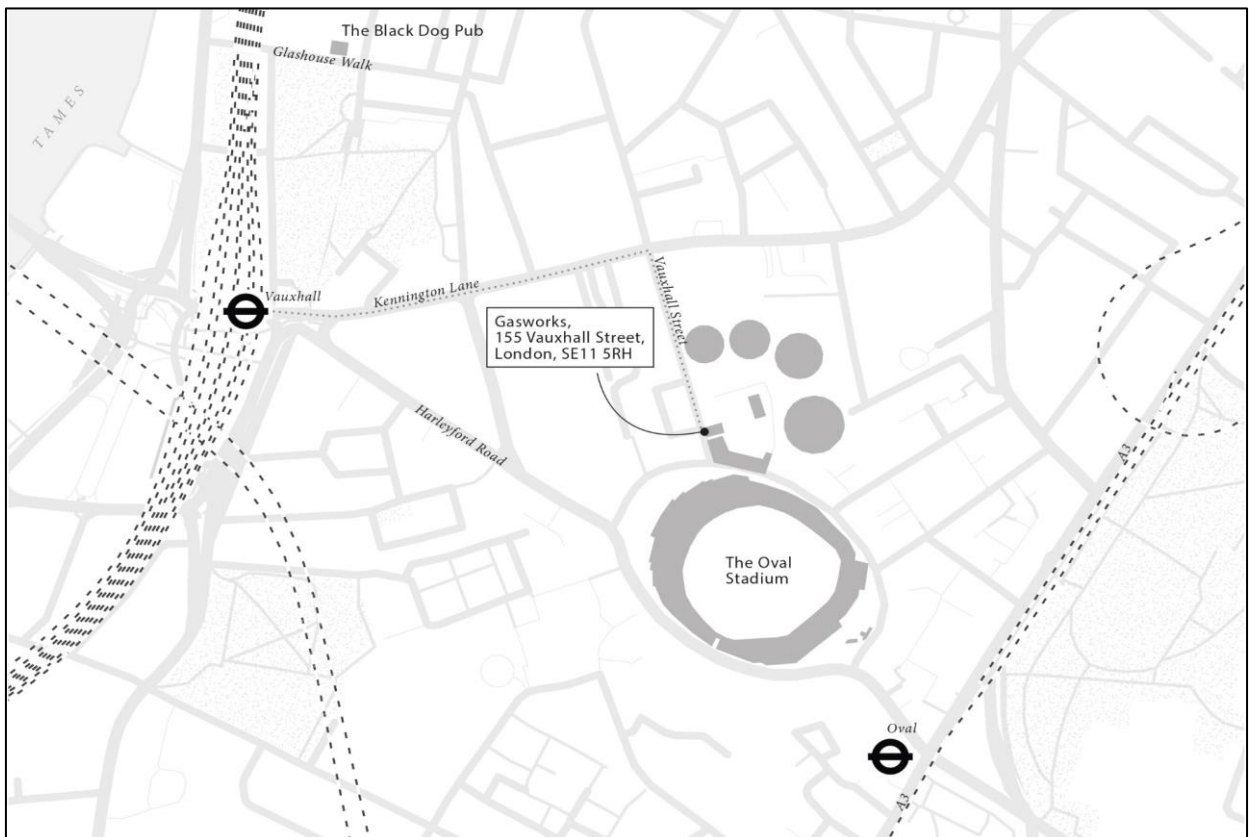
Helge Mooshammer, PhD, is an urban and cultural theorist. He was director of the international research projects Relational Architecture and Other Markets (www.othermarkets.org) at the School of Architecture and Urban Planning, Vienna University of Technology. He is currently a Research Fellow in the Department of Visual Cultures at Goldsmiths College, University of London. His research is concerned with changing forms of urban sociality arising from processes of transnationalization, capital movements, informal economies, and newly emerging regimes of governance. Mörtenböck and Mooshammer's books include *Visual Cultures as Opportunity* (Sternberg 2016), *Informal Market Worlds: The Architecture of Economic Pressure* (ATLAS & READER co-ed. with Teddy Cruz and Fonna Forman, nai010 Publishers 2015), *Occupy: Räume des Protests* (transcript 2012), *Space (Re)Solutions: Intervention and Research in Visual Culture* (transcript 2011), *Networked Cultures: Parallel Architectures and the Politics of Space* (nai010 Publishers 2008), and the forthcoming *Building Capital* (2017).

Stephanie Polsky, PhD, is an interdisciplinary writer/academic whose work focuses on political economy, cultural identity and the revelatory points of intersection held between the two. Her first book *Walter Benjamin's Transit: A Destructive Tour of Modernity* (Academica Press 2010) focused on Benjamin's critical insights into the emerging climate of fascism in Europe between the two World Wars. Her second book *Ignoble Displacement: Dispossessed Capital in Neo-Dickensian London* (Zero Books 2015) critically revisits Dickens's canonical works to demonstrate how Victorian era liberal discourses around free market capitalism and imperial expansion still implicate themselves in the way we look at both culture and capital, both human and financial. She is now preparing the manuscript of her third book entitled *The End of the Future*, which explores how the rapid proliferation of access to digital platforms subtly advance neoliberal governance, neo-colonial warfare, environmental denigration, and social and economic barbarity.

LOCATION MAPS



Goldsmiths, University of London, Professor Stuart Hall Building, rooms LG01, LG02 & Café Natura



Gasworks, 155 Vauxhall Street, London SE11 5RH & The Black Dog Freehouse