Intelligent Futures: AI, Automation and Cognitive Ecologies

1-2 October 2018
University of Sussex

A two-day conference organised by CHASE DTP and the Sussex Humanities Lab (University of Sussex), engaging doctoral and early-career researchers working on philosophical, cultural and literary approaches to artificial intelligence. The aim of the event is to bring scholars from the humanities into discussion with their peers from the social sciences, informatics and engineering, psychology and the life sciences. This conference will promote critical and speculative engagements with questions of technical cognition, with special emphasis on sustainability and the emergence of new planetary ecologies of thought.

Web: http://intelligentfutures.org/
Registration: Eventbrite
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Conference Organising Committee
Programme Chairs: M. Beatrice Fazi (Sussex) and Michael Jonik (Sussex)
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SUSSEX HUMANITIES LAB
UNIVERSITY OF SUSSEX
CHASE
Consortium for the Humanities and the Arts South-East England
Arts & Humanities Research Council

1 October 2018
ACCA Gardner Tower

9.15 – 9.30 Registration and Coffee
9.30 – 9.45 Opening Remarks (M. Beatrice Fazi and Michael Jonik)

9.45 – 11.15
Panel 1: Philosophy
Chair: Ron Chrisley

Thomas Nyckel (Technical University Braunschweig)
Alan M. Turing's 'Rule of Thumb' and the Philosophical Analysis of AI

The term 'rule of thumb' commonly refers to fast methods for the calculation of approximate values without performing precise computations. Interestingly Alan M. Turing – whose turing machine from 1936 is not only regarded as the *fons et origo* of the concept of computability, but which also had significant influence on McCulloch and Pitts and their design of neural networks – used the term 'rule of thumb' in clear contrast to this common usage. According to Turing the term refers to all that – and only to that – which can be executed by digital computers: Some years ago I was researching on what might now be described as an investigation of the theoretical possibilities and limitations of digital computing machines. […] One of my conclusions was that the idea of a 'rule of thumb' process and a 'machine process' were synonymous. (Turing 1947) The reason for this semantic shift seems to be that for Turing the question concerning the *correctness of the results* of rule of thumb processes becomes unimportant. Instead we have to acknowledge that the procedures must be of *inherent* exactitude, for a human and particularly a machine to execute them. The talk will argue that a philosophical analysis of AI needs a shift in perspective: Instead of discussing the adequacy of the results of digital processes compared to entities like the "real world" or the "human mind", which are proliferating in the debates about AI, we might follow up on Turing's usage of the term 'rule of thumb' to analytically focus on the inherent properties of digital technologies and processes.

Mattia Paganelli (Goldsmiths, University of London)
Artificial: the Onto-Epistemological Implications of a Misnomer

The notion of *artificial* intelligence is a misnomer that contradicts the plastic and ecological processes that support the ability to learn. This paper will examine the philosophical implications entailed by the acritical acceptance of non-human intelligence as artificial. It will expose how this notion rests on an unquestioned concept of totality, as the external and a priori definition of the ontological perimeter of possibility of an algorithm, which both resurrects the binary opposition of subject and object inherited from the modern and upholds a reductionist paradigm unable to engage with the flexibility and openness required for learning processes. Temporarily pausing the questions concerning the empirical feasibility or the ethical ramifications of AI, the paper proposes that the possibility of a non-human or machinic form of intelligence (learning to learn) should be thought as the *synthetic* product of an evolutionary process of emergence. It will do so by offering a different conceptualisation of the question of AI moving from Gödel's notion of incompleteness and Chaitin's re-elaboration of this problem as the "halting point" or computable horizon of an algorithm, leading to the articulation of complexity introduced by Leibniz where entropy, both informational and chronological, is essential for structuring and understanding ecological equilibrium. In so doing, the paper will provide an alternative conceptual platform from which to recast several questions, hopes and fears that surround the image of AI in the post-human debate (such as, the undoing of a human centred discourse or even the fear of a conflictual relation with machines, or -conversely- the projection of the emergence of another form of intelligence as a mirror of the human and its logic, or the hubris of 'playing god') proposing to conceive of it as form of intelligence, and potentially of agency, that may evolve *with* us rather than being designed *by* us, beginning by seeking a proper name for it.

Johannes Schick (University of Cologne)
Vital Coding vs. Artificial Intelligence or How Can We Understand Artificial Intelligences with Gilbert Simondon?

My talk conceives of artificial intelligence and the technical cognition involved with artificial intelligence in terms of the philosophy of Gilbert Simondon. His philosophy of technology allows for a symmetric and recursive relationship with artificial intelligence, while its capabilities are not overestimated. According to Gilbert Simondon, one specific difference between living beings and machines is their capability to form and use memories. While machines have

impressive storage spaces that exceed the human faculty of memory in size and detail, machines are in need of a *form* that is given from the outside in order to produce anything meaningful: code and content remain separated within the machine, while for living beings in general and specifically for human beings, the content becomes the code and is constantly adapted to a dynamic environment (Simondon 2012: 114). The new developments of artificial intelligence seem to undermine this argument, since they seemingly adapt to new situations and are even able to learn by themselves. The *form*, however, of how they adapt and learn is still programmed: even the most sophisticated artificial intelligence tries to solve specific, pregiven problems and can neither problematize itself, nor create and solve »new« problems that lie beyond the realm of their artificiality. Yet, the application and the scope of artificial intelligences necessitates that the user is able to »understand« the a.i. and their actions. This technical cognition of computing machines, does not imply an asymmetric relation with technology, but rather requires of the user an effort to reinvent artificial intelligence in order to make the mind »function as the machine would function«. This effort of reinvention creates a new perspective on the technical networks we are involved in and might help us to conceive of »intelligent futures« that are not trapped by the choice between technophilia or technophobia.

11.15 – 11.30 Coffee Break

11.30 – 13.30
Panel 2: Ethics
Chair: Joanna Zylinska

Miguel Prado Casanova (U.W.E Bristol)
The Over-Extended Mind? Pink Noise and the Ethics of Interaction-Dominant Systems

While the cognitive enhancement and neuroethics debates remains to a large extent concerned primarily with neuropharmaceuticals, there is a growing recognition of the need to place greater emphasis on cognitive artefacts. Fasoli (2016) has argued for the need for greater consideration of cognitive artefacts in neuroethics and has developed a taxonomy of relationships between cognitive artefacts and cognitive processes (Fasoli and Carrera 2014). Likewise, Heersmink (2017b) has argued for the broadening of neuroethics and cognitive enhancement debates to include more consideration of cognitive artefacts, including emerging technologies such as transcranial stimulation and neuroprosthetics (e.g. Brenninkmeijer & Zwart 2016) but also greater reflection on “environmental objects and structures”. This paper aims to contribute to this broadening and expansion of the cognitive-enhancement and neuroethics debates by focusing on a particular form of relation or coupling between humans and cognitive artefacts: interaction-dominance. We argue that interaction-dominance as an emergent property of some human-cognitive artefact relations has important implications for understanding the attribution and distribution of causal and other forms of responsibility as well as agency relating to the actions of human-cognitive artefact couplings. Interaction-dominance is both indicated and constituted by the phenomena of "pink noise". Understanding the role of noise in this regard will establish a necessary theoretical groundwork for approaching the ethical and political dimension of relations between human cognition and digital cognitive artefacts. We argue that pink noise in this context plays a salient role in the practical, ethical, and political evaluation of coupling relations between humans and cognitive artefacts.

Camilla Elphick (University of Sussex)
Artificial Intelligence for Good: Improving Harassment Reporting with a Chatbot Called Spot

Most people do not report workplace harassment or discrimination because they fear retaliation or victimisation. However, when reports are handled appropriately, the outcomes are better than staying silent. Anonymous reporting methods are key to encouraging reporting, and even reduce harassment and discrimination in the first place. Therefore, we designed a chatbot (Spot), that helps users through an interview without having to talk to a human. We tested a research version of Spot (Dot) against three other systems and found that Dot was particularly good at getting people to provide extra descriptive details, without compromising on accuracy. We asked participants how they felt about reporting to a bot compared with a human and found that those using Dot were overwhelmingly in favour of reporting to a bot. The reasons people gave were that they were not embarrassed to disclose distressing information, they could take as much time as they needed, a bot is not biased or judgmental, and there was written evidence of their report. Thus, our research demonstrates that bots can be used for good, and it is hoped that organisations and individuals will consider the benefits of reporting harassment and discrimination using tools like Spot.

Maria Dada (University of the Arts, London)
I, Sexbot. Hegel in the Age of Intelligent Machines

Sex Robots are instrumented sex dolls, with a history that dates back to masturbation puppets invented in the 17th century by dutch sailors. First made out of leather and cloth, the sex robot has evolved to acquire speech and, with the advent of deep learning recurrent neural networks, perhaps a mind. Discussions of sex robots are often accompanied by arguments that they encourage a heteronormative view and the idea that women are slaves to desire. For Hegel the slave or the bondsman is one of the structures of self-consciousness that is born out of the battle of desires, when one self-consciousness meets and tries to eliminate the other self-consciousness, which stands over and against it. The enslaved self-consciousness becomes the instrument, the tool or the robot of the master. The slave then enslaves another tool, a robot, in order to realise itself as self-consciousness again. The machine, or the AI is that which mediates and alienates self-consciousness from nature, from their own nature, but which allows them to realise their own boundless creativity as self-consciousness once again. In an epoch when our desires are enslaved by consumer marketing algorithms studying our statistical cybernetic past to nudge us into consuming models in order to fabricate market demand, it is almost as if the cybernetic machine, the tool, has been switched back onto self-consciousness. As if self-consciousness is meeting itself once more, only this time it's in the shape of AI. With this repeated encounter we can begin to ask: What is the role of the sex robot? How can we imagine the sex robot to come? Are we ready to queer these sex machines?

Marek Iwaniak (University of Kent)
AI Theologies and the Religious Imagination

Compared to other areas of contemporary technological and scientific development, AI research has received less theologically-informed critique - whether as a function of its novelty, or perhaps because it represents a genuine conceptual challenge to some forms of traditional theological reflection. What this critique lacks in volume, however, it arguably makes up for in terms of its speculative and imaginative re-envisioning of the role which technology may play for the inner lives of future populations. In this paper, I want to explore what happens when older, 'pre-technological' forms of religious imaginaries encounter such a novel challenge, and how in other cases, technology itself takes on sacred characteristics and becomes a sources of models for theological concepts. To this end, I will first provide an overview of the various theological responses to the questions posed by AI research, including voices both from the more established religious traditions, and from some of the smaller (and occasionally radically speculative) theological communities. I will then discuss the ways in which these theological images, concepts and categories transverse across discursive boundaries to inform broader cultural narratives about AI, presenting us with genuine philosophical questions of considerable value also outside of specific religious communities. In the course of this analysis, I will focus particularly on the diversity of fundamental philosophical commitments present in different religious traditions, in order to underscore the global nature and importance of such emerging 'AI theologies'.

13.30 – 14.30 Lunch

14.30 – 16.30 Panel 3: Writing
Chair: Jo Walton

Steph Driver (University of Essex)
SUPErNOVAs, a Poet and her Computer Sidekick; Computer-Aided Human Creativity

How can computers aid human creative processes without impinging on human creativity? I enjoy writing poetry, and I do not want to be made obsolete by an artificial poet. But what if computers could help rather than replace me? I want creative control over my work. All the creative decisions are mine, but creative choices alone do not make a poem. Choices must also be implemented. Tasks with no element of choice are noncreative ‘grunt’ work. In this paper I shall take my poem ‘SUPErNOVAs’ as a case study, through which I shall explore the role of computer-aids within a creative workflow. SUPErNOVAs is composed entirely from element symbols, as found in the Periodic Table. While composing it, I developed a “periodic table” onscreen typewriter and implemented a depth first search algorithm to translate words into symbols. I would not have written it without such computer aid due to the time and effort required to gain a fluent recall of all those symbols. There was automation but all creative decisions remained my own. Furthermore, the time and effort saved by this automation made it possible to extend my creative concept to the poem’s output medium and doing so introduced extra grunt work. SUPErNOVAs is typed on handmade recycled paper and manually bound and cased. I will conclude by relating my case study back to the wider question of computer-aided human creativity, and how this “grunt theory” could be applied to automation within that context.

Maisie Ridgway (University of Sussex)
Patalinguistics: Language as Viral, Vital and Digital Matter

In this paper I outline a new conception of language as viral, vital and digital matter that expresses a unique form of nonhuman agency. I name this new conception Patalinguistics, a term inspired by the French dramatist Alfred Jarry and his invention Pataphysics. Jarry first conceptualised Pataphysics as a playful method of discovery which uses real and imagined sciences applied in absurd, creative ways. This paper applies Jarry's playful approach to selected pataphysical works by contemporary poets including Eduardo Kac and Christian Bök amongst others, in order to illuminate the mischievous and semi-autonomous qualities of language. As part of this analysis I dismantle the imagined binary that segregates the digital from the analogue, reconfiguring them as groups of qualities that are not mutually exclusive. The analogue in the extreme is undifferentiated, obscure, and impossible to copy, while the digital is discrete, differentiated and replicable. Using the chosen poetic examples, I delineate how language shifts between analogue obscurity and digital coherence by undertaking digital, material characteristics through the parasitic occupation of host bodies such as books, computers, humans and even bacteria. Language does this so that it may realise its instinct to disseminate, a notion which reverses the idea that we use language, asserting that it is language that uses us.

John Phelan (Open University)
'A.I. Richards': Can Artificial Intelligence Appreciate Poetry?

Artificial intelligence (artificial eloquence) 'writes' poetry but can it critically appreciate poetry? This paper looks at the prospect of 'artificial interpretation'. By 'interpretation' I have I. A. Richards's practical criticism in mind which, for the sake of exposition, can be divided into three stages: first reading, close analysis and the forming of an overall interpretation on the back of the first two stages. I shall argue that an emotional response to a poetic work is not crucial to literary appreciation. I concede that A. I. could spot patterns such as rhyme schemes and repeated words as well as make illuminating links to etymology, allusion and historical context. Artificial interpretation may also be able to identify detail that is absent in a poem through comparison with similar works, register self-reference and guess at the meaning of neologisms. Further, future A. I. could apply an abductive reasoning programme to draw an inference to the most likely interpretation. My contention is that such an inference need not be the most inspired or inspiring interpretation of poetry and so falls short. I examine some examples of inspired literary criticism from the work of Donald Davie. The problem is that A. I. has no way of working out what matters in a poetic work i.e. machines lack a sense of significance. My challenge to A. I. is to develop some way of finding a star to navigate by when reading a poem.

Daniel Barrow
'Legible Form': Narrative, Imagery and the Inhuman in Contemporary Experimental Fiction

This paper brings into focus a turn in fiction of the last decade towards the visual or the act of seeing. The 21st-century transformation of narrative time described by Peter Boxall, 'a thin, simultaneous time in which it is hard to gain a narrative purchase', has been accompanied by an increasing pressure on, and investment in, visual description and narrative discontinuity: replacing what Elizabeth Deeds Ermarth identified as the psychological continuity and depth of time in the realist novel with time as a flat screen or surface. In this paper, drawing on examples of work by Tom McCarthy and Don DeLillo, I place this development in the context of what Ioannis Tsitsovits and Pieter Vermeulen identify as Big Data's role in the Anthropocene as a kind of 'geological inscription': the visual, the splitting of narrative away from human subjectivity and into the image as an autonomous and static form of time, is the inhuman agency of technology and climate finding its form in the novel. Drawing on theoretical work by Jonathan Crary, Timothy Morton and Fredric Jameson, I explore narrative that flows across the boundaries between the novel and visual media, between subjectivity, technology and the mineral, inscribing narrative time as a cognition that exceeds the humanist novel.

16.30 – 18.30
Keynote: Joanna Zylinska (Goldsmiths, University of London)
On Creative Computers, Art Robots and AI dreams

This talk will address the problem of intelligent futures by focusing on the relationship between artificial intelligence, creativity and invention. It will engage with the oft-posed question: 'Can computers be creative?', while also demonstrating why this may not be the best question to ask about AI. Along the way, many alternative questions will be formulated, in an attempt to challenge the binary framing of the current thinking on computation and automation. Yet questioning will not be the only thing on offer. The paper's argument will also involve a critique, but this should not be treated as a technophobic rejection of AI. Instead of pitching the human against the machine, we will approach different forms of human activity, including art, as having always been technical, and thus also, to some extent, artificially intelligent. The critique on offer will be primarily concerned with the political underpinnings

of the current AI debate, and its accompanying rhetoric and aesthetics. To close off, we will turn to the exploration of the problem of machine vision in AI research, which will lead us to interrogate different ways of seeing, (in)visibility and perception, across various platforms and scales.

Joanna Zylinska is a writer, lecturer, artist and curator, as well as Professor of New Media and Communications and Co-Head of the Department of Media, Communications and Cultural Studies at Goldsmiths, University of London. The author of seven books – including The End of Man: A Feminist Counterapocalypse (University of Minnesota Press, 2018, open access version available), Nonhuman Photography (MIT Press, 2017) and Minimal Ethics for the Anthropocene (Open Humanities Press, 2014, open access version available) – she is also a translator of Stanislaw Lem's philosophical treatise, Summa Technologiae (Minnesota UP, 2013). In 2013 she was Artistic Director of Transitio_MX05 'Biomediations', the biggest Latin American new media festival, which took place in Mexico City. Her own art practice involves experimenting with different kinds of photomedia. http://www.joannazylinska.net

18.30 – 19.30 Reception, ACCA Bar Café

2 October 2018
ACCA - Jane Attenborough Studio

9.45 – 10.15 Coffee and Pastries

10.15 – 11.45
Panel 4: Epistemology
Chair: David M. Berry

Emma Stamm (Virginia Tech)
Psychedelic Science and The Question of Artificial Intelligence

In this paper, I argue that qualitative research on the medical application of psychedelic drugs problematizes the positivist, generalizing and inductive principles of machine learning as a basis for artificial intelligence. I draw from interdisciplinary scholarship that uses qualitative methods, and in particular interpretative phenomenological analysis, as a hermeneutic device for research on the use of psychedelics in psychiatry. I combine precepts of machine learning with developments in psychedelic research to explore the inherent problems of generalizing psychedelic verbal reports data in the classification systems of A.I. classification. In doing so, I demonstrate that the use of qualitative methods in psychedelic drug research may envelop an immanent critique of the notion that machine-learning based predictive systems can be intelligent. I begin with an overview of the "psychedelic renaissance," the recent resurgence of interest in the medicinal use of psychedelics. This includes an emerging paradigm which recognizes the need for qualitative and abductive theorization, including methods from phenomenology, poetics and critical theory as tools to interpret the deeply subjective narrative data that is evaluated in psychedelic studies. From there, I explore axioms of machine learning and artificial intelligence that emphasize the ways in which generalization and inductive reasoning are essential to algorithms that effectively "predict" the future. Assessing dynamics from psychedelic research that stand against pure inductive reasoning alongside the empirics of machine learning as a basis for A.I., I offer that the former can work toward a theorization of the possible epistemic limitations of artificial intelligence. I conclude with an overview of primary points and a restatement of my argument.

Juljan Krause (University of Southampton)
'100 Million Times Faster Than Your PC!' Representations of Quantum Computing in Popular Science Discourse

This paper analyses representations of quantum computing in popular science magazines in order to develop a critical perspective on the burgeoning quantum hype cycle in relation to AI. Lately, governments across the world have begun to invest heavily in quantum technologies, which raises fears of a new arms race. The potentially vast processing power of quantum computers gives rise to colourful speculations about the impact of quantum networks on building intelligent systems. This paper investigates how quantum computing is represented in leading popular science venues where rival discourses on current levels of development abound. It presents results from a discourse analysis of 30 articles published in ten leading popular science magazines. It contrasts these findings

with primary data gathered in a series of interviews with researchers who are involved in building hardware components for future quantum computers. This study identifies how quantum theory is represented as a 'weird' yet rigorous endeavour to harness the foundational principles of the universe. It also finds a rather uniform representation of quantum communication as kickstarting a new arms race that will tip the balance of power in China's favour. As far as possible early applications of quantum networks are concerned, this study finds a more nuanced and balanced representation of current research in popular science discourse. Rather than replace existing infrastructures, quantum networks are likely to emerge as highly specialised niche applications that are expected to considerably boost AI and Machine Learning.

Natalia Danilkina (Immanuel Kant Baltic Federal University)
Conditio Posthumana, a New Beginning?

The 'human age', or the Anthropocene, is considered as a new geological or bio-genetic period of significant anthropogenic impact on the planet Earth. Although most Anthropocene scholars share the claim that humankind has become a geological power, which was pushed forward by geochemist Vladimir Vernadsky in the first half of the twentieth century, they would not share his optimism. Vernadsky believed that further global dissemination of human beings and the development of scientific knowledge would be beneficial for human society and the planet. Today, Anthropocene scholars rather believe that while staying at power, humanity is causing a lot of irreversible harmful changes to the environment and may eventually bring humankind to self-destruction. However, some attempts to draw a positive scenario for the Anthropocene have been undertaken, which challenges the very concept. In this paper, I will leave the controversy of the Anthropocene aside and revise the concept of 'noosphere' in Vernadsky's interpretation. I will apply the concept of 'posthuman condition' and posthumanist conception of technology (Pepperell & Punt 2000) to the noosphere scenario of the development of knowledge and society. The posthuman condition is not alien to human condition. According to Robert Pepperell, it is 'a distinct kind of self-awareness of the human condition that owes something to our anxiety about, and our enthusiasm for, technological change…' (Pepperell 2003, 1). However, as I am going to demonstrate, the combination of the posthuman condition taken as a starting point and the optimistic scenario for the 'human age' leads to 'more-than-human' futures, which also suggests that the 'human age' is not the final one.

11.45 - 13.15 Panel 5: Aesthetics

Chair: Michael Jonik

Michael Haworth
Art and Artificial Intelligence: Agency and Instrumentality

Creative activity in general, and *a fortiori* that of the artist, has often been taken to represent the last stronghold of human exceptionality against the irresistible advance of machine intelligence. According to doxa that dates back at least as far as Vasari's *Lives of the Artists*, human creative inspiration--by definition--cannot be reduced to a set of rules or instructions and codified in the form of an algorithm. This humanist model, however, appears threatened by the recent onslaught of machine learning applications to artistic techniques, along with attempts in artificial intelligence research (particularly in the nascent sub-field known as computational creativity) to programme a machine capable of being considered independently responsible for the production of a work of art. However, my argument in this paper is that such an idea of fully autonomous, post-human art-machines, rather than posing a challenge to human-centred models of creativity, itself rests on an anthropocentric, humanist conception of agency. My claim, drawing on Gilbert Simondon, is that by uniting in one instance the dual functions of author and instrument, what is neglected in this model is the transductive relation between the two. I will illustrate this argument using two examples of AI art practices whose relative success or failure as art rests on the degree to which they recognise the inextricability of this relation: Harold Cohen's cybernetic drawing machine AARON and Simon Colton's The Painting Fool software.

Dominique Baron-Bonarjee (Goldsmiths, University of London)
Automatism and Automation

This performative lecture presents my current research: how do we experience so-called 'free time'? This term simultaneously understood as leisure time, contemplative time, playtime and the time to do 'nothing' is one of the promises of techno-utopians. My aim is to see how notions of time, both occupied or not, affect our mind, body, and consciousness. I investigate this in an embodied approach through a method entitled Liquidity, a daily research practice, inspired by the artist Tehching Hsieh, which I document through automatic abstract drawings. Goldsmiths awarded me an Invention Creativity and Experience Fund alongside collaborators in Computer Science to further this research. Our joint project quantifies and measures free time with gadgets as a way to subvert notions of productivity. Algorithms, which are developed through the data from our activities, drive automation. The replacement of repetitive tasks is seen as a form of efficiency. But the fear of human obsolescence makes the

conversation around AI unearth enduring questions about the human condition, especially with regards to notions of work, freedom and agency. My practice develops a dialogue between paradoxical aspects of human use-value and self-worth through measure. It juxtaposes the immeasurable aspect of subjective experience, chance and the unknown sought by the movement of automatism in art, to the quantifiable, objective perspective of measure. Using a MUSE headband to measure my brain waves as I deliver this lecture I attempt to enter a state of flow and transient hypofrontality, connected with timeless, effortless action, whilst discussing automatism and automation.

Mujie Li (University of Sussex)
Formal Aesthetics: Imagination, Text and Image in Automatic Writing

Automatic writing software nowadays generates fiction characters, scenarios and narrative texts automatically according to input. This technical process shifts an imagination of writing based on a new relationship between text and image. Historically, from Surrealism automatic writing and drawing, to the development of cinematic techniques, texts as critiques of images gradually become subservient to techno-image making. Automatic writing software in a way pushes the relation of text and technical images to an extreme, incorporating writing into an automatic apparatus: it on the one hand produces pre-texts for techno-imagination, such as inputting a plan for the technical process of automatic writing; it on the other hand has the power of criticising techno-image by revealing technical process that has become autonomous of human decisions. Vilem Flusser analyses these two roles as the future of writing. This future of writing lies in a chance game where players become a part of machinic process while operate by following apparatus' inertia. This view on media and mediation indeed gives new perspective on participatory culture, shifting attention from active human participation to a technical process. However, the presentation would like to stress a formal aesthetics behind participatory media. Formal aesthetics views technical processes from structures. Via the nature of the digital and mathematical, the relationship of text and image can be seen as a production of abstraction and correlation of automatic machine. These abstractions and correlations generate texts and images, allow experience to occur, and offers condition to participatory media.

13.15 – 14.15 Lunch

14.15 – 15.45 Panel 6: Memory and Time

Chair: Ben Roberts

Kieran Brayford (Keele University)
On Automation, Leisure and Redundancy

Since the Industrial Revolution, society has been characterised by the displacement of human labour by machine labour: as technological capabilities increase, so do the number of people facing technological unemployment. This paper will argue that the increase in productive capacities engendered by machine labour has led (amongst other factors) to a disparity between the rates of production and the rates of workforce compensation which marks the high rates of material inequality that sit in the background of contemporary Neoliberal Capitalist society. There are those who believe that, in addition to exacerbating material inequality, technological progress will render all occupations vulnerable to Automation—this paper will argue that this belief ignores a distinction between two kinds of labour: *programmable* labour—i.e., tasks that are capable of being codified into particular configurations of semiconductor activity—and *un-programmable* labour—tasks that resist such codification. It shall be argued that whilst *programmable* labour is vulnerable to Automation, *un-programmable* labour is not so: for un-programmable labour to be vulnerable to Automation, we would need to develop Strong-AI—AI that has consciousness—and this is a task more difficult than contemporary voices would have us believe. With the distinction between the two kinds of labour articulated, we shall utilise Cheshire Calhoun's (2018) four categories of time expenditure to explore the tension between the potential leisure time freed by an automated workforce and the lack of economic resources that characterises the experience of those who face redundancy in the wake of technological innovation.

Eva-Maria Nyckel (University of Siegen)
Artificial Intelligence and the Management of Logistical Futures: Investigating the Ecology of Amazon's Anticipatory Shipping Method

In the industry of logistics, *future demand* is something that is to be automatically anticipated and intelligently managed. Reducing shipping latencies, real-time-tracking of commodities and forecasting of future demands are elementary logistical operations that structure temporal relations between customers, carriers and merchants. These logistical operations are increasingly enhanced through Artificial Intelligence. This contribution sets out to describe fundamental relations between technology and future along the lines of the US patent no. 8,615,473 "Method and System for Anticipatory Package Shipping" that was assigned to Amazon Technologies, Inc. in December 2013. The practice of including AI in prediction-based package shipping ahead of incoming orders can be considered as a big change in the temporality of logistical processes. The investigation of anticipatory package

shipping, which is also referred to as *speculative shipping* in the patent text, is a speculative undertaking in itself: At this point, there is no information accessible regarding in how far Amazon has actually implemented the method as described in the patent. However, one can assume that Amazon's logistical operations are coordinated in a similar way and that this patent therefore provides insights into how logistical operations are conducted at Amazon. Therefore, the patent will be conceptualized as a new form of managing commodity flows which creates a new planetary ecology of thought in which logistical operations are increasingly enhanced through artificial intelligence. Along these lines of the analysis the term "logistical media" will be subject to a reflection with respect to its analytical power for current media-technological phenomena.

Emma Newport (University of Sussex)
Digital Dismembering and Remembering in End-of-Life Writing

Between 2012 and 2017, a contributor to Mumsnet, a popular parenting forum online, began recording a third-person account under the pseudonym IamtheZombie: firstly of her ongoing divorce and secondly of her experience of increasingly aggressive cancer. Mumsnet permits members to create pseudonyms for themselves, with no restriction on what names people use as long as they are unique. IamtheZombie's good humour and unusual posting style attracted hundreds of regular posters, who came to form what became known as 'Zombie's Phalanx'. In January 2017, IamtheZombie died. In memoriam to her, and to recognise the popularity and her unique method of recounting her experiences, IamtheZombie's threads have been preserved by MumsnetHQ; what is left behind forms a cellular tissue of posts, a text-culture that provides a holistic and innovative form of obituary. In this paper, and with IamtheZombie's consent given before she died, I suggest that end-of-life writing in fora such as Mumsnet can be understood as a form of cytoarchitecture, creating a tissue of comments that construct a more bodily, multi-dimensional cyber-selfhood. In that sense, there is post-hum[an]ous self that continues to exist in cyberspace in a far more complex version of existence than traditional records of mortality such as the newspaper obituary. Thus, the aptly named IamtheZombie and what she called her 'scattered limbs' can be regathered, reconstituted and reanimated into a new digitised corporeality that feeds into current explorations of the post-human, in which the latest ideas of existing beyond death are largely dependent on experiments with uploading the self into cyberspace. In this way, we bear witness to, and, as writers, may contribute to, a new democratisation of the death-process. As such, this paper invites writers to rethink end-of-life writing as a communal act that generates a digital equivalent of memory tissue that is able to preserve and even partially animate those who record their lives, and are recorded, in digital fora like Mumsnet.

15.45 – 16.00 Coffee Break

16.00 – 17.00 Roundtable Discussion
with: Caroline Bassett, Peter Boxall, David M. Berry, M. Beatrice Fazi, Michael Jonik, Simon McGregor