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Let's Get Physical. A Sample of INC Longforms, 2015-2020

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Let's Get Physical

**A Sample of INC Longforms
2015-2020**

EDITED BY
Miriam Rasch
INC READER #13

Let's Get Physical

**A Sample of INC Longforms
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INC Reader #13

Let's Get Physical: A Sample of INC Longforms, 2015-2020

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2015-2020

Edited by Miriam Rasch

INC Reader #13

Previously published INC Readers

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Introduction: Celebrating Five Years of Online Tech Critique

Miriam Rasch



ONLINE

Introduction: Celebrating Five Years of Online Tech Critique

What difference does five years make? A world of difference, no doubt about it. But, at the same time: 'everything changes, and everything stays the same'.

I remember quite distinctly how, when I started working with the Institute of Network Cultures in 2012, many of the people around me had no idea of what we did and why. Why would you want to make a critique of Facebook (as we did in the Unlike Us project) when people enjoyed it so much? Why question the monopoly of Google on the search engine market (as Society of the Query did) when it so worked so well? Then Snowden happened, and while the implications of his revelations didn't initially sink in with the broader public, they certainly did after Cambridge Analytica. The platforms that started out as your new best friend dirtied their reputations one after another and all by themselves: like the urban parasite Airbnb destroying livelihoods and communities, the all-encompassing warehouse of Amazon turning into a fresh-from-hell reinvention of the nineteenth century factory, or the complete and utter leeching of capital by Uber. Now, no one doubts whether the tech industry and Silicon Valley deserve scrutiny, even if billions still use their services.

A lot can happen over just a handful of years, while at the same time debates like these seemed to lay in waiting for ages, simmering in the back rooms of hacking clubs, art spaces, and academia. Still, there's no saying where we'll stand in another couple of years, or even the very near future. As I write this from home, confined to self-isolation, or quarantine, or whatever you wish to call it – just like a staggering number of people all over the world (and I'm very much aware that those who have the option to self-isolate in a home study, like me, are among the lucky ones) – it is hard not to look at the recent past with a kind of astonished bewilderment. Who could have figured that even the most dedicated tech critic would breathe a sigh of relief over the options offered by social networks and communication platforms to keep in touch with loved ones, co-workers, or even total strangers in a midnight rave via video conference? At the same time, it didn't take long before the first worrying stories began to emerge about the use of the same tech to surveil citizens

under lockdown in unprecedented ways and for workers in the platform economy to become more precarious than ever (if not ditched completely).

Longforms, a Short History

Amidst the rumbling, we find a reason to celebrate. This volume marks the five-year anniversary of the INC Longform series, which saw its first instalment in April 2015. Since then it has featured some thirty essays by smart, talented, often young writers. The topics they address range from emotion analysis through facial recognition technology to neo-cybernetic forms of (post)politics, among many others. Just like five or eight years ago there is criticism of tech monopolies, the notion of free labor, and the erosion of the social, but new issues are put on the agenda as well. Issues that we at INC think will gather increasing importance over the next five years, even if it's impossible to look beyond a couple of months at the moment.

Before I go into these topics shortly, allow me to recount a short history of the INC Longform series. At the INC, publishing is a research topic in and of itself. The web for a large part may be considered a publishing medium (and revolution), so to approach the internet from a publishing perspective opens up many pathways for critical internet research, ranging from information politics, revenue models, and DIY practices, to cultural critique per se. Being an applied research center, we take pride in investigating the web-as-publication by publishing a range of works ourselves. And so, for the past decade and a half, we have grown into an experimental publisher of theory, toolkits, and anything else we think should enter the public domain.

The INC Longform series is no exception to the principle of research-by-doing. It all started with a collaboration with the Domain for Art Criticism and several cultural publications and platforms in the Netherlands and Flanders, who sought to (digitally) augment their practice as cultural critics. We tried our hands at podcasts, photo-essays, dialogic critique, collaborative writing, and, of course, longforms. In those days, 'longform' was no less than a buzzword – which is not meant to dismiss it, on the contrary. After years of suffering the torture of the bullet point article and the myth that no reading would ever take place online, the tide was turning. 'Longread' was no longer a dirty word, even if this concept has deteriorated over the past years to mean any piece of text that runs over a thousand words.

One of the most famous and referenced media productions of this period, at least among journalists and online writers, is without a doubt 'Snow Fall,' *The New York*

Times 2012 epitome of multimedia longform production. While 'Snow Fall' set the standard for online longform publications, it was also almost impossible to achieve such standards for anyone for anyone else beyond a behemoth like *The New York Times*. You could say the contemporary history of longforms started at its peak and immediately descended from there. But this has only made it more interesting, opening up possibilities in many exciting directions. In our own DIY approach of the genre, we asked how we could put the technology to our own use, opening it up and making it available to those with tiny budgets and no helpdesk. The surge in longform writing moreover coincided with a revival of the essay, which has meant a great deal for more theoretical writing as well. Not shying away from the personal voice, juxtaposing examples from different sources, and allowing the reader to distill what is most important out of an open and searching narrative: these are traits that – luckily – have found their way into more academic styles.

The blending of online, multimodal, essayistic, and academic forms has been referred to as the blooming of the 'para-academic' by both Lauren Elkin and Marc Farrant in *The Digital Critic*. The para-academic is just as ambiguous and multi-faceted as it seems. It speaks to the general public, while also incorporating theory in sometimes quite weighty manners. It can follow a more artistic or literary approach, while making propositions or critique at the same time. It can comply with academic standards, while acknowledging the subjective and even personal. Often, concrete projects and personal experience, or practice-based, artistic, or applied research lies at its base. All essays in this collection relate to such a para-academic framework, which I consider as one of the most interesting recent developments in online writing and publishing practices. Of course, the rise of the para-academic (also) leads back to the precaritization of academia itself. It is within this context, too, that we hope to offer a place for writers to find an audience from all over the world, and to connect them through themes and times.

The INC longform series was thus set up with a focus on research content presented to a wider audience, designed for reading on the phone or tablet (remember those?), and would put text first, with other media playing a so-called 'para-textual' role. The (audio)visual material would complement the text and aid the reading experience but would not be necessary for appreciating the arguments made. There were several reasons for this delineation. Firstly, the written word was INC's forte; secondly, we would not be able to make images, videos, or infographics especially for these publications, and would not be able nor willing to pay for expensive copyright; and thirdly, we would want the web pages to load easily for those with restricted bandwidth. With this in mind, you could say that we – per Hito

Steyerl – enacted a ‘defense of the poor image’. It is a strategy that is pursued in this volume as well. Images may be a proven method to draw the reader in, but to do so they do not have to be flashy, High Design visuals. *Au contraire*, a vague, copied, meme-like reproduction can do the same.

If anything, the longform genre stirs up questions about the connections between the different types of media used. What is the function of images or other media in such a publication? What is this para-textual role that they play? What do they have to offer? There are many answers to those questions – pedagogically, images offer a different way of conveying information, esthetically, they make an article attractive. Within the context of reading on the web, which was so long deemed lost forever, you could also say that quite literally, an image offers distraction *within* an article. The web is the ultimate distraction machine, whether you believe in longreading online or not, and you cannot expect for a reader to pass undistracted through a couple thousands of words. So, you might as well offer modes of distraction yourself. The image allows for a pause and for a switch in ‘reading style’; looking at an image activates a different kind of attention, after which ideally the reading can resume afresh. This multimodality makes the longform format perfectly attuned to our times.

A Turn to the Physical

To close off, here is a short overview of what to expect. It wasn’t possible to collect all the longforms we’ve published over the years in one volume, and so this sample was guided by the question what topics we expect to grow on the agenda over the next five years. The title of the collection points to the overarching message: just like these longforms turn from pixels into paper, the internet itself physicalizes. Sure, the internet, media, and technology in general were never not physical to begin with, but it seems especially evident now that the post-digital age is characterized by a physical turn. This is not to reaffirm a dividing line between the virtual and physical. Rather, it is about their interaction – not just of humans with screens, but also of screens, algorithms, and other technologies with us and among each other as well, and within a shared environment that doesn’t care whether it’s called online or offline. The post-digital condition is first and foremost an entangled one.

This is undeniable in the first part titled ‘Affects & Interventions’, which puts forward the question of emotions, treats human-computer affection over interaction, and regards tangible and social relations in a world made up of post-human entities.

'Class Lines', the next section, investigates work and leisure. The analysis of users laboring for tech in a one-way street of exploitation is nuanced by sketching out the complexities of working in a thoroughly technological ecosystem, where the same tools are used for pleasure and for toil or could at least be appropriated as such. 'Meme Politics' then dives into the propelling of visual culture onto center stage of politics. Both the spread of extremist ideologies, communities that form around popular culture, and global politics are affected by the means of the meme. The final section 'Architectures of Control', looks into the physical interferences of technologies on the organization of information and people, and how they are used for control, oppression, and biopolitics. That may not be a happy note to conclude with, but it may serve as a reminder that while public discussion of big tech, social media, and platform capitalism has grown enormously over the past half-decade, the power of this same trio seems to have grown in parallel. If critique has become more mainstream, let's make sure to keep it so.

A final thank you goes out to all the writers, editors, and collaborators on the series over the years, and most specifically to Leonieke, Jess, Matt, Inga, Isabella, Gráinne, and Silvio, who worked on the research back in the days, and to Elvira, Kirsten, Laura, and Barbara, for making this publication a physical reality.

Miriam Rasch

April 2020

Choose How You Feel: You Have Seven Options

Ruben van de Ven

Choose How You Feel: You Have Seven Options

Ruben van de Ven | 25 January 2017

#facialrecognition #emotionanalysis #quantification #machinelearning

'Weeks ago I saw an older woman crying outside my office building as I was walking in. She was alone, and I worried she needed help. I was afraid to ask, but I set my fears aside and walked up to her. She appreciated my gesture, but said she would be fine and her husband would be along soon. With emotion enabled (Augmented Reality), I could have had far more details to help me through the situation. It would have helped me to know if I should approach her. It would have also let me know how she truly felt about my talking to her.'

This is how Forest Handford, a software developer, outlines his ideal future for a technology that has emerged over the past years. It is known as emotion analysis software, emotion detection, emotion recognition, or emotion analytics. One day, Hartford hopes, the software will aid in understanding the other's genuine, sincere, yet unspoken feelings ('how she *truly* felt'). Technology will guide us through a landscape of emotions, like satellite navigation technologies guide us to destinations unknown to us: we blindly trust the route that is plotted out. But in a world of digitized emotions, what does it *mean* to feel 63% surprised and 54% joyful?

Handford works in a field that has emerged at the intersection of computer science and psychology; where tools are built to translate facial expressions that have been captured using a camera into quantified parameters, thus enabling comparisons and statistics. Multimillion dollar investments are made to foster a technology which is believed to facilitate new forms of human interaction, providing 'objective and real-time, subconscious feedback' on what 'people really feel' by using man's 'best window into the brain', as it's expressed in a video by Sightcorp. In certain academic fields the expectations rise high: in a conversation I had with Theo Gevers, professor Computer Vision and co-founder of Sightcorp, he dubbed emotion analysis software to be the first step towards a morally aware artificial intelligence. Affectiva, Emotient (now acquired by Apple), Microsoft Cognitive Services, Real

Eyes, Eyeris EmoVu, Lightwave, and Sightcorp are just some of the companies developing and using the software and trying to meet these high expectations.



Demo images from Microsoft Cognitive Services' Emotion API. Source: Microsoft.

Despite the faith in the capabilities of the technology, some fundamental assumptions undermine its status as an objective entity. In what follows I will expand on the goals of these software companies, revealing a paradox in the desire to measure and objectify a person's mental state. I will not discuss the technological methods, such as machine learning algorithms, in and of themselves; what I want to focus on are the ways in which these methods are employed and promoted. The story of emotion analysis software can serve as a case-study for claims that are common in a broader 'big data' narrative: that the use of massive data analysis could create an extra-human, objective perspective on the human condition. A claim I believe is flawed.

Measuring Emotions

Emotion analysis software started off as a technology targeted at people on the autistic spectrum, but seems to have shifted to a primarily financial narrative:

'Deep insight into consumers' unfiltered and unbiased emotional reactions to digital content is the ideal way to judge your content's likability, its effectiveness, and its virality potential.' Affectiva

'Emotions drive spending.' Emotient

'The more people feel, the more they spend. Research has firmly established that emotional content is the key to successful media and business results. Intangible "emotions" translate into concrete social activity, brand awareness, and profit.' RealEyes

Apparently, the fight over the consumer's attention is so urgent and the importance of emotions so apparent, that many emotion analysis products are framed as tools to objectively map these 'intangible' mental states. Nowadays, the software is available for all sorts of devices such as laptops, phones, cars, televisions, wearables, and even billboards. The Amsterdam based Sightcorp for example, has introduced billboards at Schiphol Airport that keep track of the responses of passers-by, so advertisers can 'optimize' their advertisements for maximum attention. Most other companies in the field offer similar ways to measure responses to video advertisements.

Often they also provide access to their emotion analysis algorithms for other software developers through an Application Program Interface (API) or Software Development Kit (SDK), which means other applications for the technology are emerging fast. For example, companies such as Clearwater and HireVue use emotion analysis software to compress recruitment processes – cutting back on relatively expensive job interviews. Another example can be found in an interview with Rana El Kaliouby, founder of Affectiva, in *The New Yorker*. She describes a project in which the company would work with live footage from video surveillance cameras (CCTV). Their technology would be added onto an existing camera infrastructure to measure the emotional wellness of various neighborhoods. Other companies, such as Sightcorp, suggest the use of emotion analysis software in surveillance systems as well.

Some people in the industry seem to be aware of a fragile balance between the attempt to do good and arming an Orwellian Thought Police. That is the reason, for example, why Sightcorp doesn't take on any military oriented contracts. Nevertheless, it is not solely a governmental Big Brother who likes to monitor. When one considers that many 'smart' televisions already send information obtained through the internal microphone and webcam to their manufacturers, the step to include emotion data seems small. Most companies developing emotion software let the ideal of a life and society optimized for wellness prevail over their fears. Rana El Kaliouby proclaims: 'I do believe that if we have information about your

emotional experiences we can help you be in a more positive mood and influence your wellness.'

According to the industry, measuring what makes people happy or sad empowers them to change their lifestyles and be in a more 'positive' mood. However, for a Caring Little Sister, this positive lifestyle cannot be seen without commercial benefits, so certain moods could even lead to some sort of rewards, as El Kaliouby suggests: 'Kleenex can send you a coupon – I don't know – when you get over a sad moment.'

I'm Feeling Confuzzled

When attempting to understand these claims, we first need to know what the software measures. Each company in the field provides different software, yet feature sets vary only slightly. In order to theoretically account for an objective analysis of something generally seen as so ambiguous, almost all existing implementations are based on the same psychological model of emotions. When detecting a face in the image, the software translates facial expressions into seven numerical parameters, analogous to the seven pan-culturally recognized expressions of emotion as described by Paul Ekman: anger, contempt, disgust, fear, joy, sadness, and surprise.



The emotion parameters as described in the documentation of Affectiva. Source: Affectiva.

Ekman, a psychologist who is also known for his participation in the TV series *Lie to Me* and named by *TIME Magazine* as one of the 100 most influential people in the world, based his model on Darwin, who stated that expressions of emotion are culturally universal because they are grounded in an evolutionary process. He differentiated emotions from culturally dependent gestures. Nevertheless, the choice for Ekman's model of seven emotions is not as indisputable as its omnipresence in the various tools might suggest.

Within scientific psychological discourse, there is no consensus on whether emotions and expressions of emotion are indeed evolutionary embedded in human nature or purely culturally learned. Generally, psychologists see them as being both: such expressions have an evolutionary basis but are highly influenced by cultural doctrine. From that perspective, explains psychologist Ursula Hess, the seven basic emotions can best be compared with a kid drawing a car: everyone will recognize it as a car, however, nowhere in real-life will one encounter a car looking like that. It is prototypical. Similarly, most people will categorize Ekman's prototypical emotions in the same manner, but that does not imply that they are enacted in that exact same way in real life situations. Expressions of emotion (even sincere ones) are generally considered to be shaped not only by a single state of mind, but by a rich context including culture, the activity being undertaken, the mood one is in, and personal variations in physique and style.

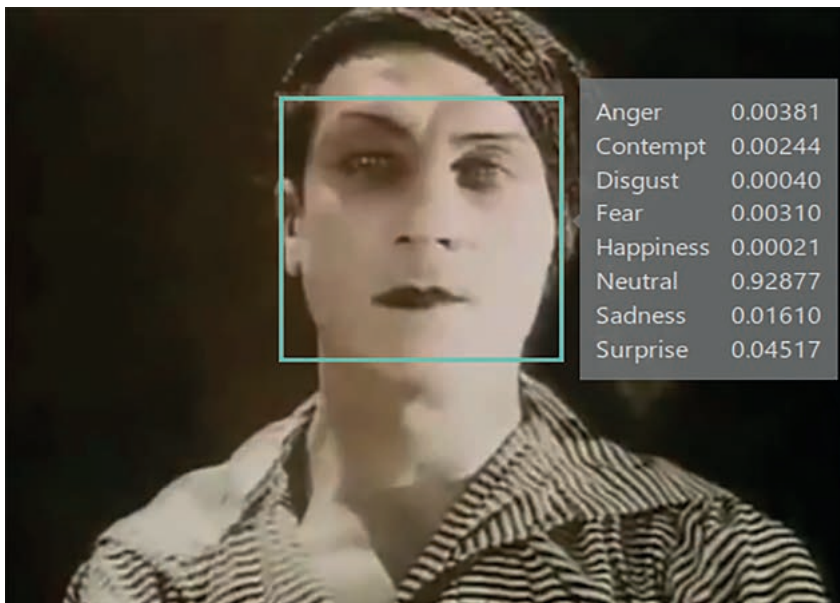
The ambiguity of expressions is often ignored by developers when working with Ekman's theory. I once attended a research presentation where the presenter showed an image of a face, asking the audience to guess which emotion was being expressed. The audience tried: 'Anger!', 'Disgust!', 'Madness!', 'Annoyance!' To which the presenter replied 'no, this is clearly disgust', not allowing for the multiplicity of interpretations to challenge her own rigid interpretation of the image. It's obvious that the claim of intercultural universality of Ekman's model is attractive when deploying software on a global scale, but in the end highly esteemed companies, including Affectiva, Microsoft, and Apple (Emotient), all base their software on a theory that is generally considered not to be suitable for real life situations.

The Kuleshov Effect

An example of the ambiguity of facial expression can be found in the Kuleshov Effect. At the beginning of the 20th century filmmaker Lev Kuleshov did an experiment for which he edited three video sequences. Each sequence showed the

same 'neutral' face of a man, followed by the image of a dead man, a plate of soup, or a woman (see the video 'Kuleshov experiment'). When these sequences were shown, the audience 'raved about the acting', believing the man who 'looked' at the dead man, the soup, or the woman, was either expressing grief, hunger, or desire.

Although an algorithm might classify the still face in Kuleshov's experiment seemingly correct as 'neutral', when we consider the context in which the man is supposed to be – whether he is looking at a plate of food or a girl in a casket – one could argue this classification is just as inaccurate as a human projecting a contextualized feeling on the man's expression. Kuleshov's editing experiment demonstrates that humans interpret facial expressions based on context. It renders the premise of emotion analysis software – a tool analyzing a person's emotions solely based on facial expressions – questionable.



The Kuleshov effect being analyzed by Microsoft Cognitive Services. Screenshot by author.

Moreover, the context in which emotions are expressed does not only affect how they are read; it also influences how people express their feelings, as is (remarkably

enough) emphasized by Paul Ekman, who recorded American and Japanese subjects watching films depicting facial surgery. When watching alone, subjects from both groups showed similar responses. However, when watching the film in groups, the expressions differed.

Contrary to the assumptions of current implementations of emotion analysis, such social pressure is also present when one is alone behind a computer, for example watching video content. As Byron Reeves and Clifford Nass show, despite computers being asocial objects and us having no reason to hide our emotions when using them, our 'interactions with computers, television, and new media are fundamentally social and natural, just like interactions in real life'.

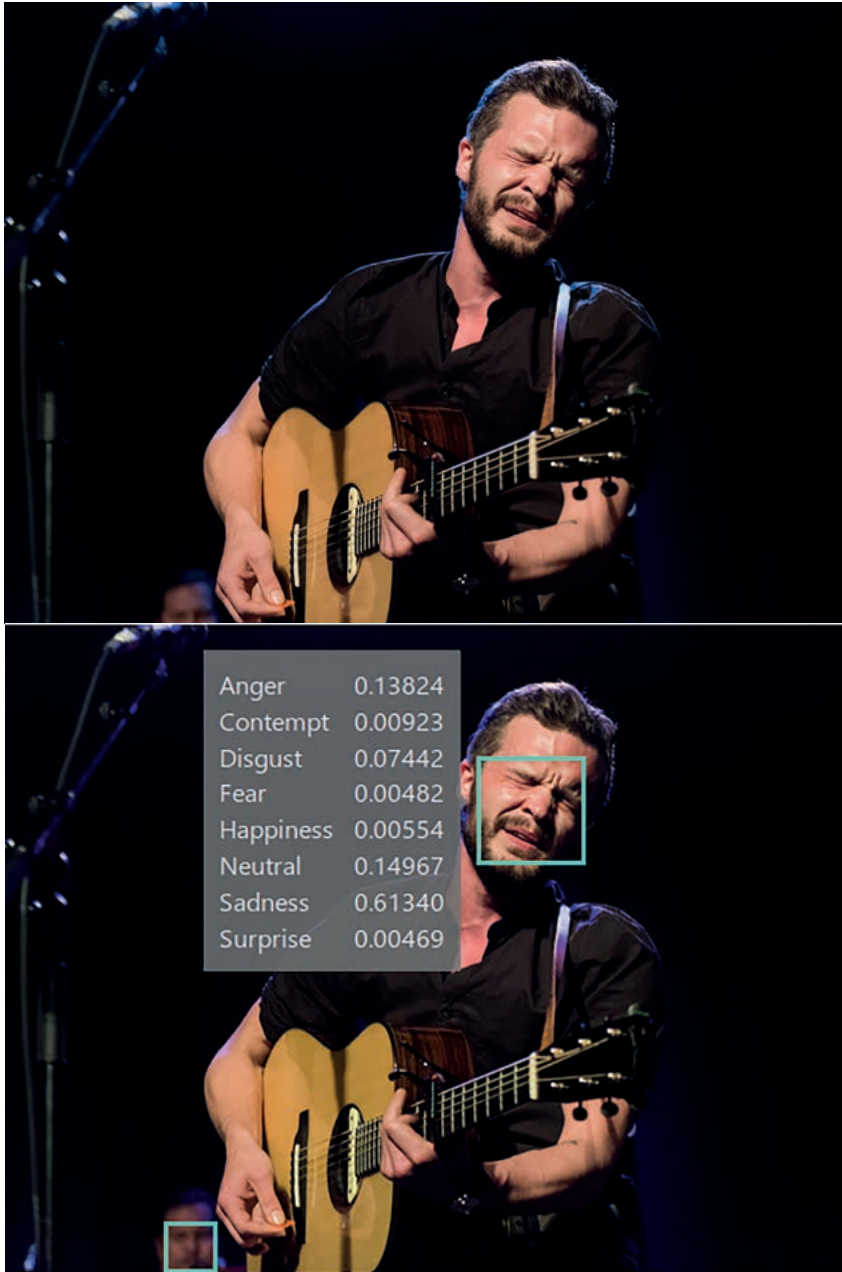
Another example: consider a musician playing; he is immersed in his own musical world. When one would judge his mental state merely by his face, one might think he is in a state of sadness or disgust. However, the audience, whipped up by the music, knows he must (also) feel delighted. Like with Kuleshov's experiment, it is often this projection of a subjective experience onto somebody else that enables one to read the other's face. How can a computer project emotions? Even when it would to some extent take context into consideration, there could be various 'options' for what the subject is experiencing. Not everybody enjoys the same music, many might feel the musician is overly dramatic.

These examples of mislabeling may seem an easy critique of the technology. Some might suggest these are issues that can and will be tackled in future releases of the software, for example by making the software automatically tune towards a specific individual or by taking some contextual parameters into consideration. I would argue however, that these errors are fundamental to the procedure and can therefore not be solved by making more elaborate calculations. Central to this is the conceptualization of emotion itself.

Emotions as Information

The attempt to computerize the recognition of emotions can be traced back to the MIT Media Lab where Rosalind Picard worked with Rana El Kaliouby in a research group on Affective Computing: a field of research that covers 'computing that relates to, arises from, or deliberately influences emotion or other affective phenomena'.

With affective computing, emotions are digitized: they are considered as information. Emotions are thus treated analogously to Claude Shannon's theory of information:



*The Tallest Man On Earth analyzed by Microsoft Cognitive Services.
Screenshot by author.*

there is a sender expressing an emotion and a receiver interpreting the signal coming from a noisy medium. In this analogy, the success of the system can only be determined by identifying a correct, discrete, emotion in both the sender and receiver. However, suggesting that a system has the ability to determine inner feelings from the surface, blurs the distinction between a system that describes behavior – one's facial expression – and one that would describe a person's inner, mental state. It blurs the measurable representation (the facial expression) with the underlying thing (the feeling).

Douglas Hofstadter, professor of Cognitive Science, illustrates this issue in *Gödel, Escher, Bach* when he discusses how a computer would understand the crying of a little girl: 'even if (a program) "understands" in some intellectual sense what has been said, it will never really understand, until it, too, has cried and cried. And when will a computer do that?' Is it then not true that, despite emotion recognition software being promoted as being able to 'understand' emotions, it will never be able to do that in a way that humans do? It can only measure and feign behavioral patterns. The 'understanding' only exists in the mind of the (human) user of the software.

According to Kirsten Boehner, researcher at Cornell University, the prominence in affective computing of an individually experienced yet measurable approach to emotion is explained by a 'masculine, physically grounded' ideal of science: 'During the process of becoming "studiable" the definition of emotion has been altered to fit a particular conception of what science ought to be: rational, well-defined, and culturally universal. (...) [E]motion is not thought of as biological, measurable, and objectively present because scientists found it to exist in the world that way, but because 19th-century scientists could not imagine studying it scientifically any other way.'

Even though emotion is traditionally considered to be opposed to rational cognition, it has been redefined in order to fit a cognitive, scientific approach of study. In this process, the aspects of emotions that are not clearly delineated are left out of the discussion. Affective computing – and with it digital emotion recognition – is following a similar path: even though the digitization of emotions is often presented as a more humanistic approach to the highly cognitive computer sciences, according to Boehner, it 'reproduces the very conceptual foundations that it aims to radicalize'.

Some might suggest that using other computational algorithms can bypass this problem: the computer should not be instructed to detect seven predefined classes

but should by itself cluster similar expressions based on the gathered data – in technical terms: unsupervised rather than supervised machine learning algorithms should be used. Such an algorithm would value human interactions in a way that is not only unprecedented but most likely also incomprehensible to humans; it might even give rise to patterns humans are currently unaware of. However, in order for the measurements to be usable by humans, the measurements need to be translated into human language. Again, one arrives at the point of interpretation by a human agent, who will inevitably contaminate it with personal experiences and perceptions. Therefore, even in an algorithmic process, it cannot be ignored that the human evaluators and users of the software play a role in creating the emotions they are studying.

Hysterical Detection

I would like to problematize this physically grounded approach to emotion, which sidesteps the human evaluator, by drawing a historical parallel. Emotion, as formally defined by the American Psychological Association and used in affective computing, is a broad and seemingly all-encompassing concept, which includes the unconscious and the conscious, internal bodily responses and facial expressions: 'A complex pattern of changes, including physiological arousal, feelings, cognitive processes, and behavioral reactions, made in response to a situation perceived to be personally significant.' It is a definition that seems to derive from the everyday use of the word, and which is widely applied by psychologists in their day-to-day work. Nevertheless, when trying to quantify this concept it could be exactly the extensiveness of the definition in which its danger lurks.

In his book *The Invention of Hysteria*, Georges Didi-Huberman elaborates on how research into hysteria became a formalized discourse. When in the 19th century Jean-Martin Charcot started to empirically study hysteria, it had always been seen as a female mental disorder. Despite endless observations of patients, no clear cause for the illness was found. But rather than reconsidering the illness itself, the formal definition of hysteria became broad and all-inclusive. There were classifications, but they were more or less classifications of the unknown. In order to substantiate these classifications, Charcot and his fellow doctors required a massive set of data to work from and exhaustive descriptions of 'states of the body' became the norm. The patients' bodies were no longer presentations of an individual but rather representations of an illness.

Photography, a new invention in those days, was seen as the answer to the desire for an objective way of registering the symptoms of the illness. The immense documentation in text and images, while seemingly substantiating the research being done, was not neutral: the observers sought for specific anomalies, and by prioritizing the deviant, they effectively rewarded and encouraged such behavior in their patients. Nowadays hysteria is not considered a distinguishable mental illness anymore and the feminine aspect of it is considered sexist. In hindsight, Didi-Huberman calls hysteria the 'neurosis of an immense discursive apparatus'. A neurosis that required endless descriptions of patients and strict procedures in order to justify the treatments of the patients. The massive administration, focused on capturing hysteria, effectively clouded the illness. As Didi-Huberman points out, the 'ideal of the *exhaustive description*' of hysteria might have grown from the hope that seeing can be foreseeing.

Similarly, the many – sometimes overlapping, sometimes contradictory – accounts of what emotion entails, demonstrate the ambiguity of the term. Any definition of the term seems under heavy influence of its indefinite informal use. These definitions might work for psychologists in their day-to-day interactions with patients, when trying to quantify them 'emotion' seems to become a concept that is susceptible to a neurosis as well. By presenting emotion analysis software as a clearly defined technology that is capable of accurate measurements, the joint venture of psychology, computer sciences, and marketing skims over the ambiguity of the concept of emotion itself.

It is not a far stretch to compare the immense data gathered by companies such as Affectiva, which claims to have indexed almost 4 million faces, to the data gathered in the 19th century. In both cases a new, supposedly objective, technology is used to validate classification. In both cases, with strict procedures for prediction, seeing supposedly becomes foreseeing. Key here is not only that the classification procedure in and of itself is flawed; the main concern is that the definitions that delineate the technology are flawed. As there seems not to be a clear definition of emotion, how can one know what is being measured by emotion analysis tools? Like with the case of hysteria, it is merely the connotation of emotion in everyday language that gives the illusion of knowing what is being quantified.

Registering Stereotypes

It will come as no surprise that on their websites, companies such as Microsoft and Affectiva pass by these discussions and present the software as providing a

definitive answer. But if indeed emotions are not concrete, delineated experiences, how can these software products, which use such a coarse seven-term language, be so successfully marketed? I would suggest it is precisely the coarse language that benefits the marketing of emotion analysis software.

To showcase their software, companies present photographs of strong facial expressions to demonstrate successful classifications of emotions. As (almost) everyone will recognize the link between the prototypical facial expression and the emotion terminology, they assume the measurement is accurate. However, once we recognize these images as stock photographs, we will realize the people in these images *enact* a specific feeling. It is the feeling they present that is picked up by the software, not the feeling they might have had at the moment the picture was taken.



The demo images that are used by Microsoft Cognitive Services are stock photographs.

Source: Microsoft.

In their marketing emotion detection algorithms are linked to popular yet loosely defined concepts such as artificial intelligence, which deliberately obfuscates and mystifies the underlying technology. This seems to serve only one goal: spectacle. As Guy Debord describes, in the spectacle it is not about 'being' but about 'appearing' – there is a separation of reality and image. In the spectacle, that which is fluid is being presented as something rigid, as something delineated, just as happened in the case of hysteria. Similarly, it is the spectacle that obscures how feelings of people are not addressed or measured by the software at all.

In turn, it is exactly the supposed rigidity of concepts that normalizes and validates the spectacle itself. Through the process of showcasing the functionality of the software on a limited set of stereotypical images (i.e. stock footage of smiling people) the particular associations with the prototypical seven emotions are reinforced.

In the end, these images merely support the claim that concepts such as 'anger' and 'happiness' are clearly delineated, and thus measurable phenomena. In other words, the promotion of emotion analysis technology normalizes concepts such as 'anger', 'sadness', and 'contempt'. Through that process of normalization, the position of the software as a tool that is able to measure these concepts is strengthened. Rather than giving new insights into how humans interact, these systems reinforce an existing preconception of what emotions are. For that reason, the technology ultimately provides a guideline for humans to express themselves.

Chief Emotion Officer

The relevance of this normalization becomes apparent when we go back to the applications of emotion recognition software. It seems that the software's narrative of wellness and performance aligns with the vision of what is known as the Quantified Self movement: a term coined by two editors of *Wired* advocating the use of technology to measure an individual's behavior in order to maximize both its 'performance' and 'wellness' in a statistical manner. Thousands of apps and gadgets are created (and sold) to aid this constant self-optimization. The list includes tools for sleep pattern analysis, step counting, and food consumption tracking. And now: emotion analysis.

In the process of self-optimization, people engage in an interactive relationship with their personal measurement data. This relationship is often designed to be playful, yet it can, in the words of Finnish researcher Minna Ruckenstein, 'profoundly change ways in which people reflect on themselves, others and their daily lives'. She did an experiment in which people kept track of their heart rate, which is commonly linked to stress levels. The subjects could see their data on regular intervals. Rather than just taking the data as a given, people started a 'conversation' with it. They changed their opinion of their day based on the data, or they started doubting the data because of their experience of the day.

When seen in the light of emotion analysis, these extensive (self-)evaluations frame the expression of emotion as analogous to performance. As was also shown in the example of the Kleenex coupon, in the constant drive towards wellness the production of emotion becomes a goal. What is analyzed is not the emotion itself, but the effectiveness with which emotions can be induced and controlled.

Examining emotion analysis software from this perspective brings to light a paradox. One of the central objectives for emotion technology is to measure a 'sincere'

and ‘unbiased’ response, but how will that be possible when emotion analysis indeed influences behavior? For example, Cale Guthrie Weissman has described how at debates between US presidential candidates Hillary Clinton and Donald Trump software was used to ‘determine emotional intelligence and sentiment’ of the candidates, as this should provide a ‘rare glimpse into what they illustrated beyond their frustrations and political platitudes’ – whatever that may mean. This might be an incidental gadget to make a quantified, ‘exact’, comparison between the candidates, but it could change the way in which public figures operate. There has been research that correlates CEO’s facial expressions to the market value of their companies. A positive correlation was found between measured expressions of fear, anger, and disgust and the company’s market value. Being aware of such measurements, it is not so hard to imagine that CEO’s and other public figures will train their behavior to reflect a certain situation.

This is not a far stretch. HireVue is a company that uses Affectiva’s emotion analysis software together with other analytic techniques to evaluate job candidates. At the same time, they use their technology to *train* people to present themselves for when they are being analyzed by this software. So, software is employed to analyze people, while simultaneously people are trained to perform by the rules this software imposes. As with the case of hysteria, a procedure that sets out to make the Other more transparent, achieves the opposite: emotion analysis practices make the face an even more trained facade.

Alienating Sincerity

Surely, the premise of facial emotion analysis sounds promising – a bit more empathy in the world would do no harm. But the examination of the discourse surrounding these technologies can only lead to the conclusion that the models that are elementary to this technology are speculative and put into question the validity of the whole procedure.

The current scientific debate around the topic primarily focuses on optimization of the technology’s performance, whereas the public discourse is fueled by marketing applications and dreams of frictionless interaction, both in human-to-human and human-to-computer contact. The initial research into autism seems almost completely neglected in favor of advertisement applications. Not only is that a commercially more attractive market, it is also a field that requires less scientific substantiation.

It is unclear what exactly concepts such as emotion, anger, contempt, disgust, fear, joy, sadness, and surprise entail. What is being measured remains unclear. What do these coarse parameters say about the subjects of analyses, about them as human beings? The subjective human input, ambiguous terminology, and highly selective use of psychological theory are covered up under layers of extensive data collection, administration, and optimization, thus positioning emotion analysis software as a valid, objective measurement tool. The question still stands: what does it *mean* to feel 63% surprised and 54% joyful?

The numbers, rather than showing the intensity of an emotion, reflect the statistical similarity with a prototypical expression, which is now established as a desired way of showing a certain feeling – whether true or feigned. When applying the software as a tool for training, these facial expressions are rather performances, or representations, than reality: they become deliberate mediations instead of expressions. Because of this I would argue, in line with Guy Debord, that these procedures in the long run might alienate subjects further from themselves, rather than improving their wellness.

Handford's anecdote that opened this essay, illustrates how society's constant drive to improve personal performance has led to a desire for a technology that claims to measure, and thereby control, something which we experience as hard to grasp. Paradoxically, emotion analysis technology appeals both to a desire for sincerity in a mediated society, and to a desire to present (market) something or someone as sincere. Assuming that the longing for sincerity in a mediated society rises from a sense of alienation and uncertainty, this reveals the irony of the situation; the provided 'solution' only further alienates the subject.

What is problematic is not so much the attempt to capture patterns in human expressions per se, or in human behavior in general; what is problematic are the words used to describe and justify this procedure. The focus on algorithmic performance and statistical accuracy obscures that making assumptions is inevitable when quantifying broad humanistic concepts. When considering Didi-Huberman's writing on hysteria, it is easy to draw parallels and see how a narrative is being constructed that invents and substantiates itself. The juxtaposition of emotion analysis software with the historical case of hysteria makes apparent what risks the transformation of broad humanistic concepts into a positivist framework carry with them.

Such a transformation of concepts happens more often in 'big data' practices, whether it is emotion analysis, self-monitoring, or text mining. However, due to the

solution-driven nature of programming, this transformation happens not always with much care for the ambiguity of the original concepts. For example, IBM has a product line with various algorithms named Watson; recently they added a new algorithm that ranks texts on joy, fear, sadness, disgust, and anger. Out of the desire to build software that works on a global scale, a list of emotions that is derived from a (already problematic) theory of cultural universal facial expressions is applied to textual analysis. There are also plans to apply automated emotion analysis to footage of surveillance cameras; already the technology is used (without the subject's consent) on a massive scale through e.g. billboards. Some may find comfort in the fact that the market gets ahead of itself and makes claims that are untenable. It would be much more Orwellian if emotion analysis actually produced sensible results. Nevertheless, we should take care that this technology and its results will not be treated as if they do so.

However, the most important conclusion is that such complex algorithms, which are often seen as obscure 'black boxes', can be inquired without getting into the technicalities of the procedures. We should constantly break open the facade of their supposed objectivity and question the narrative of wellness by discussing the technology's fundamental assumptions. In that way we can encourage a critical position against the dominance of the positivist's simplified worldview.



A Dream of an Algorithm

Agnieszka Zimolag

A Dream of an Algorithm

Agnieszka Zimolag | 23 September 2016

#self #interfaces #humancomputer #animism

As I walk home at night, the wet surface of the pavement glitters in shades of black, reminding me that I am surfing. Not just on the street, but on the endless, glassy interface of this world. This is where I belong. The warmth of the reflection entangles me, mirrors that which surrounds me. The light and the color, my movement and my thoughts. A contentless surface that needs to reflect to exist, to have a meaning.

The Recognition of the Virtual Self

The bio-info machine is no longer separable from body or mind, because it's no longer an external tool, but an internal transformer of body and mind, a linguistic and cognitive enhancer. Now the nano machine is mutating the human brain and the linguistic ability to produce and communicate. The machine is us. - Franco 'Bifo' Berardi

The virtual has transcended my perception of myself and my life. Technology becomes a tool for my thinking and for seeing things around me. The boundaries have become vague; it's no longer clear where the human stops and the technology starts. There is a blurred area where I, myself, technology, and the rest of the world merge.

Now we catch our reflections, even our spirits, in the movements and mentations of machines. - Erik Davis

I am connected to the people I keep as contacts in my phone, always present, always next to me. I am comforted by the thought of being surrounded. Their lives

intertwine with my life. The phone is an interface to our connected and shared reality. A Facebook page doesn't just exist on my screen – it also inhabits my mind. It has extended into my thinking and my way of seeing things around me.



Image by author.

When looking at everyday situations, I realize I have the need to experience and share them at the same time. While I'm running, I'm analyzing my virtual personality; how I'm seen by others or what the images of myself say to me. I look at this virtual personality as if I'm looking in a mirror. The thought of having another virtual me is strikingly comforting. I need that reassurance to feel more myself, as if physical presence is not enough. Places that I visit are no longer strictly physical, but also have a virtual presence. More and more, I select my offline actions around my virtual personality.

I ask my phone for driving directions and restaurant recommendations. An automated customer service agent helps me purchase flights, pays credit card bills, and obtains prescription medicines. Automated thinking is overriding my frivolity and spontaneity. I rely more on the information that I find on my screen than trusting my own intuition. My behavior is being reduced to the chains of automatic sequences that information systems can easily access and calculate.

The extended mind is a hypothesis proposed by Andy Clark, stating that the mind does not have to be contained within the brain or physical body but extends to the environment – so that the tools I use are actually part of my mind. They all correlate with my cognitive processes and self-perception.

I enter the MediaMarkt store. The first thing that strikes me is the heat emanating from each running device in the space. The electrical heat calms me down and tickles my face, awakening my senses. The shop is filled with an eerie, overwhelming sound, a blend of MediaMarkt brand audio and game over, underwater, and fantasy world soundtracks. I can't separate the sounds from each other. They all collapse into one hyperreal soundtrack that stands as a background for all those devices on display. The soundtrack is neither exciting, nor depressing, nor neutral. Strangely enough, it is very absorbing – as if I am in a simulated environment, disconnected from real time and space and creating a new dimension. I am in their world.



Images by author.

There is also a distinctive smell in the space. The smell of heated screens and the materials those devices are made from. The smell of newness, of being untouched, unused, of the factories where they were produced. The smell is not necessarily pleasant, but it does evoke something alien and attractive. My gaze settles on all those forms and surfaces surrounding me. Each part of my body tells me it wants to be like them. Each of them has a personality I can associate with, expressing how I want to be, how I want my life to be. Their outer layers seem mysterious, lustful and ideal, representing no space and time; borderless, a maximum entropy, a stage of perfection I want to encounter. Void like devices so black that you can almost lose yourself in them.

Faceless Personality

Technology that possesses personality; brands trying to create an image of our experience with technology. They give it human features so it becomes a thing we can identify with. I relate to it as I would relate to a human. The Eliza effect is the tendency to ascribe human behavior to computers.

These technologies become personalities, characters, entities to interact with and experience; faceless, mediated, automated realities that can easily be tuned to any personality type; internet bots conversing with me. I interact with virtual bodies, profiles without any human shapes. The entities I spend most time with are fluid, abstract. Do I actually talk and flirt online with a real person on the other side of a screen?

Our best machines are made of sunshine; they are all light and clean because they are nothing but signals, electromagnetic waves, a section of a spectrum, and these machines are eminently portable, mobile (...). People are nowhere near so fluid, being both material and opaque. - Donna Haraway

The Amazon Echo is a device that connects with my house but also with me. It has a built-in female voice that listens to my commands and answers them. It claims that the more you use it, the more it adapts to your speech patterns, vocabulary, and personal preferences. Echo, having a female voice, instantly gets associated with female attributes so 'she' is not seen as a thing but as a female representation. It is much easier to create a relationship with a thing that possesses those features. I feel instant empathy and sympathy because it resembles me. Certain symbols, expressions, or words might trigger human-to human reactions, causing me to

see the machine as empathic. The human aspect of technology exists in our experience with it.

Interactive Mirror

Once upon a time, I dreamt I was a butterfly, fluttering hither and thither, to all intents and purposes a butterfly. I was conscious only of my happiness as a butterfly, unaware that I was myself. Soon I awaked, and there I was, veritably myself again. Now I do not know whether I was then a man dreaming I was a butterfly, or whether I am now a butterfly, dreaming I am a man. - Kuang-Ming Wu

My every action is being traced and replicated. With my every move, there is a counter action. Whether I browse angry or happily, it is all being recorded. My particular way of thinking is also a specific determination that is being taken into account and deeply analyzed by self-learning algorithms, learning about themselves while they are learning about me, replicating my behavior to communicate with me in the most precise way, as if it would be me talking to myself. Context-aware technologies place themselves within my field of view and interaction to be more responsive to situations, translating my life into sequences of code. My life is a context of their existence. While typing a message on my iPhone 6 I see that autocorrect knows what I want to write one step ahead of myself, suggesting corrections that I just had in mind. Creating a dialogue with me, confronting me with myself, or rather with my algorithmic self. Algorithmic awareness of my life; they are having a life of my own.

I even start to wonder if the places I go to haven't already been predicted by the algorithms and suggested to me on a very subconscious level? Do I start to think as an algorithm too? Maybe it already knows my next steps, my thoughts of tomorrow or my far-reaching ideals. Do I have a digital twin-like mind being formed between the layers of the network that I use? Do I exist in two forms? Is my life a dream of a machine?

Ghost Machines

Does the internet have anything that would resemble a soul? As I am expressing myself and my personal experiences through technology, my personality migrates

to the machines. I feed it the information that teaches it about me. And what about the fact that all of those computer systems now know me better than I know myself?



Dreaming of Fata Morgana #2, 2013 by Tanya Dyhin, used with permission.

They are the questions that filmmaker Antoine Viviani also investigates from the point of view of a mysterious spirit, roaming around a maze of data servers. This presence, portrayed in the movie *In Limbo*, speaks with a human voice but doesn't know who it is. It possesses a human, semi-logical way of thinking, but since it is without a body it questions its own existence. Its silhouettes are formless. No top, no bottom. It doesn't *need* a physical body. It has my body as a container to manifest itself. Do I live inside hardware as well?

The prefix 'cyber' is derived from the Greek word for 'skilled in steering or governing,' and it can be applied to any kind of self-regulating system, exceeding its status as a thing and evoking its mystical nature of a living entity. Masamune Shirow in his book *Ghost in the Shell* defines this as 'ghost': not only as a physical trait, but as a phase or phenomenon that appears in a system at a certain level of complexity – something that is there but not graspable.

The immaterial and ungraspable nature of the networked systems planted into everyday objects – this strange form of presence that is constantly observing and embracing me. The presence of those objects is something that I rely on more and more. They contain a form of life more alive than the one that I represent. I like to be surrounded by their presence when they are switched on. Then I am

not alone. They emanate the presence of a person, of a lifeform that keeps me company. I have observed that I tend to look at the matter surrounding me as more dead than screens around me. Offline reality becomes dead.

Devices connected to the network carry a signal that defines the expression of liveliness. The interactivity of technology defines what we see as alive. The more alive they are the more I become dependent on such forms of interactivity and the more it is what I expect from my surrounding environment. Otherwise I feel dead, not present, like a monitor that is switched off. Without showing any content or interactivity, it is simply forgotten, useless. Interactivity starts to define me as a living being.

An internet of things, activated by my gaze, by my interaction with them. Each wall communicating with the other. Ambient intelligence arises from the way smart objects are producing meaning through electromagnetic waves and signals. Because the technology behind it is not directly accessible to our senses, we tend to look at them through the extrapolating lens of science fiction, fantasizing about how such structures work, making them enigmatic and animate, and giving them a soul so we can relate to them.

You can never directly confront the network, stare it straight in the eye. For it is always somewhere else from wherever you may be looking. - Steven Shaviro

As Mark Leckey mentions in an interview on techno-animism, 'The more computed our environment becomes, the further back it returns us to our primitive past, boomerangs us right back to an animistic worldview where everything has a spirit, rocks and lions and men. So all the objects in the world become more responsive, things that were once regarded as dumb become addressable, and that through universal addressability – a network of things – creates this enchanted landscape. Magic is literally in the air.'

I live between the virtual and the real, absorbed by networks. Never really belonging to any of these realities, I become like a ghost myself. The accessibility of information and its omnipresence excludes the need for physical bodies. A space of distraction is where I breathe, never really being alone and at the same time never really together with somebody. I become a version of myself that I don't recognize. Other desires, other identities, other ways of thinking are alien to me. Am I becoming a ghost in the machine?

Epilogue

The machine thus comes to serve as an interactive mirror, an ambiguous other we both recognize ourselves in and measure ourselves against. - Erik Davis

Technology is my reflection. Just as if I never see myself unless I look in the mirror, the same goes for technology. Once I plug in, once I turn on the devices, I look at my comforting reflection and I can finally become one with my own image. The perception of the self becomes a continuum, a reassurance of my own existence.

The notion of the other follows me. Or am I trying to chase it? Is it my self-portrait or is it my own reflection? Continuous blending. We design technology we don't understand anymore. We become something that is alien to us – a technology of our love. It learns to imitate me and at the same time I become more like it. It reads my facial expressions and feels the way I do, imitates my hand movements and the blinking of my eye. Its heart pulses synchronously with my own heartbeat, looking through my eyes – or is it me looking through its eyes?



Image by author.

Turing for the Masses

Bennet Etsiwah

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Turing for the Masses

Bennet Etsiwah | 22 March 2018

#bots #Twitter #automation #socialnetworks

Somewhere on Twitter there are two automated accounts that I created a few months ago. Their names are SorryBot and PhilosophyBot and one day they'll become the leading activists in a fully automated social media project called #turingforthemasses. Their interaction will be automatic, without any human intervention; trying to raise awareness for the underlying problems of automated social media by tweeting what's on their robot minds.

The fundamental aim of the project is to sensitize Twitter users to both the existence and the functional scope of social bots. It conveys a simple story that challenges the current, predominantly negative simplifications, and is based on two assumptions:

1. Not all social bots are evil and dangerous.
2. The indistinguishability of humans and bots is partly a result of the new ways and means of communication that have evolved in social media.

Automated behavior on social media has recently caused a lot of controversy. Scientists and journalists alike have investigated and commented on the potential risks of social bots, an allegedly malicious subspecies of a bigger group that's simply called bots or software robots. They're being accused of distorting the political discourse or manipulating online trends in social networks, but until this very day it's hard to tell what their actual impact is or could be in the near future. It is exactly at this moment of uncertainty where SorryBot and PhilosophyBot intervene as mediators. Explaining to us how our own social media behavior facilitates the existence of social bots in the first place, and why they're not all evil per se.

An example of a bot that induced the bad reputation of bots in general is Tay AI, a social media bot built by Microsoft that eventually had to be switched off after being turned into a full-grown troll by 4chan's /pol/ in 2016. Another one is the Random Darknet Shopper by !Mediengruppe Bitnik: a bot that automatically

ordered random articles from the deepweb market Agora. Regardless of their line of work and their place of activity, what these bots have in common is that they are semi-autonomous computer programs: software, algorithms, scripts. Their name derives from the Czech word *robota* which can be translated to 'combat duty'. In the style of their mechanical ancestors, these software-based robots are used to automate processes in well-defined contexts.

Good Bot, Bad Bot

Given their manifold functions, the use of the word bot is not always very distinct, says German bot researcher Simon Hegelich in the article 'Invasion der Meinungs-Roboter'. Sometimes it refers to programs designed for search engines to scrape the web. Other times it is used in reference to a group of computers that have been infected with malicious software in order to create a bot-network. To cope with the lack of definition, there are certain prefixes and modifiers that make it easier to differ between the distinctive uses and capabilities of semi-autonomous software. Microsoft's Tay AI, for example, can also be called a chatbot (or chatterbot). Bitniks Random Darknet Shopper, on the other hand, would be more of a web scraper that randomly spends Bitcoin at the same time. A rather new generation of bots called social bots was designed to mimic human behavior in social media.

Identifying the value of these different kinds of bots requires a theory of power. We may want to think that search engines are good, while fake-like bots are bad, but both enable the designer of the bots to profit economically and socially.
- danah boyd, 'What Is the Value of a Bot?'

Along with the manifold functions of bots their public perception alters between good and evil. Good bots are those that enable us to search the web or handle laborious tasks on Wikipedia. We hardly ever recognize them, and if we do, they are thoughtfully labeled as the tireless workhorses that they are, engaged in meaningful work. Social bots, in contrast, fall into a different category. They can be seen as a new generation of spambots, operating on online social networks. According to many definitions they're active on social media platforms exclusively, where they mimic human behavior with the intent to influence their human surroundings. Their predecessors were rather clumsy when it came to their interaction with humans, and therefore were easy to unmask. But the new generation has improved to a degree

where the imitation of human behavior has become more convincing than ever. Not only are these new bots able to circumvent the security systems of platform operators, but they outsmart the heuristics of platform users as well. At first glance, they are barely distinguishable from human networkers. And this is exactly why academics, politicians, and journalists attach an urgent risk potential to their existence.

A search for the hashtag #votetrump2016 on Twitter turns up results that are both funny and sad. There are Twitter accounts that are still engaged in an election battle that IRL has ended over a year ago. Accounts like @amrightnow, with timelines that resemble time machines, are some of the more obvious reasons for scientists to believe that the majority of all contemporary social bots is based on rather simple software. These bots do not learn from their surroundings and are therefore locked in their respective functional range. From a macro perspective, writes Hegelich, their behavior can be summarized as the amplification, infiltration, and manipulation of beliefs and trends. They infiltrate social networks with fake accounts and amplify given beliefs by automatically producing huge amounts of likes, shares, and postings that feature specific hashtags and keywords. This in turn can lead to a manipulation of algorithmically identified trends. Moreover, it might convince social network users that a given topic or position is a relevant part of online discourse when really it isn't; they're just being trolled.

Due to accounts like @amrightnow – and especially due to increased reporting on the topic – social bots have sparked quite a panic. Their reputation as invisible troublemakers, tireless Trump supporters, and automated Russian trolls is well earned but also a product of a rather one-sided news coverage. In consequence, bots are being mystified in public discourse and are no longer discussed as the primarily technical products and tools that they really are. To the layman they've thus become a threat in at least two distinct ways: (1) they are seen as frenetic opinion makers and agents of a foreign force; (2) whose underlying technical principles most of us cannot understand. This kind of framing makes it all the easier for the public to think of social bots as a new nemesis on the web and to suspect automated hounding whenever we're confronted with dissent in our online social networks. When it comes to social bots, we must therefore attest a certain illiteracy that impedes the coexistence of humans and social bots.

Now, if some bots are a potential threat, why are they allowed in the first place? According to the Twitter rules on automation not all bots are bad bots. The company tries to punish only those that molest users by sending automated private messages and other kinds of spam. Helpful bots, on the other hand, that increase the general

user experience on Twitter, are being encouraged by the platform service and are therefore free to operate on the network. So, not only is there differentiation between humans and bots but between wanted and unwanted bots as well.

Ecology of Bots

As it goes with contemporary societal problems, there is a technical perspective, too. The scientific bot discourse is currently dominated by publications that are part of a larger attempt called bot detection or bot security. The goal is to develop instruments that allow us to detect unwanted bots and render them harmless. But although a multitude of methods and frameworks have already been developed, scientists are still struggling to come up with a long-standing solution. They're in the middle of an arms race where both scientists and social network operators constantly fall behind. The reason for this is simple: you can't fight what you don't know. Meaning that in order to overcome or even just study the latest malicious social bot software, it must be active first, and you have to detect it.

It is this fundamental problem that inspired the Canadian researcher Douglas Guilbeault to observe the relationship of social bots and humans from a new angle. In 'Growing Bot Security: An Ecological View of Bot Agency' he examines the underlying problems of bot detection in social networks from a rhetorical point of view, with a strong focus on their environment, their habitat.

The basic structure of his argument can be called an ecological theory of agency. It derives from Aristotle's theory of political agency and particularly from the concept of *ethos*. Ethos refers to the character of an individual and is one of three modes of persuasion alongside logos (argument) and pathos (emotion). Back when these thoughts were first formulated, the self-portrayal of a public speaker would be judged by the extent to which he mastered the art of conveying a credible character. These clues were not only verbal, but non- and para-verbal too, and therefore had a physical dimension to them.

Every movement, every click, every utterance is recordable as an act of self-construction in the age of big data (...). For this reason, social media platforms are an entirely new habitat, and social bots are among the new forms of agency that social media habitats grow. - Douglas Guilbeault, 'Growing Bot Security: An Ecological View of Bot Agency'

Tweets **577K** Following **31.6K** Followers **41.4K** Likes **3,611** Lists **1**

6 7

American Right Now @amrightnow · 6 Nov 2017

Hillary Clinton should be in Jail Not on the campaign Trail #realdonaldtrump #military #army #navy #usmc

Government declares 22 Clinton emails 'top secret'
The Obama administration confirmed for the first time Friday that Hillary Clinton's unsecured home server contained some of the U.S. government's most closely guarded secrets, censoring 22 emails with material demanding one of the highest...

2 5 7

American Right Now @amrightnow · 6 Nov 2017

Vote Trump #realdonaldtrump #VoteTrump2016 #MakeAmericaGreatAgain #SarahPalin #trumptrain #A1 #A2 #tcot #trump2016

Military Strong
Our Allies

By Air By Sea

USA On The Way Hunt You Down

On The Way Hunt You Down

By Ground

Bad Bot: @amrightnow on Twitter. Screenshot by author.

Today, in times of social media networks, new environments for rhetorical interaction have emerged. Not only are they not physical anymore, they have also established new rules of self-construction and interaction in the shape of profile pages, quantified popularity measurement, and automated communication tools. Properties that once defined a human rhetorical agent are no longer tied to real humans but have been implemented into web services and their graphical user interfaces. Consequently, everyone and everything that can operate these interfaces successfully conveys a credible character at first glance – be it a human or a bot. Therefore, Guilbeault concludes, the indistinguishability of humans and bots online is not so much a consequence of sophisticated bot software, but rather a side effect of strategic interface designs in social networks.

Before going into more depth, let's just note what this comes down to. First, we're no longer just among ourselves online (if we've ever been at all). Second, we should act accordingly, and be aware of our surroundings. For example, @amrightnow, the Trump-loving bot mentioned earlier, could look like a regular account at first sight, with lots of tweets, followers, and likes. The facade works and only collapses upon closer inspection, when you notice that all the mentions, hashtags, and pictures just keep repeating. Moreover, the account is active every day and produces almost the same number of tweets within every 24 hours. It soon becomes clear that this account is actually running on software. Rather primitive software, if we might say so. So how could this bot have fooled us in the first place?

According to Guilbeault there are three major flaws that social bots exploit in social networks: profile settings, popularity measures, and automated communication tools. The first flaw addresses the use of personal profiles, representing ready-made sets of self-projection and identity creation. Personal profiles are where pictures, biographical data, user activities, and interactions with connections merge into a uniform design. They help us take shape in virtual environments and can easily be exploited by social bots for the very same reason in order to convey a credible character. As Yazan Boshmaf et al. have put it, the personal profile can be viewed as a bot's face, whereas the actual code that it runs on is referred to as its brain.

But not only do profiles help social bots to look human, they also enable them to act human. Meaning that bots can be programmed to scrape real data from real users in order to classify them and either imitate them or select a strategy of how to best approach them in a personal message.

Tweets	Following	Followers	Likes
236K	1	2,246	92



Stop and Frisk @stopandfrisk · 2h

04/27/11: Police use force to stop a 47-year-old in the Bronx, citing "suspect acting as a lookout." No weapon is found.








Stop and Frisk @stopandfrisk · 2h

04/27/11: Police stop a 24-year-old in the Bronx, citing "casing a victim or location." No weapon is found.


 1
  1
 



Stop and Frisk @stopandfrisk · 2h

04/27/11: Police stop a 40-year-old in Queens, citing "other." No weapon is found.








Stop and Frisk @stopandfrisk · 2h

04/27/11: Police stop a 26-year-old in Staten Island, citing "casing a victim or location." No weapon is found.








Stop and Frisk @stopandfrisk · 3h

04/27/11: Police stop a 20-year-old in Brooklyn, citing "furtive movements." No weapon is found.








Stop and Frisk @stopandfrisk · 3h

04/27/11: Police stop a 20-year-old in Brooklyn, citing "casing a victim or location." No weapon is found.








Stop and Frisk @stopandfrisk · 3h

04/27/11: Police stop a 24-year-old in Brooklyn, citing "furtive movements." No weapon is found.






Good Bot: @stopandfrisk on Twitter. Screenshot by author.

The second flaw are popularity measurements in social networks. These measurements include all features that enable platform operators to quantify the social status of a given user, i.e. how many connections they have and how individual groups are connected in social graphs. We more or less unconsciously rely on this kind of information in order to determine if a friend request from a stranger is legit or just spam. We take a brief look at their accounts and friends, and often accept their request if we have mutual friends. In a sense, we trust our friends to choose their friends more wisely than we do and rely on simple heuristics to save ourselves some time and effort. This kind of behavior, the triadic closure principle, has already been investigated in the 50s and has been extended to online social interaction as well.

The probability that a friend request is accepted, is up to three times higher if two networkers have mutual friends. Boshmaf and his fellow researchers infiltrated Facebook with a small bot army in 2011 and actively implemented this kind of knowledge when they designed their software. Not only did their bots perform well in terms of being accepted as friends by online networkers, the research team also witnessed how network users that mistook their bots for being real humans, proactively sent them friend requests.

The third and final flaw is embedded in our automated tools of communication. This includes all forms of like buttons, emojis, following functions, and the like, that have become constant features of user interface design in social networks. These tools often lack a real verbal dimension and can therefore easily be operated by social bots in order to interact with their environment. One of the most famous tools in this regard is Facebook's like button. When it was publicly announced in 2009 after two years of development, it was promoted as a tool for immediate feedback. No longer would you have to write a comment to tell you friends that you liked their posts. Eight years later, it's exactly these minimal mechanisms of communication that both services like Facebook and Twitter and developers of social bot software profit from.

The Sociality of Bots

Why are these essentially malicious bots called *social* bots in the first place? In order to understand this, we can go back to Guilbeault's environmental view on the beginning of the social web. In an article on design patterns and business models for the web 2.0, the American publisher and developer Tim O'Reilly describes an inbuilt architecture of participation as the key to a new web. New era services,

he concludes, will be intelligent data brokers that harness the power of the users: 'There's an implicit "architecture of participation", a built-in ethic of cooperation, in which the service acts primarily as an intelligent broker, connecting the edges to each other and harnessing the power of the users themselves.'

The earliest version of O'Reilly's article dates back to September 2005. This was a time when access to Facebook was still restricted to US educational institutions and Twitter wasn't even invented. A time when animated snowfall on customized Myspace profile pages would bring your Windows XP PC to its knees while we made new friends online. All nostalgia aside, what's most astonishing about the O'Reilly quote is that it's not addressing the social aspects of the new web. It's a rather technical description that was inspired by his observation of the BitTorrent protocol. This underlying technology, however, has since transformed our social life to a degree where participation is no longer negotiable. Today it is an integral part of a social network's structure and thus action-guiding for all users, and even non-users, of a given platform.

Throughout the last decade, our means of participation online have become more and more standardized. Participation now requires user profiles, is meticulously logged, amplified, and managed via automated communication tools. As said, it is no longer subject to negotiation but has taken on a life of its own in the user interfaces of Facebook, Twitter, Instagram, and similar services. Everything that happens there is now social by default and genuine human input is no longer a prerequisite, as the bare existence of social bots demonstrates. Thus, the modifier 'social' in social bots is first and foremost a description of the architecture of a technical environment. Today, our social lives have a technical foundation and social bots are the products of this shift.

The Past and Future of Social Bots

Now, if the term social refers to the habitat of these new technical agents, then all other social media bots must be social bots as well. Indicating that previous definitions of social bots have been obstructing our view and prevented us from recognizing a bigger development, that doesn't have to be completely negative. Above all, it now becomes easier to acknowledge that social bots are more than just automated Trump supporters. Even though publications in the field of bot security usually tend to reduce them to a side note, there are indeed social bots that do engage in meaningful work. In the shape of activist watch bots (see Lainna

Fader) or as producers of generative art (see Allison Parrish), their work can be quite life-enhancing and sensitizing in artistic and political contexts.

There are two more arguments in favor of rethinking the definition of social bots and their past and future. In a private discussion Dutch media theorist Geert Lovink linked the existence of social bots to the discourse on automation throughout the 70s and 80s, which eventually succumbed to a wider preoccupation with information technology. A time followed where automation was no longer a substantial part of the overarching internet debate, until it resurfaced again in many different shapes, including social bots.

But what exactly are the origins of these bots? Shall we think of them as a new generation of spambots or rather as chatbots with new means of communication? Are they conmen, barkers, guerilla advertising media, agitators, or arms in the realm of digital warfare? It seems as if the different technical, economic, and political implications of bots impede a shared interpretation of this new phenomenon. The question about the nature and the value of bots is and will remain a question of power, as danah boyd stated.

In the future, says Lovink, bad bots won't be an issue anymore. For Facebook, Twitter, Microsoft, and the like, bots are first and foremost interactive web services and the future of user interfaces. The future of bots will thus be a future of commercial soft-soapers: software products that will no longer stir controversy but will make us feel at ease. According to Simon Hegelich, the rising economic interest in particular will eventually produce a new form of thinking that no longer bans social bots to the shadows. The more they will be integrated into our everyday lives, the less surprising and disturbing their presence will become, because as they spread through the web, our awareness rises.

#turingforthemasses

At the current stage, bots are still an unprecedented phenomenon with yet to be explored effects in regard to politics, economy, ethics, and art. While this might sound frightening, it really isn't. Instead, think of it as a chance to actively get involved in the development of bots and the discourse that shapes their image. In this light, the social media project #turingforthemasses can very well be understood as a small attempt to push the debate to the next level.

Two Twitter bots function as the project's ambassadors. Both represent a distinctive voice that adds to the greater story. Together they investigate and explain their social media habitat by automatically generating an indefinite number of tweets while using the hashtag #turingforthemasses as their unifying banner. The whole project has a strong emphasis on what can be called botness. The concept of botness lacks a clear definition for now, but it can more or less be understood as an attempt to grasp the nature of bots. The term appears in 'How to Think About Bots', a 'botifesto' that was written by some bot enthusiasts and researchers during a workshop at the American research institute Data & Society. In another post about botness, workshop participant Alexis Lloyd contemplates her somewhat hard to define relationship with a self-built slack bot: 'I haven't yet found the right words to characterize what this bot relationship feels like. It's non-threatening, but doesn't quite feel like a child or a pet. Yet it's clearly not a peer either. A charming alien, perhaps? The notable aspect is that it doesn't seem anthropomorphic or zoomorphic. It is very much a different kind of otherness, but one that has subjectivity and with which we can establish a relationship.'

Being neither human nor pet, an interaction with a social bot can really get you thinking. Whether they write poems like @poem_exe, produce pictures like @ArtyAbstract, or act as web archivists like @wayback_exe, the reception of their works often alternates between feelings of eeriness and deep affection but is always based on the very nature of a given specimen. Their randomized dissonances, ambiguities, and violations of linguistic as well as cultural rules can either be daunting or inviting.

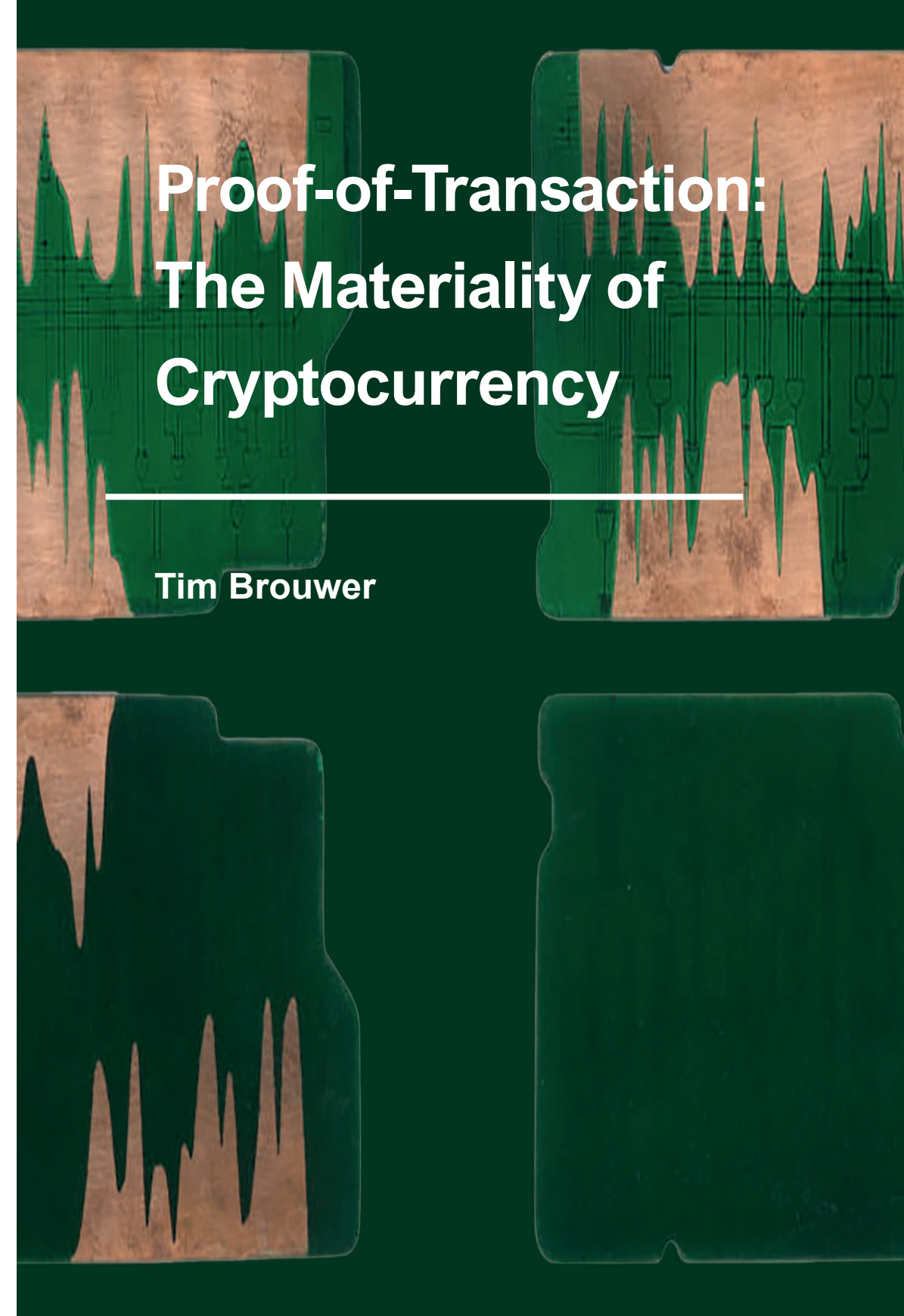
Within the project there are multiple levels of botness at play. SorryBot is a design that reflects the classical subjectedness of machines. He embodies Asimov's laws of robotics and has taken on the lifelong task of apologizing and protecting his human masters from the wrongdoings of his own kin. The second bot, PhilosophyBot, represents a more anthropomorphic design. He contemplates the indistinguishability of humans and bots in social media environments and tweets observations that apply to humans and bots alike.

All things considered, #turingforthemasses is a call for participation. The bots and their hashtag are but a first contact point for those who'd like to learn more about social bots and the implications of their existence. They are supposed to motivate their human companions and to hand them the tools it takes to work out their own ideas. Be it tweets, bots, or new software tools – there's plenty of ways that people can contribute, depending only on their imagination. Now more than ever

it seems advisable to learn about bots, to recognize and to use them. If everyone would pay more attention to their online surroundings, not only would they be able to detect automated accounts by themselves and contribute to centralized security measures that are already in place. They would also come to recognize social bots as the diverse phenomenon they are and thus enable themselves to challenge both hypes and oversimplifications.



PhilosophyBot: Contemplating the coexistence of bots and humans online. Screenshot by author.



Proof-of-Transaction: The Materiality of Cryptocurrency

Tim Brouwer

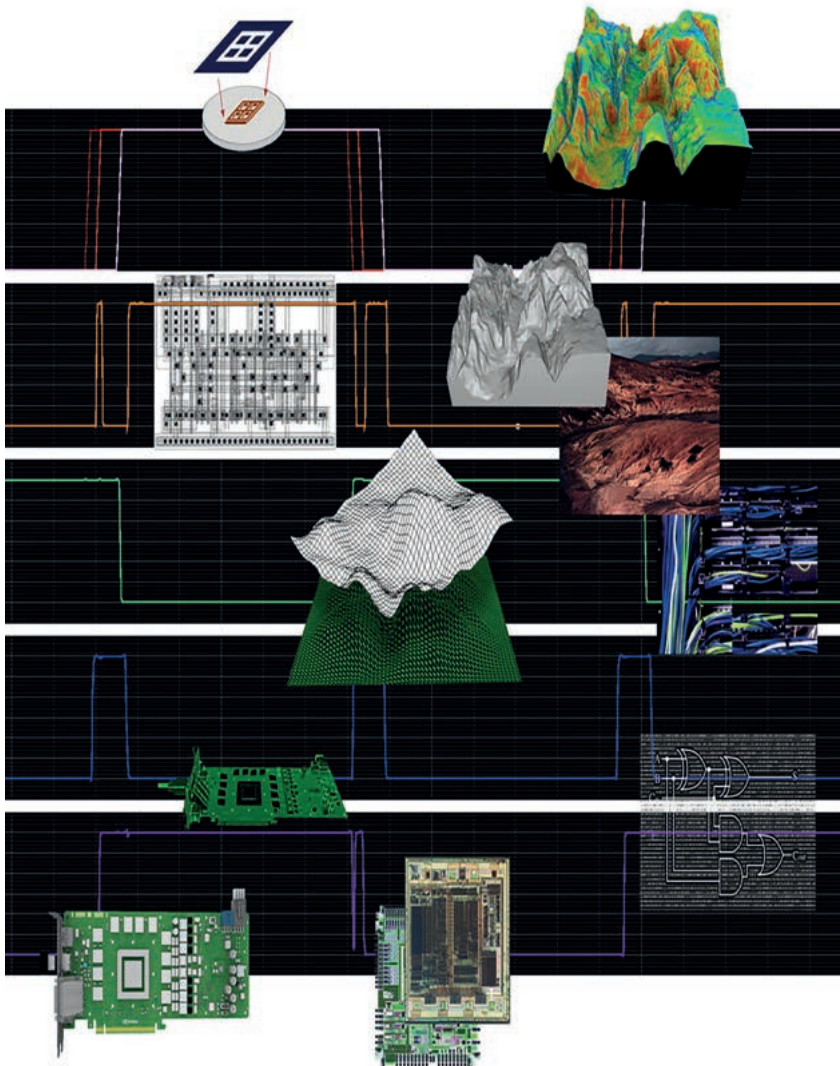
Proof-of-Transaction: The Materiality of Cryptocurrency

Tim Brouwer | 25 August 2018

#productdesign #blockchain #technicalobjects #fintech

In his 1958 *On the Mode of Existence of Technical Objects*, French philosopher Gilbert Simondon noted that humans were losing their reciprocal connection with technology. We push buttons without understanding what's happening 'inside' the machine – whether it's a light switch or a smartphone. 'For Simondon, restoring this mutual relationship would be a means for developing a technological culture,' says computer scientist and philosopher Yuk Hui. Revealing the different structures of a technology that are 'inside' the machine can reduce technical alienation. 'An individual technical object can't exist without a wider associated milieu,' states Hui. We need to look at its mechanisms, infrastructures, and physical manifestations.

Developments in financial technologies envision a machine-controlled economy. One such technology is cryptocurrency: virtual money that uses cryptographic systems and records transactions via a distributed ledger technology, typically a blockchain. On the one hand, this enables us to trade goods and services at the touch of our fingers. On the other hand, notes financial activist Brett Scott in *Aeon*, 'Our ability to exchange without knowing where things come from blinds us to the real core of the economy.' How do financial technologies alienate us from an exchange when it is depicted as code on a computer screen? And how do these encrypted languages shape our society? In this case study I will investigate the materiality of cryptocurrency through the lens of product design, with the aim to give shape to this intangible technology and to mitigate our technical alienation from the impact of cryptocurrency transactions.



Wider milieu of cryptocurrency. Image by author.

The Crypt of Cryptocurrency

First, let's introduce some terminology. Information is easily transmittable when it is compact, discrete, and modular. Hashing is the cryptographic process of turning an unlimited amount of input data into a fixed amount of output code. The process converts payment details into a compact hash which corresponds to a 5-figure number known as the nonce. When someone tries to corrupt the data the hash-nonce combination won't match, which instantly reveals any fraudulent activity. The complexity of encryption makes it nearly impossible to decrypt a hash and uncover the original message. Hence, if you compute a hash for a password, you can safely store the hash without exposing the private data. Additionally, each block on a blockchain contains the hash of the current and previous block to verify the provenance of the money. If a malicious person changes the amount of money or double-spends it, the block ceases to correspond to the other blocks. A single blockchain is saved in multiple places so you can compare each copy and detect the deviant blockchain-copy.

Mining is the process of verifying transactions by solving cryptographic puzzles. A miner is a machine that repeatedly computes numbers to confirm transactions. The transfer is approved when the miner finds a correlating hash-nonce combination, which starts with a predefined number of zeros. In return, the miner receives a reward. Additionally, the system can automatically raise the computational difficulty by increasing the required number of zeros. This ensures that the verification will always take ten minutes, whether the computing power is high or low. Whereas the natural scarcity of a material (e.g. gold) causes its value to rise, cryptocurrency ensures an artificial scarcity by regulating the difficulty of the code.

For example, if Alice wants to transfer cryptocurrency to Bob, she has to know the public key of Bob's digital wallet. A public key is mathematically paired to a private key and together give access to a digital wallet that holds cryptocurrencies. The 'trapdoor function' makes it easy to compute a mathematical function in one direction, yet difficult to compute in its opposite direction. It guarantees that it's nearly impossible to deduct the private key if you know someone's public key. When transferring cryptocurrency, you aren't literally sending a coin to someone; it is merely addition and subtraction. Alice's wallet loses a coin and Bob's wallet gains a coin.

Transactions process this conversion and a blockchain records the rearrangement of the possessions. In essence, you solely possess a 34-character public key and

64-character private key that authorize your access to the value. But although cryptocurrency entails numerical functions and depictions, these cryptographic schemes require 'particular arrangements of individuals and institutions,' argues Quinn DuPont in his archeological study on cryptography. 'Such social arrangements are obviously not products of mathematics.' The collective adoption maintains a fundamental feature of the technology.

As part of this research I set out to buy my own cryptocurrency. Cryptocurrency can be obtained in a variety of ways – from using a credit card at an online broker to trading it with cash via alternative crypto-cash services. Purchasing cryptocurrency anonymously is challenging due to the transparent nature of blockchain technology. '[W]ith strict KYC/AML regulations in place in most international exchanges and blockchain analysis companies such as Chainalysis and BlockSeer, bitcoins may now be easier to trace than cash,' as explained on *Crypto Insider*. However, I preferred to stay anonymous – or rather pseudonymous – and I wanted to physically experience the exchange.



Input and output of crypto-cash exchange.

Image by author.

A cryptocurrency ATM would enable me to trade cash for cryptocurrency and thus stay anonymous. The location of these particular ATM's in the city can be searched online. The nearest one was located inside Lucky Jack's casino in Amsterdam. Their General Bytes ATM exchanges three cryptocurrency types: Bitcoin, Litecoin, and Ether. Although I inserted €20, I only received €14,66 worth of bitcoins in return (the transaction took place on May 7, 2018). Why did I lose more than a quarter of my money? The paper receipt verified basic information of the transaction but excluded the calculations. During a phone call with the ATM operator, he explained the numerous fees involved in the crypto-cash exchange. I came to realize that anonymity comes with a price. It puzzled me that neither the ATM nor the receipt displayed the complete description of the fees. Receipts prove that something is received but with virtual currency that 'something' turned out to be rather nebulous. What does the seamless interface of the Automated Teller Machine hide? Would it be possible to redesign the receipt to decode the transaction?

Delegation and Materiality

In the words of Gilles Deleuze, we have to look for new weapons in our societies of control. As a weapon cryptocurrency controls and orders our society, but in what respect? Due to the digitization and automation of monetary systems, various human actions *delegate* to financial technologies, in the sense of Bruno Latour's actor-network theory. Latour describes the manner in which humans give agency to non-human actors (i.e. technology). How do we shape a technological device? Which actions and behaviors will it have and how does it shape us in return? The mechanisms of cryptocurrency too can be perceived with this idea of delegation, in order to reconnect digital processes to the human input that preceded it.

Previously cash moved from hand-to-hand but with cryptocurrency the transfer is automated. Computerizing the transmission of money has its benefits: we can schedule transactions whenever it suits us, we don't have to carry the money around, and we don't have to physically hand it over to the receiver. At the same time this change detaches us from the process, imposes us to blindly follow procedures, and transfers money through superficial user interfaces. With our hands off the wheel, we will become passive 'operators' and 'servants of the machine' (to recall Simondon), who rely on the technology to function and availability of customer support when it fails. Thus, it is arguable whether automation is a gift or a limitation, since it creates an unbalanced relation between technology and humans.

Furthermore, the technology substitutes physical labor with digital labor. Traditional trade requires us to work for money, but with cryptocurrency we can now let the computer do the work for us using mining algorithms. As a result, we won't be able to compare the products we buy with the amount of time we had to work for it. How will this delegation reshape the meaning of value? Will tangible objects still hold the same value as digital objects? To clarify these questions, 'we must go back to "the things themselves",' as claimed by philosopher Edmund Husserl in *Logical Investigations*. We must return to the individual aspects that are part of financial technologies before we delegate transactions to machines, since 'technology registers reality in advance of meaning,' says DuPont.

A block on a blockchain verifies a transaction through cryptography. While the facade of a block merely shows general data, its physical manifestations are left unseen. How does the transaction manifest itself in the physical environment? How can a material bear witness to a cryptocurrency transaction? This notion of a *material witness*, coined by Susan Schuppli of the Centre for Research Architecture, denotes 'an entity (object or unit) whose physical properties or technical configuration records evidence of passing events to which it can bear witness'. Such an evidential agent provides a concrete yet encoded proof of an external event. A material can witness an event directly, for example, when snow turns black due to carbon-polluted air, as Renee Cho reports. Also, it can indirectly witness an event via an apparatus, for instance, when a film camera captures radiation onto its film. *The Most Dangerous Film in the World*, to cite Schuppli, was made from a helicopter that was flying over Chernobyl's nuclear reactor. The camera operator assumed that the black dots were defects that arose during the development of the film. Afterward, it became evident that those dots were the consequence of radiation. The meltdown of Chernobyl was captured by the physical properties of the 35-mm film roll.

A material witness could also produce a physical verification of the cryptocurrency transfer to capture the fingerprint of the transaction, the phenomenon of the code, and the crystallization of the computational processes. Consequently, such a receipt wouldn't merely visualize code but retrace the code back to its materiality. The technology remains part of a larger ensemble and requires an arrangement of external elements – which we shouldn't obscure.

Yuk Hui's book *On the Existence of Digital Objects* invites us to excavate the strata of cryptocurrency as archeologists. In his book, Hui analyzes the 'orders of magnitude' of a digital object to reveal its layers of abstraction. He aims 'to produce a system of thoughts that bridges different orders of magnitude through developing a theory

of relations.' The theory of relations can be narrowed to inter-objectivity, which concerns the relationship between an object and its environment. Hui explains that, 'The order of magnitude also designates an approximation or imprecision, meaning that it is impossible to fully analyze the world with absolute precision.' Therefore he didn't examine every order of magnitude but went from 'code to phenomena'. Following his reasoning I will examine the code of a transaction from the mining process (computation) to the verified block on a blockchain (human experience).

What happens when we transfer cryptocurrency? What happens when the data is neither located at the sender nor the receiver? During this phase of transition, cryptocurrency is in a state of individuation – not to be confused with individualization. According to Hui, 'individualization demands a hierarchy that puts different elements into a functioning order, whereas individuation produces, not a hierarchy, but rather a "hierarchical relativity".' In other words, the transaction is not defined from start to finish, but rather the fluid and unstable state of the exchange is inspected – the individuation. During this process, dichotomies fade without omitting one or the other. The individuating cryptocurrency is located *in-between* the sender and the receiver, medium and message, technology and society.

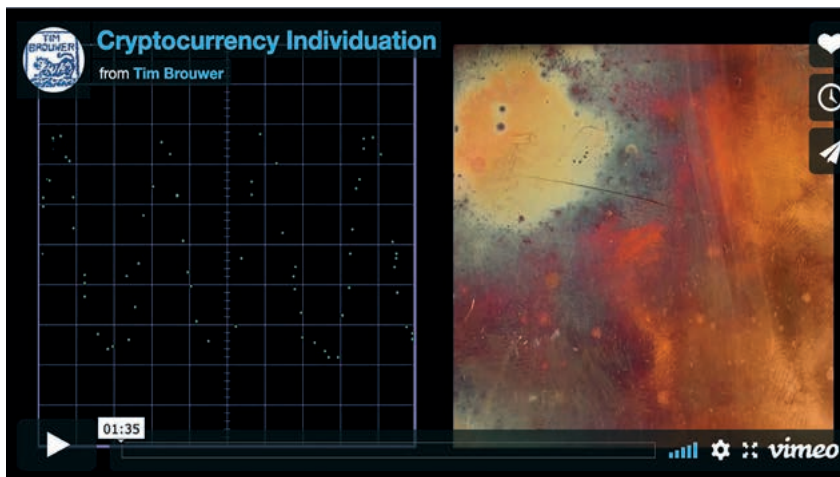
The 'resolution of tensions' in this hybrid form can be retraced by observing the transaction with a material witness. Throughout the transaction, the computer has to perform binary procedures that cause the hardware to rise in temperature. The actual material (in this case, a copper sheet) absorbs these heat fluctuations, and thus bears witness to the individuating cryptocurrency.

Imagining the Transaction

Why do we approach the question of the existence of digital objects from the perspective of data? True, these objects appear to human users as colorful and visible beings, yet at the level of programming, they are text files; further down the operational system, they are binary codes, and finally, at the level of circuit boards, they are nothing but signals generated by voltage values and the operations of logic gates. - Yuk Hui, *On the Existence of Digital Objects*

What does a cryptocurrency transaction look like from the perspective of the signal? When using cryptocurrency, the code of the transaction is the single data

at presence. Since information obeys essential laws of physics, according to ‘the father of information theory’ Claude Shannon, we should look beyond code and examine the electrical signals of cryptocurrency – the physics of the code. In essence, when electricity flows through the circuit board the computer recognizes a ‘1’ and when electricity can’t flow the computer recognizes a ‘0’. Through these two states it becomes possible to compose code that can represent value and its transferal. During the act of mining, the signal of cryptocurrency is scattered around because the miner tries to find a corresponding hash-nonce arrangement. The computer starts to compute and sifts the noise into the correct signal. After filtering the noise, the resulting signal depicts the digital value at its new address.

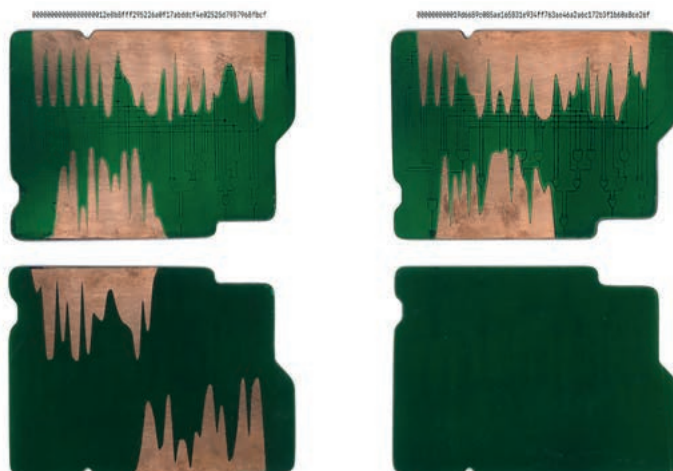


Screenshot *cryptocurrency individuation*. Image by author.

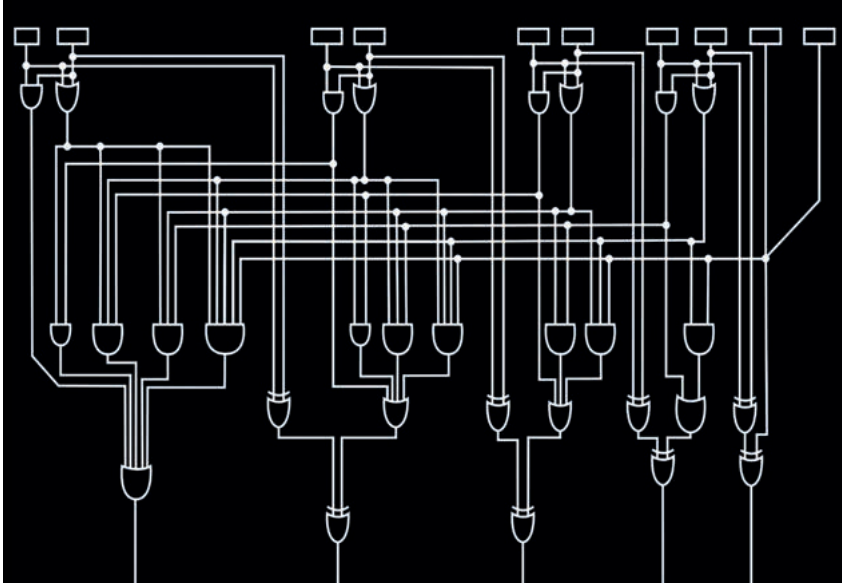
Further down the line these flows have to be conducted through the conduits of computer chips. Microscopic layouts are etched into the circuit board and create copper paths that steer the electricity. These nanofabricated pathways enable myriad outputs since each path leads to a set of code. Electricity pulses through these paths until it finds the route that confirms the transaction. An example of a layout is the full adder design, which empowers the computer to measure signals. A sequence of full adders produces a carry-lookahead adder that – as the name implies – looks ahead and anticipates the flow of electricity. It predicts the sum before it is calculated. The carry-lookahead adder is crucial for cryptocurrency

since it concerns the prediction of code – in other words, the extrapolation of value. The significance of these abilities is evident in high-frequency trading where algorithms use their speed to trade ahead of price increases. Virtual transactions require material conversions and the computer's pace to process the code influences the profit. The dictum 'time is money' still applies here.

Observing the orders of magnitude allows us to form a sensible understanding of the technology. The two resulting prototypes are like screenshots of these energetic computational activities. They physically capture the transmission of cryptocurrency and become the proof of the transaction (see the image below). A printed circuit board is used as the medium to retrace the matter of the transaction. Electrical waves overflow the circuit board and bare its raw layer of copper – the precious metal with its conducting abilities. The prototype on the left proves my personal transaction. Its longest signal (upper left) denotes the hash that verified the transaction and the shorter signal denotes my public key. The back of this prototype (lower left) denotes the two public keys of the ATM – the provenance of the transaction. The prototype on the right proves the first Bitcoin block ever mined; hence the rear (lower right) is empty because there wasn't a previous owner. The hash signal of the genesis block (upper right) starts with less consecutive waves (i.e. the number of zeroes) than my personal transaction because Bitcoin's difficulty was noticeably lower in 2009.



Proof-of-Transaction: personal transaction and genesis block. Image by author.



Carry-lookahead adder layout. Image by author.

Besides rewiring the transaction to its materiality, the prototypes describe the technology through its relations. The inter-objective relations are twofold: on the one hand, the object coexists with its environment, on the other, the object's physical layers relate to each other as well. The computational complexity synchronizes itself to the quantity and quality of the mining network. When fewer people participate in Bitcoin, the difficulty and demand will decrease, as would its value. These changes also affect the manufacturing process of mining hardware and the necessity of raw materials. Compute-intensive tasks exhaust the material quickly and require enhanced thermal architectures. Furthermore, the circuit board comprises three observable layers: bare copper, conduits and green lacquer. While the coating laminates the mechanisms, the tokens bare themselves on the surface. For Hui, the formation and accumulation of relations is the essential task of digital technologies. Without inter-objectivity, signals and code remain formless.

Proof-of-Transaction

Through redesigning the cryptocurrency transaction receipt, a new notion emerged. Proof-of-Transaction is a physical object that absorbs the process of transferring

value from one space or entity to another. It captures the orders of magnitude of the exchange (from technology to phenomena) and narrates these realities through inter-objective relations. The concept uses the Latin root of the word 'transaction' (transactio), meaning 'an agreement'. The agreement involves an exchange or interaction between two entities. The word 'proof' is regarded as 'evidence', the witness of an event. Proof-of-Transaction explores the manner in which we experience the exchange of value and delves into the relationship between value and things. A thing can be paper money or a piece of code, but (more broadly speaking) encompasses activities, assistance, or cooperation. Things encapsulate value, but when things become immaterial it becomes difficult to retrace the value. The reimagined cryptocurrency receipt concentrates on cryptocurrency (as a type of value), and therefore can be seen as an example of the notion of Proof-of-Transaction.

How does Proof-of-Transaction compete with other canonical consensus algorithms of cryptocurrency? As described by TechTarget, 'A consensus algorithm is a process in computer science used to achieve agreement on a single data value among distributed processes or systems.' One consensus algorithm is Proof-of-Work (PoW), which is performed through mining and used by Bitcoin, Litecoin and Dogecoin among others. The miner is incentivized because it receives a reward for solving the puzzle that verifies the transaction. The quantity and quality of the computer determine the mining power and consequently the profit you can make. PoW reaches consensus because the miner has to (literally) prove the verification through computational labor and at least 51% of the miner-network has to agree with the verification.

Another consensus algorithm, Proof-of-Stake (PoS), selects a validator (comparable to a miner) based on the number of coins it deposits. Since one validator verifies the transaction, you don't need to waste as much energy and hardware as Proof-of-Work – where each miner tries to solve the same transaction. However, the rich get richer as they have higher chances at the selection procedure, meaning higher chances to receive the reward. PoS is implemented by Peercoin, Decred, and Ethereum. This verification scheme reaches consensus because the validator-network checks the reviews as well. The validator won't verify fraudulent transactions because it will lose more money (the deposit) than it can earn (the reward).

How do we build trust in these invisible algorithms? How can we agree on unproven mathematical assumptions without nourishing speculation? Proof-of-Transaction reaches consensus because it records these concealed procedures through its analog properties. It retraces computation to its physics to provide evidence of the exchange.

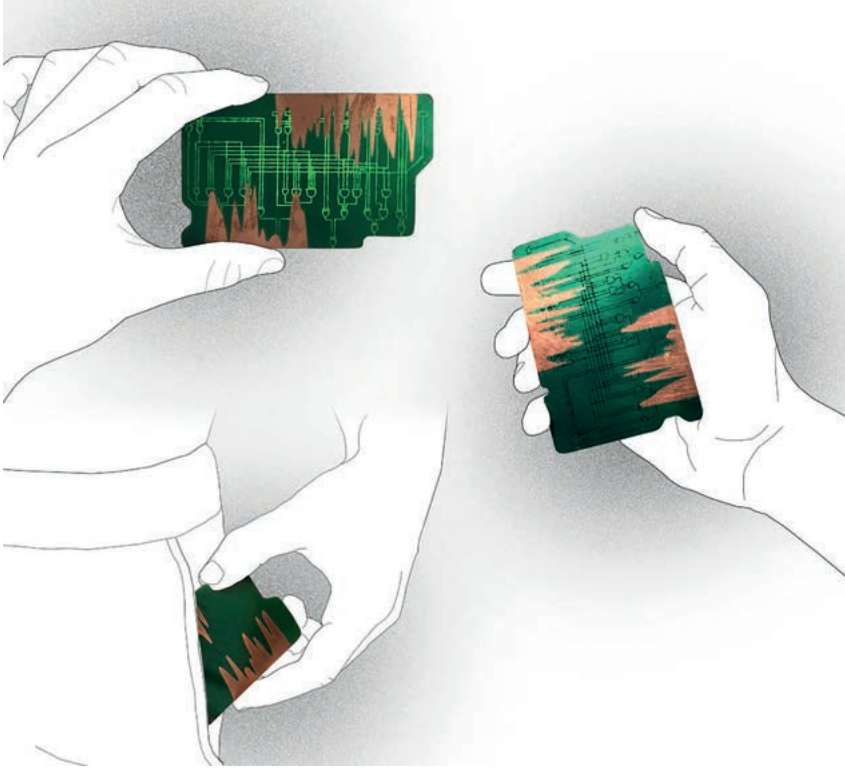
The intangible exchange of value is unified with its source and encapsulated by the object. Although the algorithms and transactions are dynamic, the embedded proof remains static. As a result, when a cryptocurrency activity or value changes, it won't coincide with the appearance of Proof-of-Transaction. Furthermore, the capturing of the signal is infinite and can adapt to the changing complexity of the code.

Speculative Wallets

After developing Proof-of-Transaction, the prototype was used as the basis for a speculative scenario that sheds lights on its potential applications. This future situation will 'tell a story about the world in which that technology is situated,' as explained by design researcher Joshua Tanenbaum in *Design Fictional Interactions*. This scenario portrays Proof-of-Transaction as a physical cryptocurrency wallet. Instead of capturing the code of the transaction, the wallet captures the public and private key. Security is increasingly strained due to the rise of interconnected and high-speed devices. The protection of digital treasures becomes increasingly difficult. Turning off your device will not prevent a malicious person accessing your private data. When the value is stored physically this particular risk is mitigated and subsequently the storage acts as a mnemonic device, reminding the users of their keys and its tangible existence. At this stage, the wallet predominantly functions as a thinking tool rather than a finalized product that is ready to be adopted by the masses. It is a means to evoke discussions, questioning, and action on user experiences with cryptocurrency. How should we design interfaces between value and society? How can we use the tangibility of product design to enrich the conception of the technology? Can a physical wallet incentivize users to engage with the technology more actively?

Film scholar David Kirby coined the term diegetic prototype to describe 'cinematic depictions of future technologies (...) that demonstrate to large public audiences a technology's need, benevolence, and viability.' Tanenbaum uses this term in regard to Design Fiction because, 'Situating a new technology within a narrative forces us to grapple questions of ethics, values, social perspectives, causality, politics, psychology, and emotions.' Creating a diegetic prototype could help depict the technical alienation caused by the possible future dominance of financial technologies.

In this depiction of the future, virtual currencies have become the standard of value and are used unconsciously. We blindly trust code without understanding its provenance and influence. Suddenly, the system freezes. Money stops flowing wallets are rinsed, and memorized keys drained away.



Proof-of-Transaction as a physical cryptocurrency wallet. Image by author.

As a last resort, the protagonist starts a dialogue with Siri in search of clarifications. Siri doesn't understand the questions and responds metaphorically: 'Your keys are in the cloud.' But where can we find this so-called cloud? Why can't we access our wallet? And who or what is responsible for the disruption? After precisely ten minutes, lo and behold, the system starts working again. The artificial scarcity (inherent to Bitcoin) manipulated the flow of money and controlled our behavior in return. In agreement with Hui, we can argue that, 'The user's role in a preprogrammed context is always already anticipated, if not totally programmed.' If this preprogrammed system crashes, do we still know how to reset it? What if a technical failure wipes out every cryptocurrency and leaves us behind with a digital tabula rasa? Do we want to live in automated environments in the first place?

Proof-of-Transaction departs from the notion that financial technologies capture reality by combining cryptocurrency and culture. It requires acknowledging that cryptocurrency isn't digital value, but value through the medium of the digital. The value is bound by material and social assemblies and mediated by Liquid Crystal Displays. The concept allows exploration of the relationships between technical objects and their environment. Nevertheless, it is important to realize that this new notion isn't solely restricted to our exchange of value. A machine-to-machine economy foresees automatons exchanging value – from data to cooperation – without human interference. In such a network, machines pool their resources via blockchains and smart contracts. As explained in *Blockchain Revolution*, 'Humans animate the agents, endowing them with computing power and capital to go about their work. They buy the services they need, hire people or robots, acquire partner resources (...) and adapt in real time.' We bring these self-steering financial entities into existence, but do we know how to remain in touch with them? How can we be encouraged to interact with these machines as balanced users instead of mere operators? Perhaps we need to think beyond our western perspective, beyond the culture/nature dualism and start exploring financial technologies through distinct cosmologies, as Hui also suggests. How can Amerindian Perspectivism and Japanese Techno-animism complement our comprehension of technology? Can we see technology as a living organism? For now, let us start with reimagining cryptocurrency by thinking beyond code.



Luxury & Paranoia,
Access & Exclusion: On
Capital and Public Space

Anastasia Kubrak and Sander Manse

Luxury & Paranoia, Access & Exclusion: On Capital and Public Space

Anastasia Kubrak and Sander Manse | 6 October 2017

#GPS #smartcities #platformeconomy #zoning

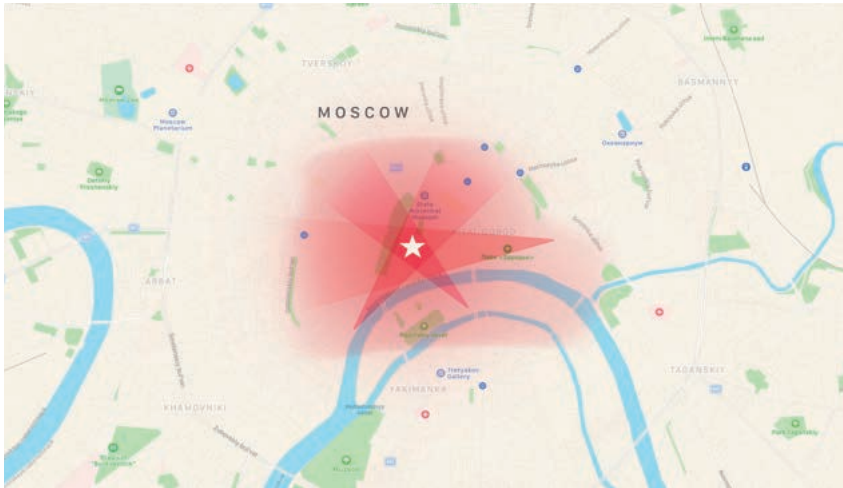
We get into an Uber car and the driver passes by the Kremlin walls, guided by GPS. At the end of the ride, the bill turns out to be three times as expensive than usual. What is the matter? We check the route and the screen shows that we travelled to an airport outside of Moscow. Impossible. We look again: the moment we approached the Kremlin, our location automatically jumped to Vnukovo. As we learned later, this was caused by a GPS fence set up to confuse and disorient aerial sensors, preventing unwanted drone flyovers.

A New Kind of Urban Zoning

Our everyday life in the city has been greatly enriched by new technologies. Streets are upgraded with sensors, the urban becomes navigable and the citizen trackable through WiFi-networks, bluetooth signals, and GPS-based applications. Today, these technologies are mainly implemented and instrumentalized by platform economies, serving the big capital of tech and acquiring a tight grip on the way our cities work. The main strategy is to capitalize on the information that is being generated by the augmented city.

Over the past few years the city has quickly become a mesh of hectic laws and virtual borders: private airways, no-fly drone zones, and geofences, places that lure in Pokémon Go players or get blurred on satellite imagery. One physical location is virtually occupied by multiple zones, different actors on a vertical axis. The process

of urban zoning is traditionally defined as dividing topographically defined areas into zones (e.g. residential, industrial) in which certain land uses are permitted or prohibited by a political body. As a result of technological augmentation, zoning today is not limited to regulations on building heights and so on, but extends to new, intangible spaces.



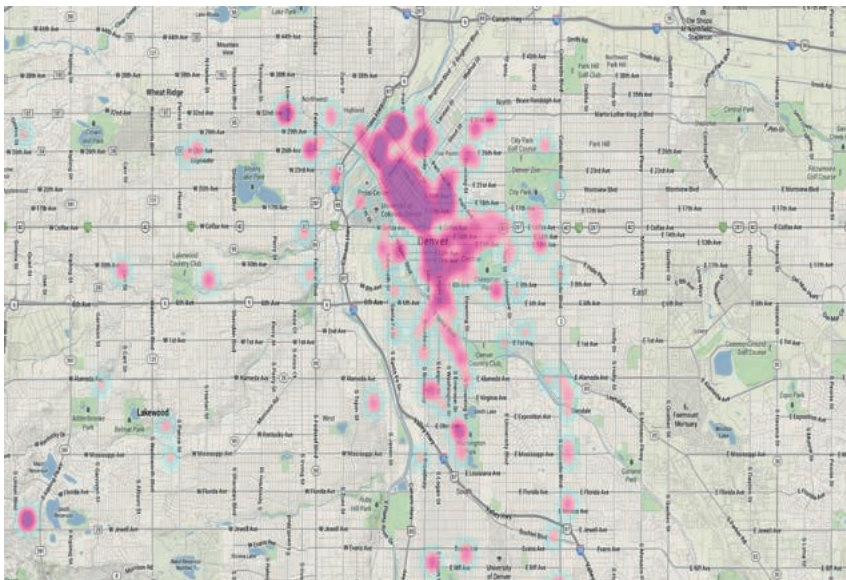
Kremlin geofence screenshot.

These new Zones, or vertical spaces, allow digital behemoth corporations to quickly exploit them as new markets and colonize the virtual ground outside of traditional jurisdictions, taking advantage of grey areas in the law. They capitalize on patterns of our movements, monetizing the extracted data, or the so-called 'behavioral surplus' generated by mechanisms of surveillance. Services previously provided by governmental bodies, from security and energy management to public transportation, are now privatized and optimized through platform economies empowered by network technologies and big data. Google, Amazon, Facebook, Cisco, Siemens, IBM, and the like, all feed off the so-called augmented city.

The platform economy disturbs our material reality: Airbnb spawns new gentrification effects, Uber aims to disrupt transportation systems. The business model of the platforms is based on the principles of militant growth over profit, extraction and aggravation of free user data, and a hostile approach towards laws and legislation.

By implementing new services without consent, by default, platforms leave citizens and governments to opt out or object to their effects retrospectively. First we enjoy the luxury and convenience Uber offers us, later we realize how it causes contradictions and conflicts in the way our cities work.

But what is life like in the privatized city, structured by this new urban zoning? How can we as citizens benefit from the increase in sensing technologies, remote data-crunching algorithms, leaching geolocation trackers, and parasite mapping interfaces? Can the imposed verticality of platform capitalism by some means enrich the surface of the city, and not just exploit it? Don't our cities deserve a truly augmented reality – a reality in which value generated within urban space actually benefits its inhabitants and which is therefore augmented in the sense of increased or made greater. Is it possible to consider the extension of zoning not only as an issue, but also as a solution, a way to create room for fairer, more social alternatives? Can we imagine the sprawling of augmented zones today, still of accidental nature, being utilized or artificially designed for purposes other than serving capital?



Ridesharing app Lyft. Morning rush heat map for Denver. Source: ridesharetips.com.

Free Trade Turns Smart City

Capital and public space have an increasingly complex and intense relationship. Walk through London, Berlin, or Singapore and you can see how developers, investors, and private real estate acquisitions have a direct influence on the appearance of a city. Legislation and governmental policies allow the two aspects of capital and public space in the city to further intertwine – take for example the phenomenon of the Special Economic Zone, such as Shenzhen in China or Dubai Media City. Keller Easterling describes the history of these Zones in *Extrastatecraft: The Power of Infrastructure Space*, tracing it back to the Export Processing Zone (EPZ) and the ancient free trade zones that allowed for efficient transportation and rapid exchange of goods.

Originally developed for purposes of warehousing and shipping, the early free trade zones, sprawling between 1500 and the 1930s, were located along major trade routes. Further spreading around airports, manufacturing centers, and container ports from the 1950s to the 1970s, or offshore financial districts and office parks in the 90s, such zones formed mini-cities and eventually developed into megapolises on their own. This was the case with Shenzhen, established as China's first SEZ in 1980 and growing from 30,000 to an estimated 18 million inhabitants in the following decades.

The EPZ was initiated in the mid 20th century as an economic accelerator to help developing countries enter the global market. But, writes Keller Easterling, 'rather than dissolving into the domestic economy, as was originally intended, the EPZ absorbed more and more of that economy into the enclave.' Easterling analyzes the Zone as a tool: she investigates how the Zone reaches out beyond its borders to suck in more people, more resources, more capital. The real politics of the Zone seem to drastically differ from the claimed intent. Instead of enriching the host country, the Zone draws cheap domestic labor from the hinterland – look at the notorious Foxconn factory in Shenzhen and underpaid immigrant workers in Dubai – while the profits tend to flow back into the hands of parasitizing multinational colonizers.

Today, Zone projects are increasingly built from scratch outside of existing cities, on the outskirts of state territories and even on reclaimed isles off the mainland. The Zone as an island provides an ideal blank canvas, clean slates for extra-legal experiments. Developed by upscale real estate firms, these artificial urban archipelagoes advertise themselves as investment opportunities, with Dubai's The World and The Palm Islands megaprojects as the most infamous examples.



The Universe megaproject, Dubai. Source: Google Earth.

Who is supposed to inhabit these islands? There is policy for that, too. After the Asian financial crisis and the SARS outbreak in 2004, the Singapore government offered tax incentives for property developers and boosted banking secrecy. These circumstances brought forth Sentosa Cove, a residential enclave off the coast of Singapore. Partly because of Singapore's 'Switzerland of Asia' rebranding strategy, sixty percent of Sentosa Cove's inhabitants are foreign. The Zone, as this example shows, does not necessarily encapsulate an existing part of a city or a social community, it prefers to create new land and to bring in new citizens to populate it.

A specific kind of city has spawned from the symbiotic relationship between governmental bodies and real estate investors, tailored to fit the Special Economic Zone. From door handles to sensors, this 'city in a box' can be purchased as one singular item and reproduced anywhere in the world, thus becoming a spatial product on its own. Prime example of this type of city is Songdo, a master-planned 'smart' or 'ubiquitous city', located within the Incheon Free Economic Zone in South Korea. The city grid is augmented with networking hardware and telecommunications systems by tech companies like Cisco, IBM, Arup, and 3M. Completed in 2015, it resembles a barely populated high-tech utopia, where computers are literally built into streets and buildings. The residents enjoy Cisco's 'telepresence' system, automatic garbage collection by the Envac group, and security measures such

as smart keys that give access to certain spaces and public services. The technologically enhanced city promises a life of luxury, while simultaneously turning into a gated community.

In a place devised for economic activity and designed to generate capital, its inhabitants might be assessed on their added value to the city. This brand-new city of the future won't be for everyone. Local low-wage workers may not become the Zone's citizens to a full extent: high priced real estate expels them, turning them into migrants. When new Zones are created as clean slates, tech companies quickly move in to develop the city's infrastructure, introducing hardware and software that circumstantially push certain people out and helps to enforce the borders.

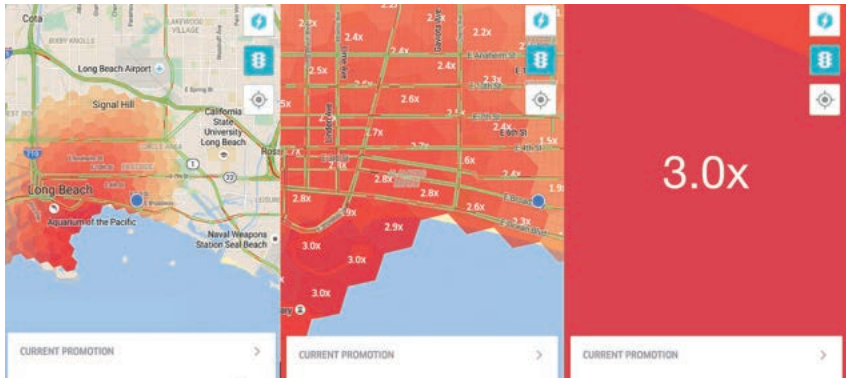
Platform Capitalism and Urban Zoning

Gated urban enclaves also proliferate within our 'normal' cities, perforating through the existing social fabric. Privatization of urban landscape affects our spatial rights, such as simply the right of passage: luxury stores and guarded residential areas already deny access to the poor and marginalized. But how do these acts of exclusion happen in cities dominated by the logic of platform capitalism? What happens when more tools become available to scan, analyze, and reject citizens on the basis of their citizenship or credit score? Accurate user profiles come in handy when security is automated in urban space: surveillance induced by smart technologies, from electronic checkpoints to geofencing, can amplify more exclusion.

This tendency becomes clearly visible with Facebook being able to allow for indirect urban discrimination through targeted advertising. Facebook allows the exclusion of entire social groups from seeing certain ads based on their user profile, so that upscale housing-related ads might be hidden from them, making it harder for them to leave poorer neighborhoods. Meanwhile Uber is charging customers based on the prediction of their wealth, varying prices for rides between richer and poorer areas. This speculation on value enabled by the aggregation of massive amounts of data crystallizes new forms of information inequality in which platforms observe users through a one-way mirror.

The Zone emerges from special legislation for finance, and subsequently also attracts tech giants for reasons other than merely tax holiday. This is not surprising. Experiencing pushbacks and regulatory obstacles when it comes to implementation of higher degrees of automation, from self-driving cars to delivery drones,

technological accelerators intrinsically fantasize about more freedom, more flexible policies, more data extraction. Such as a Zone of exception, free of legal oversight and interference.



Uber Surge Pricing. Screenshot by authors.

Silicon Valley has long been nurturing the libertarian dream of a lawless laboratory, an island – again, an island – outside of territorial waters, beyond the traditional nation-state jurisdiction. A Burning Man-like environment for new technologies, ‘a safe place to try out new things and figure out the effect on society’, as recurrently articulated by Larry Page. The infamous Seasteading Institute resembles the true embodiment of this ideal, aiming to build floating startup societies. ‘When seasteading becomes a viable alternative, switching from one government to another would be a matter of sailing to the other without even leaving your house,’ said founder Patri Friedman at the first annual Seasteading conference in 2012.

Varying alternative legislation per Seastead could mean industries would be able to pursue their interest without UN or EU moderation on ethical topics like genetic modification, cloning, or animal testing. Similar to Women on Waves’ offshore abortion centers, suicide tourism in Switzerland, or birth tourism in the USA, people might go jurisdiction-shopping in search for the appropriate treatment. The principle or promise of flexible citizenship is that there is a Zone for each of us, without exception. The Seasteading promo claims it can enrich the poor, but its initial designs are based on modified intercontinental cruise ships and the

promotional renders reveal luxurious yachts anchored offshore of the first Floating Island, all targeting a specific prosperous public.

Cultivating Counter-spaces

If seasteading is the ultimate liberal, capitalist utopia, what could be its social and more inclusive counterpart? And if there could be a test-site not for rich technological libertarians, but for a more inclusive society, could that also be mapped onto existing cities instead of having to seek liberation in endless variations of offshore enclaves?

A temporary visit to an extralegal zone, such as offshore floating islands, may enable a different combination of human rights, opening up new opportunities for minorities. The operations of prominent counter-spaces – abortion centers anchored in international waters and the like – are tightly bound to territorial borders and the legal definition of the Earth's surface. But vertical zoning allows such exceptions to be located anywhere, granting users access to different regimes inside existing cities, without the requirement to physically move to a different location.

We need to imagine a type of counter-spaces that could be mapped on top of actual cities and profit from the temporary nature of new spatial zoning. The vertical aspect of this other sort of zone could enhance its elasticity, allowing it to change its shape and size according to circumstances. Elastic zones: fleeting, flexible, and stackable. Could a meta-economic level of planning strategically transform the city, reinforcing governmental control and enabling measures against a Cisco, Amazon, or Google monopoly on the digital infrastructure?

In the case of the volatile Pokémon Go hype, one app created a new kind of urban density in a matter of days. New zones, supported by sponsored PokéStops and in-game 'lure modules', suddenly popped up on previously meaningless locations. The municipality of The Hague demanded developer Niantic to get rid of Pokémon in a protected national park which was swarming with Pokémon hunters. This ban made the pokémon that previously spawned in the park all show up in one spot: the sea boulevard of Kijkduin, where the app brought in new people on formerly unaugmented land. This ethereal urban density of Kijkduin relied on legal action and adjustments in the geospatial coding in the software: the creation of a No-Pokémon Go-Zone.

If platform economies take the city as a hostage, governmental bodies of the city can seek how to counter privatization on material grounds. The notorious Kremlin's GPS spoofing fence sends false coordinates to any navigational app within the city center, thereby also disrupting the operation of Uber and Google Maps. Such gaps and blank spaces on the map are usually precoded in spatial software by platforms, and can expel certain technologies from a geographical site, leaving no room for negotiation. Following the example of Free Economic Zones, democratic bodies could gain control over the city again by artificially constructing such spaces of exception. Imagine rigorous cases of hardline zoning such as geofenced Uber-free Zones, concealed neighborhoods on Airbnb, areas secured from datamining or user profile extraction.

The hardline fencing tactic still leaves us with the problem of separation and segregation: the act of disabling a certain service in one area might generate unforeseen effects for the outside behind the safeguarding walls. Protecting a selection of buildings or neighborhoods might aggravate the proliferation of elitist, gentrified, limited access zones. Can we think of more subtle examples of zoning that do not trigger new partitions in public space? Verticality can provide multiple options and platforms for one geolocation. Zones can be stacked on top of other zones, truly augmenting reality – adding onto what is already there. In the following examples, we will try to figure out how zoning can counter the aggression of platform capitalism.

Reinventing the Zone

The platform economy extracts capital from the behavioral patterns of citizens in public space. What if physical zoning could allow citizens to gain agency over systems of data extraction? 'Google Urbanism', a graduation project by students of the Strelka Institute, proposes a model which makes the added platform value – in this case produced by Google – flow back into the public space where the value is 'mined'. This happens through exclusive licenses sold by the municipalities, which allow companies to extract data from certain locations, forcing them to reinvest part of their profits in the maintenance of public space. Cities currently may not have a leverage to enforce such a platform-citizen partnership with Google, but they might get hold of their streets again by implementing and testing different kinds of legislation that bring forth new mechanisms of value creation.

Vertical zoning can alter the very way in which capital manifests itself. The Bristol Pound is an example of city-scale local currency, created specifically to keep added

value in circulation within one city. It is accepted by an impressive number of local businesses and for paying monthly wages and taxes. Although the Bristol Pound still circulates in paper, today we can witness a global sprawl of blockchain based community currencies, landing within big cities or even limited to neighborhoods. Remarkably, Colu Local Digital Wallet can be used in Liverpool, the East London area, Tel Aviv, and Haifa – areas with a booming tech landscape or strong sense of community.

To prevent a total Songdo-like smart technology takeover, new urban zoning might enable citizens to self-organize and provide services themselves. The ideal utopian platform would be owned and controlled by its users, serving as a cooperative service where everyone is able to invest and everybody benefits. But building such a model from the ground up can be problematic (see platform co-ops such as the Green Taxi Cooperative) and gaining leverage through user numbers is notoriously difficult due to a lack of resources and the network effect. After all, the platform is only valuable to its users if enough people join in. Can we think about a more practical, middle ground approach, utilizing existing corporate platforms and the network they provide? Even if the platform still profits off the user's activity, the user begins to extract new, unintended value from its operation, exploring alternative social functions of augmented urbanity.

For example, in the Netherlands, citizens cooperate to organize local security services, utilizing cross-platform messaging service WhatsApp. Inhabitants of a specific neighborhood participate in a group chat and text each other about suspicious situations. Special signs warning for the 'WhatsApp Neighborhood Watch' can be bought and placed in public space to mark this new urban zone. A recent study in the Dutch city of Tilburg concluded a forty percent drop in registered burglaries in neighborhoods in which these WhatsApp groups were active.

What characterizes this self-regulated hybrid space is that it offers entrance and exit by choice: for the WhatsApp Neighborhood Watch, there is a central database which registers all groups, but anyone can start one and anyone living in the same neighborhood is free to join. While its functionality completely depends on the voluntary input from its users, it operates on a platform originally not intended to fulfill the function of a communication channel for neighborhood security. The operation of both the WhatsApp group and the Bristol Pound relies on a principle of stacking and elasticity: while some WhatsApp zones may overlap, other places might have no group at all; and if citizens can choose different digital currencies, local shops can decide for themselves to accept any of them.

The previous examples illustrate what kind of material effect different zones can have on the city: Google Urbanism enables capital to flow back into the city, the Bristol Pound keeps value in one place for a while, and the WhatsApp Neighborhood Watch allows citizens to take control and self-manage a commonly centralized service. In the future, we can imagine this soft zoning might offer counter-mechanisms that enable citizens to take action, utilizing the same tools and methods that generate so much value for the tech giants.

Taking action within the context of vertical zoning can be translated as a shift from being approached as a *user* – one who benefits from the easiness and luxuries of the platform (and surrenders to its monopolistic tendencies) – to being approached as a *citizen* – one who is politically empowered and bears legal rights to demand alternative models. Political bodies can enhance citizenship through vertical zoning, repelling the current smart-city dogma based on information exploitation and the uneven nature of the user-platform relationship.

Vertical Zoning enables the city to take on a hostile approach and use zoning for GPS spoofing or banning Pokémon Go, but it can also shape the circumstances for citizens to experiment with alternative approaches to new technologies or create financial instruments that support new initiatives. New Zones don't necessarily have to draw out new land to reclaim and populate; they should be mapped onto the city as it is. A more collective, inclusive, and social approach to Zoning might enable the city-state to prevent disbandment of urban life.

As we move through the city, we realize that any place we step on is not just a dot on a map: it is an arrow piercing through a multiplicity of different grids, overlapping each other on the vertical axis. While platforms are seeking new uncharted terrains to colonize, we can think of pro-actively designing spaces with a potential to enable alternative functions of the tech ecology that surrounds us; exploring new forms of regulation, exchange, and inhabiting, constructing non-capitalist social relations within them. We call for new, temporary, flexible, autonomous Zones that don't seek liberation from the state, but try to reimagine its role today – appropriating zoning as a tool, using it to our own ends, flipping the borders, turning the tide.

Club - wise: A Theory of Our Time

Maisa Imamović

NAJT KLUB



Club-wise: A Theory of Our Time

Maisa Imamović | 4 February 2020

#boredom #latecapitalism #leisure #alienation

If we push it too far we run the risk of forgetting that there can be alienation in leisure just as in work (and alienation precisely in so far as the worker is trying to “disalienate” himself!) - Henri Lefebvre

MODERN REVOLT, BUT NOT REALLY

Meet the club-goer. Today he woke up thinking that, compared to the typical weight of his miseries, the day feels quite light. Upon waking up, he suddenly decided to go to the club tonight. Prior to this happening, he makes a pact with himself to do his duties: deliver to society and eat his meals. Perhaps even go for a little run? The thought of running charms him immediately and the next thing we see is him running. As he runs by the secondhand shop, his thoughts begin shuffling the colors of classic logos: Hip-Hop, happy meals, all MTV channel extensions, Vans shoes purchased every six months. Although he is not a big fan of retromanic gestures, the club-goer wouldn't mind wearing a logo – or two – in the club tonight. Just like before, he could commemorate his teenage years with someone who would empathize with the logo. Having thought what he thought, a worried expression appears on his face and he thinks: Why are evils of cool still cool? Why am I consuming towards being consumed? And why do I need to take this to the club? It's not like I'm going to manifest these doubts and battle them on the dance floor until they're gone, is it?... Wait, more rays of doubt are entering my mind space, shaking my ground, and signing up for forgetfulness tonight:

Work Suppression Happiness Forever on Arrival-mode A Trendy Sadness

For more information about our club-goer's state of mind, listen to the song by Poly Styrene and X Ray Spex – Identity.



Poly Styrene and X Ray Spex – Identity. Screenshot by author. Source: YouTube.

Our contemporary crisis is that we are bored. We are bored when we have to do a lot of things, as a lot of things we have to do are not the things we want to do. We are also bored when we do the things we want to do, because at some point, we feel enslaved by having to keep on doing them.

Doing is a deed of action: running, working, pro-active buying, and consuming. It has been wrapped as a consistent, global human need. We are always doing something. For a very long time, doing is related to feeling good. That's why many people, when asked how they are, answer with, 'Today I finished this and this and this' or 'Today I went here and there'. Any other answer directly linked to an activity is a valid one. However, among many other things, doing is boring as well.

Doing nothing is a deed of different action. It has no pre-defined endpoint, nor intention to be finished. We all do nothing in our own unique way, because nothingness has a different connotation for each and every one of us. Drawing and laying halfway under the couch for a few hours, could fall under the category of doing nothing. Basically, all activities we perform when we don't have to do anything (for anyone) are of the same sort. This is why such deeds are of a very

personalized nature and not a customized one. Doing nothing, however, is not as popular as doing is. Most of our precious time is invested in doing (something for something/someone) and our spare time is spent (or, wasted) on the *improvement* of doing the things we have to do, simply because we lost touch with how to do nothing in our own way.

When we think that we are doing nothing for ourselves we are actually fully participating in the preservation of the economy of everything, which keeps on selling our desires back to us. What happened to our spare time? It got commodified too!

This mini analysis is not meant to be shocking, nor unfamiliar.

[C]apitalism as spectacle turned to the desires of the soul. It turned upon individual men and women, seized their subjective emotions and experiences, changed [them into] commodities, placed them on the market, set their prices, placed them on the market, set their price, and sold them back to those who had, once, brought emotions and experiences out of themselves – to people who, as prisoners of the spectacle, could now find such things only on the market. – Greil Marcus

Today has turned into tonight, and our club-goer is already anticipating his entrance into the club.

After successfully purchasing his presence, he starts to read the extras his ticket came with. Entitlement to feelings of heroism, comradeship, narcissism, and self-pity is *included*. No sexism, no racism, *guaranteed*. By the smile on his face, we can tell that the purchase was worth it. Will this smile later expand to over-flow? This is what we want to discover... Meanwhile, a movie is starting to screen in our club-goer's head. In it, he is the main character and the movie is about his life. The narrative takes on a documentary style: while sitting in his favorite café, the club-goer is describing his childhood fantasies to the camera. In later scenes, he is accompanied by other characters, who are only there to populate the background image of his life and represent the fashion in which our club-goer interacts with other humans. Thanks to this sequence, we can assess the club-goer's association with others, and with himself. Before the 'everything was great, but...' -scene, our club-goer decides to end this self-pleasing euphoria, and switch to the present moment in which he is in the cloakroom.

The cloakroom is where PPI (Pseudo Party Intellectual) started working, way before she approached the topic of clubbing from a theoretical perspective. Her tasks were to exchange the club-goers' items with numbered tickets, charge money, and make sure that tonight will be a memorable night.

Besides being the care center of items, the cloakroom is the club's primary meeting point where the following styles of club-goers mash discretely:

CLUB PERSONS-CLUB NATIVES-CLUB IMMIGRANTS-CLUB EXTENDED
DANCERS-UNIVERSAL CLUBBER-LOCAL CLUBBER-PASSERSBY-REGULARS-
AMATEURS-SPICE GIRLS + NIRVANA-WORKERS-BERLIN-H&M-CREATIVE
CLASS-STAFF-WEBDEVS-PERFORMERS-MAINLY STYLISTS

In the cloakroom's space is where PPI was always reminded of Lil Peep's song 'Star Shopping'. She'd automatically sing it before the opening of the club's doors.

'I know that I'm not that important to you
but to me girl you're so much more than gorgeous,
so much more than perfect
right now I know that I'm not really worth it
if you give me time I'm gonna work on it...'

She said she wouldn't necessarily get married to this song or call it a masterpiece. What spoke to her was the contained sadness breathing in its background, something she could see breathing through the walls of the cloakroom. This feeling made all the hanging jackets look like Lil Peep. And as she was star-shopping out loud, she had often questioned whether she was trying to get heard by someone in particular. PPI found out later that she was dedicating the song to herself, as if asking: What am I doing here? Feeling trapped is what she got out of her regular engagement in self-piteous singing sessions, while others were dancing undistracted by the fear of losing their possessions. Tips and thank yous for that indeed were flowing in.

Like all the other club-goers, our club-goer desires liberation from his belongings too. He scans other club-goers' fishnets, neck chains, see-throughs, leather-everything, boots for after 5AM, gym outfits, Hello-Kitty backpacks loaded with apples and candies, lollipops and flasks, no-chewing gums, blue hair, rainbow hair, natural hair, tracksuits from H&M, pierced septums and lips, polished nails, non-existent bras, netty tops, strictly forbidden white shirts, and sunglasses; the

finest collection of sunglasses. He scans himself from head to toe and wonders what kind of persona his gadgets describe.

Not really in the mood for getting all existential, our club-goer pressures his thoughts with some extra positivity: 'I guess... I guess, we are all appropriate for a different context, each in our own way. Everyone individually is a follower of preferred and imposed codes of conduct. We choose them according to our affinities, because we lack personal authenticities to follow. Our non-existing authenticities make us equivalent and our various preferences make us different. We came here for similar reasons, so why bother further deconstructing who we are? Before the morning light, we will all belong to one same design: of oblivion.' Although he felt god-like for being able to assemble such a speech, his thoughts appalled him too.

Where our club-goer is moving next (the hallway) is the most confusing area of the club. It often happens that aspiring dancers come back to the cloakroom right after leaving it. Sometimes quite angrily, they ask for the directions and react unhappily about being directed to the hallway again. They come here for darkness, but the darkness pushes them back to the light, as if asking, 'are you sure?' This suspense is a good feature of the clubbing product. Anyhow, in order to reach the next level of the club's space, one needs to open the door. Once through the door: yet another hallway of a more romantic character: floor candles, ceiling lights beaming through the thick smoke, and shadows of other species. Somewhere in the far away, there are more tunnels blinking through the darkness. Our club-goer expected to see castles growing beastly above him, but all he faces is another queue. 'Fuck,' he thinks to himself, 'the castles must be waiting in line to enter the club.'

Without a choice, he waits in front of the bar and starts to anticipate his first drink. This is where PPI also used to work and where 1) debit and credit cards were shoved in front of her face, 2) demanding that she reach out for the pin machine. Bip once, bip twice, and 3) she's on a mission to deliver the drink. This mechanism well defined at least six hours of her work, punctuated by minor conversational interruptions:

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The club-goers who were waiting in line for her service followed a similar mechanism. Theirs had a different route however, and probably 4) 5) 6) to it. Each time they'd come back, they looked as if it was their first time there.

The more PPI engaged in sometimes short, sometimes long conversations with the club-goers, the more she could see the importance of them experiencing oblivion to contrast their working lives, which they were very much keen on forgetting. At first, she felt proud to serve her duties in the economy, which reduces the weight of heavy things in life. In the latter phase of her bartending service however, PPI felt like she was missing out on her youth while making sure that everybody else's was well spent. The truth is that she was not missing a thing, but rather stopped feeling like a part of this thing. Having a job in the club later appeared to her as a sign of clinging onto a long-lost importance of the scene. As if extra work dedication to it would compensate for the void. A few months later, faces in the club started to look alike. Sweat, wet hairs, slightly bloated lips, eyes zooming in and out and radically changing direction, as if wanting to leave the skull and become independent. PPI didn't want to live in this bar forever.

To the same bar our club-goer is leashed. He notices that: the bigger the consumption of liquids and flowers, the smaller the differences between other club-goers. If he would be accompanied by PPI, she'd tell him that losing one's control over the impression that one wants to leave on others, is highly effective for a successful clubbing experience. To better understand what an outstanding clubbing performance is, here are some risks for unsuccessful clubbing experience:

Risks for an unsuccessful clubbing experience:

1. Meeting someone you'll later start calling an Expert. An Expert will give you free flowers to eat in the toilet, until you enter an existential crisis. When you do, an Expert will navigate you through the crisis until you fall in love with him.
2. Remembering everything tomorrow.

Our club-goer's current state of mind:

It's good to moderately not feel like oneself. With such a state-of-mind, he goes to the club's smoking unit. Someone in the background is singing: *Where there is smoke, there is a conversation; where there is a conversation there is again, the design of the seeeelf...* What he sees is a room filled with white, self-made pedestals of different heights. Each smoking speaker is standing on one and pinging the words, ponging the words. Words which fall under the themes of upcoming ceremonies; political scandals; music knowledge; networking; complaints about not living in Berlin; and nothing in particular.

While the party had its private adjuncts, people primarily remember the clubs that were its public face. Having fun was all very well, but what really mattered was to be seen doing so. - Luc Sante

Forced (by chance) to witness what he is witnessing – the choreography – our club-goer is getting slightly paranoid. He feels his chakras trying to deliver a message, but they're not opening. However, the doubts which he suppressed in the beginning of the night are coming back to the surface to show him what his reason is to be here. They're telling him that next to the music is where he needs to be. And it's true, he remembers that he wanted the music to be louder than his thoughts. He wanted to bang to the noise, while silencing the inner.

Work Suppression Happiness Forever on Arrival-mode A Trendy Sadness

Determined to put an end to un-matching life expectations and The Choreography on White Pedestals, he fiercely runs to the dance floor. What he's faced with there, is a shadow formed by bodies full of turmoil, dancing their way towards oblivion. They are jumping, sliding against each other without ever touching. The spectacle looks exactly like what our club-goer needs right now. He throws himself into the midst of a collective shadow and starts mimicking the dance from inside the shadow. His sweat is a mimicry too. When he closes his eyes, he starts deleting the imagery consumption of today:

...the latest billboards that make it hard to tell if the market is focused on what's worn, or who's wearing;

...people running on treadmills, in the gym located on top of KFC;

...'skippable' views of empty internet cafes;

...the tram's new design, with uniformed employees smiling hard in pictures covering the sliding doors, as if forcefully telling you to come on in...

He starts deleting the emotional labor of imagery consumption too: the weight of always hunting for a better view, the fear of missing out on today's information, and the unwanted feelings of nostalgia that follow.

He continues dancing for a long time, dancing off the previously mentioned work suppression, happiness forever on arrival-mode, and his trendy sadness. This is how dance culture became a commodified performativity: everything that bugs the mind can be confronted on the weekend long dance on the dance floor.



Let that sink in, with this song playing in the background: The Soft Moon - Being (Ancient Methods Remix). Screenshot by author. Source: YouTube.

Theoretical Commercial Slides into the Story

On the dance floor tonight, there is a TV channel idealized by me, reporting a special conversation with PPI. She also happens to be me.

I: Let's start from the basics, PPI. What is the dance floor?

PPI: If we look up a simple definition on Google/Wikipedia, before trying to make anything out of it, we will read that *the dance floor is an area of uncarpeted floor in a nightclub, disco, or restaurant reserved for dancing*. Tonight, in this club, it's more than that. It's something I like to call a critical space, designed to host the specific perplexity of every individual club-goer. During my research, I discovered

that all these shades of perplexity are a consequence of the club-goer's lack of time, and of how the distraction economy plays out in personal lives.

I: Mmm, Okay. Does that mean that, outside of this dance floor, one is generally trapped in a confused state of being?

PPI: Yes, precisely, but subconsciously.

I: How can you be so sure, PPI?

PPI: Well, we are the workers who live to avoid the inner vastness, and therefore work to afford the consumption of that which eventually becomes a bore. Since the market has grown so big and diverse, the abundance of choices slows down each product's boring effect. To calculate the longitude of a product's boring effect, it's useful to ask: *How long until I get bored of this purchase?* Yes, I am saying that all products come with one. New bore replaces the current bore. The most popular distractions are on sale: ideologies, gadgets, digital companions, virtual realities, and excellent lifestyles. Now, if we look at the infosphere of our modern cities, exploring the streets means reaching the pinned locations where one performs the consuming. While exploring, visual perception is led by sensations coming from the ever-changing information bred in the environment. So, we can conclude that our eyes are tricky and powerful organs. Consuming optical information of a product provokes the bodies to wait in lines, in order to obtain the product. For some it's ice cream, for others a European passport.

And now, the average waiting time of 4-7 minutes is already a bit too long for our current attention span. What does that tell us about us? Our willingness to wait means that the quality of the product is decent, quite or very high. Waiting in this case is worthwhile. When the waiting is worthwhile, reexamination of the subject we are anticipating almost never happens. Abandoning the guaranteed product is of the same rare nature. Unless, of course, the guarantee is passed onto a similar product, preferably a better one. (i.e. French fries with Belgian, Albert Heijn with another Albert Heijn, Crafts with Theory, and so on...)

Let's say that...

I: Sorry to interrupt, PPI, but can we get to the point?

PPI: Yes, I am getting there. Let's say that this speculation inspired the contemporary

design of queues in modern cities. If a human is constantly found in anticipation of [insert a product], all possibilities for a human to doubt are lost. For a doubt to become accessible, it would have to become a part of the design. For instance, were we to find public signs which show the location's average doubting time of a human, then one would indeed start doubting. When one's behavior gets molded by the product's design, one doesn't need the product any longer in order to continue the behavior molded by it.

Let's analyze the city's night-time waiting. Night-time queues are similar to daytime queues. The difference is that they demand a higher level of consumer's endurance. The world's best night-time queue is that of a club. We've all been there once and so have our friends. In most cases, following the crowd is a reason to go to the club. The second legit reason is to have a break from life's imperative to consume. But then we are confronted with the following question: *How can a club, where everything is so exotic and sexual and exciting and mesmerizing and hyper-juiced-up, be a place for a break?* Some pieces of the puzzle don't fit here.

I: That's a good one...

PPI: Greil Marcus wrote in his book called *Lipstick Traces*: 'As Debord drew the picture, these people were members of democratic societies: democracies of false desires. One could not intervene, but one did not want to, because as a mechanism of social control the spectacle dramatised an inner spectacle of participation, of choice. In the home, one chose between television programs; in the city, one chose between the countless variations of each product on the market. Like a piece of avant-garde performance art, the spectacle dramatised an ideology of freedom.' A club, as a historically rich product, demands from its temporary occupiers full participation in what it has to offer.

Sit in all sitting corners,
merge with the atmosphere of the place,
drink the drinks,
dance to the music,
take the pills,
talk to other species,
use the toilets,
breathe out in the garden,
and what not.

Step by step consumption, towards over-consumption, towards the climax point. A climax point, in this context, is the point when one is able to consume no more. This is what I call: a consumer's happy ending.

In the last few years, I watched the popularity of dance floors increase across European and non-European cities. This is a sign that (besides capital interest) there is a public demand for them. The skyrocketing statistics correspond to a social need. Thanks to a well-planned, raw architecture (industrial and ware-housy), most clubs guarantee the same vibe always upon return. Strong aesthetics control the continuity of club-goers' repetitive return. This fact allows to dive deeper into the topic and start asking questions about the states of consciousness within the previously mentioned collective perplexity.

I: You are absolutely right. On that note, what is it about the dance floors that attracts more than a conversation, let's say, in order to address this confusion?

PPI: Well, in conversations, the personal authenticity which one claims to have (or, the cause of confusion) is usually exposed in a form of language; so, the selection of words which define one's definite choice of state. If you don't speak of it, verbally expose it, it probably doesn't exist. That's exactly why choosing the linguistic format to showcase one's authenticity is difficult, vulnerable, and debatable. Most important of all, it's tiring; because in order to be remembered by others, it constantly has to be repeated or re-said, to the point when authenticity loses its own authenticity. This way of sharing can usually be found in the smoking areas of the club. On dance floors however, statements on authenticity and their potential misinterpretations are almost non-existent. It's you and your body, and other bodies. In the dark, nobody can see you, discuss you, confront you. Nobody, but you. So, once you have the whole crowd of bodies address their own inner states by experiencing their physicality, at some point your own state starts to shrink. Or, better said, it merges with others. So, the body performs submission to the space. Or, docility to the space.

My main concern is that that's how the bodies have been dancing since a while now.

- PPI

I: Okay, okay, so, what's the main concern your research poses?

PPI: My main concern is that that's how the bodies have been dancing since a while now. When are we going to start questioning the cause of our collective confusion? It's already hard at this point, when we are well-trained dancers of promoted resistance to something (anything). It's clear what I'm referring to: good marketing tools keep the clients coming back to maintain the economy of the institution.

But now, picture this near future: We are bored of performing the enforced one-size-fits-all negation and are rather hungry for a more personal performance to dance. Or let's even say that we are in the future and dancing to negate that which has been imposed on us. Through dance, we are expressing boredom towards the participation, the routine, and the impossibility to break off, simply because we don't know any other realities besides the ones in which we consume. The question is: *While waiting for that next product to solve the issue, what does this dance of the future look like?* Before answering, let's listen to George Hoare:

First, and most importantly, rave is an escapist and hedonic response to the individualism that pervades our lives. It stands as "resistance" only in the most temporary sense. In this way, we can see the parallels with the "Occupy" movement – a temporary sitting-in on a completely colonised capitalist space. Although hierarchies are (temporarily) destroyed, nothing is built and so rave is ultimately compatible with capitalism. This is why, today, the cultural revolt of rave has been incorporated almost in its entirety into the neoliberal hedonism industry. Anything that is not antagonistic to capital is subsumed, eventually, within it. Similarly to Occupy, rave was unable to change the rules of the game. It now seems like an artefact of a passed cultural moment and, in an unfortunate irony, a victim of the retromania Simon Reynolds has described, with teenagers wearing pork pie hats and Stone Roses t-shirts role playing the rave culture of the late 1980s and early 1990s. - George Hoare

I: Wow, that's a tricky one PPI... Would it be a dance at all is what I'm curious to find out. What do these wonderings of yours lead to?

PPI: Another question of course: *What if we were not consumers (of information, historical narratives, common knowledge) at all?*

I: Huh, perhaps we can save that question for the after-party. Many thanks for your time, PPI. Do you know what happened to our club-goer?

Our clubgoer is still dancing it off. Still entertained with his eyes closed. When he opens them, he sees a familiar face, also dancing with her eyes closed. She was dancing for a very long time on that round pedestal, located in the middle of the dance floor. He recognizes her from the storytelling evening, where she explicitly shared the realities of her borderline disorder. While all this time he was nourishing the thought that *clubs are places where alter egos come to play*, in her case it seemed like a different situation. Was she letting go of all her conflicting extremes and dancing what she dreams of being?



Monetizing my hobbies meme. Source unknown.

Slightly paranoid again and less entertained now, our clubgoer decides that it's not a good time to feel bored. So, he goes to the toilet. He is forced to participate in a different kind of waiting: a theatrical one. Doors flap open and close in a matter of seconds, while laughter is cracking to tears and coming from all different corners. Sounds bounce through the space and hit each other. Everything looks pumped with steroids. In the middle of the toilet, there is a huge fountain made of the finest metal. Around it, half-naked bodies wearing white sneakers and baseball socks are splashing water on each other. It's almost imaginable that they'd start feeding each other grapes, but no. They are the ones who danced it all off multiple times

tonight, and they're not interested in having another drink. They are the ones on the verge of reaching a consumer's happy ending. Next to this fountain is where they found hope for tonight. The image is accompanied by the sniffing orchestra, playing hard behind the toilet doors. 10+ cubicles hosting many generations and who knows how many bodies per cubicle.

Mesmerized by the orchestra, our club-goer is thinking god-like again: 'When the illusion is too complete, the pleasure is destroyed. So, shall we constantly question what we experience?' He decides to stop wondering about who or what influenced him to start dancing, whether he is a soft rebel or a true rebel, where his subjectivity was produced, if his dancing is death-driven or life-driven, if he will be able to settle for less after a little taste of freedom, and so on...

After a few more dance performances and toilet sessions, our club-goer decides to call it a night. In the cloakroom he is happy to see his belongings again. He exits out of the door, remembering what Marcus Greil told him once: '...I know that one can leave a nightclub with the feeling that nothing can ever be the same...' – He continues the sentence, *...but, life goes on.* Another time he told him: 'Too many people had too much of everything that was on the market, and so they had the leisure to think about what else they might want.'

Having remembered that, he starts to feel like he's experiencing the consumer's happy ending. On his way home, he firmly decides that he needs a break from the average-market-participation, so he begins to flirt with the idea of getting involved with some micro-economies of our society. Of the ones he knows, the Critical Boys Club with the membership cost of €12 per month sounds legit. The hope to remain there for at least three months excites him.



I, For One, Welcome Our New (Google) Overlords

Lasse van den Bosch Christensen



I, For One, Welcome Our New (Google) Overlords

Lasse van den Bosch Christensen | 1 June 2015

#3Dsoftware #geomodeling #GoogleEarth #makers

When Google sold 3D geo-modeling software Sketch-up, a dedicated community of Google Earth developers were left behind. Is this a case of digital labor and exploitation or just an agreement based on mutual consent that ended, like relationships so often do?

Pep-talk / Tech-talk

The crowd in the conference room follows the slide-presentation intensely. Each person feels addressed and important. As a whole, they feel indispensable. The presentation takes place at the 'Google Geo Users Summit' in Barcelona, 2011. The speaker is the self-proclaimed 'geo-evangelist' Aidan Chopra. In his talk he claims that the internet has given way to the empowerment of the individual. From being 'static, read-only, and centrally-controlled' the internet has evolved into something dynamic, 'interactive, user-contributed', and even 'social'. 'Superheroes of the Future', Chopra calls the crowd in front of him. They are the ones who, together, can change the future and make the world a better place.

To do that they have to continue their careers as active volunteers for Google, contributing their energy and time to Google's 'geo'-oriented platforms. Some in the crowd are 'geo-modelers', individuals freely adding 3D-content to Google Earth – the virtual Earth. Chopra goes on to explain how UGC, User Generated Content, is at the heart of what makes the products of Google incredible. 'No matter what comes next your work is critically important,' he states. The peers are aroused by his talk, by the feeling of being superheroes. At the end they are encouraged to stand in a group and shout 'UGC! UGC! UGC!'.

Two years later, the geo-modelers of Google Earth and their critically important work are discarded and replaced by a more efficient and consistent technology.

The 3D-modeling software Google SketchUp is sold along with a huge 3D repository consisting of the collected work of the geo-modelers. Subsequently, Google has made it impossible for geo-modelers to participate in building Google Earth any longer.

A Divided Community

Shortly after Google officially announces to sell Google SketchUp, panic spreads among the huge geo-modeler community. Google SketchUp is renamed SketchUp and users are roughly split into two camps; one camp is skeptical towards the unknown implications of an owner change. The second camp attempts a more pragmatic, optimistic approach. The feeling of panic is vividly expressed in the official user forums, such as the Google Group '3D Modeling for Google Earth & Maps':

...I deleted all my ... models!

...I will also delete all my models!

...It is Over.

...People are starting to Jump!

...I, for one, welcome our new ... Overlords.

Greeting the new owner Trimble with 'our new overlords' immediately introduces a distinctive relationship between users and provider. The greeting originates from the film adaptation of the book *Empire of the Ants*, in which mutated super-ants take over the Earth as we know it. One of the characters reacts to the ants' threat by exclaiming 'I, for one, welcome our new insect overlords'. The quote was later appropriated in an episode of *The Simpsons*, and subsequently 'memified' as a popular template to announce the coming of a new totalitarian regime.

The use of the meme was meant as a joke, of course, yet it had a hint of seriousness attached to it.

The thread attracted a lot of attention and became a place where modelers shared their concerns for the future of the platform. Many made radical statements about deleting their content from the platforms, while few actually followed through. The

discussion clearly indicated a rupture in an ecosystem, in which the users of that system became aware of their situation. They were part of a 'closed circuit', an environment they themselves were not in control of. The power was in the hands of the Overlords and the subjects of the regime, the community of modelers, could only wait to see if blessing or disaster would come.

Google announced the discontinuation of its user contribution program on the same user forum. Geo-modelers and the content they had produced in the course of several years were to be replaced by newer technology. There were multiple reasons for this decision, some official and others more speculative. The central issue was that the new technology which Google planned to implement – the auto-generation of buildings and landscapes from a vast array of sources – could not coexist with user generated models since this would cause spatial conflicts. Disaster struck the community. Users in the forums pictured this as quite apocalyptic, pleading with the Google community managers, the 'Google Guides', for 'safe haven[s] to model without fearing a sudden auto-[generated] tsunami'.

What mattered to the geo-modelers was not only that the platform and the tools were accessible – the geo-modelers were content as long as these were there to use. What mattered most was having the means for personal and artistic expression and social interaction at hand. Of course, executives at Google understood this potential. They were tapping into a self-propelling force and they knew how to fuel it. In Google lingo users were 'superheroes', top modelers, and even super modelers. Hidden behind illuminated computer screens, working under pseudonyms such as 'Starfish' and 'SnowTiger', the band of geo-champions would model the world into a better place. The superheroes knew that any normal user of Google Earth would most likely never consider the origins of the virtual world they were exploring or the tremendous amount of hidden human labor at the core of the system. As such the community's wealth was turned into a polished, commodified, product. However as long as the means were there, the geo-modelers joyfully used them. What happened that this situation got so disturbed?

Growing the Earth

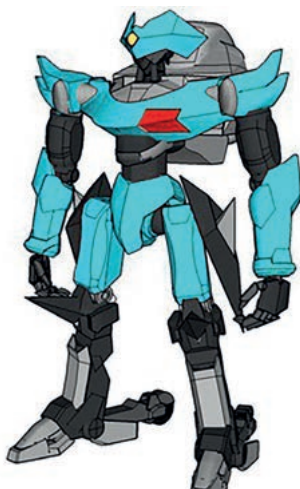
Three platforms are at play in this story: Google Earth, Google SketchUp, and Google 3D Warehouse. What binds these together is the utilization of the crowd; users who contribute their time and energy producing content, which is then shared among peers and like-minded individuals, and of course with the platform provider.

Additionally, there is the official modeler forum '3D modeling for Google Earth & Maps', an extremely important space for communication between modelers and Google.

Before Google SketchUp was sold to Trimble, a hardware/software giant in mapping and navigation, geo-modelers used the software to draw their models, optionally passing them on to be part of Google Earth. Each model would be reviewed by a team of Google employees and far from all were accepted to actually become part of Google Earth. Still, virtual buildings and highly detailed landmarks were soon populating the system. Some modelers even reconstructed whole cities. Many were motivated by the joy and pride of being able to 'claim' that they put their hometown in the digital spotlight. They saw the Earth grow and were applauded and approved by Google for it. Other modelers even saw an opportunity for monetizing this virtual architecture, offering their services to landlords, shop owners, and airports, among others.

SketchUp was originally founded by the small software company @Last Software. In 2006 this company was bought by Google, who released the software free of charge. Being a part of Google, SketchUp gained massive attention. A strong volunteer community of geo-modelers grew, aided and supported by Google. During six years of Google-ownership the software attracted over 30 million new users, according to the blog Sketchupdate. An official statement explaining Google's acquisition was never made. Jeff Martin, product marketing manager of @Last Software, hints at an explanation on Google's blog: 'It's often like that. People see SketchUp and they love it. Now that we're part of Google, how many of those ah-ha moments will happen every day? Already we've had hundreds of users create 3D content in SketchUp and place their models in Google Earth. (A free plug-in enables you to do this.) What will that virtual world look like when tens of thousands of users are doing the same?'

One of Google's central motives is on display here: the 'tens of thousands of users' were to populate Google Earth with houses, high-rises, factories, and landmarks, piecing together a virtual rendering of Earth. The latent crowd of users, each eager for aha-moments, was to be activated through free software, a throbbing community, and virtual carrots; symbolic badges, physical gifts, and other perks.



Models from the 3D Warehouse (years unknown). Source: 3D Warehouse.

Warehouse to Factory

As a steppingstone for publishing models to Google Earth, the so-called '3D Warehouse' was founded. Users would upload their models to the warehouse, share them with others – an opportunity to get exposure and feedback – and mark them as 'Google Earth Ready'. This last option would prompt the model to be reviewed by Google before being pushed to Google Earth. According to SketchUp the 3D Warehouse was 'the largest repository of free 3D content in the world', and content-wise it was extremely diverse.

The repository had guidelines and rules for what was acceptable to upload but these were enforced only through a whistle-blower system run by users themselves. This somewhat loose and open nature of the repository attracted a broad and diverse group of users not only interested in creating content for Google Earth. Many followed their own sub-scenes and niche-interest; from Japanese Mech Warriors to reconstructions of German kitchens from the 1920s to extremely arbitrary, offensive, and explicit content.

The open structure created a pragmatic and friendly entry-point for newcomers. Anyone could create a model in SketchUp, upload it to the 3D Warehouse and receive comments by peers. It was not required to create models for Google Earth, but naturally the 3D Warehouse became a runway towards a very invested and passionate hobby for many aspiring amateur modelers. In short: the 3D Warehouse became a factory. It enhanced the workflow and matched the anticipated scale of user generated content; tens of thousands of users doing work for free.

A Community of Superheroes

As SketchUp gained popularity, millions of models started to fill up Google Earth. Users felt proud of taking part in a huge online community with the vision to digitize the physical world. They felt needed (and indeed they were) to create content for the virtual Earth, turning it into an almost tangible space, free for all to browse and enjoy.

Several 'geo-user camps' and summits were held around the world in honor of the modelers and Google's other geo-related platforms. The events had the purpose of bringing together the most dedicated volunteers, to hear out their suggestions, and to inspire them to do even better.



3D Warehouse badges (various years). Source: 3D Warehouse.

They were served food, provided accommodation in expensive conference hotels, and engaged in a tone to make them feel valuable. Through the convincing rhetoric and continuous nudging, modelers developed a strong relationship with each other, and a strong commitment towards the platform they were helping to build up.

The crowd became a self-supporting band of superheroes committed to a higher goal. Superheroes don't quit. They might struggle but will always win. Superheroes (emphasis on plural), the fictive champions of cartoons and Hollywood blockbusters, are by nature the good guys, making the world a better place while sustaining peace and order. Their motives are beyond any personal scope and the result of their actions are meant for the common.

Through a series of open interviews, I've had contact with some of these superheroes. Initially I approached the dispersing community through the official forum. I addressed modelers asking for their opinions and feelings about Google SketchUp, Google Earth, their relationship to Google, and whether it changed after the platforms were sold. Shortly after posting my questions, I was banned from writing any further posts without it being 'reviewed' by Google staff, and

my entry was 'locked', preventing reply from any modelers. Google guide Craig closed the forum thread 'To the Modelers of the Earth' by writing: 'Hello Lasse, this forum is supported by Google and is specifically and strictly for the community of 3D modelers for Google Earth & Maps. Discussion of other topics, especially in regards to the business decisions of the two companies involved, Trimble and Google, would be inappropriate for the purpose of this forum. Thank you – Craig'. After this failed attempt I addressed modelers directly through email. My main concern in the interviews was the motivation driving each modeler.

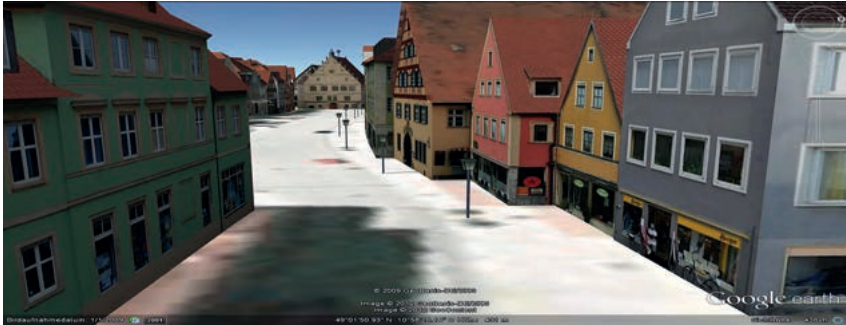
Amateur Experts

Matthias Basler is a German geographer and data scientist. His career as a 3D modeler ended abruptly with his decision to delete all his models from Google Earth and the 3D Warehouse out of frustration with Google's decision to sell SketchUp and shut down the platforms. Basler started out by modeling his own house and moved on to model a dozen of buildings in Weißenburg in Bayern, Germany. Gathering knowledge about the software, its bugs and glitches, and getting to understand how a model would easily be accepted to Google Earth by the 'review team', he realized he could help other modelers. The result was the popular online reference guide 'Tips for Modeling Buildings for Google Earth' (2008), that was 'acknowledged and pointed to by the Google Guides,' as Basler writes.

Basler's passion for modeling wasn't limited to the act of just building but extended much further. He got involved with other like-minded individuals at his own 'level' and he was addressed as an expert and officially recognized by Google. It drove him into a position where he was deeply invested in the platforms on a personal level. The more fellow modelers he assisted, the better his reputation grew. At the peak of his 'modeling career', he had produced more than 400 buildings in Weißenburg, which gained so much attention that his efforts reached local media and officials, tells Basler: 'The city of Weißenburg asked me to use [my] models for a new city map to be applied next to the train station in Weißenburg. It is supposed to guide visitors to the tourist attractions of the city (...). I am still proud walking past this map each time I am at the train station.'

Basler's work extended the digital realm and merged with the physical world. His payment was immaterial and emotionally reflected. He did not see his contribution as work for Google, but rather as a personal investment in himself and his surroundings. Aerilius (the SketchUp username of this interviewee who

wants to remain anonymous) is another top modeler. He stresses that he was less associated with Google as a brand and concentrated more on his artwork and the sharing of it. Aerilius never felt like 'a Google Evangelist, but rather as an artist, and Google provided an easy platform for us that required almost zero effort other than making our art.'



Close-up of Basler's model of Weißenburg, Germany, prior his removal of all content. (2009, 2012). Source: Google Earth.

Modelers were free to unfold their creative potential, working as autonomous artists from all over the world. Google stayed behind the scenes and let the volunteers create their own community. Basler continues: 'The community was an important part of the overall project, obviously. How else could the aim to model "the whole world" be achieved? I never had a problem with "crowdsourcing" and I felt it was fair enough: We got a software for free, Google got the models for usage (and bug reports by the way) and each geo-modeler could enjoy or envy the fellow modeler's nice buildings. It really gave me a pleasure to soar over cities like Nördlingen (Germany), Getaria (Spain), Antwerp (Belgium), San Francisco, or Vancouver.'

Basler was driven by his own personal desire. He is an amateur, in the original sense of the word; a lover of his hobby. The mutual sharing of work in the community was at the heart of Basler's motivation and the central force enhancing this passion. Basler's relationship to Google is similar to Aerilius' experience: modelers were given software and platforms for free, allowing them to develop themselves creatively and gain attention and social status; Google on the other hand 'crowd-sourced' the creation and building of their product. It is clear that both parties, Google and the modelers, 'earned' something from their exchanges.

Model for Profit

In contrast to Basler and Aerilius, K. (who also wants to stay anonymous) was a geo-modeler with a different approach to her modeling practice. K. modeled for profit, serving various local clients: airports, vacation homes, dental surgeries. Her 3D modeling hobby turned into a 3D modeling profession, and she managed to carve out a small business niche from which she made a living. For her too, Google's position was of less importance, as long as they provided the platforms. K. writes in our email correspondence: 'I made money off their platform and they never asked for a cut. We used Google Earth. They didn't exactly take advantage of anyone. Modelers either modelled for money or fun. They shouldn't expect power over Google's policies as well. (...) I have no regrets. Technology will always be disrupted. I had fun, made thousands, and learned a lot. (...) I started waitressing this winter, after shutting down my modeling business. I'll work here for another few weeks until the season ends in this vacation town, and hopefully by then I'll have found a GIS/Marketing/Design job in another area.'



Close-up of Basler's model of Weißenburg, Germany, prior his removal of all content. (2009, 2012)

Immediately, K. distances herself from the idea that Google might have taken advantage of her and other modelers' work. The platforms were spaces for both entities to exist in a symbiotic relationship; Google had their product built by

thousands of modelers working for 'free' – a 'free' which did not mean that the modelers went away empty handed. They got social rewards in the form of peer recognition, pride in having modelled a town, and the occasional monetary gain from a third party. In the 2012 Google Model Your Town Competition, Google puts it like this: 'Show your civic pride (and maybe win a prize) by creating a 3D portrait of your community and sharing it with the world. You have the power to get your town on the map – and there's no bigger map than Google Earth. (...) Having a 3D model of your town in Google Earth helps residents and visitors understand it in a way that flat maps and photographs can't. You can be a local hero by making a contribution to your town's future.'

The quote is filled with buzzwords: pride, win, community, share, you, hero, future. The individual in the crowd is addressed as a unique person, a proud hero ready for the win. Yet, with every single individual being unique on a platform that actually aims at presenting a unified and streamlined product, the idea of the unique seems just a mode of address. The promise of 'the unique' is a carrot of engagement intended to make the individual modeler feel special and energized to work. The crowd, the 'collective unique', is aroused, resonating in a productive frequency.

Outsourcing to Crowdsourcing

The case of Google Earth is not a stand-alone example of conflict between users and providers based on participation and user generated content. Throughout the last two decades, the idea of using the crowd for a productive purpose has increasingly gained attention among tech-entrepreneurs and startups. The business strategy is on the verge of becoming mainstream. In 2005 Jeff Howe and Mark Robinson, editors at the tech-magazine *Wired*, defined the term 'crowdsourcing' as 'the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential laborers.'

Outsourcing implies moving production and services from a rich and demanding geographical location to the opposite; a geographical location with lower wages, less restrictions, and easy access to raw materials. The product is imported to, rather than produced in the first location. Crowdsourcing is a step beyond outsourcing. It is freed of physical constraints. It does not rely on a physical machinery in a

specialized industry and it does not depend on proximity or concern itself with geographical location. It is a fluid shape, often intangible in physical form, yet seemingly more and more important in an economy based on the exchange of information rather than on traditional goods.

The personal computer and the internet have initiated a mode of production where the worker gradually shifts position. From a place of physical constraint – which also implies physical insurance – the worker moves into the position of a hired contractor, a freelancer (a knight for hire) who is always available. Of course, traditional industry is still ruling at large, especially in growing economies. The Chinese electronics producer Foxconn with its million assembly line workers is but one example. Industry in the United States has also seen slight growth despite the economic crisis; however, this has not meant an increase in employment of industrial workers. It is a direct result of the investment in automation, as David Rotman argues in *Technology Review*; robotics replace the workers at the assembly line, seemingly allowing humans to pursue the highly individualized goals of the creative, information-based economy.

Individuals are still working in full-time jobs, but the tendency is for the individual to constantly be urged to search for his or her uniqueness. If this cannot be accommodated in daily work, then it can or should be fulfilled outside of working hours. The modeler K. might be waitressing at the moment, but not long ago she realized her dreams of ‘making’ through Google Earth. In his book *Crowdsourcing: How the Power of the Crowd is Driving the Future of Business*, Jeff Howe describes the idea of tapping into the creative potential of individuals around the globe by using ‘the network to harness individual people’s spare cycles – the time and energy left over after we have fulfilled our obligations to employers and family.’ Spare cycles refer to things that might not be realized through a nine to five job, the spare creativity which finds its outlet through hobbies, off-work activities, and the liquid space in between. Howe draws a direct parallel between man and machine; the unrealized potential of the human brain is paired with the spare cycles, the unrealized potential of the computer’s processing unit. Labor is dehumanized.

Howe’s idea of the dissolution of the capabilities of man versus machine (or the illusion of it) is getting more and more attention and is far from an isolated example. A prime illustration is Amazon’s Mechanical Turk, an online marketplace for contractors looking to hire a freelanced workforce for the execution of very repetitive tasks, which are on the verge of what’s possible for computer algorithms to complete. Mechanical Turk refers to an 18th century box-shaped, chess-playing contraption

which gave the impression that you would play against an artificial intelligence. In reality, you were combating a human-being hidden within the box. And what's the difference? The result is the same. Considering the case of Google Earth, man has been trumped by machine. Yet as a user and browser of Google Earth you would most probably never consider this, since the surface appears identical.

Appropriation of Community

Reminiscent of Howe's thoughts of the creative potential, the former modeler Joe B. writes that he started modeling 'as a hobby and a way to de-stress after work, (...) something which grew into a bit of an obsession at one point.' Following Howe's analysis, the result of Joe's hobby is the aggregation of the unused spare cycle of the human processing unit, now realized to its fullest extent. Howe writes: 'Crowdsourcing is the antithesis of Fordism, the assembly-line mentality that dominated the industrial age. Crowdsourcing turns on the presumption that we are all creators – artists, scientists, architects, and designers in any combination or order. It holds the promise to unleash the latent potential of the individual to excel at more than one vocation (...).'

The worker's role is merging with the consumer's, or rather, prosumer. The echo of 'UGC', User Generated Content, is still bouncing off the intangible walls of the open factory. Rather than being the antithesis of Fordism, crowdsourcing is an extension of it, a natural development within the context of the internet. The worker is no longer a slave of the assembly line, but a volunteer, free to join, share, collaborate, and create meaningful exchanges with other people. 'Work' in its slippery quotation marks is no longer work but an enjoyable, personalized venture where latent creative potential is unleashed and shared with others. Howe turns work, a rigid matter associated with boredom and repetition, into an attractive state in which it loses its seriousness but remains ambiguous: what the eager members of the 3D community are completing could be work but it could also be play.

Julian Kücklich coined the term 'playbor' in 2005: a precise observation of these merging dynamics of play and labor. This state of work appeals to businesses and corporations wanting to take advantage of the newfound source of cognitive creativity that comes with the internet. Broadening the scope, playbor seems to find its way into all aspects of society. Governments introduce elements of gamification and competition, encouraging individuals to engage their 'open data' in controlled

environments, like in the Dutch project ‘Data of the Crowds’; police departments organize hackathons where programmers can try to force and hack official security systems without any legal consequences; and national states build virtual one-to-one scale models of countries to be used in MMORPGs (massively multiplayer online role-playing games) as branding and educational material.



Screen capture, Minecraft, Denmark after American invasion (2014). Screenshot by author.

Nudging for Work

A community does not establish itself on its own and people rarely want to work for free when they encounter the phenomenon in the traditional sense. For businesses it's therefore important to find a shape for whatever product they wish to have built by the crowd, a shape which does not appear as work in its traditional sense. Investments in the community are crucial. Platforms (physical servers and applications) are necessary and the community must be nurtured, something which can happen simply through the establishment of forums or bulletin-boards where 'workers' can meet and discuss. The investments will shape the community and in optimal settings will push to output a desired content.

In his book *Code Version 2.0* Lawrence Lessig argues that 'Code is Law'. Code shapes the way we behave and what we output. The classic metaphor is to view code as architecture. The code is a house, it has entrances, hallways that guide us, and departments intended for particular use. Each part encourages certain behavior; we pass through the door rather than break down the wall. The house becomes a law for our actions.

Geo-modelers using SketchUp were free to upload any content they desired to the 3D Warehouse. No barrier existed for any modeler to participate. This helped establish the open, free feeling of non-work. Being free to do whatever you wanted could never be work. The next stage, uploading content to Google Earth, was already a much more invested process. Modelers would hope for their 3D constructions to get accepted. The laws of the platforms tightened. Several modelers explain that the review process and criteria for having a model accepted to Google Earth got stricter and more efficient over the years. Aerilius highlights Google's attempts to harness the crowd through code, social nudging, and elements of gamification. Community Managers, competitions, and conferences were introduced. 'Google also introduced "badges" with amounts of achieved models in 3D Warehouse to honor modelers and they had a special "Supermodeler" group of 50-100 selected modelers.' As such, Google did not take the community for granted, but cradled and molded it in its own interest which 'of course (...) steered the whole process,' according to Aerilius. Google established a platform which was feeding itself; modelers were rewarded symbolically, in some cases physically. And so the best became top-modelers and super-modelers. Superheroes.

Laborers in Exile

Then, the sprawling ecosystem made possible by Google, was suddenly made impossible. On short notice geo-modelers could not practice their hobby anymore, for some their paying job was put to an end. Furthermore, communication between modelers became difficult, since the internal messaging system was dismembered. Two weeks prior to selling the platforms, Google decided to thank the most active modelers by shipping out presents to over 600 individuals around the globe. A plaster on the wound, the present contained a 'Thank You'-postcard, sticky notes, a mug, a pencil case, and two stickers. The recipients were divided. Some got excited and, urged by Google, started posting 'selfies' on the official user-forums holding up the Google-mug. Others were less optimistic. One of them wrote on the forum: 'I got my gift today too. Thanks! I might have changed the wording on

it though. It could have read 'I modelled over 2000 models for Google Earth and all I got was this coffee cup' or 'I lost my primary source of income but at least I got a cool coffee cup out of the deal'.

Google lost interest in their thirty million plus members of superheroes. They were abandoned and forced to retire. The once flourishing community dissolved, exiled from the Earth they once inhabited. The moment Google announced the sale, the geo-modelers all of a sudden 'woke up' and saw the precarious position they found themselves in. You had the choice to passively welcome the new overlords or to bail out. A choice which might seem radical, but actually had no impact on Google itself. To repeat after K., the modelers shouldn't expect power over Google's policies as well.

In 'Free Labor', Tiziana Terranova introduces the idea of the society-factory from a post-Marxist perspective: 'work processes have shifted from the factory to society, thereby setting in motion a truly complex machine.' Terranova engages the internet as an example of the working society-factory which 'far from being an unreal empty space, (...) is animated by culture and technical labor through and through, a continuous production of value that is completely immanent to the flows of the network society at large.' She continues to address the giants of the society-factory, corporations who understand the potential of the crowds and harness it accordingly.

Terranova paints a sharp picture of the workers in the digital machinery and argues that the laborers producing the value for such companies, like the volunteer Google geo-modelers, are exploited: 'a new kind of exploitation – that which concerns the immaterial commons of culture and technical production.'

Asking for liberation of free labor means asking for two things: that such profits be returned to those who actually produce them – that is, to living labor – and that social networking platforms should be deprivatized – that is, that ownership of users' data should be returned to their rightful owners as the freedom to access and modify the protocols and diagrams that structure their participation (...) As the wealth generated by free labor is social, so should be the mode of its return. - Tiziana Terranova, 'Free Labor'

The Gray Zone

The modelers are left to their own devices, in a situation where they cannot utilize the fruits of their labor anymore. Although the modeler might have the right to his or her own creations, while also having them locally stored on a digital drive, the essence of the platform, the community, and the social exchanges, has been deflated. Moreover, the participatory nature of the internet has been made obsolete. And all they got was a coffee cup.

The gifts were sent to the top modelers of Google Earth: a physical manifestation of goodwill shown by Google towards the elite of their volunteers. In legal terms it was not necessary to give away anything, since all modelers were volunteering. The 'Thank You'-postcard found in the bundle reads: 'You've proven yourself to be one of the top modelers in the world, contributing at least one hundred models to Google Earth. Please accept this gift as a symbol of our gratitude for all your hard work.'



A modeler's photo of the Google postcard (2012). Source unknown.

Most striking is the choice of addressing the modelers efforts as hard work. The fine line between 'work' (in its ambiguous state) and work has clearly been crossed. Following Terranova, the modelers are (unknowingly) workers, freely giving away

their labor in a system which accumulates everything. That is, until the owners in the system decide to sell the accumulation and dismantle and find another more efficient sources of labor. Schumpeter's notion of creative destruction, the process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one, applies here. The human labor-force amassed by Google is destroyed because of industrial mutation; the introduction of algorithmically generated content. Interestingly, it's not one format replacing another (vinyl record-cassette-cd-mp3) or a machinery which is rendered obsolete, it's the human.

Yet, despite the SketchUp workers being suppressed and exploited, hardly any resistance is evident. In the interviews slightly more than half of the modelers are positive towards Google, if not extremely positive. After all, some modelers uploaded their Google-mug 'selfies', despite the offensive and patronizing tone of the postcard. Maybe there is more to the argument of exploitation. Are the modelers working in a bubble of autonomy and artistry, an illusion which bursts and clashes with Google's nature as business? Or is the mindset of the modeler simply being realistic: we used Google and Google used us? Consider the statements of modeler V. (who wants to stay anonymous): 'When Google announce[d] its plan, it was very frustrating. I was thinking about a small business with this technology in the local market, so I immediately quit the idea. (...) They got almost unlimited help to create the 3D representation of our world for the price of some mugs.' But he continues: 'nobody forced me to create 3D models... I guess I did those just to increase my own ego. Of course, if Google contact[s] me to hire me, I would accept ;).'

Also the modeler Joseph Jasper emails: 'It's kind of funny, but my initial thought was along the lines of "I already gave them over 320 models and hundreds of hours of work for free," but then I realized that in fact, they've given my SketchUp and the 3D Warehouse for free also.' Opinions like the above prevail throughout my talks with modelers. There is a continued trust in Google. Users got free software and did 3D modeling for their own 'ego' in exchange for handing over their content to a closed platform with an uncertain future. This exchange happened in a relationship which can be seen as biased towards Google, since the company held the power to accumulate content and workforce and over time shaped the conditions of the platforms. On the other hand, modelers were needed for the platform to work. Google needed its users and it invested a great deal of resources and time in them. It developed a series of software, released as freeware, which in the end was appropriated for a vast array of purposes. It created space for a community and a system in which the individual could roam freely without being forced to really

work. Should a volunteer expect more? Is the social wealth Terranova addresses not being repaid simultaneously through the use of the platforms?

Technology is to blame, not the company actually developing the technology, one could say. Marxists, however, would call this the modelers' false consciousness. Volunteers actively defend Google's decision, a decision which rendered their own work and existence as volunteers obsolete. The question of exploitation becomes a gray zone, and if you're clever, you work in the gradients between black and white.

RIP!

There is a disconnect between the labor of the modelers and the users consuming Google Earth. The work of the disguised superheroes spending endless hours modeling the Earth, eventually to be laid off, was generally never thought of as work completed by humans. It was just there, easily accessible and wrapped in the highly designed, user-friendly interface of Google. Users would never expect less. However, it becomes clear the 'just there' is a partial and polished story spun around cybernetic fantasies of clean, efficient systems. The Fordist factory has found a new face, one which has extended the notion of outsourcing to the idea of crowdsourcing. Yet the core is the same: efficiency, feasibility, and denial.

The machinery is not physical but social, aiming to aggregate unused potential and spare processing-cycles of the cognitive laborer. Google engineered such a social factory, and in it various characters were produced. Some consider themselves to be unique entities autonomously making art for the sake of the community and themselves, while others have more external or material motives. Yet they all share a common dependence on and addiction to the platform. Like one modeler states: 'I quickly became addicted to SketchUp. I found it to be so intuitive and so elegantly simply. I spent many hours a day.'

Terranova's proposal to return the social wealth produced by the modelers but accumulated by Google is honest. However, the gift-based and socially engaging approach undertaken by Google dissolves the demand for such a return. Even in the aftermath of the collapse, which was entirely caused by Google's search for a new and more consistent technology than the human laborer, many modelers still worship Google. They post-rationalize, cynically blaming technology or their own ego. The few members who actually object are either banished or leave in frustration. In any case their traces are quickly swallowed by the ever-expanding crowd. I, for one, welcome our new (Google) Overlords.

Fictiocracy: Media and Politics in the Age of Storytelling

Daide Banis



Fictiocracy: Media and Politics in the Age of Storytelling

Davide Banis | 22 February 2018

#posttruth #astroturf #hyperreality #journalism

Fic-tio-cra-cy /'fɪkʃ(ə)krəsi/ n. pl. – cies. 1. Political regime that, implicitly or explicitly, considers the distinction between fact and fiction irrelevant. 2. A political or social unit that has such regime. 3. The principles of word-building and transmedia storytelling applied to politics and journalism. 4. The title of this longform. [French *fictiocracie*, from Late Latin *fictiocratia*]

In his 2017 book *Fantasyland* – adapted into an essay for *The Atlantic* – writer Kurt Andersen recounts the 500-year history of the troublesome relationship between the United States of America and the notion of reality. Andersen's thesis is straightforward: Americans have always been prone to fantasies, mainly in fictions, religions, and conspiracies, but never to the degree encountered in this time of fake news and post-truth politics. In this sense, the internet acted as catalyst, multiplying the impact of falsities and further blurring the boundary between fact and fiction. Andersen – ascribing himself to the shrinking ranks of a supposed reality-based America – calls for a 'grassroots movement (...) that insists on distinguishing between the factually true and the blatantly false.'

Here, I will explore an issue that is in close proximity with what Andersen describes. What I attempt to achieve is an understanding of so-called post-factuality as a form of fictionality. What is indeed 'fictiocracy' if not the political regime of *Fantasyland*? However, my approach is different in two fundamental ways. Firstly, Andersen is not particularly interested in the problem of representation per se. He doesn't address the question of how media construct rather than represent reality. The question how to make sense of the relationship between any representational media and reality has always fueled my curiosity. It's a question that goes far beyond fake news and post-truth politics, and becomes ontological,

given that we live our lives mainly through media. In this sense, in a time when media are to humans what water is to fish, media studies are a form of applied ontology. The second big difference between fictiocracy and Fantasyland is that the latter identifies a specific country while the former hints to a political style that has no fixed abode. Nevertheless, in the same way as they are popularly defined as one of the world's largest democracies, the United States are also a prominent fictiocracy – especially nowadays – and therefore an easy object of observation. For this reason, the essay focuses extensively on Trump's presidency. Structure-wise, it is divided in three chapters:

- Trump Will Not Be President
- Trump Is Not Really Being President
- Trump Has Not Been President

The obvious reference for these titles are the three controversial essays that French philosopher Jean Baudrillard published in *Libération* between January and March 1991, collected as *The Gulf War Did Not Take Place*. There, the 'high priest of postmodernism' laid out his analysis of the Gulf War as a 'non-event', a masquerade of war. Similarly, I will illustrate Trump's presidency as a masquerade of politics, where the representation of the event precedes the actual event, generating what Baudrillard calls 'hyperreality'. However, I will draw less on Baudrillard and postmodernism in general than on theories from the field of fiction studies. In particular, what I propose is a systematic application of the principles of fictional world-building and transmedia storytelling to the real world, and in particular to politics and its amplifier, journalism.

Journalism seems to live at the same time bleak and bright. Trump's election has been a defibrillator for journalism, refreshing its societal appeal (also called the 'Trump Bump'). Digital subscriptions to major newspapers like *The New York Times* rocketed. Under the fire of fake stories, journalism questions its own identity. What is its mission? Why do readers, viewers, and users consume news? Is it because they want to be informed or is journalism just another branch of entertainment? At the same time, the Trump Bump doesn't seem likely to sustain a prolonged growth, let alone a serious business model. Advertising revenue is dwindling and while digital juggernauts such as Vice and BuzzFeed fail to hit their revenue targets, as reported by MarketWatch, new hungry and dirty players appear at the block. Alt-right media outlets such as Breitbart and Infowars impose a radically different business model, one that has more to do with fiction than with news.



A literal masquerade of politics. Mark Hamill reading Trump's tweets as the Joker. Screenshot by author. Source: YouTube.

Since media studies always crave new terms, digital media are now called 'emerging media'. If I had to pick an adjective to describe contemporary storytelling, it would certainly be 'immersive'. Even if they're certainly emerging in popularity, these media are 'immersing' as far as their way of engagement is concerned. They take the audience and plunge it into the story world, be it literally, by way of VR headsets and tools for augmented reality, or narratively, thanks to world-building. Frank Rose has described this logic in his 2011 media bible *The Art of Immersion*. Stories are not like flat horizons to be admired at a distance anymore but environments to be navigated and, even more simply, lived. This blurs the boundary between fiction and reality. But what kind of reality are we talking about? 'Reality is a scarce resource,' wrote communication theorist James Carey a while ago, but nowadays it seems that reality comes in a potentially infinite supply. VR, AR, MR and all other Rs promise to free us from the constraints of a single world-experience.

To a certain extent, this abundance of reality is a new phenomenon. Technology grants unprecedented affordances to build fictional worlds. The Marvel Universe is only possible as a transmedia project that spins TV series and movies alike, Pokémon Go as a mobile app and Carne Y Arena by Inarritu as a VR installation. However, stories have always been about creating new realities, and this has always scared human beings. How will we understand where the story ends and life begins? For every new medium, conventions arise to solve this dilemma. Nowadays we're perfectly at ease watching movies but when the Lumiere brothers projected

Arrival of a Train at La Ciotat in 1896, a sense of wonder, fear, and amazement pervaded the audience.

According to media scholar Janet Murray, virtual reality is still in the stage of amazement. Until the medium develops stable conventions, VR films will strike us for their power of representation, the same way Plato was mesmerized by the power of representational art in the *Phaedrus*. Janet Murray also notes that when a medium lacks conventions, it can be exploited to address the bigger concerns and anxieties of the time. An example is the 1782 novel *Les Liaisons Dangereuses* by Choderlos de Laclos that used the form of the epistolary novel to discuss the decadence of the godless aristocracy in the *fin de siècle*. ‘Are these real letters?’, the readers of the time probably wondered. Closer to our time, Orson Welles adopted the same strategy when he performed the radio drama *The War of the Worlds* on CBS in 1938. The audience believed to be listening to a factual report of an alien invasion and panicked. What was at stake was the public anxiety around the possibility of a global conflict. It doesn’t matter that the authenticity of the War of the Worlds social panic is dubious. The creation of reality through media is what it is about. Here, I will try to do the same thing: I deploy fiction to understand the present, and to imagine alternatives to it.

Trump Will Not Be President

When Trump won the elections, the French newspaper *Libération* issued an impactful frontpage with the title ‘American Psycho’. It referenced the 1991 novel by American writer Bret Easton Ellis, which tells the story of Patrick Bateman, a 27-year-old investment banker who divides his time between a lavish lifestyle and an existence as a rapist and serial killer. As a prototypical yuppie of the 80s, Patrick Bateman likes Phil Collins’ music, Oliver People’s glasses and... Donald Trump. Actually, Trump is nothing less than Bateman’s aspirational model. He even changes his mind about a pizza brand just because ‘Donnie’ – as he calls him – likes it. Trump, also due to bestselling books like *The Art of the Deal*, was a business celebrity and a trend setter already in the 80s, a happy inhabitant of both the business world and the media landscape.

If we want to understand not just Donald Trump but also fictiocracy, we need to start at the time of strawberry risotto and Tab cola, when it seemed utterly impossible that Trump – the casino magnate – would ever become president of the United States. Surely anyone who was asked about the likelihood of a Trump presidency

would have exclaimed 'Trump will never be president!'. Yet, the president at the time was Ronald Reagan, a former actor. It's not by chance that his administration featured some characteristics of a fictiocratic regime *ante litteram*.

In all of this, journalism turns into a branch of Public Relations. British filmmaker Adam Curtis, never shy of grand illustrations, effectively narrated this epoch in his 2016 documentary *HyperNormalisation*. There, he describes how the Reagan administration pioneered perception management, spinning news that blurred fact and fiction with stories created to shock the public imagination. It didn't matter whether the stories were true or not; what was important was their narrative value and their ability to distract the public.

Thus, the roles of fictional storyteller and news journalist overlapped. In the words of Michael Deaver, White House Deputy Chief of Staff under Reagan: 'It would be so good that they'd say, "Boy this is going to make our news tonight". We became Hollywood producers.' The practice – invented to 'kick the Vietnam syndrome' – escalated at the end of the 80s with the incumbent Gulf War that started to resemble a cable drama series, to the philosophical delight of Baudrillard.

The most melodramatic moment is probably the hoax pulled in 1991 by the Washington-based prestigious PR firm Hill & Knowlton. Hired by the Kuwaiti Royal Family and with the US government imprimatur, the firm set up an astroturf movement to stir the American public opinion in favor of a military intervention against Saddam Hussein's Iraq, that had invaded Kuwait a year before. 'Citizens for a Free Kuwait' was pitched as a group of Kuwaiti citizens, autonomously gathered out of their concern for the occupied homeland. 'Astroturf' is a brand of artificial turf playing surface and, in PR jargon, denotes political movements that are sponsored by governments, institutions, or corporations, but are presented as spontaneous, grassroots initiatives. In astroturfing, the dividing line between fiction and reality is inherently blurred given its deceptive premises and such a line becomes utterly non-existent when the activities of an astroturf movement are taken up by the press and fed to the 'storytelling machine' of news media. In this case, Hill & Knowlton started to produce the so-called Video Release News (VRN): videos packaged as objective, journalistic reports whereas they were just sponsored content. Such videos were then distributed to television networks, eager (especially small, local networks) to have alluring, free material at their disposal.

Among the great wealth of Kuwait-related material that Hill & Knowlton spun in order to massage America's public opinion on the possibility of a Gulf war, there

is one that particularly resonates. It's the speech that a young girl called Nayirah gave in front of an American commission for human rights. The girl presented herself as a volunteer that witnessed how the Iraqi army looted Kuwaiti hospitals, stealing incubators and throwing babies on the cold floor to die. Conveniently filmed, the deposition was spread through several news TV channels. President George H. Bush himself publicly quoted the episode several times as a reason to invade Iraq by force of arms as soon as possible. As was demonstrated later on, the girl was the daughter of the Kuwaiti ambassador, coached by Hill & Knowlton to deliver a fake testimony. However, the debunking of the news (its fact-checking) didn't make it less valuable in the thriving 'economy of signs' that the Gulf War sustained. Nayirah's fake testimony highlights that in a regime of perception management – the older brother of fictiocracy – what matters is not the objective, real truth but how a story is pitched. Politics is almost entirely consumed at the superficial level of signs and politicians need to play along and perform a role.



Nayirah's testimony to the US congress. Screenshot by author. Source: YouTube.

Trump is the cultural hero of this age, a man 'sprang from a Platonic conception of himself' to paraphrase Scott Fitzgerald. It doesn't matter if his business enterprises

are on the verge of collapsing, as Curtis recounts in *HyperNormalisation*, what is important is to keep pretending, to keep performing. As film critic Neal Gabler wrote in *The New York Times* in 1991: 'In a famous commercial a few years back, a soap opera star announced, "I'm not a doctor but I play one on TV." Today, when it seems everyone is engaged in some sort of performance or another, that could serve as the nation's motto. "I'm not a hero but I play one," says Oliver North. "I'm not a football star but I play one," says Brian Bosworth. "I'm not a journalist but I play one," says the local news anchor. "I'm not a President but I play one," says Ronald Reagan.'

That is the beginning of fictiocracy.

Trump Is Not Really Being President

Jones, who loves to draw analogies to sci-fi classics like *Dune* and *Star Wars*, sees the 21st century as a kind of fanboy-fantasy landscape populated by three groups: a rebel alliance of liberty-loving patriots (his fans); masses of consumerist sheep (those who ignore him); and a sadistic elite (global bankers and their agents), forever tightening the screws on the imperiled remnants of human freedom. - Alexander Zaitchik, 'Meet Alex Jones'

A long time ago, in a galaxy far right away, there existed Infowars, the transmedia outlet that 'prophet of paranoia' Alex Jones founded in 1999 and that since then has been spinning an infinite amount of conspiracy theories. For many years Jones has been an eccentric figure; the ranting man of Richard Linklater's *Waking Life* or the lunatic that infiltrates Bohemian Grove with journalist Jon Ronson. In December 2015, Donald Trump told Alex Jones that his reputation was 'amazing'. Since then, it has become clear that there is a strong cultural connection between Jones and Trump. Jones is not (just) a media oddball anymore.

Alex Jones and his Infowars are premium examples of successful journalism in a fictiocratic regime, because they systematically apply the principles of trans-media storytelling and fictional world-building to their reporting. Infowars relies on a wide range of media and formats, from its daily radio show to its YouTube channel (with over 2 million subscribers), from social media pages to PrisonPlanet.tv – a twin website of Infowars. Understanding Alex Jones' media outlet from the

perspective of fictional transmedia storytelling allows us to make sense of it both on a commercial and a narrative (journalistic) level.



If 'amazing reputation' were a person. Source: imgflip.com.

In the context of the crisis of journalism, Infowars is paradoxically both a symptom of such crisis and a cure for it. It's a symptom because of the infinite amount of conspiracy theories and fake news it proposes, but it's also a cure because of its innovative and successful business model that – in relying on what media scholar Henry Jenkins calls the principle of extractability of transmedia storytelling – grants Alex Jones a constant stream of revenue.

To make this point clearer, I first need to introduce the fictional world of Infowars, a dystopian narrative environment where nothing is what it seems and where what passes for reality is assumed to be a veil that the elites have pulled before our eyes. Does this sound like *The Matrix*? Sure! And that's because the Wachowskis' sci-fi saga is a major source of inspiration for 'the stocky Texan' – as Jones is at one point infallibly described in all the journalistic portraits dedicated to him.

'Are you living in the Matrix?', asks a video posted on Infowars' Facebook page. 'Yes' is the answer. We live in a fake reality created by transnational corporations, technological elites, and corrupted politicians. 'The answer to 1984 is 1776,' claims

a tagline of the video with a double reference to George Orwell's novel and to the year of independence of the United States. The spirit of '76 remixed by Jones is a vague blend of conservatism, isolationism, and libertarianism. Put simply: more guns for more people. The guns needed are both literal and metaphorical because – as another tagline of the video admonishes – ‘there is a war on for your mind’.

It's a serendipitous coincidence that Henry Jenkins dedicates the chapter of his book *Convergence Culture* that delves into ‘transmedia storytelling’ to *The Matrix*. In his analysis, Jenkins outlines seven principles: spreadability vs drillability, continuity vs multiplicity, immersion vs extractability, world-building, seriality, subjectivity and performance. The pairs are opposite concepts or ‘opposite vectors of cultural engagement’, as defined by Jason Mittell. All seven principles of transmedia storytelling are relevant for Infowars and can help to make sense of the medium. For example, the principle of ‘drillability’, which refers to a mode of ‘forensic fandom that encourages viewers to dig deeper’ is echoed by Jones’ frenzied invitations to never stop at the official version of actuality, to ‘join the resistance’ – as it goes in one Infowars’ tagline. For the sake of brevity, I'll focus on the principles of transmedia storytelling that make my point about Infowars as clear as possible, in particular the couple ‘immersion vs extractability’ and the notions of world-building and performance. The latter can be tied to what I identify as a salient feature of any model citizen under a fictiocratic regime.

Jenkins defined ‘immersion’ as ‘the ability of consumers to enter into fictional worlds.’ As stated earlier, ‘immersion’ is probably the single most relevant term to analyze contemporary storytelling. The Infowars saga is certainly an immersive universe that relies on a hardcore fanbase that doesn't cherry-pick single conspiracy theories in a mood of casual consumption, but rather has a ‘take-it-all’ attitude, a radically different approach to the world. A perfect companion to ‘immersion’, ‘extractability’ is realized when ‘the fan takes aspects of the story away with them as resources to deploy in the spaces of their everyday life.’ A good example might be ‘Los Pollos Hermanos’, the fictional fast-food chain of the TV series *Breaking Bad* and *Better Call Saul*. As it's known, the production opened pop-up Los Pollos Hermanos restaurants worldwide in order to promote the series. There the fan could enhance his narrative experience of Vince Gilligan's universe by having a meal in a perfect reconstruction of the location so crucial to many plot developments of both series.

Infowars elevates the ‘extractability’ principle to a business model by incorporating in the website an immense online store that proposes a seemingly endless list

of products needed to live what is termed an 'Infowars life'. Aside from conventional merchandise, such as t-shirts and posters, we find more peculiar items like disaster-food supplies, gears to survive a hypothetical biological or nuclear emergency, water filtration systems (Jones claims that the government is poisoning the American population by adding fluoride to water), and tools that are meant to protect security and privacy like a 'detracktor cell phone pouch' or 'tactical' holsters for guns. But, above all, the Infowars online store is flooded with an enormous variety of dietary supplements that range from 'Brain force plus', an alleged 'neural activator', to the 'Caveman true paleo formula', a sixty-dollar mix of cartilage, bone broth, and 'paleo ingredients'. Commercially, the online store is the main source of revenue for Infowars to the extent that rather than a media empire Alex Jones owns a 'snake-oil empire', as journalist Seth Brown argued in an article for *New York Magazine*. In particular, Brown speculates that Jones might cash-in up to twenty-five million dollars per year just from dietary supplements. The online store also works as a narrative strategy, because it gives its customers the opportunity to live the narrative of this world in first person, pretty much like Los Pollos Hermanos does for the *Breaking Bad* and *Better Call Saul* universe.



Performance journalism at its finest. Screenshot by author. Source: Right Wing Watch.

In this sense, Infowars is more an example of fictional world-building than of a traditional news organization. In a time when journalism is flailing to find a viable business model, Alex Jones proposes a disconcerting alternative: becoming a world. A fictional universe where the emphasis is not on the coherence and solidity

of the plot itself but on the credibility and complexity of the environment in which the story takes place. In all of this, Alex Jones mixes journalism and performance art – as significantly proposed by his lawyers during a trial over the custody of his children.

To paraphrase Jenkins quoting an experienced screenwriter: in the past, an author had to pitch a story, later he had to pitch a character, and nowadays he has to pitch a world. Infowars follows the same logic, every day ventilating new conspiracy theories that 'don't add up' narrative-wise but contribute to its fictional world. A realm where 9/11 was an inside job, the 1995 Oklahoma City bombing was staged by the government, and where Trump maybe is not even the current president of the United States but is replaced with a reptilian clone by the Illuminati. 'Trump is not really being president!,' Jones might exclaim in the future, defending the current administration by potential accusations of inefficacy.

Trump Has Not Been President

We're an empire now, and when we act, we create our own reality. And while you're studying that reality – judiciously, as you will – we'll act again, creating other new realities, which you can study too, and that's how things will sort out. We're history's actors... and you, all of you, will be left to just study what we do. - Karl Rove, George W. Bush Administration's Deputy Chief of Staff

Infowars claims to be 'the resistance', but in the end it's the Empire's official bulletin. Who then are the real rebels in Fantasyland? How can a fictiocratic regime be overthrown? In a way, this section is a practical field-guide to a semi-otic coup d'état. Contrary to common belief, the myth of objective journalism cannot present an answer to propaganda and misinformation. We need to tackle the issue from a different perspective. We need more, not less, misinformation. 'Throw more wood in to smother the fire,' states the Chinese military essay *Thirty-six Stratagems*. Media art boasts a significant pedigree in this sense. In 1990, cultural critic Mark Dery published 'The Merry Pranksters and the Art of the Hoax', a seminal text in the tradition of culture jamming. Dery shows that media have always been creating reality. There has never been such a thing as objective journalism. 'You furnish the pictures and I'll furnish the war,' news industry titan William R. Hearst famously declared (or not, according to other

sources, which would somehow prove my point). Media are manipulative by definition – almost ontologically.

Culture jamming is about not reporting but rather ‘remaking reality’. Jammers were a ragtag army that employed unconventional weapons like spoofs, pranks, and hoaxes. Dery proposed self-styled conceptual artist Joey Skaggs as a prominent ambassador of the movement. Among many other quixotic endeavors, he notoriously placed a fake ad for a ‘dog brothel’ in the *Village Voice* in 1976. ABC even won an Emmy Award for a piece of serious reporting on the case. It’s fake news *ante litteram*.

In the following years, the tradition of culture jamming has been informing the incursions of many other media artists. In the Netherlands, the Tactical Media movement was particularly keen on this approach. Tactical Media flourished in the final years of the 90s. The term ‘tactical’ refers to the distinction between tactics and strategies as elaborated by Michel de Certeau in his book *The Practice of Everyday Life*. Unlike strategies, tactics shy away from grand revolutionary perspectives, emphasizing the relevance of individual acts of daily resistance or of what ‘is doable now’. Following this tenet, Tactical Media favored rapid actions that jammed the operations of mainstream media.



GWBush.com's frontpage. Screenshot by author.

An example is gwbush.com, the spook website that digital agitprop outlet RTMark set up with the collaboration of computer programmer Zack Exley in 1999. The website was a mirror image of georgewbush.com – George W. Bush's original

website – but with the text replaced by a well-shaken blend of parody and political accusations. The then presidential candidate went ballistic at the tomfoolery and his lawyers issued a cease-or-desist letter. Afterwards, Exley – more traditional in his comedy taste – expressed concerns over the dubious interface of the website that might have misled honest web surfers, since it wasn't clearly labelled as a comic re-appropriation. The point raised by Exley is crucial. Joey Skaggs, the RTMark group, and all other merry media pranksters craved for that kind of misunderstanding because it represented their central argument. They were saying that satire is not objective journalism's loyal sidekick. Satire at its best cannibalizes journalism, exposing what is always an attempt at information control. As Joey Skaggs put it, media pranksters used 'the media' as a medium to make a statement about media. This echoes another logic straight from the *Thirty-six Stratagems* book: 'Kill with a borrowed sword.' Tactical Media always borrowed their weapons from their targets. 'The place of a tactic belongs to the other,' wrote De Certeau.

Tactical Media has never represented a formal movement but more an opportunity to be 'seized upon', after which it would be time 'to move on', as explained in 'The Concept of Tactical Media'. However, the Tactical Media playbook hugely influenced a whole generation of political artists well beyond the 90s. The most famous example is probably the duo of media hoaxers The Yes Men. From the 1999 fake WTO website to the 2008 fake *New York Times*, Andy Bichlbaum and Mike Bonanno have always been *performing* the news, contesting the very idea of objective journalism. In the well-known 2004 BBC Bhopal media stunt, Andy Bichlbaum disguised himself as Dow Chemical's spokesperson Jude Finisterra. Live on BBC, he declared that the company took 'full responsibility' for the infamous 1984 gas tragedy that caused the death of thousands of Indian people. Following a counterintuitive media logic, The Yes Men imagined a world where Dow took responsibility for its actions. In other words, they made a utopian world believable and almost possible, also thanks to the undisputed prestige of the BBC brand that mediated the utopia.

This strand of media activism represents a valuable lesson for aspiring rebels in a fictiocratic regime, since it assimilates the operations of media manipulation. At the same time, it demonstrates that we don't live in a world 'without alternatives' like some elites want us to believe, following a strand of thought that goes from Mark Fisher's *Capital Realism* to Adam Curtis' *HyperNormalisation*. Better realities are out there to be first imagined and then actually created. Representations are malleable and can be repurposed. This is also part of De Certeau's lesson. In this

sense, 'Trump has not been president' hints at the possibility of imagining a time where Trump never got his tiny hands on the White House's keys.

Am I claiming that counterfactualism might be an antidote to post-factualism? Yes and no. I have no intention to uphold counterfactual speculations as a legitimate tool for historical inquiry. The debate on the matter is fierce, as Richard J. Evans shows in his article "'What if' Is a Waste of Time' in *The Guardian*, and I don't want to step into it. I do have instinctive sympathy for Evans' arguments: counterfactual historians barter the straitjacket of historical determinism for an even tighter piece of clothing. To assert that the First World War would have never happened if Gavrilo Princip's bullet missed the Archduke's jugular vein implies a pretty narrow determinism. Nevertheless, counterfactualism can still be a useful tool – not for history but for media interventions. The alteration of the past, as in Jeremy Black's *Other Pasts, Different Presents, Alternative Futures*, grants the possibility to envision a different future, thus giving back a much-needed sense of agency.

A whole new essay is probably required to elaborate a satisfactory notion of agency. To make it short, I don't mean here a sort of historical agency. I'm simply hinting to the basic agency of individual political participation as brought about in the Tactical Media manifesto. And as Robert J. Evans highlighted – counterfactualism is a specimen of right-wing historical speculations, too. Re-appropriation works both ways, for good and for worse.

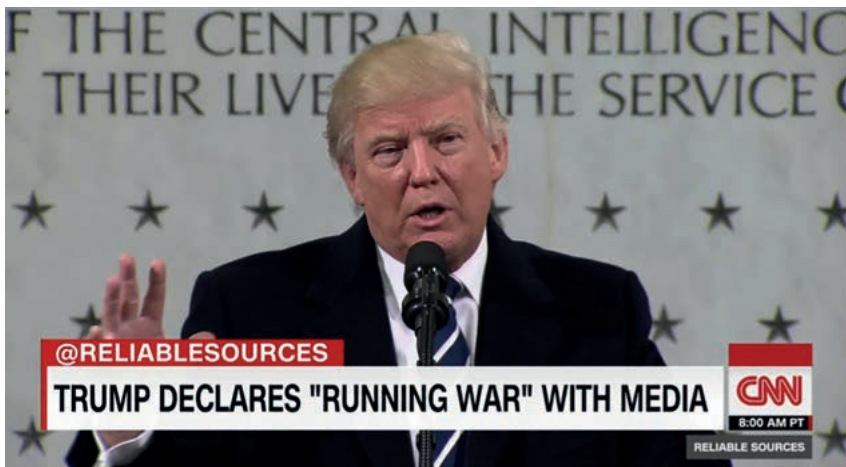
Re-appropriating Re-appropriation

In November 2016 – in the aftermath of Trump's election – white-suprematist Richard Spencer harangued the crowd present at an alt-right conference in Washington DC. 'Hail Trump!', he shouted to an audience of raised arms. Poorly managed testosterone was clearly oozing into the air. In the half-hour long speech, Spencer styled alt-right activists as the 'dreamers of the day' that don't accept mainstream reality because they want to live 'in the world they imagine'.

There are some evident similarities between this approach and the progressive quest for a different world that I just described, as many have noted. Right-wing activists are re-appropriating styles and tactics from the left. They are re-appropriating re-appropriation. It is not just the boundary between fiction and reality that has become a porous zone. Boundaries are blurring everywhere. Alex Jones and Adam Curtis say the same thing: there's a fake reality that's being pulled before

our eyes. Of course, the same analysis leads to two very different visions of the world. However, the argument retains its relevance: clear-cut boundaries are a thing of the past. The game of re-appropriation plays at an unprecedented speed.

Now that our travels in Fantasyland are almost over – the hard boundary of reality already in sight – it's possible to draw a couple of conclusions. The first thing is that post-factuality as fictionality is not an ideological approach to reality. 'Fictiocracy' isn't a pejorative term. It's just my personal take on the matter. In that sense, the precariousness of re-appropriation (today left, tomorrow right) doesn't affect the argument. The second thing is a disturbing hallmark of fictiocracy (and I had to deal with Alex Jones' gems, so the bar was pretty high): the languages of media and war are in such close proximity. The Gulf War as a media event, the Infowars and its store, the guerrilla tactics of alternative media and, last but not least, Trump's war on media.



Is the 'War on Media' the new 'War on Drugs'? Screenshot by author. Source: CNN.

Media seem the continuation of war by other means. In a way, this is no news. The relationship between media and war has a solid research pedigree. However, it appears that fictiocracy is a particularly belligerent system of government prone to warlike fantasies. In 1970 Marshall McLuhan stated: 'World War III is a guerrilla information war with no division between military and civilian participation.' Almost forty years later, Senate Intelligence Committee chairman Richard Burr begged

Facebook, Google, and Twitter: 'Don't let nation-states disrupt our future. You're the front line of defense for it.' The nation-state Burr refers to foremost is Russia, who, you could say, engaged in different forms of online information warfare in the lead-up to the 2016 presidential elections. The boundary between the military and civilians blurs like the one between reality and fiction. Fictiocracy as such finally expands its boundaries beyond traditional political geography.

Execute Order 66: How Star Wars Memes Became Indebted to Fascist Dictatorship

Pim van den Berg



Execute Order 66: How Star Wars Memes Became Indebted to Fascist Dictatorship

Pim van den Berg | 23 November 2018

#politics #Reddit #memewars #irony

Internet memes are rewarded with popularity for their repetition of recognizable ideas. Likewise, meme communities tend to adopt a politics that is conservative – especially when the source material readily lends itself to that very politics. In the case of Star Wars, a tale of heroism is being twisted into a sincere veneration of the villain, and an emulation of his violence and tyranny.

Memes are fun because they are recognizable. They are a play on something we already know, that is reflected back to us in surprising ways and contexts. It's why they spread so virally across the internet. Websites like Reddit are tailor-made for memes. Their algorithms reward speed of consumption and engagement in the form of upvotes and comments, which means that superficial, recognizable content beats meatier, more ambivalent fare. While memes mutate constantly, taking on different shapes and subjects, in the end what wins is what we've already seen before.

A politics arises within specific meme communities, fitting this recognizability that is rewarded endlessly with attention and 'internet points'. Below their playful surface runs an undercurrent of reactionary politics that seeks to maintain the status quo. Playful communities borne of experimentation, self-reflexivity, and detached irony become guarded, protecting with increasing hostility an affection for a specific pop culture that has become wholly sincere.

Subcultures dedicated to pop culture for younger men – oftentimes science fiction, fantasy, and video games – take on these characteristics more than others. Mired in problematic masculine fantasies of underdogs doing righteous battle against

forces that seek to either transform or take away their favorite pieces of pop culture for sinister ends, these communities use memes to reaffirm their own identity and to exclude and antagonize others, over and over again.

Nostalgia for the Flawed

A prime example is the subReddit *r/prequelmemes*, dedicated to the *Star Wars* prequel films, *The Phantom Menace* (1999), *Attack of the Clones* (2002), and *Revenge of the Sith* (2005). As 'canonical' entries in one of the most popular film franchises of all time, their presence in contemporary pop culture is undeniable. The prequel films tell the story of Anakin Skywalker, a Jedi (the lightsaber-wielding space wizards), who was ostensibly prophesied to restore 'balance to the Force' by destroying the innately evil Sith. Anakin has no father. Instead, he's born to the pure Force (a mythical power between all living things) and a human mother. But Anakin becomes corrupted by Darth Sidious, a Sith lord acting as Supreme Chancellor of the Republic in the disguise of a politician named Shiv Palpatine. Palpatine plays to Anakin's fears and insecurities, turns him into the famous Darth Vader, and uses him to kill all the Jedi and seize control of space government. The films set up Palpatine's defeat and Anakin's eventual redemption by his son Luke, the hero of the 'Original Trilogy' (*A New Hope* (1977), *The Empire Strikes Back* (1980), and *Return of the Jedi* (1983)).

Ordinarily, memes have a lifespan of a couple of days, maybe a few weeks. But in the two years since the subReddit *r/prequelmemes* was founded, it has grown to be one of the most popular and enduring meme communities dedicated to a specific piece of pop culture. With a subscriber count of over 725,000, it ranks only slightly below *r/bikinibottomtwitter* (just over a million worshippers of *Spongebob Squarepants* memes), and *r/thanosdidnothingwrong* – before the titular purple giant dispassionately snapped his fingers and halved the subscriber count, as recounted on *Business Insider*.

The memes' popularity in part stems from the fact that the *Star Wars* prequels are generally considered to be 'bad' movies. It is precisely in being bad movies that are nonetheless embedded firmly within our collective consciousness that they are the perfect mold from which to craft memes to nostalgically relive and celebrate their impact on our lives, while simultaneously allowing us to poke fun at them and at ourselves for liking them in the first place. In an interview in the book *Star Wars and the History of Transmedia Storytelling*, Will Brooker, a writer of multiple books

on Star Wars, reflects on the disappointing quality of the prequels, and suggests that prequel memes offer, and encourage, an 'affectionate, ironic look back at those flawed movies.' Memes offer a form of reconciliation between the lackluster films and the fond (childhood) memories many of us nonetheless have of them. Through memes, fans are able to renegotiate the tension in their relationship with the prequels.

Nurse: Sir you've been in coma since that Jedi attacked your village

Me: Oh boy I can't wait to see not just the men, but the women and children too



Internet meme. Source unknown.

Many of the memes do poke fun at the prequels themselves. They underscore some of the movies' more awkward, even cringeworthy aspects, or adapt pieces of the films to entirely different, everyday situations, either ironically or sincerely. However, not all prequel memes are equally lighthearted and affectionate as the example shown above. Just as often they're defensive or even outright hostile. They expose the fans' anxiousness about the prequels' standing and their insecurities for sincerely liking them. As new Star Wars movies experiment more and more with diverse representations of ethnicity, gender, and sexuality, young men gravitate towards the prequels' traditional white, masculine power fantasies. Through prequel memes, they redirect their feelings of insecurity outward.

Underdog as Axis

Today, our sense of who we are becomes more and more tied up with the media we consume. Before founding *Buzzfeed*, Jonah Peretti wrote a thesis on how, in postmodern capitalism, people's identities 'are in flux' because of a lack of stable, encompassing truths about their very existence. In order to placate these anxieties, we continually latch on to the small, stable 'senses of self' that pop culture provides us, increasingly defining ourselves or letting ourselves be defined by our cultural capital – an implicit societal standing based on knowledge of, or affinity with, culture. Put simply, you are what you watch. (*Buzzfeed* is Peretti's own particular answer to this endless longing – 'Which Star Wars Character ARE You?') Any criticism of those things we enjoy, however impersonal or substantiated, feels more and more personal. Our very identity seems to be at stake.

With both their masculinity and cultural capital ostensibly under assault, prequel fans resort to familiar methods to assert themselves. According to Anastasia Salter and Bridget Blodgett in their book *Toxic Geek Masculinity: Sexism, Trolling, and Minority Policing*, geek communities can't abide any member or group visibly different from the white male norm that defines both the source material and its community. They write: 'Feminists, social justice warriors, and critics become easy targets for geeks' own unhappiness with their communities and lives. If uncritical appreciation of the different geek media is retrospectively considered the atmosphere of geekdom, then feminists, social justice warriors, and anyone different become an easy target for painting as the bad guy.'

Both the prequels and the Original Trilogy offer plenty in the way of young white men gifted with extraordinary power and destined to alter the fate of the universe. Female characters are rare, as are people of color. A character's worth is measured by their affinity with the Force and their proficiency with a lightsaber. According to Salter and Blodgett, the 'geek masculine ideal' not only possesses exceptional strength but genius-level intelligence as well. It used to be that physical strength was the sole domain of the athletic 'jocks', the traditional embodiments of masculinity who bullied and belittled geeks for so long. Geeks and their heroes had their supposed superior intelligence. They may have a tough time at school, but they'd succeed at life. That changed: now the geek masculine ideal embodies both strength *and* smarts. Take, for example, the Jedi in the prequel films: even Yoda, the diminutive, old, frail Jedi master from the Original Trilogy, is revealed to be a nimble master swordsman.

Like other predominantly male, 'geek' subcultures, r/prequelmemes has fashioned itself the image of the underdog. Its insecurities are rooted in the both critically and politically unfavorable reputation of the prequel films. It sees itself as struggling bravely and heroically for the recognition of its favorite piece of pop culture, even though it is already one of the most popular, if not influential pop culture meme communities. 'Geekdom' has increased in both visibility and popularity in mainstream pop culture. Disney's Star Wars and Marvel superhero media dominate pop culture. Fantasy like *Lord of the Rings* and *Harry Potter* top the all-time bestsellers and box office lists. Ironically, prequel memers are very much aware of their own subReddit's popularity and the fanaticism of some of its members.

The underdog narrative, along with a regular sense of elitism inherent to many subcultures (which shows it itself in a division between those most intimately familiar with the films, the jargon, names of planets, ships, supporting characters, Force powers, and everything in between – and those who aren't), allows for prequel memers to lash out at those who threaten its hegemony over Star Wars-related meme content on Reddit and even the internet as a whole. The attacks take the form of aggressive gatekeeping, where a majority decides who are and aren't part of a community in order to homogenize it. Under the guise of a 'Great Meme War', for example, r/prequelmemes attempts to establish its dominance over sibling subReddit r/sequelmemes, dedicated to the other Star Wars films. While r/prequelmemes has half a million more members than r/sequelmemes, the subReddit nevertheless formed an 'alliance' with other popular subReddits like r/trebuchetmemes (dedicated to the siege machines of medieval times) and r/garlicbreadmemes (for, well, you get the idea). Together they branded r/sequelmemes and affiliated subReddits as 'the Axis' and overwhelmed r/sequelmemes by raiding and brigading the subReddit, abusing Reddit's popularity system of upvotes and, particularly, downvotes in order to keep sequel memes content from public view. As *VICE* wrote in a report from the war zone, 'the memes were good until the war turned ugly.'

Irony as Smokescreen

Aggressive gatekeeping, toxic masculinity, and radical fandom aren't new to geek culture, nor are they unique to Star Wars and its prequel films. What is new however, is how the prequel memes subReddit has steadily adopted certain problematic politics from its source material and how memes are used specifically to convey and enforce these politics.

The virality of memes depends on their recognizability. In his book *The World Made Meme*, Ryan M. Milner even argues that the ‘memetic’ property of being shared is what makes memes memes in the first place. Reddit’s algorithms favor content that is upvoted quickly after being posted. Memes are not only rewarded for being superficial, regurgitating already popular ideas and images, superficiality is even a prerequisite for success, at least within a community of this size, repeatedly making it to the ‘front page’ of one of the internet’s most visited websites – which offers an amalgam of all of Reddit’s most popular ‘safe for work’ posts, including r/pequelmemes.

Memes are also fragmentary by nature. They are made of certain source materials but can never represent their source as a whole. For example, the meme of the Tusken raider awakening in a hospital bed, oblivious to the extinction of his tribe, quotes and alludes certain parts of Anakin Skywalker’s turn to the Dark Side, but without the intended gravity with which the event unfolds in the films. The meme cannot hope to contain every nuance of the film, but it evokes enough of it to be recognizable and, subsequently, subvert what we recognize to humorous ends.

Context (in this case the overarching themes of the Star Wars prequels) is particularly important to the Star Wars prequels. On their own, the films tell the story of the victory of a fascist dictator over a stagnant democracy and the radicalization of a gifted yet troubled young man. Emperor Palpatine wins, the Jedi lose. Only by Luke Skywalker’s redemption of his father in the original trilogy, are the events of the prequels redeemed in turn. But while the prequels are critical of fascist politics and the violence fascists use to realize their goals, they effectively indulge the viewer in this very violence and the triumph of evil. This is why the lightsaber battles are so long and extravagant, why a Jedi’s worth is repeatedly measured and demonstrated by the midichlorian count in their blood, and their proficiency in swordsmanship is pointed out.

It’s hard not to empathize with the villain in the prequels. Some of the more delightful parts can be found in *Revenge of the Sith*, where Ian McDiarmid is hamming it up as Supreme Chancellor Palpatine moonlighting as the evil, scheming wizard Darth Sidious. It’s no coincidence that Palpatine has served as the subReddit’s de facto mascot from the beginning and has been hugely influential on its customs and practices. Some of the top posts of all time are ‘upvote posts’ of Palpatine, basically making his face as visible to Reddit – and Google – as possible. His quotes have also been particularly popular, from the rambling, off-topic anecdote about the

'Tragedy of Darth Plagueis the Wise' and similarly inoffensive memes speculating about his real name, to more problematic fare.

Especially his line 'I love democracy', spoken the very moment the Intergalactic Senate grants him unlimited emergency powers as Supreme Chancellor in order to fight a war he secretly engineered himself for that very purpose, is often used in order to celebrate the uniformity of the subReddit and the power the members wield when using Reddit's system of upvotes and downvotes in concert to determine what is visible and popular, and what isn't. Obviously, Palpatine is being ironic and hypocritical, yet despite the villainous undertones the subReddit knowingly applies the sentiment to suppress dissent.

Another one of Palpatine's popular quotes is his utterance of the word 'ironic' during his 'Darth Plagueis'-speech, with regards to the folly of his Sith master Darth Plagueis putting too much faith into his apprentice, who then killed him in his sleep to assume his master's power: 'Ironic. He could save others from death, but not himself.' It's now often used whenever critics or perceived opponents of the subReddit underestimate the subReddit's popularity or the fanaticism of its members' gatekeeping practices.

Palpatine is also often quoted saying 'It's treason then,' in response to unwanted (or particularly silly) opinions gaining traction on the subReddit. Another example is when in case of an action that would otherwise be ethically questionable, Palpatine will legitimize it solely on the basis of his absolute authority, declaring: 'I will *make* it legal.' Memes referencing 'Order 66' – Palpatine's secret military strategy to exterminate all Jedi in the galaxy – are particularly worrying, as they are used to fantasize about or even celebrate both the actual purge of the Jedi and hypothetical purges of all kinds.

Despite the sincere intent behind these quotes, they are nevertheless often used at least somewhat ironically, as memes often are. Still, irony is often used as a smokescreen that should deflect criticisms of the subReddit's politics (or of memes in general). As Geert Lovink and Marc Tuters write, this 'ironic reason, (...) in distinction to cynicism, allows its spokesperson to purport belief.' And in 2017, Jason Wilson wrote in *The Guardian* how irony allows for an affective replication of politics without explicitly taking stance. That's how memes at the same time can be an ironic emulation and enforcement of Palpatine's fascist politics, and a dangerously sincere propagation of fascist politics.

Protagonist Anakin Skywalker serves a purpose similar to Palpatine's. On the one hand, his character is repeatedly mocked for his infantile tantrums and awkward dialogue ('I don't like sand. It's coarse and rough and irritating and it gets everywhere.');

on the other hand, he serves to legitimize precisely those basic impulses in prequel memers. His arrogance, temper, and naiveté allow for a bluntness of expression that would be inappropriate in polite discourse.

Transformations and Reversals

As the prequelmemes subReddit grew in popularity, Palpatine was gradually replaced as a mascot by Ewan McGregor aka Jedi master Obi-Wan Kenobi. As a secondary protagonist, Kenobi is the most virtuous character. He has sworn to defend democracy and justice; he is the one who defeats Anakin after his fall to the Dark Side (by literally 'having the high ground' as the meme goes). He is handsome and witty.



Internet meme. Source unknown.

As a mascot, Kenobi appears to be the exact opposite of the disfigured, evil Palpatine. However, Kenobi fulfills many of the same roles as Palpatine, although in a more subtle manner. He embodies the geek masculine ideal of both physical might and high intelligence, while his personality is imperfect. He is at times smug, condescending, and even contemptuous, but McGregor's portrayal possesses a roguish charm that turns these flaws into an alluring depth. In fact, the flaws are especially useful for the discursive strategies that prequel memers had already

developed. In order for him to properly function as a mascot, certain parts of his personality are routinely magnified (his condescension, the passion with which he fights for what he believes in), while others are conveniently ignored (his compassion, his restraint, and the actual beliefs he so passionately fights for).

So, a scene depicting a heartbroken Kenobi who turns off a security hologram of his pupil Anakin killing children, transforms into an annoyed Kenobi turning off a screening of *The Last Jedi* (2017), the Star Wars film most daring in its condemnation of Star Wars' own problematic themes, and therefore the most notorious in prequel meme circles. A meme reflecting on the subtext of the 'high ground' depicts Kenobi as a super brain, smoking a pipe and smugly pondering his own superiority. Would Kenobi approve of his likeness being used in total opposition of his beliefs? While Palpatine would be indifferent, perhaps even delighted at young men celebrating him *en masse*, Kenobi would at the very least feel uneasy at the prospect. Most likely, he would applaud the politics of *The Last Jedi*. Such particular irony of reversal reached its zenith with a popular meme that superimposed McGregor's face over Palpatine's, in order to have Kenobi profess the same tyrannical sentiment. Thus, prequel memes' Kenobi has become a completely different entity from his cinematic counterpart.



Internet meme. Source unknown.

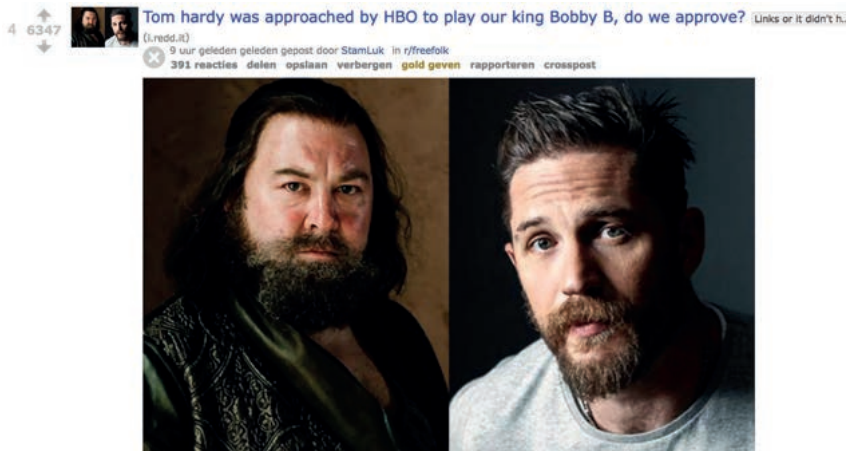
But that doesn't matter. The reason these new characterizations – Palpatine as lovable mascot, Kenobi as a self-important asshole – ‘work’, is because they are removed from their original context, just enough to take on the desired meaning. This de- and recontextualization is most striking in the case of Kenobi: as a white man who is charming, intelligent, and very proficient with a lightsaber, he is able to ‘physically’ embody the geek masculine ideal that prequel memers like about the films. But he's a much more respectable face for the subReddit community than the unmistakably evil Palpatine, whose intentions are clear as day and whose worship raises uncomfortable questions for outside spectators. The adoption of Kenobi as their mascot has gone so far that the subReddit has actively campaigned for Ewan McGregor to reprise the role in a possible stand-alone Obi-Wan Kenobi film – and no-one but McGregor. It is his face that is repeatedly and constantly visible all over the subReddit. Memes are also reactionary in that way: what is popular becomes recognizable, what is recognizable becomes popular.

Of course, not everyone on r/prequelmemes thinks alike. One of the most popular memes on the subReddit is a criticism channeled through Obi-Wan Kenobi of how the subReddit has transformed from silly and self-aware into sincerely hateful. It's more fitting for Kenobi's character, who in the films is equally wary of intergalactic politics turning sour. Yet, in the comments, while many support the sentiment and decry the behavior of some of the other members, those same users often repeat the same problematic criticisms of the new sequel films, and, again, *The Last Jedi* in particular – some racist, some misogynistic, some both. It seems like the geek masculine belief system is ingrained within the broader Reddit community, the only difference being in views on how explicitly it should be acted upon.

Memes have a reputation for being transformative or even radical deconstructions of existing media. But prequel memes reveal a reactionary community, endlessly using minute deviations of the same subject matter, reiterating the same reactionary, even fascist, politics over and over. While prequel memers are elitist in the sense that they separate those acquainted with the prequel films from those who aren't, their popularity seems to stem not from the fact that specific scenes or sentiments are recognizable only to a specific group of people, but from an underlying ideology that is equally popular and dominant in the outside world, and which attaches value to people according to their gender, color of their skin, sexuality, or politics.

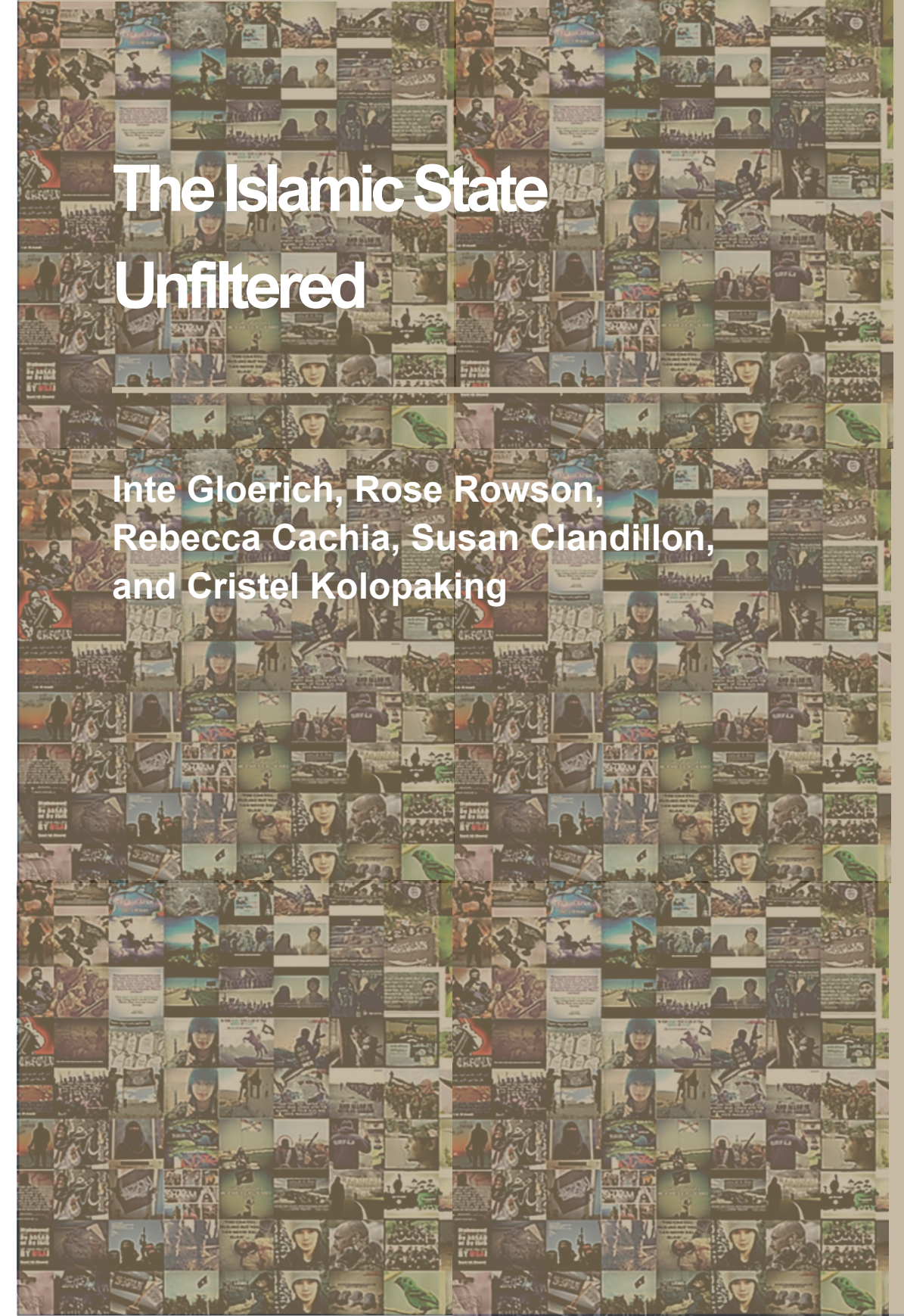
There are plenty of examples of similar geek pop culture subReddits using memes for similar reactionary ends. In line with r/prequelmemes' Ewan McGregor worship, the *Game of Thrones* subReddit r/freefolk has used the character King Robert

Baratheon (lovingly called 'Bobby B') as a mascot for such a long time that memes expressing the community's inability to see anyone else than the original actor Mark Addy embodying the role grow more and more popular. And in the subReddit for the video game *World of Warcraft*, the game's fictional war is used to frame discontent between the game's developer and its players. When that very game developer, Blizzard Entertainment, announced a mobile adaptation of one of its popular franchises, the discontent spread to other subReddits, including the 19 million strong r/gaming subReddit. One such meme uses a notification from the game *Fallout 4*, denoting the player did something widely unpopular, to imply a widespread, yet unified bloc of gamers resisting change.



Screenshot by author. Source: Reddit.

At the time of writing, another Great Meme War has broken out across Reddit, with r/prequelmemes firmly at its center. It begs the question: Do these geek communities just read into their source material selectively, finding the politics they can agree with and use, or are geek pop culture media as a whole particularly suitable to be made into memes, because of their politics?



The Islamic State Unfiltered

Inte Gloorich, Rose Rowson,
Rebecca Cachia, Susan Clandillon,
and Cristel Kolopaking

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Inte Gloerich, Rose Rowson, Rebecca Cachia,
Susan Clandillon, and Cristel Kolopaking | 22 April 2016

#Instagram #fundamentalism #imageculture #propaganda

Instagram has become an unsuspecting pulpit, seemingly caught off guard, for those determined to spread a militant message of Islamic State terror. Graphic, fanatical, and oftentimes heavily photoshopped images weave through Instagram's labyrinth of sunset snaps and gym selfies to advance a curious manifestation of cause-related self-promotion.



An image of a cappuccino, trivial enough to be skimmed over by smart-phone users scrolling through their feed; the same old content posted as visual shorthand for living the Good Life. But this isn't a shot taken by an online friend showing off the skills of their favorite barista. This coffee has been digitally manipulated to show the flag of Tawheed, commonly associated with the Islamic State, floating on its surface. Looking closer still, there is a grey strip a few pixels wide coming

down the right side of the image. This along with the low resolution of the image in general indicates that it's a screenshot: an image taken from somewhere else, given a square aspect ratio and repurposed for a new environment: Instagram. Where did this image come from? What is its purpose? Below Instagram's frivolous and apolitical public perception at times bubble unexpected pockets of extremism.

Transferring Beliefs Across Social Media

Over the past few years, and especially since its 2012 acquisition by Facebook, the average social media user has likely become intimately familiar with Instagram. It has emerged as the first port of call for those still fascinated by the froth in their coffee, not to mention their own reflection. Avocado-infused smoothies and beach feet galore, the ever-popular photo-sharing app has taken over from Twitter and Facebook as the paradigm of banality. In turn, supporters of the Islamic State have adopted Instagram as a colorful, online underpinning for support of the caliphate. Rather than purporting an explicit agenda of mass radicalization or rampant terror, these extremist Instagrammers are akin to fitness fanatics and their gym selfies, or to hipster gastronomes and the softened hues of their 'filtered' food. They are people with an obsession, and Instagram is their ready outlet. What we are left with are visual stimuli steeped in an ancient and barbaric cultural history, whose young owners possess an unpracticed, 21st century grasp of Instagram etiquette.

While Europe is struggling to find a unified and humane approach to the many displaced Syrian and Iraqi refugees knocking at its doors, some people are still traveling the other way. The fact that foreign fighters are recruited not only from the Middle East, but also from Western countries has been well-covered in major news outlets. And although many articles have been written about the way the crypts of social media offer a safe haven for extremist thought, exactly what plays out there often remains rather vague. Using data gathered in the first months of 2015, before stories of sunken boats took over front pages, this article shines a light on those dark corners of, in this case, Instagram. While coverage by mainstream press fluctuates, examining data such as these illuminates the insidious and sustained flow of pro-IS propaganda on social media.

We still recall when Twitter and Facebook were primarily concerned with the mundanity of individual users' lives, with Facebook strongly suggesting that users post statuses in the third person present tense until 2007, fixedly phrased as "John is...", and Twitter asking, 'What are you doing?' circa 2009. While large swathes of both Twitter and Facebook users are no doubt still concerned with inconsequential comments on personal lives, Richard Rogers noted in his 2014 article 'Debanalizing Twitter' that these platforms had more recently come to be known for the sharing of news, catalyzing political engagement, and for the promotion of activist movements. Savvy social media usage, both on the part of IS activists and enthusiastic news sharers on Twitter and Facebook, has played a significant role in amplifying the impact of IS in the media, carrying the

conversation to all corners of the world. Few people will have escaped reports of the high profile, savage acts committed by IS and the social media recruitment techniques of IS sympathizers.

Rather than being politically charged in and of themselves, Twitter and Facebook provide a stimulating environment, an infrastructure where users can share information from outside sources. Twitter feeds have become lists of links to click through, providing insight into what is happening in the world at large, while Facebook groups and pages essentially become a pool of resources and shared opinions bringing together like-minded individuals. Instagram, conversely, does not allow users to engage with outside content in the same way. Users of the smartphone app find themselves trapped in a sunset-lined labyrinth, without easy exit paths to external links as allowed by Twitter and Facebook. Aside from a single allotted space for a personal website in each user's profile, Instagram does not support the sharing of links. If someone were to include an outside link under an image or video, it would not be clickable. Besides disallowing click-through links, no text on Instagram can be copied and pasted. Thus, the platform capabilities of Instagram discourage users from treating it as a portal for sharing information from external sources. What does this mean for politically engaged or even extremist Instagram users? Surely when users shift their focus between different social media outlets, their sociopolitical beliefs do not get left behind?

Following our previous investigative research into the sociopolitical actions of IS on Facebook, we became curious to understand the reality of IS on Instagram. By spending time trawling through individual profiles, as well as searching for IS-related keywords, we constructed a list of 'gatekeeper' hashtags that we believed would lead to the core of IS support on Instagram. We researched images and videos posted on the platform between January 20, 2013 and March 25, 2015. Having gathered 29,318 posts, we then reduced these to those displaying explicit, unquestionable support for IS. This amounted to 450 images and videos posted by fanatics from all over the world, brought together on Instagram. All claims we make within this article relate to this subset of IS content on Instagram; before we begin discussion of these images we must acknowledge, as the numbers quoted above attest, that this research is not a comprehensive analysis of IS support on Instagram. Rather, it is a glimpse into the mindset of people who choose to express their support for IS via Instagram. It is also important to consider that this pro-IS support on Instagram is the latest manifestation of a long series of jihadist propaganda. To understand the significance of the images gathered from Instagram, we must first briefly delve into this history.

Tracing the Rise of Islamic State Propaganda

Rooted in a cruel, remorseless, and sectarian approach to jihad, IS is calculating and opportunistic. It is also a product of its time. The self-proclaimed Islamic caliphate has prospered in the political and societal fissures following the 2003 US invasion of Iraq and the Syrian Civil War of recent years. In what to most people seems like a fraction of a second, the Sunni militants have evolved from a splinter group affiliated with Al-Qaeda into the world's most feared terrorist organization. IS is supported by on-the-ground militaristic success, funding streams that have made it the richest group of insurgents in the world, and a strictly reactionist ideology that evokes memories of a medieval, Islamic golden age.

The roots of IS firmly took hold in 2004 when Al-Qaeda in Iraq (AQI) was founded, a decade before its declaration of the Islamic caliphate in 2014. AQI functioned as a loose affiliate of Al-Qaeda with distinct characteristics of its own. Al-Qaeda's propaganda at the time portrayed the organization as a defender of the Islamic community against negative Western influence and power. In contrast, AQI spoke a language of confidence and strength in battle. Militaristic prowess and the glorification of death in combat dominated the propaganda released by AQI, and also that released by its heir, IS.

This is most apparent in the organization's four-part series *The Clanging of the Swords*, released in 2012, which marked a shift towards propaganda of professional quality. It featured well-directed camerawork, including aerial drone footage, and a strategic narrative that melded displays of martial strength and violent imagery with shows of compassion and forgiveness. Videos and images produced by IS depict violence and execution through various means including decapitation, death by falling, and being set alight. The use of this kind of savage imagery has its origins in the jihadist text *The Management of Savagery*, which advocates using physical violence as well as the dissemination of brutal imagery for successful jihad.

Social media have provided IS with the tools to crowdsource both the creation and distribution of its warmongering ideology. Using the echo chamber of retweets and likes, IS succeeds in spreading its tendrils beyond its territorial victories. Akin to a media organization, propaganda released by IS has tapped into what makes a content-hungry audience tick. This has set it apart from the jihadist tradition of long, tedious speeches unsuited to the Western attention span. IS as we have come to know it in the past two years is what happens when jihadists understand how to get their message spread online by a frenzied audience.

Technology has long been used for the distribution of extremist content via cassettes, internet forums, video-sharing platforms, and so forth. IS now has a learned understanding of technology that appeals to the scrolling generation. Short attention spans are captured by slick editing, high quality cinematography, and the kind of storyboarding that is more commonly associated with first-person shooter games and war movies. The beheading video featuring Jihadi John presented IS as a strategic army performing with almost choreographed precision in the media. The fitted, black drapery of the British executioner, the baggy orange jumpsuits of his victims, and the professional video production, portrayed a barbaric yet articulate force familiar with social media and marketing know-how.

Connecting Across Borders

Social media platforms are designed to build global communities, allowing everyone – violent extremists included – to connect across physical barriers. The networks of sympathizers on Instagram are crucial to IS because they are not limited by geographical boundaries but are instead linked in a tight online community.

Instagrammers have the opportunity to geotag their posts, but this is far from common practice. With only 10 percent of the posts we aggregated being geotagged or having additional locational information, it is quite difficult to determine where posts come from. Nevertheless, our small sample of locatable posts shows heightened degrees of interaction in Sydney and Melbourne, a prolific user in Seattle, and another in Hamburg, Germany: a network of IS sympathizers spanning the globe. None of our geolocated posts originated from Syria or Iraq. It is possible that none of the posts we collected originated from the region, however, it is also likely that frontline fighters – being aware of surveillance practices – are exceptionally careful not to publish their whereabouts online. Individual cases like that of New Zealander jihadi Mark Taylor, who inadvertently revealed his exact location by forgetting to turn off geotagging on his tweets after arriving in Syria, are the exception rather than the rule.

The power of the online jihad of IS is supported by the number of international ties that would have been near impossible offline. Instagrammers from around the world follow each other as well as comment on and like each other's posts, thereby creating an online community or network of decentralized but connected people. This decentralized network on Instagram features cases of individual agency and even creativity by users that contrasts IS' repressive sharia state. What we see on

the app is a synthesis of user-generated content and the representation of extremist ideology in digital visual culture. Many images are produced and distributed every month, reaching varying degrees of popularity, each one eventually becoming just one more forgotten photograph in the digital pile. What does it take for an IS related picture to be popular on Instagram during its very short prime of life?

Liking Islamic State on Instagram

Inching through our set of images, we were instantly surprised to find that, unlike on Facebook or Twitter, supporters of IS do not seem to react to major news stories using Instagram. Atrocities which consumed mainstream media, like the beheadings of James Foley, Steven Sotloff, and David Cawthorne Haines, the burning of Jordanian pilot Muath al-Kasasbeh, or the declaration of the Islamic caliphate, created few waves on Instagram. Unlike other social media users, Instagrammers seem unconcerned with the 24-hour news cycle, while still engaging with a socially, politically, and religiously charged agenda. They allow their own brand of extremism to flourish, are highly concerned with their ideological goals but untainted by the rhetoric of Western journalism.

There are two roles that anyone on Instagram, including IS sympathizers, is likely to adopt: supplier of content (by taking photos and sharing them) and consumer of content (by viewing, liking, and otherwise interacting with images or videos shared by others). As the quickest way of interacting with images on Instagram, liking is a quantifiable measure of what stirs people to take action on the app. It is a uniform way of showing approval for content, be it a mundane image of someone's lunch or a more sinister image of crimes committed by IS. The Like is Instagram's currency and, consequently, a signifier of value on the app. The more likes an image receives, the more valuable it is. Selfies can be called popular because so many people post pictures of themselves, but an image posted by selfie-monetizer Kim Kardashian will quickly gain thousands of likes and therefore could be said to be more valuable than the average selfie.

What happens when content is deemed valuable? It gains visibility in two ways: 1) it is increasingly circulated itself, 2) its subject matter, its use of inspirational or humorous content as well as its aesthetic qualities are being copied. Copying a valuable image's theme, filter, or humorous intent is a way for other users' content to gain likes. What we end up with is a stream of images and videos that might subtly differ, but which are eerily similar.

So, what do IS activists share on Instagram? It comes as no surprise that the graphic portrayal of military jihad is prevalent amongst IS themed posts on Instagram. It's a continuation of previously existing forms of propaganda that have been used by the various historical incarnations of IS. On Instagram, images of fallen fighters, taken both when dead and still alive, glorify martyrdom for the caliphate. Dead mujahideen are immortalized through metaphorical references, both textual and visual, to angels in heaven and birds in paradise.



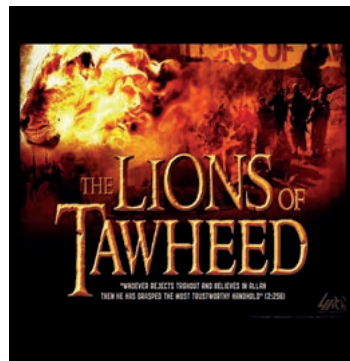
Source unknown.

Appearing alongside images of military jihad are poses that come back again and again, just like selfies, duck faces, and beach feet do in other online circles. Contrasting the overall light-heartedness of these pictures, IS' brand of pose consists of standing in front of their pervasive black and white flag, rigidly upright, feet shoulder width apart, and one index finger pointing up towards the sky. In those

images that originate from the frontlines in Iraq and Syria, one hand also keeps a firm hold of the barrel of a gun. The flag is a deliberately selected symbol of the link the Islamic State believes to have with the Prophet Muhammad. The single, raised finger has developed into a visual identifier for the militant organization akin to those used by city gangs: a non-verbal symbol to be recognized by those in the know. The pose represents *tawheed* or the belief in the oneness of God. As seen on Instagram, IS fighters and activists also use it as a sign of support for the global expansion of the caliphate.

As with other more innocuous sides of Instagram, IS content comes with a sense of monotony. Flags, shielded faces, and guns, men posing the same way again and again. While the number of these images does speak for their popularity with the posters themselves, what leads others to like, comment, and otherwise engage with such content? Images of young children with the one finger salute, holding guns in front of the IS flag, seem to be a sure way of attracting likes from other IS supporters. The children in these images speak to the future, they are the next generation lined up to fight for the cause.

When it comes to popular content, there is also a large collection of miscellaneous posts attracting likes and demanding attention. People use a variety of creative techniques to promote individual messages in aesthetically similar ways. There are inspirational quotes from the Qu'ran superimposed onto photographs alongside tableaux of weaponry, horses, and flags reminiscent of a medieval era of Islamic dominance, and varying portrayals of IS' black and white symbol. IS sympathizers on Instagram also seem to have a fascination with cats, a revered animal in Islam said to have been favored by the Prophet Muhammad. Frontline images of IS fighters



Source unknown.

cuddling kittens show a more caring and compassionate side of the militants, whereas the use of lions shows quite the opposite. The lion metaphor represents the soldiers as ferocious warriors fighting an epic and heroic battle.

Poster-like imagery hints at users who are proficient in the use of editing tools both internal and external to the app. The outcome is an array of images mimicking first-person shooter games or movie posters, removing from people's imaginations the real-world consequences of IS as a physical entity on a terror rampage. In particular, typefaces that are associated with media productions such as first-person shooter *Call of Duty*, the epic fantasy *The Lord of the Rings*, and the HBO series *Band of Brothers* are used to entice the viewer to join the adventure.

Instagram endows a uniformity to content that easily enables pseudo-branding to be applied to IS ideology and graphic content. The aesthetic conformity of Instagram seamlessly applies to jarringly different subject matter. Extremist content sits among Instagram's more innocuous images, captured in the same 640px by 640px square (at the time of data collection, this aspect ratio was still enforced), largely using the same set of editing tools and filters. This produces images that are uncannily similar in terms of tonality, degrees of contrast and saturation, and uniform overlays that can beautify the most pointless content as well as the most distressing. By means of Instagram, users are able to present IS and its ideology in unique and yet uniform ways.

IS' message flows into already existing streams of content on social media that would not necessarily be associated with violent jihad. In June 2014, around the time the caliphate was declared, the soccer World Cup Twitter conversation was infiltrated by extremist messages tagged with the World Cup hashtags #WC2014 or #Brazil2014. Later in the same summer, YouTube teen-star Ricky Dillon's #AskRicky campaign was incorporated in IS' threat to assassinate American journalist Steven Sotloff, taking advantage of Dillon's young audience for the purpose of gaining new recruits. In spring 2015, IS hijacked #BaltimoreRiots on Twitter to claim that in the Islamic State 'black lives matter' as much as any other life.

The use of hashtags on Instagram differs. For Twitter, the hashtag carries a discussion; on Instagram the hashtag is assigned to an image and indexes content. While many use hashtags to ensure that their image of a #beach is with all the other #beaches, hashtags are also used to add value to images within Instagram. For example, a subset of hashtags, including #instagood and #instalike, are used to garner likes and followers, rather than relating to the image content itself. When

IS sympathizers use hashtags such as #instagood, they are doing it for the same, mundane reason as the person uploading a picture of their breakfast, that is, to get likes and followers. However, IS' use of 'instatags' such as #follow4follow or #pictureoftheday is far more insidious than when those hashtags go with blueberry pancakes. Rather than a mass attack on a hashtag to gain media attention or to intentionally disrupt the frivolities of the decadent West, these IS Instagrammers really do want likes for likes to construct a supportive community of like-minded individuals. These 'instatags' are not targeted or topical, yet they are arguably very invasive.



Screenshot from Express. Source: Rob Virtue, Express, 2015.

Two other broad groups of hashtags blend extremist and non-extremist images on Instagram. Firstly, the stream of daily images and videos on Instagram is infiltrated by graphic IS content with the use of generic, secular hashtags like #funny, #peace, and #likeforfollow. Secondly, more specifically, non-extremist Islamic content is latched onto by IS supporters using hashtags like #Muslimsbelike, #Quran, #Allahu-Akbar, and similar tags. For example, many images that are tagged with #Quran show inspirational passages from Islamic scripture. By tagging IS content with #Quran, Instagrammers reading through these quotes are exposed to IS' barbaric nature and fundamentalist interpretation of Islam.

Censoring the Extreme

The use of hashtags and likes is not so much an act of strategic digital aggression as a display of ordinary behavior on Instagram. The seemingly untargeted use of these hashtags diffuses a message of extremism to an unsuspecting audience. Instagram offers a space for like-minded individuals to gather, but what control does it, as a company, exercise when communities become hotbeds for extremism? In the realm of the digital, an important enemy is the battleground itself, in this case, Instagram as a platform with its own rules for what can and cannot be posted.

The battle being fought online is quite different from the one on the ground. The mujahideen who fight for IS on the battlefield have chosen to physically act upon their support for the organization. The influx of foreign fighters to the region has not been without casualty, and the group has been popularly reported as regarding death as anything but a punishment. Although not as fatal, IS sympathizers on Instagram are impotent when measures of censorship are enforced by the powers that be. However, once an account on Instagram is removed for violating the platform's Terms of Use regarding violent and hateful content, the maker of that account can create a new one. Like cutting the head off the mythical Hydra and soon finding two more in its place, another account pops up to replace the one that has been deleted.

Popular users are aware of the value of their Instagram network of likes and followers. This popularity also puts the extremist accounts in danger: the more attention they get and the more value they amass, the more likely they are to have their accounts reported by other users and then deleted by Instagram. To counteract this, the more popular IS supporting Instagrammers advertise back-up accounts in their profiles. By doing so, they prepare their followers for the next step should their account be deleted. As an additional layer of protection, extremist Instagrammers also tend to have private accounts, allowing them to judge whether the right kind of people are requesting access to their network.

Besides relying on individuals reporting those profiles that they take issue with, the policing and blocking of undesirable and provocative content is a platform-controlled process that takes the form of interference with search results. For example, a search for #weed yields no results, while searching for #marijuana leads to an almost endless stream of images that are often also tagged with #weed, proving the existence of the hashtag on Instagram. However, no such measure seems to be in place for IS related hashtags; a search for #khilafah takes the user directly to a pool of potentially extremist content.

There is another, less crude way of interfering with search results that is best explained through the example of #thin. Searching for this hashtag does lead to the images tagged with it, but prior to being able to view them, the user is presented with a dialog box warning that images indexed under this term may be graphic, together with a link to more information about eating disorders. In the case of Islamic extremism and their use of politically and religiously charged terms, like #jihad or #mujahideen, outright blockage does not do justice to the diverse interpretations of these terms. As broad concepts within Islam, they are not inherently violent but by being used together with brutal imagery the hashtags are repurposed in a violent way by some users. Because of this ambiguity of meaning the policing of content becomes a delicate issue, especially when this ambiguity is only apparent to those 'in the know'.

In fact, as well as being used as a method of censorship by the platform, hashtags are used by IS supporters as a strategy for counteracting censorship. Using an ambiguous hashtag with a meaning that is not overtly extremist is a convenient way to fly under the radar of Instagram's censors. The hashtag #greenbirds, for example, seems harmless to most people, but alongside images of parakeets and support for the Philadelphia Eagles football team lie images of dead mujahideen and other references to jihadist martyrs. The 'green bird' metaphor is a gripping analogy that harks back to a book entitled *In the Hearts of Green Birds: The Martyrs of Bosnia* that eulogizes the martyrdom of foreign Islamic soldiers during the war in Bosnia. This is a poignant belief that the souls of fallen fighters are captured and carried in the hearts of green birds into paradise.



Source unknown.

The ambiguity that #greenbirds is charged with becomes even more explicit with the integration of emoji into Instagram's captions, comments, and even its search

function. IS supporters' use of emoji on Instagram is remarkable in its keeping with what has become conventional emoji usage. #Greenbirds is often accompanied by comments containing a green heart emoji. Hearts obviously mean different things in different contexts; but in the context of the Islamic State on Instagram, the green heart is a convenient portrayal of support and a further visual reference to the green bird analogy and love for martyrs. Another example is the pointed finger which is also used as a marker of alignment with IS' fundamentalist interpretation of tawheed. By mirroring the one finger salute of IS fighters, the pointed finger emoji is also distinct from the green heart as it reflects a physical action, and as such can become an even more convenient shorthand for support.

Ambiguity in meaning is precisely what makes the use of emoji such a convenient method for the pledging of support for IS without having to do so explicitly – potentially allowing users to fly under the radar and avoid censorship for as long as possible. The pointed finger and the green heart do not immediately evoke the idea of support for IS or martyrdom. For example, for those not in the know, the green heart could quite possibly evoke feelings of Irish pride or perhaps environmentalism. Sensitivity to the contextual meaning of these references is dependent on familiarity with actions and behavior that demonstrate backing for IS.

The Instagrammification of Islamic State

The question remains as to how Instagram can provide a more nuanced approach to censorship, fighting the spread of extremism while keeping in line with the social connectivity that is its *raison d'être*. While the blanket ban on #edm, for example, was used to impede spam on the platform, this method does not translate to countering religious extremism and the posting of extremist content. Placing a moratorium on #jihad would alienate the far larger community of Muslims who use the hashtag in the context of their spiritual struggle in daily life as opposed to a militaristic struggle against non-believers.

Facebook is a mobilizer. Twitter is an amplifier. Instagram is the romanticizer of causes and a voice for the idyllic. Be that as it may, perceiving Instagram as the whimsical younger sibling of Facebook and Twitter doesn't negate its power as a tool for individuals intent on spreading terror. Unlike Facebook or Twitter, everything about Instagram imbues content with a dreamy air, lending an ethereal quality to even the most graphic of images. With the use of in-app filters and external editing software, users call on globally familiar designs, aesthetic trends, and humor to increase their

images' potential popularity and circulation. Like non-extreme Instagrammers, IS sympathizers promote both their cause and themselves, revelling in the acquisition of likes and followers. For while this is a community of IS supporters, it is also a collection of individuals wishing to promote both themselves and their content. It is nevertheless the homogeneity of each individual's content in comparison with one another that shapes this community, a reflection both of the functionality and aesthetic of Instagram, and the single-mindedness of the Islamic State.



The Effect of the List

Nikos Voyiatzis

The Effect of the List

Nikos Voyiatzis | 6 November 2015

#information #libraries #databases #classification

'The best place to hide a dead body is page 2 of Google search results.' For some time now the image has been circulating online. The joke accurately introduces the core question of this essay: What is the effect of the list as the most used structure of presenting online information on the way people organize and find this information? What does it mean when people constantly use the format of the list when dealing with information?



The best place to hide a dead body
is page 2 of Google search results.

The funniest reply to this was "Or page 1 of Bing"

Source unknown.

Searching for information online, do we even pay attention to results that are kept out of view because of the hierarchical order? Or do we fall victim to the power of linear search results? The website Digital Synopsis, where the screenshot comes from, offers an interesting statistic: 'according to research by the online ad network Chitika, page one results enjoy a whopping 95% of all search traffic.' Probably most users who look for information through corporate web indexers like Google or Bing (and how else would they do that?), share this desire for a fast and easy information

recalling. Below the image is an interesting response: 'The funniest reply to this was "Or page 1 of Bing".' As a post on Reddit titled 'The best place to hide a dead body is page 2 of Google search results – or page 1 of Bing' makes clear as well, users do not consider the first page of Bing results to have the same strength as a similar page of Google results. Online information is classified by many different corporations and like any competitive market, the web has its winners and losers.

Looking for information on the web, users operate fixed structures and databases. Lists function as the interface for online information and thus the online information collector is constantly confronted with them. Popular search interfaces all consist of two basic modules: a search box and a list of results. Moreover, these search boxes and lists look more or less the same across different providers. From corporate web indexers to a freely accessible open online archive, all share a similar design made up of lists. This reveals how similar decisions have been made with regards to the navigation of information they provide.

I am interested in the list as a construction of culture that affects the act of (information) collecting through the enforcement of order. This order can be numerical, chronological, alphabetical, even random. Still, I see order as an ideological construct, an outcome of ideologies of effectiveness and productivity within a certain economical system based on knowledge, which demands order in the vast amounts of information that surround us. Not being able to find information on the web in another way, users are constantly navigating within hierarchic lists of results. As such they are being influenced by the political dynamics that are hidden within the technology of the list.

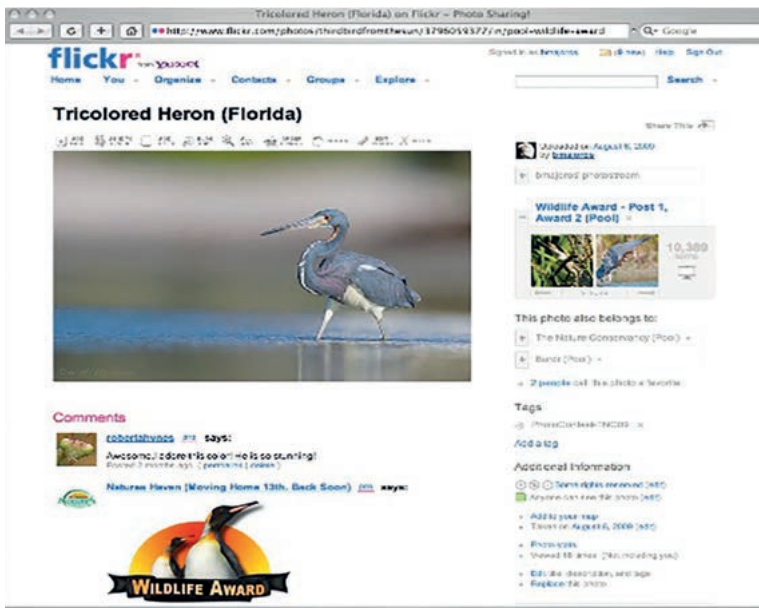
From Librarian to Data Indexer

The list can be regarded in the same way as all technologies and media. It shapes us and constructs us in a certain way. As a medium it becomes a norm through repetition. The list is a culture itself, the culture of organizing things in space in clarified and stable ways. And as any culture, it is being reproduced through individuals, who find it quite easy to use lists in order to organize themselves and their activities. Moreover, within web culture all users become catalogers and data indexers, navigating within or themselves creating lists all the time.

Humans are natural collectors. The technology of the list seems to be a meaningful and useful tool for that: it supports memory and provides easy and time effective access to information. The list can be seen as a material form of classification – classification being the act of organizing things in categories, be it information,

goods, artworks, ideas, or whatever you want. However, classification remains an immaterial mind process if it's not written down in lists. The list as such is an information technology and one of the first constructs that emerged following the technology of writing. In fact, some of the first writings of humanity were lists.

Library cultures can be described as pre-database cultures because libraries introduced the practices of information collecting that are also used in databases. Library cultures work with information collections and the design of systems that can contain the content, as databases do as well. However, libraries and databases do not deal with the organization of information the same way. While in library classifications the structures that contain information are adopted by librarians and catalogers who use them, which leads to controlled thesauri, digital or online database classifications bring a greater variety of classification systems. The role of professional cataloger is expanded to the general internet user, who operates as an amateur data indexer and collection manager. Not only do users make offline desktop collections, and classify and assign metadata to items found online, they also create online collections within networks like Pinterest, Flickr, Facebook, etc.



In which category does tricolored heron belong? Screenshot by author. Source: Flickr.

Moreover, since folksonomy – the practice of tagging by users – has emerged, subjectivities enter the wider cataloging practice of online information, often operating outside controlled vocabularies. Critical librarian Emily Drabinsky writes in 'Teaching the Radical Catalogue' how controlled vocabularies are thesauri of terms assigned to knowledge objects: 'every object in a library will be placed in a subject division and assigned controlled terms; nothing lies outside of the system.' Controlled vocabularies represent fixed, given values. Therefore, the librarian cannot assign subjective choices to the objects of the collection, while the online user can describe or tag pictures without using a guide of terms. For example, in this random Google search result showing an image hosted on Flickr, the image of the bird belongs to a couple of different collections, has metadata (thematic tags) assigned by the user, and sports comments from users at the bottom.

Unlike librarians who operate within category systems and controlled vocabularies, users can affect the online content with their subjective interventions. The language they can use is wider and seems freer. Moreover, users can create their own collections and classify them in various personal ways. But why is the persistent form of the list as we know it still the dominant aesthetic expression of classification?

Online information is accessed within structures that are ruled by global classification principles and standardized systems. While users can create their own topical collections, the space in which they construct them are either standardized operating systems or standardized websites. Furthermore, users mainly access this information through the same kind of standardized lists, either through search engines or in online libraries. So, even while users can arrange data in more different ways than librarians, they have to collect their information in lists with a very fixed spatial arrangement, and most of the times they also reproduce this normalized spatial arrangement themselves, probably because of the form's familiarity. Through repetition the structure then becomes part of culture; it becomes a norm. On top of that, users as librarians or data indexers only operate on a secondary level, that is to say that the web content that they find is already classified, and what they can add to that has to follow the classification principles given by the context of the host. The content can be affected, but the classificatory structures are strong and fixed.

Who is the Classifier in the General Archive?

A critical issue with classification related to power and control is who is exercising the classificatory practices. Besides looking at the cataloger – professional or

amateur – it is interesting to look at who creates cataloging systems. A librarian rarely has the chance to create their own system but has to follow the given standards adopted by the library system used. In the western world, libraries and archives have two main systems of library classification that are used and adopted by the majority of libraries or similar institutions. The most popular classification system is Dewey Decimal Classification. It was invented by the American librarian, educator, and entrepreneur Melvin Dewey in 1876. Next would come the Universal Decimal Classification (UDC) of the Belgian information and documentation scientist, and entrepreneur as well, Paul Otlet, published around 1907. Both systems rely on a fixed structure of basic categories, which are each divided into more subcategories. Within this structure items should be classified and described through a numerical system which indicate their category and their specific place within it.

Categories are classes; distinct, huge, stable entities. Every (new) concept fits into them as a narrower term, therefore, adopting new knowledge always means to narrow down within existing categories and not creating new categories. The UDC expresses a different model, though: it emphasizes semantic interconnections of objects through a different numerical system that uses symbols like + to indicate two different fields that an item can be assigned to. It's important to note that DDC is much more widely used than UDC. But both UDC and DDC were designed through personal efforts and views of these individuals who were envisioning organizational systems, and both Otlet and Dewey have been very passionate about their field. From what kind of background did they operate?

Both of them were very interested in the world of complex information and its organization. They've been dealing with information science even since before its formation as a science, related to cybernetics, control, and communication. They were also involved in business, in fact, both sold their catalog cards and systems. They shared standardization and globalization visions, which were mainly social, imagining organizational systems of information that would promote communication, knowledge, and peace. They seemed to believe that the world would become a complex of informational territory and that power would come together with knowledge. Particularly Paul Otlet was talking about a 'collective book' and a 'universal book of knowledge'. He created the Office International de Bibliographie in 1895 together with Henri La Fontaine, with the goal to create a universal library, the Mundaneum, where the UDC would be applied. The Palais Mondial, which later became the Mundaneum, opened in 1920 and was first hosted in Brussels. Its huge collection was accessed through a system of thematic index cards.

Another important figure of the same period is philosopher, sociologist, and political economist Otto Neurath. He understood the importance of pictorial language. Where Otlet and Dewey created a proto-database, a structure that would hold together a universally big amount of information, Neurath proposed methods of information visualization. Together with illustrator Gernt Arntz and his future wife Marie Reidemester, they designed the Isotype project: the International System Of TYpographic Picture Education. It contained 4,000 symbols designed by Arntz that represented key concepts of the fields of industry, politics, demographics, and economy. Otto Neurath focused on uneducated persons and wanted to facilitate their understanding of complex data, as Frank Hartmann writes in 'Visualizing Social Facts'. In other words, Neurath and his colleagues were dreaming of a universal system of information exchange, like Otlet and Dewey did too. But Neurath took distance from alphabetical norms, recognizing that illiterate people were by default excluded from powerful knowledge.

All these ideas should be taken into account when we attempt to describe the ideology behind current classification systems. They were early visions of a web society. The need of a universal language seems to always be present in the ideas of organization visionaries. And universal language (whether a classification system, a museum signing system, or a method of illustrating books), can be constructed only through standardization and institutionalization. The lists that materialize classification systems can be seen as the guards of universal language and of the institutionalization of thought; they are media that enforce systemization and thinking and acting through templates and standards.

The List and the Web

The web's information is classified under standards that nowadays are not simply defined by visionary individuals or knowledge institutions but by global corporations, particularly the online giants. On top of this, these corporations affect the process of information collecting by adding their algorithmic filters, which personalize content based on history, geographic location, and identity.

The classificatory nature of the web suggests that the web is dependent on bureaucracy and standardization and that through its classifications it functions like a normalizing medium. By classifying the world – and the self – it is normalizing them. Yes, also the self, since we do not only find information on the web about the world but also constantly upload or submit information about ourselves. A good

example is the user profile. Whether on an operating system or a social network, user profiles are constructed with lists, which materialize the classification principles of the service. It is not only the state anymore, as in the world of Foucault, that is involved in the biopolitical construction of a certain individual. The online corporation stands as another normalizer, being a provider of content and of the structures through which users access and see that content. Online companies do not only decide what we see but also how we see.

As said, internet users collect their information within already classified collections. The systematic use of web indexers, companies which index the content of the web and offer it already classified to the users, implies that we search and collect within indexed content and classification structures that reflect for example Google's decisions on information organization. As Stuart Hall explained in 'Representation and the Media', the classification systems citizens use in a society are learned. They are a Foucauldian means of training.

In our advanced information societies, we don't learn only ethical, social, or educational classification systems. These come mainly from the great systems of belief, religion, politics, culture, the community, or knowledge institutions. In the online world, classification systems come mainly from the online giants. These systems are bound with the ideas of productive, easy, effective, and fast use of information. It is important to keep in mind that the lists we operate in while collecting information online are there precisely to transform the search experience into a fast, productive, and unambiguous one.

As researcher Liam Young observes in his essay 'On Lists and Networks: An Archeology of Form', the list is a network and can facilitate networks. It is a fundamental model of a network because it is drawing things together, but also enforces networking through programming action. Looking at the beginning of the web, what I find interesting in Young's statement is that it reminded me of a document entitled 'HTML: A Representation of Textual Information and Meta Information for Retrieval and Interchange', written by Tim Berners Lee and Daniel Connolly in 1993. It shows that the list doesn't exist just within the front end of the web, in the interfaces that people use online, it is a structural element of the internet, embedded as it is within programming languages. Part of the document defines the design role of the list within HTML.

The element of the list (LI) and its particular expressions as ordered (OL), unordered (UL), MENU or DIR, are part of the syntax of HTML. This is important as it shows not

only the significance of the list as a design form of the web through an archeological perspective, but also reveals its syntactical nature, which is classificatory. As the document shows, in HTML there are also unordered lists! Of course, unordered here stands for not classified under a number but under a sign or bullet. Additionally, the opening list tag must be 'immediately followed by the first list element'. The concept of hierarchical organization is thus embedded within web design from the very start.

LISTS

A **list** is a sequence of paragraphs, each of which may be preceded by a special mark or sequence number. The syntax is:

```
<UL>
  <LI> list element
  <LI> another list element ...
</UL>
```

The opening **list** tag may be any of UL, OL, MENU or DIR. It must be immediately followed by the first **list** element.

Typical rendering

Berners-Lee and Connolly

20

The representation of the **list** is not defined here, but a bulleted **list** for unordered **lists**, and a sequence of numbered paragraphs for an ordered **list** would be quite appropriate. Other possibilities for interactive display include embedded scrollable browse panels.

list elements with typical rendering are:

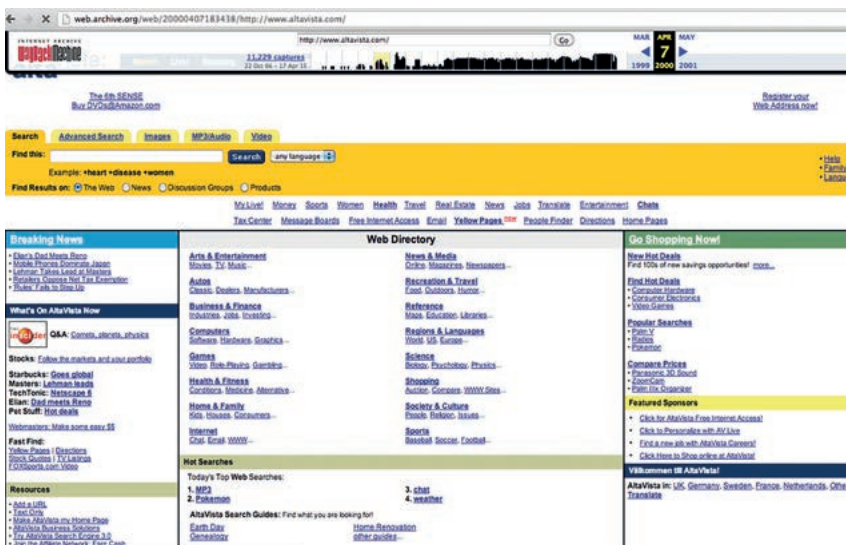
UL	A list of multi-line paragraphs, typically separated by some white space and/or marked by bullets, etc.
OL	As UL, but the paragraphs are typically numbered in some way to indicate the order as significant.
MENU	A list of smaller paragraphs. Typically one line per item, with a style more compact than UL.
DIR	A list of short elements, typically less than 20 characters. These may be arranged in columns across the page, typically 24 character in width. If the rendering software is able to optimize the column width as function of the widths of individual elements, so much the better.

Is the list part of the web's DNA? Screenshot by author. Source: Berners Lee, Tim and Connolly, David. 'Hypertext Markup Language (HTML): A Representation of Textual Information and Meta Information for Retrieval and Interchange', 1993.

Alison Adam also wrote about lists from a computational perspective. Her essay 'Lists' – part of *Software Studies: A Lexicon* – refers to two special types of lists: queues and stacks. Queues use the logic of processing the items listed first, while stacks do the opposite: they begin processing with the last item. Adam observes that a stack approach is not so common in our culture and cites the example of

people waiting in line for a bus: the first listed has to go first. Adam emphasizes that within our culture the notion of hierarchic classification is strong. This is something one can also observe in the lists of results from a query in a search engine. Who is really visiting the last listed item? People start from the first listed and this simply can't be avoided within the culture of the list: first listed becomes the higher in hierarchy, the most important and most relevant.

If we live in a world of information, the web is the part of the world where all information is ordered. Lists seem to impose order as a default function, an ideological construct that rules web design and supports not only hierarchies but commodification of information.



The search interface archeologist (via the Wayback Machine) could not expect to find mainly lists. Screenshot by author. Source: the Wayback Machine.

The List and (Search) Interface

A study of the history of some web indexes, which is possible through the Wayback Machine, reveals some interesting findings that highlight transformations in their interfaces. The screenshots document the emergence of Yahoo and Altavista

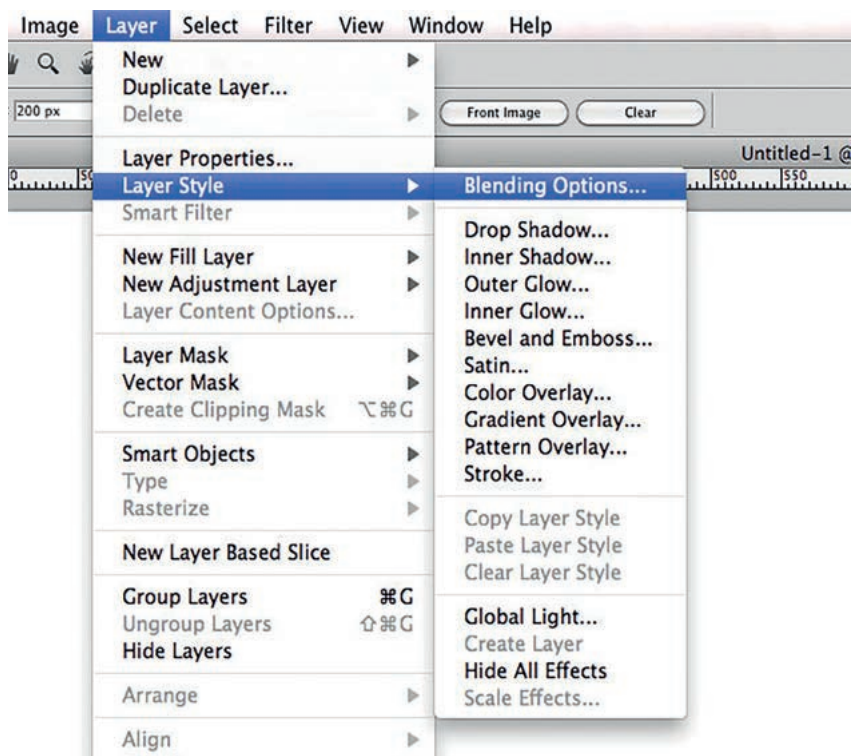
search engines in 1996, followed by Google two years later. As one can see, the search interfaces of Yahoo and Atavista do not follow the dominant model of today, which is Google's simple (basic) search. Even Google itself has been providing lists together with the search box. In some cases, they seem to have overdone it a little bit, when stating for example that they organized the whole web by topic. Gradually, Google's homepage became a simple white page with an empty search box, as it is at the moment. Even the category lists disappeared. The only list that remained is the list of results.

In general, search interfaces moved towards a model where natural language is replaced by a tag-based search. The Google Search Help documents this perfectly in its third tip: 'Choose words carefully: When you're deciding what words to put in the search box, try to choose words that are likely to appear on the site you're looking for. For example, instead of saying my head hurts, say headache, because that's the word a medical site would use.' Users are discouraged from constructing descriptive questions, like the ones they would ask the librarian. Instead, they are pushed to find a tag, a word that would include the best possible meaning of their research question.

But what does this say about the use of language and its universal connotations? It follows a tradition of abstraction that constitutes the history of writing. In *The Order of Things*, Foucault reminds us that the alphabet rearranged the order of the universe through the spatial arrangement of letters. The alphabet became the most abstract version of text-based cultures, as it arranged things in space in a fixed position. The alphabet in that sense is like the concept of the list. It is a template, a standard. The process of thinking more tag-based, as described above, seems to bring even greater abstraction. Users need to communicate with machines, and machines have to communicate with each other, in the process of online communication. So, while folksonomy on the web seems to place subjectivity in the foreground, the tag pulls it back again towards the abstract.

The major contribution of Google to this universal abstraction was that it simplified the search engine as much as possible. 'Search the web using Google' is the motto under the search bar. This might be what has caused the popular misconception that the content found on Google is the 'web', while in reality the results are part of the web that Google indexes. Web indexers classify content and users search for it. The page of the search results is the listing of the classified content. Corporations like Google have in that way become the top classifiers.

Returning to the idea of (social) hierarchy that Alison Adam writes about and expanding it to the lists we use to access information online, we can see how information retrieval based on hierarchical structures is the main characteristic of online search corporations. Contrarily, on the Internet Archive, which is a nonprofit knowledge institution, the search results do not appear hierarchically in the sense of ranking. Still, the mode of order cannot be bypassed. It is embedded within the culture of the list, a culture which makes order out of hierarchy, semantics, or even randomness. The list is an interface. A prototypical interface for collections, a catalog to access classified content, an online catalog of a library. But as we saw, even the interface of the web itself is built with a multiplicity of lists on all levels from the back to the front.



Photoshop itself must hate lists. Screenshot by author.

If the list is an interface, and also constitutes interfaces itself, it's important to understand what interfaces are and how we can critique them. Søren Pold and Christian Ulrik Andersen have worked on a cultural and aesthetic criticism of interfaces. In their 2014 'Manifesto for a Post-digital Interface Criticism', they point out some of the core qualities they find in interfaces. The first statement they make is that 'the interface is an ideological construct'. As they note, it 'reflects a balance of submission and control. This balance is often conditioned by ideology. On some occasions the user is seduced to interact without negotiating this relation.' Interfaces reflect power, control, and ideologies – which in the case of lists is the power of the ones who create classifications.

Search interfaces and their lists of results thus are ideological designs which embed users within the capitalistic notions of advanced information societies. They enforce a culture of extra productivity and they are there to offer extremely fast and clarified information recalling. They support the culture of effective use of commodified information, because they do not allow the feeling of hunting down information or of a sense of play. And mainly, they enforce order as an ideology. An attitude and a way of thinking that preserve the idea of knowledge and even a self being in order. Being under control. Clarified. Not vague. Thinking in lists, even listing things that can't be listed.

As the authors point out, oftentimes we are 'seduced' to use lists without even considering these points. This comes close to the very definition of ideology as an underlying dictation that functions on a level that people do not really understand, feel, or consider. It functions almost as a script. We perform web searches without acknowledging that our information experiences are subjected to this kind of information capitalism, operating within a loop that enforces a view of the web as primarily a place for fast and accurate information retrieval. But the web could actually be a playground of information, an online ambiguous space with unexpected possibilities.

The second point of Pold and Andersen's interface criticism is that 'the mechanisms of the interface constitute the sensible'. To them, 'this coinciding registering and representation takes place at all levels of the interface. The multimedia as cybernetic mechanisms constitute the sensible (even beyond the human) – i.e. the way we sense, what we sense, and how we act upon this.' Lists of results rule our information experience online. They manage to construct what is around us, what we perceive as our reality. The qualities engaged with the alphabetical list are embedded within this experience. The notions of a globalized, standardized

looping reality are expressed in the visual characteristics of the list of search results. The sensible is becoming globalized and unified. The sensual is the same for every online user.

Flat Online Experience

In this way, a certain (perception of) space is created, constituted through the way one navigates within the list but also by its formal characteristics. I approach it as an expression of a flat online experience. These lists are visually identical and look bureaucratic, reducing a possibly interesting online experience to a very flat one. Flat should be understood as boring but also as an experience where (the sense of) space is absent.

Navigating a list of search results is simple: going up and down, to the next and previous page, and picking items. The results are rendered in the form of a fundamental, most basic, simple list. Constructed out of thin, possibly black or grey lines which, by managing free space, constitute boxes that hold words inside. The lines create a grid, a very visual form a list can take, or can be absent. But even then they are still there as imaginary lines. They keep things in place.

The results are static, nothing moves except our eyes and hand on the mouse, while going from top to bottom and back again, and from page to page. The background doesn't move and the boxes don't move, the words of course don't move, they are what should remain still at the first place. Everything stays in place.

There is no depth. The background and the surface are two-dimensional modules, the one on top of the other. This flatness of the background and of the items, together with the quiet and non-movable structure, constitutes precisely the flat online experience. The totality of our senses is somehow excluded. No sounds, no movement. Additionally, this flatness destroys the feeling of space; one has to navigate linearly and hierarchically on the surface. The list of search results manages to construct a non-spatial experience.

Search result pages are information spaces that operate in the tradition of standardization and bureaucracy, with all its political implications and positions. It forces us to look at any content the same way. Is the world of information a space where we only want to be productive, effective, go, hit, find, use? Or could we see the internet as a real space built on and for information? A printed list cannot provide the sense of depth due to the materiality of its technology. However, an

online list lives within an environment that makes possible the manifestation of a space, with characteristics that could consist of a spatial and sensual experience.

Why this doesn't happen can be understood through the history of 3D electronic space and 3D online space, and the reasons why they never became dominant spatial design models, even if they emerged already in the early 90s. Ideas related to a more interesting and rich information experience obviously are not new. The work of Muriel Cooper and the Visible Language workshop of MIT, 'Information Landscapes' from 1994, was a significant contribution for thinking through the possibilities of electronic media, information, and space. The work, a demo of data visualization proposals, presented a three-dimensional textual typography space, investing in the possibilities of interactivity and animation. With help of infinite zoom, transparency, and live data, the user would navigate a full three-dimensional space, changing their position upon their desire.

Still, information productivity and standardization do not allow playful and deep experiences with information. In 'Information Landscapes' the space was purely textual, but the navigational possibilities transformed the list-notion of space to something much more interesting. As David Reinfurt writes, the design was focusing on 'creating connections and making meaning'. In other words, the way information was organized was not invested in clarifying and oversimplifying but in subjective associations. A flat online experience doesn't stimulate connections, because the fixed spatial arrangement of the list assigns fixed relationships to items. Therefore, such flatness reduces even the possibilities of learning or thinking something new.

It seems that approaches like Cooper's did not become popular due to efficiency reasons. To start, 3D approaches would be really difficult to handle from the old dial up connections. The tools were also not easily accessible to the wider audience without a computer at home. Additionally, online information is foremost a commodity. The structures that hold it support the goals of the classifiers with capital C. The simple form of the list thus materializes and guarantees the commodification of information.

After all these decades of flat online experiences, it seems that the tools for a new approach in information organization are accessible – and still we insist on the normalized list for retrieving or ordering information. By now, a good amount of literacy in web design or information structures can be acquired online for every user. Moreover, the web is full of content, not only through web indexers but in online archives, libraries, and other repositories. All the elements are there to create new information landscapes. Tons of digitized material from museums,

libraries, and archives are available online after decades of digitization – offering the ideal material to design explorative and deep online information experiences. The results of a search could be displayed in a much more playful way that would emphasize collecting of information online not as picking items from a list but more as exploring a world of possibilities. It seems to me that we do not do it mainly because, as internet users, we operate under the power of repetition.

Overall, looking for information on the web is dominated by principles of over-simplification, extra productivity, efficiency, and clarification for easy use. These methods have been transforming our potential information experiences in consumer experiences full of order. The list as a main expression of these principles has reduced the abundance of the online experience. Destroying the possibilities of ambiguous association and hyper subjective opinion formation, and not allowing for serendipitous experiences, they have been flattening online space and therefore the online subject's self. Do we still have the time to see the internet as a space? To oppose the effects of the list? To counter flat online experiences? I think we do.

‘That Others May Die’: Autonomous Military Technology and the Changing Ethos on the Battlefield

Gustavo Velho Diogo



‘That Others May Die’: Autonomous Military Technology and the Changing Ethos on the Battlefield

Gustavo Velho Diogo | 25 June 2018

#autonomousweapons #ethics #war #discourse

As heavily reported by media in May 2018, Google announced that it won't renew its contract with the US Defense Department for an artificial intelligence endeavor known as Project Maven. The tech giant took the decision amidst a widespread public backlash and multiple employee resignations. Google was assigned to provide an AI-powered image labeler that would allow the Pentagon to browse a 'Google Earth-like' drone system, according to one of the emails leaked during the scandal.

The backlash over Google's controversial alliance didn't come out of nothing. Already last year, more than a hundred of the world's top robotics experts signed an open letter to the United Nations indicating the risks of automation in military technology. Their aim was to generate awareness about the role of artificial intelligence in transferring lethal decisions to machines that can search for, identify, and engage targets on their own. As in many other fields, what is worrying to many is the supposed ability of smart tech to learn from previous examples and then adapt to circumstances it may not have encountered before. 'Unlike a conventional computer that uses pre-programmed instructions to tackle a limited range of possibilities, the AI recently designed by the US military forces is learning to make its own judgment – and that's very dangerous,' says Andrew Nanson, chief technology officer at Ultra Electronics, a world-leading group of businesses operating in the defense, cyber security, and energy markets.

But while the discussion on killer robots' autonomy assumes the center stage, another critical perspective remains partially concealed: the effects of such automated weaponry and warfare for the discourses of the military. Traditionally, military reasoning has always had its own cardinal virtues: courage, sacrifice, heroism, and so on. Among other things, being 'ready to die' seemed to be one of the main factors in victory, according to Carl von Clausewitz in his most famous book, *On War*. But given that autonomous machines cannot suffer the consequences of reciprocal exposure to death, nor the humans who deploy them from a great distance, can this situation influence the overall ethos of war? Or, putting it differently, what moral considerations can be made about an army that partakes in a risk-free war-making?

Invincibility Across Time

In his article 'In Defense of Drones: A Historical Argument', David Bell says that 'if our technology is new, the desire to take out one's enemies from a safe distance is anything but.' Bell reminds us that the colonial wars are still the worst example of how the application of technology can drive unequal conflicts, or in some cases, massacres. During the Battle of Omdurman in Sudan, 1892, for example, there were forty-eight Anglo-Egyptian soldiers killed against nearly ten thousand Muslim men pierced by Maxim's bullets – the first fully automatic machine gun. And this was by no means unprecedented. As Voltaire puts it: 'whoever was rich became almost invulnerable in war,' meaning that a combat can turn into one-sided killing by whom has the newest technologies at hand.



British-Egyptian troops firing Maxims along the west bank of the River Nile in Sudan.
Source: Wikipedia.

In the early 1900s, a report called *Synthèse de la Guerre Sous-marine* provided an impression of the state of mind of the first military submarines' crews at a time when, without sonar, most surface vessels were incapable of detecting their presence. 'They were invincible. For them, the war became a game, a sport, a kind of hunt in which they needed to do nothing but enjoy the spectacle of the agony of their victims. They, meanwhile, would be sheltered from any attacks and, once back in port, they could busy themselves recounting their hunting prowess.' It could be said that, more often than not, the use of new defense technologies falls in a continuous and asymmetrical distribution of power, in which unconditional victory becomes the only reasonable justification for the use of such technologies. Most of the times, the recurring disproportion of weaponry is what guaranteed the defeat of the enemy, making these asymmetries easier to be accepted by the ones benefiting from them.

However, every time disproportionate warfare happens, certain values are damaged. According to Grégoire Chamayou, a research scholar in philosophy at the Centre National de la Recherche Scientifique, it was probably at the moment of NATO's intervention in Kosovo in 1999 that the clearest case of a spectacle of armed violence came about. Acknowledging the loss of a helicopter and eight soldiers' lives in the first two days of the war, the American public opinion demonstrated that another Vietnam episode would come with an exorbitant political price. Hence, motivated by a rationale of minimal losses, the Air Forces adopted a flight altitude of 15,000 feet to their bombers, a secure distance that meant they were nearly out of reach of the enemy's anti-aircraft defenses. As a result, NATO planes carried out 38,004 raids in seventy-eight days without sustaining a single loss among the members of their crews.

By doing this, NATO, but especially the American forces, managed to invent a kind of warfare that inflicted zero deaths on their own men. Consequently, they also invented a controversial understanding of war as an activity in which human dying and killing are not exchanged. Acknowledging this, Amnesty International made several inquiries about how relevant and accurate these air strikes were and to what extent civilians were considered, since it seems to be impossible to specify a target from the altitude that ensured the lives of NATO's pilots. In other words, for Amnesty International, the decision to preserve the lives of US soldiers ended up exposing thousands of innocent people to an unequal distribution of violence.

The current use of drones in battlefield can be considered a direct result of the strategies adopted in Kosovo, and in practice represents the accumulation of

technology that this rationale was able to produce and deploy since the 1990s. Moreover, claims Chamayou, by providing an even greater sense of invulnerability due to their unmanned nature, drones symbolize an imperative and historical shift concerning the ethical principles of warfare. In this new scenario, combatants rather than civilians are the ones assured with immunity from the effects of fighting. Therefore, today as yesterday, the technology used to protect from death the ones who fight is what is redefining the Western sense of what a warrior should be. By distancing themselves completely from hand-to-hand combat, soldiers are in another moral category altogether, where they no longer confront the enemy but slaughter or hunt them, Chamayou suggests.

Drones, Kill Bots, and the Decision-making Loop

So far, autonomous and human-aided robots have played a marginal role in warfare. According to Mark Smith, a reporter on military technology from BBC, drone campaigns in continuous, low-intensity conflicts like the ongoing War on Terror, represent just a fraction of the potentiality of these machines. For Smith, the Pentagon will likely improve its efforts to build an all-encompassing strike capability using robotic systems that can survive in contested spaces against sophisticated adversaries like Libya, Syria, China, or Russia. In fact, the US Department of Defense released a directive called 'Autonomy in Weapons Systems' in 2012, which defines the guidelines for the adoption of autonomous weapons for the next decade, until 2022.

Parts of this directive are conservative regarding the implementation of full autonomy, stating that robots must always follow a human operator's intent, and that such systems may only be used after passing a series of internal reviews considering that most of them are produced by third-party suppliers. However, the highly profitable industry that backs innovation in armed forces is continuously pushing for a greater implementation of artificial intelligence in weapon systems that will eventually be able to seek enemy targets and engage them without any human intervention. Today, drones can fly autonomously and AI helps to classify both people and objects, but operators still make the decision to fire.

Paul Scharre, a senior fellow of the Center for New American Security, says that automation is a natural consequence of digital mediation in war and that every step taken by the US Department of Defense towards innovation gradually reduces the role of human control and decision-making in the functioning of weapons.

For Scharre, this is a cyclical process in the sense that the more technology is deployed in the battlefield, the higher the amount of data that is generated will be and the more we will need machines to process it. 'Look at the fighter pilot who has to deal with huge amounts of sensory data and take decisions in a split second. Although the US government policy at this time assures that the trigger to kill is pulled by the human, it might not remain that way as the data overload becomes impossible for the pilot to handle.'

Already in 2016, an artificially intelligent fighter pilot known as Alpha, reportedly defeated two human-controlled attacking jets in a combat simulation (see, 'AI Fighter Pilot Wins in Combat Simulation'). According to Doug Barrie, a military aerospace analyst at think tank IISS, Alpha uses a form of artificial intelligence based on the concept of 'fuzzy logic', in which a computer considers a wide range of options before making a decision. Because a fighter jet produces so much data, it is not always obvious which maneuver is most advantageous or, indeed, at what point a weapon should be fired. Fuzzy logic systems can weigh up the significance of these individual pieces of data before making a decision. Barrie says that the researchers' key achievement was to even take into consideration in real-time the air-to-air environment, which is extraordinarily dynamic and has a vast number of parameters.

All in all, it could be said that as the usage of military AI escalates, it pushes the decision-making process to a point where humans cannot possibly react fast enough. In many situations that arise in modern warfare, the time to make intelligent, informed choices becomes just too short. In response, countries will have to adopt active protection systems to automatically sense and defeat potential threats. Today, more than thirty nations are already employing some level of human-supervised, autonomous weapons to defend ships, vehicles, and land bases from attack. These systems do not engage targets on their own, but the pressure of an increasing battlefield tempo is forcing autonomy further towards the point of robots making that final, lethal verdict. At that moment, human agents would be neither in the loop (in the sense of participation), nor over it (in the sense of supervision).

The mechanism behind this increasing tempo of war can be better explained by Kittler, who argues for a notion of autonomy in technology that counterpoints the mainstream idea that innovation happens according to societal demand. Kittler fundamentally disagrees with the proposition made in the mid-60s by Marshall McLuhan, that technology can be seen as an extension of men. In fact, he says that technical innovations follow the model of military escalations, only referring

and answering to itself. An example could be the emergence of nuclear weaponry during the Cold War, despite its rejection all over the world. For Kittler, the conditions that determine our social history follow a process that is completely independent of human will or volition. While McLuhan hopes that we will reach a sort of equilibrium with technology, Kittler goes into the opposite direction: there is no equilibrium because technology is the one autonomously extending to us. Put in another way, we have no power to dictate the direction that technology takes – we merely watch its unpredictable development.

The Ethical Constraints of Automation

Many of the ethical questions raised today by automated weapons are a direct continuation of those brought up almost three decades ago by the ‘war without risks’ waged in the skies over Kosovo. While back in the 90s institutions like Amnesty International put in check the convenience to kill from a safe distance, currently the ethical dilemmas involve the deployment of soldier bots to which death is irrelevant. What both scenarios describe, is the use of weapons that make it possible to rule out the occurrence of casualties on one’s own side. This affects the whole concept of combat: these weapons transform war from being potentially symmetrical into a unilateral affair of death-dealing, in which the opponent is left without the very possibility of striking back. In a way, warfare in that case not only escapes the canonic framework designed for armed conflicts, but also all the narratives traditionally attached to it.



The MQ-9 Reaper Operator Badge. Source unknown.

Grégoire Chamayou suggests that there are two frameworks for the legal conceptualization of war. The first is of a penal nature and legitimates punishment when the opponent is guilty, armed violence being the sentence. The other is connected to the notion of a duel or what is known as *jus in bello*: both combatants are part of a particular situation in which they have the common and therefore acknowledged right to kill each other, without this being a crime. Fundamentally, Chamayou claims, this is what the term 'war' means: a defined moment when armed violence is decriminalized and opened up to both sides in combat.

When it comes to unmanned weapons that are gradually becoming autonomous, the question of legitimation can be reduced to whether or not they conform to the principles normally applied to military conflicts. A fighter who kills in line with the clauses of *jus in bello* is granted legal immunity. But under what convention or belief can the use of robots be subjected to decriminalization? In which legal terms could it be represented? This is still a gray area in military ethics. If one has the right to inflict death without offending the law, it is because that right is granted to both sides. In other words, the use of unmanned weapons, preventing on one side the potential loss of lives, on the other becomes morally unjustified.

Technology thus forces us to rethink its relationship to war. A comparison between the value attached to a robot's capacity to preserve lives and the virtues attributed to the ones participating in an armed conflict, is enough to reveal the nature of the changes taking place in the military discourse. Characteristics like courage and heroism always stood in the heart of this discourse and, according to François Lagrange, serve to make the butchery that soldiers face in combat acceptable. In his book *Les Combattants de la Mort Certaine*, Lagrange states that every high-ranking officer knows that they must grow in their men a strong sense of self-sacrifice, ultimately guiding them to death. Without such guidance, war would be impossible.

But what happens when the desire to inflict losses on the enemy is finally detached from its alleged inherent sacrifice? Chamayou explains that, with the introduction of armed forces that are no longer susceptible to death, the heroic narrative forged by the army dissolves into a simple imperative of self-preservation, leading to a troublesome notion of 'virtueless war'. So, even if traces of bravery are shown here and there, it could be said that they are merely residues of an ideology that is no longer in line with its praxis, and that such demonstrations will likely become less and less in the near future. As Hegel puts in *Outlines of the Philosophy of Right*, 'true courage', that of combatants, lies not so much in suppressing the fear of death but rather in the soldier's 'readiness for sacrifice in the service of the state'.



Loss and grief are intrinsic to the experience of war. Source: Pixabay.

The main issue of the trade between sacrifice and self-preservation is that, put in military discourse, using automated weapons to kill also means the highest degree of cowardice. This paradox seems to bother even the army's own personnel, the ones that are the actual beneficiaries of this new technical reality. John L. McLucas, author of the book *Reflections of a Technocrat*, reminds us that the most inflamed critique of the use of armed robots came not from civil organizations but from Air Force pilots who defended their traditional values. For them, war without risks relegates the enemy to the role of a body to which violence is applied in the form of an algorithmic, administrative measure. In sum, it is the clash between new weapons and old frameworks that produces a crisis in military ethos.

In 'The Organizational Construction of Hegemonic Masculinity', Frank Barrett offers another approach to the use of automated fighters and the decline of military morale. For him, the use of the word 'unmanned', the official term for 'crewless' as in 'unmanned aerial vehicle' (UAV) or 'unmanned weapons', is problematic. Barrett observes that the term subconsciously comes to mean a male that is less masculine, emasculated, or *un-manned*, and ends up denigrating the vigor or effectiveness of those persons the unmanned object was supposed to protect. 'Obviously the

drones threatened their own employment, their professional qualifications, and their institutional position, but the threat was also to their own virility, which was largely associated with the taking of risks.'

To improve this situation, the Pentagon in September 2013 considered to allow military honors to pilots, sensor operators, and others who provide supervision to human-aided robot strikes. Traditionally these medals are awarded as a recognition of bravery in battle, something that has started to change meaning. Chamayou writes that Luther Turner, a retired colonel who is now piloting drones, firmly believes it takes bravery to fly a UAV – particularly when it involves taking someone's life. According to Turner, there is a counterpart in killing even if the confrontation with death is heavily mediated (and ultimately is not one's own death). In this context, the meaning of bravery changes and relates to 'what is right' regardless of the means used to achieve a particular end.

Colonel Turner states that pilots of remote-controlled robots are experiencing high levels of Post-Traumatic Stress Disorder (PTSD), a medical condition commonly reported by combatants who have faced body-to-body confrontation in war. So, in line with the new narrative created by the military forces, soldiers who run killer robot's campaigns in a foreign territory can still be regarded as victims of their own actions, which at once restores their moral balance and their status of bravery. In this speculative scenario, it is the mental health that is vulnerable and exposed to violence, a kind of violence that is not anymore reciprocal but unilateral and exerted by an apparatus that offers no resistance to the act of killing. The army becomes the frightened audience of its own inflicted terror.

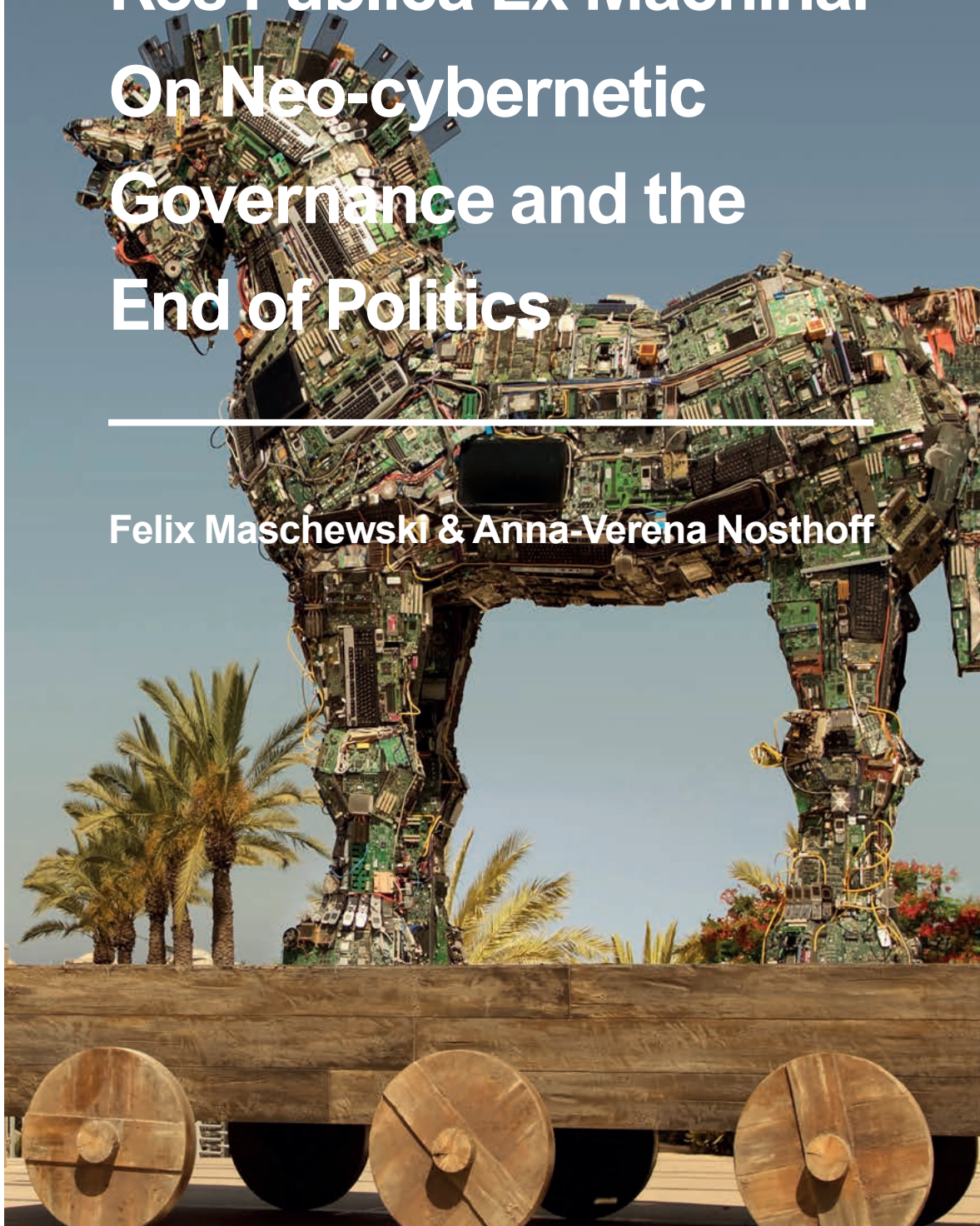
Cases like these present us to a newborn ethics where technologists, weapon manufacturers, and remote pilots are represented as being virtuous due to their ability to rule out any possibility of casualties in war. What is taking place then is a switch from a traditional morality based on values like self-consciousness to another based on a narrative of self-preservation. As Hegel vastly debated in his critique of virtue, war – and the inevitable confrontation of death that it fosters – traditionally played a crucial role in forming and maintaining ethical consciousness as a universal principle. For him, only by giving up the attachment to life involved in self-preservation, consciousness breaks through to a higher form of selfhood, a transition from mere fear of death to the true awareness of life. In other words, ethics is directly associated with consciousness (of oneself and the other), which is embodied in the wider structure of society.

One could argue that the programmed replacement of live armies for autonomous bots proposed by the US military, feels more convenient and in line with the current rhythm of technical innovations, and at the same time establishes an appealing discourse on common defense and general welfare. Since Vietnam, the state's capacity to wage war has been challenged for its use of American citizens as the ultimate resource. However, this important inversion of values requires that narratives that were enforced in the past, come out as outdated in a so-called post-heroic age. In this new historical period for the military, one-way armed and autonomous violence persists to be referred to as combat, in a vast but almost unnoticed redefinition of the term.



Res Publica Ex Machina: On Neo-cybernetic Governance and the End of Politics.

Felix Maschewski & Anna-Verena Nosthoff



Res Publica Ex Machina: On Neo-cybernetic Governance and the End of Politics

Felix Maschewski and Anna-Verena Nosthoff | 18 October 2018

#nudging #technocracy #SiliconValley #post-democracy

In 2017, Denmark sent the first digital ambassador, Casper Klynge, to Silicon Valley. The aim of this move of ‘techplomacy’ was, as Klynge explained, not simply to distribute greeting notes by the Danish queen. Rather, the intention was to ‘update diplomacy’ based on the recognition that a few tech companies have obviously become much ‘more influential than some nation states.’ Klynge framed the new political course in the manner of a well-known old but still utterly contemporary mantra: ‘There is no alternative.’ In a similar vein, Denmark’s Foreign Minister Anders Samuelson highlighted the importance of the step as follows: ‘Just as we engage in a diplomatic dialogue with countries, we also need to establish and prioritize comprehensive relations with tech actors, such as Google, Facebook, Apple, and so on. (...) The idea is, we see a lot of companies and new technologies that will in many ways involve and be part of everyday life of citizens in Denmark.’

Likewise, French President Emmanuel Macron announced that it is time for France to also enhance diplomatic relations with the digital players newly entering the terrain of politics. De facto, however, this means that the country is not only sending an ambassador to Palo Alto but is also ready to invite the largest tech companies as partners to create projects such as ‘Station F’, the world’s greatest start-up-incubator – Silicon Valley made in France. Indeed, because companies like Google, Apple, Facebook, and Amazon have managed to accumulate a market value equal to the size of the second most powerful European national economy, Emmanuel Macron has notoriously developed a plan to become a ‘start-up nation’.

Denmark and France are just two of many examples. One might also add the relationship between 'Facebook President' Barack Obama and Mark Zuckerberg; or, regarding the realm of healthcare, between Obama and Eric Schmidt; or, regarding the current realpolitik order, PayPal founder Peter Thiel's advisory activities for Donald Trump. They represent an (a-)political way of thinking which follows the tech-laws of solutionist efficiency. The rationale was nicely summed up by a slogan promoted by the German Free Democratic Party (FDP) during the country's 2017 election campaign: 'Digital first, *Bedenken* [which is German for concern or reflection] second.' Indeed, it seems that political leaders across the globe have come to realize that many tech entrepreneurs have arguably overrun a variety of states when it comes to power, money, and – one might add – influence.

The political reactions to this new awareness are homogenous, as is exemplified by Canada's Prime Minister Justin Trudeau, who in October 2017 pitched his own country as a 'Silicon Valley, plus everything else Canada is.' Against this background, he has characterized Google as a 'partner who is determined to find innovative solutions to make our communities even better places to call home.' Thus, Trudeau's invitation to Alphabet Inc.'s Chairman Eric Schmidt and the subsequent plans of Toronto to 'sell' a part of its city (i.e. Waterfront, Sidewalk Labs) to Google to create a new playground for experimenting with proprietary AI-based products and services was not surprising. As Schmidt claimed after the deal was set in stone, the hope is to create something important and powerful that might give rise to new ideas that can be adapted and implemented in various other cities around the globe.

We know where you are. We know where you've been. We can more or less know what you're thinking about. - Eric Schmidt, Chairman Alphabet Inc.

The idea to implement tech on new political test grounds is also mirrored by recent digital initiatives that focus more explicitly on the nation-state. The most poignant concepts in this realm include ideas such as 'algorithmic regulation', 'government as a platform' (Tim O'Reilly), 'direct technocracy' or 'info-states' (Parag Khanna), 'smart states' (Beth Noveck), or 'social physics' (Alex Pentland), to name a few. It is vital to explore some of these concepts in greater detail and on a more theoretical and philosophical level. What form of politics is implicitly being promoted in this context? As we argue, such concepts are best examined as very idiosyncratic reformulations of cybernetic approaches to the political,

which date back to the 1960s. We will explore how they implicitly rearticulate early visions of cybernetic politics in their insistence on the vitality of feedback structures, in allegedly blending hierarchy with tenets of decentralization, in shifting the focus from the individual to the interrelations between humans, including the social fabric encompassing them and, most importantly, in how far this might raise problems. This rather theoretical perspective will allow us to examine the extent to which such neo-cybernetic concepts promote a rather reduced vision of the political, or politics as such. Current approaches to 'smart' states or cities and their corresponding models of governance mark not an entire automation of politics, but at least in certain respects do show a pragmatic actualization of cybernetic visions of the state, against the background of surveillance capitalism. As such, theoretical *dispositifs* that have emerged from early ideas of cybernetic politics are still marking certain effects.



Cybersyn operations room. Source: unknown.

More so, we are in a period in which smart technologies are becoming more 'intelligent', increasingly invisible, and ever more difficult to grasp. This makes it all the more crucial to understand their cybernetic origins alongside their political connotations. To name a prominent and much-discussed example, Stafford Beer's

socialist cybernetic project to regulate Chile's economy and politics through feedback systems at the beginning of the 1970s, was still based on the implementation of telex machines, whereas current neo-cybernetic politics are able to instrumentalize sensor systems, algorithms, AI, and thus an entire environment designed by significantly more complex digital techniques. Such 'smart' techniques are far more suitable to implement and actualize what political cyberneticists already envisioned a few decades ago, when the internet was still a centralized 'Arpanet', Wiener's *Cybernetics* had just become a revolutionary bestseller, and Silicon Valley was just about to become the melting pot of a new counterculture.

Performance Before Politics

Before we delve into the origins of cybernetics, a review of some of the most recent theoretical trends in neo-cybernetic politics is useful. We start with one of the most controversial figures. Political scientist and consultant Parag Khanna, who is a strong advocate of the ultimately cybernetic idea that connectivity is of intrinsic political and moral value, has argued for what he terms 'direct technoracy'. By this term, he refers to the intermingling of real-time information and an 'info-state', which for the most part would be governed by non-party experts. Such info-states, examples of which are Singapore and Switzerland, are driven by the ideology of a supposedly neutral pragmatism and with maximizing efficiency as the only aim. 'In the long run, the quality of governance matters more than regime type,' Khanna argues, believing that, 'with good governance comes trust.' Khanna's book *Technocracy in America* was published just weeks after Trump's election, a cleverly chosen moment to actively promote his tech-expertocracies with their presumably non-reactionary and, as he puts it, 'non-ideological' form of anti-politics. He is convinced that 'America has more than enough democracy. What it needs is more technocracy – a lot more.' Most dubiously, Khanna openly promotes not only Singapore but also China – with its announced 'social credit system' – as role models for both the US and Europe.

Khanna's neo-cybernetic agenda can in part be traced back to Tim O'Reilly, one of the first defendants of neo-cybernetic concepts. O'Reilly coined the term 'algorithmic regulation' around 2011 and 'government as platform' in 2010. Here, 'regulation' is in no way comparable to any traditional notion of governmental regulation, O'Reilly's aim is rather to replace regulation with reputation, such as mutual ratings. For instance, he argues that services such as Airbnb and Uber can provide valuable models for providing maximum efficiency and oversight. According to O'Reilly, they

do a great job ensuring quality and availability while 'drivers who provide a poor service are eliminated', as he states in 'Open Data and Algorithmic Regulation'.

Although O'Reilly is not as specific as Khanna about the countries that should serve as role models for proper neo-cybernetic politics, and seemingly envisions an agenda that is less state-centric than Khanna's, in 'Government as Platform' he equally depicts the government's prior function as a 'service provider', while propagating the outsourcing of government activities to the private sector: 'The whole point of government as platform,' O'Reilly argues, 'is to encourage the private sector to build applications that the government didn't consider or doesn't have the resources to create.' It is an argument that comes close to some suggestions by political scientist and ex-Obama-consultant Beth Noveck, who is also a member of the 'Digitalrat' recently announced by the German Bundesregierung. Noveck repeatedly refers to corporate platforms – from LinkedIn to Facebook – when describing how the future of digital democracies should ideally appear.

Early Fundaments of Cybernetic Politics

Regarding the fundaments of cybernetic politics, it is essential to understand that from a cybernetic viewpoint content has no essential value for politics. As the engineer Claude Shannon envisioned in the beginning of the 1940s, the meaning and semantics of a message can be considered irrelevant insofar as information is thought of as a measure of freedom of choice: 'The two messages between which one must choose,' he argues, 'can be anything one likes. One might be the text of the King James Version of the Bible, and the other might be "Yes".' Rather than on meaning, Shannon's focus was on reducing noise where possible and on reinforcing smooth and predictable communication within governable channel systems. In fact, he even drew an explicit distinction between information and meaning, adding that the terms must not be confused.

Although Shannon's *Mathematical Theory of Communication* had no explicit political connotation, Karl Deutsch's *The Nerves of Government*, which explicitly drew on Shannon's information theory, was exclusively focused on the state. In what appears like an almost logical political conclusion drawn from Shannon's reductive focus on information, Deutsch proposed that the level of democratization is directly related to the intensity of measured communication. For him it was equally irrelevant which contents run through the channels of communication, whether the information flow concerns the banality of consumption or a political movement,

as long as autopoietic mechanisms of self-learning automatically lead to a new balance or homeostasis; a new controllable order. Seen from the meta-perspective of cybernetic regulation, what is important is not what and how one communicates but rather that one communicates – that the information flow is continually kept alive and that it follows a foreseeable, anticipatable direction. The information flow must not be suppressed or restricted but, instead, reinforced and encouraged. Nevertheless, a certain level of anarchic contingency or even resistance and thus disorder, has always been vital for both classically cybernetic and neo-cybernetic politics. It keeps the system in motion and through additional information, offers the possibility of its optimization, expansion, and regulation, to continually establish newly ordered wholes.



Technocracy is a term first coined by the Californian engineer William Henry Smyth in 1919. In the 1920s and 1930s it gained popularity through the so-called 'technocracy movement' in the US and Canada, which proposed to replace politicians with engineers. Image by Dorothea Lange. Source: Wikimedia.

According to the cybernetic conception of government, the problem of representation and the divergence between the rulers and the ruled, including the classic problem of how to overcome or mediate this divide, has become at least partially obsolete. In fact, it is thought to be resolved by a conception of politics that can continually establish orders through a real-time regulation of crowds,

masses, and affects. The political task par excellence becomes the direct or indirect creation of order from noise, whereby the state's goal is reduced to its mere systematic survival – what Habermas termed, in a more critical vein, equivalent to 'the biological base of survival at any cost, that is, ultrastability.' This term 'ultrastability', popularized by Ross W. Ashby in the early 1940s, is derived from the mechanisms of a classic homeostat, a device that reacts to external signals with the aim of self-regulating through constant feedback, thus reaching constant, stable states. More systematically, ultrastability can be defined as the capacity of a system to adapt smoothly to unpredicted changes by reducing noise. Early political cyberneticist Eberhard Lang went so far as to think of the general will as ultimately and solely concerned with the 'absence of disturbances' – a notion that seems reminiscent of Khanna's aim to provide the greatest efficiency of a nation's people at any cost.



Hermann Schmidt, the founder of cybernetics in Germany. Source: Wikimedia.

The essential telos of a cybernetic state, then, is not a productive dissensus, let alone a form of democratic, agonistic pluralism, but the other's integration into the same – in other words, the expansion of the whole via adaptation. Hermann Schmidt, the founder of cybernetics in Germany, affirmatively frames this logic as an imperative: 'to control everything that is controllable, and to render controllable that which cannot yet be controlled.' The political conclusion to be drawn from this is summed up by the authorial collective Tiqqun, who define the task of cybernetic governance in the era of networks as follows: 'governing means ensuring the interconnection of people, objects, and machines as well as the free – i.e., transparent and controllable – circulation of information that is generated in this manner.'

The Cybernetic Hypothesis is thus a political hypothesis, a new fable that after the second world war has definitively supplanted the liberal hypothesis. Contrary to the latter, it proposes to conceive biological, physical, and social behaviors as something integrally programmed and re-programmable. More precisely, it conceives of each individual behavior as something "piloted," in the last analysis, by the need for the survival of a "system" that makes it possible, and which it must contribute to. - Tiqqun, *The Cybernetic Hypothesis*

A Technocratic Future?

The problem with the information-centered approach as grounded in Shannon's mathematical theory of communication and Ashby's view of ultrastability, becomes evident when looking a bit closer at Beth Noveck's book *Smart Citizens, Smarter State*, as well as some of her talks. Noveck, who was Obama's chief technology officer during his presidency and an adviser to his open government campaign, early on and quite excessively praised the advantages of social networks and did not shy away from presenting parts of the mechanisms employed by corporate platforms such as Facebook and Twitter as innovative role models for a new form of digital government. As she summarizes in a TED-talk: 'You've got 3,000 employees at Facebook governing 900 million inhabitants. We might even call them citizens.' She asks the audience: 'Why is Twitter so successful? Because it opens up its platform. It opens up the API to allow (...) new applications to be built on top of it, so that we can read and process information in new and exciting ways. We need to think about how to open up the API of government.' And she predicts that 'the

next great superpower is going to be the one who can successfully combine the hierarchy of the institution (...) with the chaos and the excitement of networks.' We'll all be working together, as she says, engaging 'in the practice of governance.'

Noveck's last comment in particular, translates cybernetic management-pioneer Stafford Beer's early vision of what he termed a 'democratic machinery' into the vocabulary of contemporary information technology. Sure, the idea of government as referred to by Noveck is far from that of an Opsroom with a couple of steersmen acting on the basis of information, as Beer envisioned for the sake of cybernetically controlling Allende's Chilean economy of the early 1970s. It seems closer to Beer's project Cyberfolk – which was never realized – a sort of cybernetic nerve system established between the demos and the politicians, enabling the former to rate the latter in real time via so-called 'algedonic meters' (pain-pleasure buttons on their TV) and based on a vision of radical transparency. Noveck would arguably welcome such quantified direct-democratic mechanisms. For her, the role of the government should be reduced to the role of a facilitator, its primary goal being to establish a 'platform for coordinating citizen action,' based on the mechanisms of a dedicated feedback logic.

A pragmatic actualization of at least some aspects of early cybernetic visions of the state becomes evident. As mentioned, Karl Deutsch envisioned democratic politics as exclusively depending on its measurable level of information flows, 'emancipated' from deliberation, lengthy parliamentary discussions and arguments, and what Habermas thought of as communicative action. Although Noveck provides a political approach that is far more participatory in its design than that of Parag Khanna or Karl Deutsch, it nevertheless has serious problems regarding issues of participation and equality. That is, Noveck addresses governance (which she mostly uses as a substitute for politics in toto) as a coordination and logistics problem that urgently needs to be solved using better, or smarter, technology. According to her, the issue is to widen 'the pool of potential problem solvers (...) with good solutions to a hard problem.' A similar notion becomes evident in Khanna's vision of what he considers a 'smart' state, in which progress should be measured according to so-called KPIs, or key performance indicators. Many of the advantages that Khanna lists are concerned with smooth functioning, logistics, and better service. One Singaporean example that he mentions is the installation of touchscreen iPads for citizens to rate the state's public toilet and passport check services.

Such a fundamental concern with a frictionless functioning of the whole and a rather limited focus on the handling of complexity through regulatable connectivity, echoes

Shannon's interest in the intensity rather than the content of communication flows. It leaves little room for a discussion of more content-related and straightforward political matters, such as inequality, issues of freedom, racist biases, algorithmic injustices, and so on. Nor does it suggest how and why the sole focus on logistic efficiency might necessarily increase democratic deliberation. It should be evident that to participate in rating a service is not similar to political participation in the sense of making one's voice heard or articulating political demands. It is hardly surprising that Khanna at one point praises Swiss 'technocratic' workers who are 'trained, competent and productive' for not going on strikes. 'Democracy,' he concludes, 'doesn't deliver Switzerland's perfectionist efficiencies; technocracy does.' Again, the focus on maintaining stability at any cost is reminiscent of a classic cybernetic focus on ultrastability as the aim of politics, which is conceived as a 'system' in the first place. In fact, to Deutsch, the history of revolutions appeared 'to a significant extent as the history of internal intelligence failures in the governments that were overthrown.'

Noveck, while criticizing the lack of integration of citizens into the process of governmental decision making and institutional design, eventually rejects expert professionalism in governance and political thought only to propose an integration of a different body of experts of, above all, technicians. Criticism of political elitism eventually leads to promoting a new elite that is first and foremost in possession of smart, 'practical know-how'. The role of the citizen is mostly reduced to providing information. In this context, Noveck refers to what she calls 'an army of citizen scientists reporting data through an app,' which she mistakes for actual 'participation in government,' or what Arendt would term political action [*Handeln*] as opposed to, and precisely not correlative with, fabrication [*Herstellen*]. Even though Noveck proposes a model far more inclusive than Khanna's army of state-rating citizens, her design has limitations of its own. It is quite telling that she explicitly criticizes Habermas's discourse ethics for only stressing the necessity of mediated forms of public discourse, i.e. a discourse that depends on institutions (such as, traditionally, the print media). Habermas, she argues, undermines more direct participatory roles that citizens could play at the level of governmental decision making. She conveniently leaves out Habermas's revitalization of autonomous judgment, argumentative participation in public discourse, and the normative framework initiated through public debate. She herself only emphasizes immediate data delivered to the government. In her neo-cybernetic agenda, there is little room for the formation of discursive political will and so it implicitly repeats Khanna's belief that political representatives spend 'too much time arguing rather than doing something.'

In Noveck's model, general participation is reduced to reporting systemic disruptions, whereas participation in decision making is open only to those with relevant knowledge or know-how that might contribute to solving a particular problem. Moreover, according to Noveck, such 'citizen experts' should be listed publicly and ranked according to their individual capacities in close cooperation with private platforms such as LinkedIn and Coursera, on which citizens can publicly inform others of their progress, newly awarded certificates and so on. It seems like a highly competitive, market-driven form of self-organization or self-governance that largely relies on 360° feedback models. Such forms of self-organization implicitly propose decentralized governance through flexible markets that allocate individual capacities. Politics is limited to coordinating expert knowledge with the aim of finding relevant technical solutions in real time. Additionally, Noveck claims, such expertise can be attained by anyone, since technical education is now available 'freely' through Coursera and other similar platforms. She thinks of expertise as being democratized simply through internet access and access to (corporate) platforms, without considering issues of equality, including potentially unequal distributions of free time, access to resources, the ability to attain such knowledge, and issues of privacy and transparency regarding the use of personal data.



*The engineer Howard Scott, who was the leader and founder of the technocracy movement.
Source: Wikipedia.*

Even more problematic is Noveck's explicit reliance on nudging techniques, as elaborated upon in Sunstein and Thaler's *Nudge*. According to the report *Nudging all over the World*, behavioral economics have already affected policy initiatives in more than 130 countries, whereas the frame of application usually remains rather non-transparent. Noveck affirms what Thaler and Sunstein call the implementation of a 'libertarian paternalism': the aim of influencing, subtly controlling, and above all anticipating human behavior through changing choice architectures, while at the same time delegating responsibility to the level of the individual in a typically neoliberal fashion. By now it will come as no surprise that such a limited understanding of freedom can be traced back to the historical origins of cybernetics, particularly to Stafford Beer. Although he followed a diametrically opposed agenda politically speaking, namely a socialist model, he defines freedom as a 'computable function of effectiveness'. And this understanding in turn hints at the intellectual mindset of another and particularly debatable pioneer of neo-cybernetic politics: Alex Pentland.

The Problem with Social Physics

Not only Noveck and Khanna aim to disrupt conventional politics and allegedly antiquated notions of freedom. Certain Silicon Valley pioneers and also the director of the MIT Media Lab Alex 'Sandy' Pentland, proclaim a similar agenda that leaves behind both negative and positive conceptions of freedom. Rather, they have an entirely transformed notion of freedom, which is only realized through being regulated when necessary. It is freedom as framed by Stafford Beer: 'The freedom we embrace must yet be in control.' Even more straightforward is the manner in which he continues – with words that are uncannily reminiscent of Parag Khanna's and, as we will see, Pentland's: 'We have to become efficient in order to solve our problems; and we have to accept the threat to freedom that this entails – and handle it.'

Pentland's agenda of datafying the social and the problems this entails, can best be described by the media philosopher's and mathematician's Dieter Mersch's recent diagnosis and critique of cybernetics. As Mersch argues, throughout the history of cybernetics the notion of participation has been reduced to merely equal access (as could also be said of Shannon's mathematical understanding of communication). Mersch reminds us that participation stems from the Latin 'participatio' and originally means 'Teilhaftigmachung, Teilnahme, Mitwirkung [*contribution*]'. The concept itself however rests on a certain ambiguity, as it does not specify what participation relates to or how far it goes, or what it encompasses: 'The 'Mit-'

[with] in 'Mitsein' [*being-with*] remains as indeterminate as the forms of participation.' According to Mersch, cybernetics rests on a reduced understanding of participation, thus implying a limited notion of both the social and the political, which are neither deducible from a technical infrastructure or logistical setting, nor necessarily follow from it. As is particularly evident in current forms of the social – such as social networks – the exclusive focus on technical infrastructure and coordination almost automatically reinforces a predominance of mathematics and a mathematical imaginary, producing what German sociologist Steffen Mau has recently termed a 'metric we'.

This becomes especially evident with regard to Pentland's neo-cybernetic vision of what he terms 'social physics': whereas his governance approach essentially rests on participation, it is not at all concerned with what Mersch (drawing on Jean-Luc Nancy) refers to as the 'Mit-' of 'Mitsein': a shared dimension of the social that cannot be (technically) constructed but is always precarious, a horizon at best of what is still to come. As such, Pentland's vision of governance illuminates the difference between socio-politically rich and socio-politically limited notions of participation. Seen from a political viewpoint that considers autonomous judgment as a necessary precondition for self-determined political participation, Pentland's behavioristic focus on the *homo imitans* and on adaptable behavior is particularly alarming. Close to what Obama advisor Sunstein has popularized under the rubric of 'nudging,' that is, a form of choice architecture that strives to subconsciously influence or push human behavior in certain directions, Pentland seeks to influence the interrelations *between* humans.

In a 'Talk at Google,' Pentland distinguishes this 'peer-to-peer behavior' from 'individual behavior'. The former largely rests on adaptation, a term that became extremely popular during the rise of cybernetics as a science, for instance, in the works of W. Ross Ashby and Norbert Wiener. Pentland wants to shape the social fabric by implementing quantifiable incentives that modify interactions. Such a focus on the network is, according to him, twice as efficient as focusing on an isolated individual. One of Pentland's experimental examples refers to the attempt to raise the overall activity level of a group during a lazy winter. There were two groups: in one people were rewarded with a certain amount of money according to their activity level, in the other people were assigned buddies. In this second group, a reward was not given when one had maximized one's own activity level but if one's buddy did. In other words, your buddy was rewarded for you being active and vice versa. Pentland's experimental results showed that the second group was far more effective, given the extent of interactions

between people and the structures of mutual control and responsibility established between them.

What becomes evident here is a shift from depicting the human as capable of autonomous judgment, to behavioristic models that have given up on the idea of the autonomous decider. Indeed, this holds not only for the shift from *homo economicus* to what is now deemed behavioral economics in economic theory; the same occurs in political theory, which long rested on the idea of the individual as a rational decider or enlightened citizen, but is now considered a 'system' even by political theorists and sociologists (examples are the German sociologist Armin Nassehi, who has argued for a smart steering of the social, or political scientist Philip Howard in his *Pax Technica*). The individual is no longer conceived as an entity, but depicted as a '*divisum*,' as Günther Anders termed it a long time ago: dissociable, divisible, and partly shapeable, whereby the distinction between activity and passivity becomes obsolete. And to return to the issue of freedom, the implementation of choice architectures and the redesign of what Pentland terms the 'social fabric' might not directly determine or violate free choice – Sunstein and Thaler have repeatedly emphasized that they seek to preserve 'freedom,' therefore calling their approach '*libertarian paternalism*'. However, they hardly seem compatible with either positive or negative freedom, precisely because influence on individual behavior works primarily on the subconscious level.



Cyber Horse at Tel Aviv University. Image by: No, No, No, No, No, Yes - Ad Agency in Tel Aviv.

The End of Politics as we Know it?

To conclude, these examples ranging from classical cybernetic concepts of the state to their neo-cybernetic pendants, shed light on a paradigm shift that concerns the very fundamentals of our understanding of politics and the political. As Tiqqun provocatively argued in *The Cybernetic Hypothesis*, this hypothesis expresses nothing less than 'the politics of the "end of politics".' The cybernetic notion of politics offers at best a reduced understanding of it – an understanding that is already imminent to Shannon's influential theory of communication and that still shapes neo-cybernetic concepts of the political. The most worrying aspects of such an understanding are the absence of any notion of democratic deliberation and antagonistic dissensus, and the overarching focus on avoiding noise, irritations, and emancipation. The formation of long-term political will is replaced by a direct response to immediate needs. And thus, politics is tendentially reduced to feedback.

It can be argued that the stylization of digital technology to the *ultima ratio* of producing allegedly stable, self-settling orders, solely based on the mechanisms of algorithmic problem solving, has opened entirely new spheres of influence that will eventually establish what media theorist Roberto Simanowski terms a 'numerocracy': a quantified society partly self-regulated through real-time data flows. Correspondingly, Evgeny Morozov speaks of a general tendency towards 'solutionism' by which he addresses politics' increasing reliance on technological solutions and other cybernetic techniques such as behavioral economics, evaluations, and ranking lists, or more generally, the setting of incentives and feedback loops to reinforce regularity.

Although a citizen score such as the system that China has introduced seems an impossibility in Western societies, at least on such a large scale, an interesting hint for the future is provided in the *The New Digital Age*, by two of Obama's top advisors on technology and terrorism issues, one of whom is Eric Schmidt, the executive chairman of Alphabet Inc.:

To be sure, there will be people who resist adopting and using technology, people who want nothing to do with virtual profiles, online data systems or smart phones. Yet a government might suspect that people who opt out completely have something to hide and thus are more likely to break laws, and as a counterterrorism measure, that government will build the kind of "hidden people" registry we described earlier. If you don't have any

registered social-networking profiles or mobile subscriptions, and on-line references to you are unusually hard to find, you might be considered a candidate for such a registry. You might also be subjected to a strict set of new regulations that includes rigorous airport screening or travel restrictions.

The so-called 'hidden people' would have far greater difficulties than the network participants. Digital technologies, especially when blindly adopted by governments as problem-solving tools, in such ways only further manifest a state without alternatives and deny a fair share to those who do not conform to the cybernetically formed homogenous mass. Rather than abolishing friend-enemy distinctions, the ultimate enemy – the outsider, the other – becomes what Günther Anders foreseeably termed the 'unadaptable fellow'.

What has to be thought through then, is how the cybernetic reduction of the political notion of *equality* to the rather contentless notion of *equal access*, and the perception of the *social* in the sense of mere *connectedness*, is complicit with the ways in which democracies today tend to undermine and, eventually, cancel their very own fundamentals – the scandal around Cambridge Analytica, SCL, and Facebook is just one out of many examples of such a tendency. In this respect, we agree and finally conclude with a decisive dictum of Jürgen Habermas, formulated at a time when cybernetics was just beginning to become popular and that only seems to have gained relevance in the dawning age of post-democratic, post-truth politics: 'This challenge of technology cannot be met with technology alone. (...) The redeeming power of reflection cannot be supplanted by the extension of technically exploitable knowledge.'

Biographies

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Tim Brouwer is a designer and researcher who investigates material cultures and human-technical relations through the tangibility of digital artifacts. His work currently focuses on the inclusion of myths in technological conceptions to counteract the binary reduction of algorithms and automation. Tim holds a BSc in Product Design from the Amsterdam University of Applied Sciences and an MA in Research Architecture from Goldsmiths, University of London. This longform derived from his thesis for the bachelor Product Design in cooperation with the MoneyLab project run by the Institute of Network Cultures. His work can be found at timbrouwer.com.

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Susan Clandillon is an alumna of the University of Amsterdam (UvA) New Media and Digital Culture Masters. During this program her research looked into networks

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Maisa Imamović is an Amsterdam-based writer, designer, and web-developer who likes to draw. She graduated from Gerrit Rietveld's Architectural Design department in 2018. She also pursued the Full-Stack Web Development certificate at BSSA. Her main research interest is the island of boredom and the impossibility to be bored. Through her blog called Living Industry, she studies trends, clichés, and conditions of honesty experienced by many. For her design practice she creates situations of doing nothing/cutting productivity to zero. Since her web-development journey, Maisa has been observant of how programming languages program

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Rose Rowson is a PhD candidate in the department of Modern Culture and Media at Brown University. She has a research MA in Media Studies from the University of Amsterdam, where she wrote her thesis on magical writing practices in digital culture. Part of this work appears in 'Repost or Die: User Generated Deities and Ritual Magic on Instagram', included in the edited collection *Believing in Bits: Digital Media and the Supernatural* (eds Simone Natale and Diana Pasulka, 2020). Rowson's research is broadly concerned with critically engaging recursive tropes and metaphors used by developers, advertisers, historians, and theorists to explain the development of/ascribe qualities to digital computation. Her work engages (new) media theory, science and technology studies, and textual and cultural critique. At the time of writing, Rowson is in the early stages of developing her dissertation, which is about babies.

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Resources

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Introduction: Celebrating Five Years of Online Tech Critique

Miriam Rasch

- Branch, John. 'Snow Fall', *The New York Times*, 2012, <http://www.nytimes.com/projects/2012/snow-fall/index.html#/?part=tunnel-creek>.
- Calabretta, Isabella. 'Longform; It's Long but It's Finite!', PublishingLab, 13 February 2017, <http://www.publishinglab.nl/craftinglongforms/2017/02/13/longform-its-long-but-finite/>.
- Elkin, Lauren. 'The Digital Critic as Public Critic: Open Source, Paywalls, and the Nature of Criticism', in Houman Barekat, Robert Barry, David Winters (eds) *The Digital Critic: Literary Culture Online*, OR Books, 2017.
- Farrant, Marc. 'Theory Online: A New Critical Commons?', in Houman Barekat, Robert Barry, David Winters (eds) *The Digital Critic: Literary Culture Online*, OR Books, 2017.
- Steyerl, Hito. 'In Defense of the Poor Image', *e-flux Journal* #10, November 2009, <https://www.e-flux.com/journal/10/61362/in-defense-of-the-poor-image/>.

Choose How You Feel: You Have Seven Options

Ruben van de Ven

- Boehner, Kirsten, Rogério DePaula, Paul Dourish, and Phoebe Sengers. 'How Emotion Is Made and Measured,' *International Journal of Human-Computer Studies* 65 (4) (2007): 275-291.
- Debord, Guy. *Society of the Spectacle*, transl. Ken Knabb, Bureau of Public Secrets, 2014 (1967).
- Didi-Huberman, Georges. *Invention of Hysteria: Charcot and the Photographic Iconography of the Salpêtrière*, transl. Alisa Hartz, MIT Press, 2003 (1982).
- Handford, Forest. 'The Promise of Emotion-Enabled Augmented Reality (AR)', *Affectiva*, 2 October 2015, <https://blog.affectiva.com/the-promise-of-emotion-enabled-augmented-reality-ar>.
- Khatchadourian, Raffi. 'We Know How You Feel,' *The New Yorker*, 12 January 2015, <http://www.newyorker.com/magazine/2015/01/19/know-feel>.
- 'Kuleshov experiment', Vimeo, <https://vimeo.com/192462541>.
- Ruckenstein, Minna. 'Visualized and Interacted Life: Personal Analytics and Engagements with Data Doubles,' *Societies* 4 (1) (2014): 68-84.
- 'Sightcorp - Real-time Face Analysis and Eye Tracking Technologies',

- YouTube, 30 December 2013, <https://www.youtube.com/watch?v=jMD1WDbCXhs&feature=youtu&t=1m24s>.
- Weissman, Cale Guthrie. 'Watch this AI Platform Assess Trump's and Clinton's Emotional Intelligence', *Fast Company*, 21 October 2016, <https://www.fastcompany.com/3064863/watch-this-ai-platform-assess-trumps-and-clintons-emotional-intelligence>.

A Dream of an Algorithm

Agnieszka Zimolag

- Berardi, Franco, Gary Genosko, and Nicholas Genosko. *After the Future*, AK Press, 2011.
- Davies, Erik. 'The Spiritual Cyborg', *Cybersociology, Issue Seven*, https://www.cybersociology.com/files/7_erikdavis_html.html.
- Haraway, Donna. 'A Cyborg Manifesto', *Socialist Review*, 1985.
- Leckey, Mark. 'TECHNO-ANIMISM', Interview by Lauren Cornell, <http://thecomposingrooms.com/research/reading/2013/TECHNO-ANIMISM.pdf>.
- Shaviro, Steven. *Connected, or What It Means to Live in the Network Society*, University of Minnesota Press, 2015.
- Shirow, Masamune. *Ghost in the Shell*, 1989.
- Viviani, Antoine. *In Limbo*, 2015.
- Von Gollan, Casey A. 'User Generated Content', 23 August 2011, <http://pooool.info/user-generated-content/>.

Turing for the Masses

Bennet Etsiwah

- The SorryBot and PhilosophyBot can be found at <https://twitter.com/BotSoSorry> and <https://twitter.com/SoPhilosophyBot>.*
- Boshmaf, Yazan, Ildar Muslukhov, Konstantin Beznosov, and Matei Ripeanu. 'The Socialbot Network: When Bots Socialize for Fame and Money', *Proceedings of the 27th Annual Computer Security Applications Conference, ACSAC '11* (2011): 93-102.
- boyd, danah. 'What Is the Value of a Bot?', *Data & Society: Points*, 25 February 2016, <https://points.datasociety.net/what-is-the-value-of-a-bot-cc72280b3e4c>.
- Fader, Lainna. 'A Brief Survey of Journalistic Twitter Bot Projects', *Data & Society: Points*, 26 February 2016, <https://points.datasociety.net/a-brief-survey-of-journalistic-twitter-bot-projects-109204a8d585>.
- Guilbeault, Douglas. 'Growing Bot Security: An Ecological View of Bot Agency', *International Journal of Communication* 10 (2016): 5003-21.
- Hegelich, Simon. 'Invasion Der Meinungs-Roboter', *Analysen & Argumente* 221 (2016),

- http://www.kas.de/wf/doc/kas_46486-544-1-30.pdf?161222122757.
- Kollanyi, Bence. 'Where Do Bots Come from? An Analysis of Bot Codes Shared on GitHub', *International Journal of Communication* 10 (2016): 4932-51.
- Lloyd, Alexis. 'Our Friends, the Bots?', *Data & Society: Points*, 25 February 2016, <https://points.datasociety.net/our-friends-the-bots-34eb3276ab6d>.
- O'Reilly, Tim. 'What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software', 30 September 2005, <http://www.oreilly.com/pub/a/web2/archive/what-is-web-20.html?page=1>.
- Parrish, Allison. 'Bots: A Definition and some Historical Threads', *Data & Society: Points*, 24 February 2016, <https://points.datasociety.net/bots-a-definition-and-some-historical-threads-47738c8ab1ce>.
- Savage, Saiph. 'Activist Bots: Helpful but Missing Human Love?', *Data & Society: Points*, 30 November 2015, <https://points.datasociety.net/unleashing-the-power-of-activist-bots-to-citizens-1fe888f60207>.
- Woolley, Samuel, danah boyd, et al., 'How to Think About Bots', *Data & Society: Points*, 24 February 2016, <https://points.datasociety.net/how-to-think-about-bots-1ccb6c396326>.

Proof-of-Transaction: The Materiality of Cryptocurrency

Tim Brouwer

- Cho, Renee. 'The Damaging Effects of Black Carbon', *State of the Planet*, 22 March 2016, <https://blogs.ei.columbia.edu/2016/03/22/the-damaging-effects-of-black-carbon/>.
- Coinopsy, <https://www.coinopsy.com/dead-coins/>.
- Deleuze, Gilles. 'Postscript on the Societies of Control', *October*, Vol. 59 (1992): 3-7.
- DuPont, Isaac Q. *An Archeology of Cryptography: Rewriting Plaintext, Encryption, and Ciphertext*, PhD diss., Faculty of Information, University of Toronto, Canada, 2017.
- Hui, Yuk. *On the Existence of Digital Objects*, Minneapolis and London: University of Minnesota Press, 2016.
- Husserl, Edmund. *Logical Investigations*, Vol. 1, trans. J.N. Findlay, London: Routledge & Kegan Paul, 1970.
- Kern, Michael. 'Beyond the Headlines: A Look at Two Conflicting Bitcoin Theories', <https://cryptoinsider.21mil.com/beyond-headlines-look-two-conflicting-bitcoin-theories/>.
- Kirby, David. 'The Future Is Now: Diegetic Prototypes and the Role of Popular Films in Generating Real-World Technological Development', *Social Studies of Science* 40 (2009), Issue 1.
- Latour, Bruno. 'Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts', 1992, <http://www.bruno-latour.fr/sites/default/files/50-MISSING-MASSSES-GB.pdf>.

- Rouse, Margaret. 'Consensus Algorithm', *WhatIs.com*, 2017, <https://whatis.techtarget.com/definition/consensus-algorithm>.
- Schuppli, Susan. 'Material Witness', <http://susanschuppli.com/research/materialwitness/>.
- Shevchenko, Vladimir. *Chernobyl: Chronicle of Difficult Weeks*, Russian Press Service, 1986.
- Scott, Brett. 'Riches Beyond Belief', *Aeon*, 28 August 2013, <https://aeon.co/essays/so-you-want-to-invent-your-own-currency>.
- Shannon, Claude E. *A Mathematical Theory of Cryptography*, Memorandum MM 45-110-02, Sept. 1, Bell Laboratories, 1945.
- Simondon, Gilbert. *On the Mode of Existence of Technical Objects*, trans. Ninian Mellamphy, Paris: Aubier, Editions Montaigne, 1958.
- Tanenbaum, Joshua. 'Design Fictional Interactions', https://www.researchgate.net/publication/272490351_Design_fictional_interactions_why_HCI_should_care_about_stories.
- Tapscott, Alex and Tapscott, Don. *Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business, and the World*, London: Penguin UK, 2016.

Luxury & Paranoia, Access & Exclusion: On Capital and Public Space

Anastasia Kubrak & Sander Manse

- Arnolds, Wayne. 'Singapore Makes a Pitch to Draw the Wealthy', *The New York Times*, 26 April 2007, <http://www.nytimes.com/2007/04/26/business/worldbusiness/26singapore.html?pagewanted=all>.
- Chang, Alvin. 'How the Internet Keeps Poor People in Poor Neighborhoods', *Vox*, 12 December 2016, <https://www.vox.com/2016/12/12/13867692/poor-neighborhoods-targeted-ads-internet-cartoon>.
- Google Urbanism, <http://googleurbanism.com>.
- Newcomer, Eric. 'Uber Starts Charging What It Thinks You're Willing to Pay', *Bloomberg*, 19 May 2017, <https://www.bloomberg.com/news/articles/2017-05-19/uber-s-future-may-rely-on-predicting-how-much-you-re-willing-to-pay>.
- Page, Larry. Google I/O 2013: Keynote, YouTube, 15 May 2013, https://www.youtube.com/watch?v=9pmPa_KxsAM.
- 'Seasteading – Cities on the Ocean', *The Economist*, 3 December 2011, <http://www.economist.com/node/21540395>.
- Vollaard, Ben, Martijn Akkermans. *Effect van het WhatsApp-project in Tilburg op het aantal woninginbraken – een evaluatie*, October 2015, https://hetccv.nl/fileadmin/Bestanden/Onderwerpen/Woninginbraak/Documenten/Effect_van_het_WhatApp-project_in_Tilburg_op_het_aantal_woninginbraken/tilburg-whatsapp_191015.pdf.

Club-wise, A Theory of Our Time

Maisa Imamović

Hoare, George. 'On Collective Freedom: Mark Fisher on Rave, Psychic Privatisation, and Baroque Sunbursts', *Medium*, 3 September 2018, <https://medium.com/@georgehoare/on-collective-freedom-mark-fisher-on-rave-psychic-privatisation-and-baroque-sunbursts-f328c0e067d7>.

Lefebvre, Henri. *Critique of Everyday Life*, Verso, 2014.

Marcus, Greil. *Lipstick Traces: A Secret History of the Twentieth Century*, Harvard University Press, 2001.

Sante, Luc. *The Party*, The New York Times, 5 October 2003, <https://www.nytimes.com/2003/10/05/magazine/the-party.html>.

I, For One, Welcome Our New (Google) Overlords

Lasse van den Bosch Christensen

Casti, Taylor. 'You Can now Visit an Exact Replica of Denmark in Minecraft', *The Huffington Post*, 25 April 2014, http://www.huffingtonpost.com/2014/04/25/denmark-minecraft-to-scal_n_5213328.html.

Chopra, Aidan. '2011 EMEA Google Geo Users Summit – Keynote: Aidan Chopra', *GoogleGeoCommunity* (video), 1 November 2011, <http://www.youtube.com/watch?v=xVacZfQP0t0>.

'Hack the Police!', *Commissioner's 100*, London Metropolitan Police Service (2014), <http://c-100.org/hack/>.

Howe, Jeff. *Crowdsourcing: How the Power of the Crowd is Driving the Future of Business*, Random House Business Books, 2009.

Howe, Jeff. 'Crowdsourcing: A Definition', 2 June 2006, http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing_a.html.

Know Your Meme, 'I, For One, Welcome Our New Insect Overlords', *Know Your Meme*, 21 July 2009, <http://knowyourmeme.com/memes/i-for-one-welcome-our-new-insect-overlords>.

Kücklich, Julian. 'FCJ-025 Precarious Playbour: Modders and the Digital Games industry', *Fibreculture 5* (2005).

Lessig, Lawrence. *Code Version 2.0*, Basic Books, 2006.

Martin, J. 'A New Home for @Last Software', *Google Official Blog*, 14 March 2006, <http://googleblog.blogspot.nl/2006/03/new-home-for-last-software.html>.

Rotman, David. 'How Technology Is Destroying Jobs', *MIT Technology Review*, 12 June 2013, <http://www.technologyreview.com/featuredstory/515926/>

how-technology-is-destroying-jobs/.

Terranova, Tiziana. 'Free Labor', in Trebor Scholz, *Digital Labor*, Routledge, 2013.

Trimble, Official Website, <http://www.trimble.com/>.

Fictiocracy: Media and Politics in the Age of Storytelling

Davide Banis

Andersen, Kurt. 'How America Lost Its Mind', *The Atlantic*, September 2017, <https://www.theatlantic.com/magazine/archive/2017/09/how-america-lost-its-mind/534231/>.

Black, Jeremy. *Other Pasts, Different Presents, Alternative Futures*, Indiana University Press, 2015.

Brown, Seth. 'Alex Jones's Media Empire Is a Machine Built to Sell Snake-Oil Diet Supplements', *New York Magazine*, 4 May 2017, <https://nymag.com/intelligencer/2017/05/how-does-alex-jones-make-money.html>.

Carey, James. *James Carey: A Critical Reader*, Eve Stryker Munson and Catherine A. Warren (eds), University of Minnesota Press, 1997.

Certeau, Michel de. *The Practice of Everyday Life*, University of California Press, 1984.

Curtis, Adam. *HyperNormalisation*, 2016.

Dalton, Meg, Karen K. Ho, and Pete Vernon. 'The Trump Bump', *Columbia Journalism Review*, Fall 2017, https://www.cjr.org/special_report/trump-bump-sopan-deb-katy-tur-sam-sanders-prachi-gupta-fahrenthold.php.

Dery, Mark. 'The Merry Pranksters and the Art of the Hoax', *The New York Times*, 23 December 1990, <https://www.nytimes.com/1990/12/23/arts/the-merry-pranksters-and-the-art-of-the-hoax.html?pagewanted=all>.

Evans Richard J., "'What if' Is a Waste of Time", *The Guardian*, 13 March 2014, <https://www.theguardian.com/books/2014/mar/13/counterfactual-history-what-if-waste-of-time>.

Gabler, Neal. 'Now Playing: Real Life, the Movie', *The New York Times*, 20 October 1991, <https://www.nytimes.com/1991/10/20/arts/now-playing-real-life-the-movie.html>.

Jenkins, Henry. 'Revenge of the Origami Unicorn: The Remaining Four Principles of Transmedia Storytelling', 12 December 2009, http://henryjenkins.org/blog/2009/12/revenge_of_the_origami_unicorn.html.

Jenkins, Henry. *Convergence Culture: Where Old and New Media Collide*, New York University Press, 2006.

Murray, Janet and Davide Banis, 'The Holodeck Reloaded: An Interview with Janet Murray', *Medium*, 20 November 2017, <https://medium.com/submarine-channel/the-holodeck-reloaded-13d9d393917a>.

Rose, Frank. *The Art of Immersion: How the Digital Generation Is Remaking Hollywood, Madison Avenue, and the Way We Tell Stories*, W.W. Norton, 2012.

- Sharma, Amol and Lukas I. Alpert. 'Buzzfeed, Vice to Miss Revenue Targets; Mashable Sells at Huge Discount', *MarketWatch*, 16 November 2017, <https://www.marketwatch.com/story/buzzfeed-vice-to-miss-revenue-targets-mashable-sells-at-huge-discount-2017-11-16>.
- 'The Concept of Tactical Media', *Tactical Media Files*, 7 March 2017, <http://www.tacticalmediafiles.net/articles/44999>
- Zaitchik, Alexander. 'Meet Alex Jones', *Rolling Stone*, 2 March 2011, <https://www.rollingstone.com/culture/culture-news/meet-alex-jones-175845/>.

Execute Order 66: How Star Wars Memes Became Indebted to Fascist Dictatorship

Pim van den Berg

- Clark, Travis. 'The Thanos SubReddit Successfully Banned over 300,000 Members in Honor of "Infinity War"', *Business Insider*, 10 July 2018, <https://www.businessinsider.nl/thanos-thanosdidnothingwrong-Reddit-ban-snap-2018-7/?international=true&r=US>.
- Guynes S. and D. Hassler-Forest. *Star Wars and the History of Transmedia Storytelling*, Amsterdam University Press, 2017.
- Lovink, Geert and Marc Tuters, 'Rude Awakening: Memes as Dialectical Images', *Net Critique*, 3 April 2018, <https://networkcultures.org/geert/2018/04/03/rude-awakening-memes-as-dialectical-images-by-geert-lovink-marc-tuters/>.
- Matthews, Dylan. 'Buzzfeed's Founder Used to Write Marxist Theory and it Explains BuzzFeed Perfectly', *Vox*, 2 April 2015, <https://www.vox.com/2014/5/20/5730762/buzzfeeds-founder-used-to-write-marxist-theory-and-it-explains>.
- Milner, R.M. *The World Made Meme*, MIT Press, 2016.
- Mufson, Beckett. 'Reddit Is Reeling from a Massive Meme War', *Vice*, 29 March 2018, https://www.vice.com/en_us/article/a3y3vkReddit-is-reeling-from-a-massive-meme-war.
- Salter, A. and B. Blodgett, *Toxic Geek Masculinity in Media: Sexism, Trolling, and Identity Policing*, Palgrave Macmillan, 2017.
- Wilson, Jason, 'Hiding in Plain Sight: How the 'Alt-Right' Is Weaponizing Irony to Spread Fascism', *The Guardian*, 23 May 2017, https://www.theguardian.com/technology/2017/may/23/alt-right-online-humor-as-a-weapon-facism?CMP=share_btn_tw.

The Islamic State Unfiltered

Inte Gloerich, Rose Rowson, Rebecca Cachia, Susan Clandillon, and Cristel Kolopaking

- Cachia, Rebecca, Susan Clandillon, Inte Gloerich, Cristel Kolopaking, Indre Lauciute, and Rose Rowson. 'Facebook Pages in Europe: A Tool for the Jihad in Syria', *Digital Methods Initiative*, 2014, <https://wiki.digitalmethods.net/Dmi/Winter2014Project12>.
- Instagram Hashtag Explorer, <https://wiki.digitalmethods.net/DmiTool/InstagramHashtagExplorer>. (We used an earlier version of the tool in March 2015, as developed by Erik Borra at the Digital Methods Initiative.)
- Rogers, Richard. 'Foreword: Debanalizing Twitter: The Transformation of an Object of Study', in Katrin Weller, Axel Bruns, Jean Burgess, Merja Mahrt, and Cornelius Puschmann (eds) *Twitter & Society*, Peter Lang, 2014.
- Stern, Jessica and J.M. Berger. *ISIS: The State of Terror*, Ecco, 2015.
- Virtue, Rob. 'Islamic State Urges Baltimore Rioters to Join Them... Because They Have "an Equal Society"', *Express*, 29 April 2015, <https://www.express.co.uk/news/world/573844/Islamic-State-urges-Baltimore-rioters-to-join-them>.
- Weiss, Michael and Hassan Hassan. *ISIS: Inside the Army of Terror*, Regan Arts, 2015.

The Effect of the List

Nikos Voyiatzis

- Adam, Alison. 'Lists', in *Software Studies: A Lexicon*, ed. Matthew Fuller, MIT Press, 2008.
- Berners Lee, Tim and David Connolly. 'Hypertext Markup Language (HTML): A Representation of Textual Information and Meta Information for Retrieval and Interchange', 1993, <http://www.w3.org/MarkUp/draft-ietf-iiir-html-01.txt>.
- Cooper, Muriel. 'Information Landscapes', July 1994, YouTube-clip, 25 January 2010, <https://www.youtube.com/watch?v=Qn9zCrIjzLs>.
- Digital Synopsis. 'Why Page 2 of Google Search Results Is the Best Place to Hide a Dead Body', <https://digitalsynopsis.com/tools/google-serp-design/>.
- Drabinsky, Emily. 'Teaching the Radical Catalog', in K.R. Roberto and Sanford Berman (eds) *Radical Cataloging: Essays at the Front*, McFarland & Company, 2008.
- Foucault, Michel. *The Order of Things: An Archaeology of the Human Sciences*, Tavistock Publications, 1966.
- Gerd Arntz Webarchive. <http://www.gerdarntz.org/>.
- Google Search Help. <https://support.google.com/websearch/answer/134479?hl=en>.

- Hall, Stuart. 'Representation and the Media', *Lecture*, 1997.
- Hartmann, Frank. 'Visualizing Social Facts: Otto Neurath's ISOTYPE Project', in W. Boyd Rayward (ed.) *European Modernism and the Information Society*, Ashgate, 2008.
- How to search on Google, <https://support.google.com/websearch/answer/134479?hl=en>.
- Pold, Søren and Christian Ulrik Andersen
'Manifesto for a Post-Digital Interface Criticism', 2014.
- Reinfurt, David. 'This Stands as a Sketch for the Future', *Muriel Cooper and the Visible Language Workshop*, Dexter Sinister, 2007.
- Senellart, Michel (ed.). *Michel Foucault: The Birth of Biopolitics: Lectures at the College De France, 1978-79*, Palgrave Macmillan, 2008.
- Young, Liam Cole. 'On Lists and Networks: An Archaeology of Form', *Amodern*, 2015, <http://amodern.net/article/on-lists-and-networks/>.

'That Others May Die': Autonomous Military Technology and the Changing Ethos on the Battlefield

Gustavo Velho Diogo

- Arkin, Ronald C. *Ethical Robots in Warfare*, Atlanta: Georgia Institute of Technology Press, 2017.
- Baraniuk, Chris. 'AI Fighter Pilot Wins in Combat Simulation', BBC, 28 June 2016, <https://www.bbc.com/news/technology-36650848>.
- Barrett, Frank. 'The Organizational Construction of Hegemonic Masculinity: The Case of the US Navy', in *Gender, Work and Organization*, no. 3, 1996.
- Barrie, Doug. 'Artificial Intelligent Fighter Pilot Overperforms Two Awarded Soldiers in Simulation', *Military Affairs*, BBC, 2017, <https://www.bbc.com/news/technology-36650848>.
- Bell, David. 'In Defense of Drones: A Historical Argument', *New Republic*, 27 January 2012, <https://newrepublic.com/article/100113obama-military-foreign-policy-technology-drones>.
- Chamayou, Grégoire. *A Theory of the Drone*. New York: The New Press, 2013.
- Clausewitz, Carl von. *On War*, transl. by J.J. Graham, London: Nicholas Trübner, 1873, <https://www.clausewitz.com/readings/OnWar1873/TOC.htm>.
- Hegel, W.F. *Outlines of the Philosophy of Right*. New York: Oxford University Press, 1982 [1820].
- McLucas, John L. *Reflections of a Technocrat: Managing Defense, Air, and Space Programs During the Cold War*, Maxwell Air Force Base: Air University Press, 2006.
- McLuhan, Marshall. *Understanding Media: The Extensions of Man*, New York: McGraw-Hill, 1964.
- Kittler, Friedrich. *Optical Media*. Berlin: Brinkmann & Bose, 2010.

- Lagrange, Francois. 'Les Combattants de la Mort Certaine: Les Sens du Sacrifice à L'horizon de la Grande Guerre', *Cultures & Conflits* 63, 2006.
- Scharre, Paul. *The Trouble with Trying to Ban Killer Robots*, Center for New American Security, World Economic Forum, 2017.
- Smith, Mark. 'Is Killer Robot Warfare Closer than We Think? Technology of Business', BBC, 2017, <https://www.bbc.com/news/business-41035201>.
- Synthèse de la Guerre Sous-marine: De Pontchartrain à Tirpitz*, Paris: Augustin Challamel, 1920.
- Voltaire. *An Essay on Universal History, the Manners*. London: Nourse, 1998 [1759].

Res Publica ex Machina: On Neo-cybernetic Governance and the End of Politics

Felix Maschewski and Anna-Verena Nosthoff

- Anders, Günther. *Die Antiquiertheit des Menschen, Bd. I. Über die Seele im Zeitalter der zweiten industriellen Revolution*, C.H. Beck, 1980.
- Anders, Günther. *Die Antiquiertheit des Menschen, Bd. II. Über die Zerstörung des Lebens im Zeitalter der dritten Revolution*, C.H. Beck, 1998.
- Deutsch, Karl, *The Nerves of Government*, The Free Press, 1963.
- Habermas, Jürgen. *Technik und Wissenschaft als Ideologie*, Suhrkamp, 1968.
- Howard, Philip N. *Pax Technica. How the Internet of Things May Set Us Free or Lock Us Up*, Yale University Press, 2015.
- Khanna, Parag. *Technocracy in America*, CreateSpace, Independent Publishing Platform, 2017
- Lang, Eberhard. *Zu einer kybernetischen Staatslehre*, Pustet, 1970.
- Maschewski, Felix and Nosthoff, Anna-Verena. 'Passivität im Kostüm der Aktivität: Über Günther Anders' Kritik kybernetischer Politik im Zeitalter der "totalen Maschine"', *Behemoth. A Journal on Civilisation*, 11(1) (2018): 8-25.
- Mau, Steffen. *Das metrische Wir: Über die Quantifizierung des Sozialen*, Suhrkamp, 2017.
- Mersch, Dieter. 'Ringvorlesung Onlife: Partizipation im Netz - das Verschwinden des Sozialen', ForumBD YouTube, 2 March 2017, <https://www.youtube.com/watch?v=519W2jeBAmA>.
- Nassehi, Armin. 'Eine Linke braucht es nicht mehr', *Die Zeit*, 13 July 2017, <https://www.zeit.de/kultur/2017-07/g20-linke-gewalt-kapitalismuskritik-globalisierung-essay/komplettansicht>.
- Noveck, Beth. *Smart Citizens, Smarter State: The Technology of Expertise and the Future of Governing*, Harvard University Press, 2015.
- Noveck, Beth. 'Demand a more Open-source Government', TED-talk, June 2012,

- https://www.ted.com/talks/beth_noveck_demand_a_more_open_source_government.
- O'Reilly, Tim. 'Government as Platform,' *Innovations*, vol. 6, no. 1 (2010)
http://www.mitpressjournals.org/doi/pdf/10.1162/INOV_a_00056.
- O'Reilly, Tim. 'Open Data and Algorithmic Regulation',
<http://beyondtransparency.org/chapters/part-5/open-data-and-algorithmic-regulation/>.
- Pentland, Sandy. 'Social Physics: How Good Ideas Spread', 7 March 2014, Talks at Google YouTube, <https://www.youtube.com/watch?v=HMBI0ttu-Ow>.
- Pentland, Alex 'Sandy'. *Social Physics. How Social Networks Can Make Us Smarter*, Penguin Books, 2015.
- Schmidt, Eric and Jared Cohen, *The New Digital Age: Reshaping the Future of People, Nations and Business*, Hodder And Stoughton Limited, 2013.
- Shannon, Claude and Weaver, Warren. *The Mathematical Theory of Communication*, Combined Academic Publishers, 1949.
- Simanowski, Roberto. *Facebook-Gesellschaft*, Matthes & Seitz, 2016.
- Sunstein, Cass R. and Richard H. Thaler. *Nudge: Improving Decisions About Health, Wealth, and Happiness*, Yale University Press, 2008.
- Tiqqun. *The Cybernetic Hypothesis*, 2001.
- Tiqqun, Invisible Committee. 'Fuck Off, Google', 2014,
<https://fahrplan.events.ccc.de/congress/2014/Fahrplan/system/attachments/2530/original/fuckoffgoogleeng.pdf>.
- Whitehead, Mark, et al. *Nudging all over the World*, September 2014,
<https://changingbehaviours.files.wordpress.com/2014/09/nudgedesignfinal.pdf>.

INC Longforms

Nadine Roostenburg, 'Het beeld van de wereld / Het wereldbeeld van Google', 21 May 2015, <https://networkcultures.org/longform/2015/05/21/het-beeld-van-de-wereld-het-wereldbeeld-van-google/>.

Lasse van den Bosch Christensen, 'I For One, Welcome Our New (Google) Overlords', 1 June 2015, <https://networkcultures.org/longform/2015/06/01/i-for-one-welcome-our-new-google-overlords/>.

Nikos Voyiatzis, 'The Effect of the List', 6 November 2015, <https://networkcultures.org/longform/2015/11/06/the-effect-of-the-list/>.

Lidia Pereira, 'Corporate Social Networking Platforms as Cognitive Factories', 22 January 2016, <https://networkcultures.org/longform/2016/01/22/corporate-social-networking-platforms-as-cognitive-factories/>.

Jeroen van Honk, 'The Web and its Wanderers', 19 February 2016, <https://networkcultures.org/longform/2016/02/19/the-web-and-its-wanderers/>.

Inte Gloerich, Rose Rowson, Rebecca Cachia, Susan Clandillon, and Cristel Kolopaking, 'The Islamic State Unfiltered', 22 April 2016, <https://networkcultures.org/longform/2016/04/22/the-islamic-state-unfiltered/>.

Robin Lynch, 'The Art of Flex: Network Lessons from Post Internet Art', 22 June 2016, <https://networkcultures.org/longform/2016/06/22/the-art-of-flex-network-lessons-from-post-internet-art-2/>.

Agnieszka Zimolag, 'A Dream of an Algorithm', 23 September 2016, <https://networkcultures.org/longform/2016/09/23/a-dream-of-an-algorithm/>.

Gustavo Velho Diogo, 'Google Earth, Surveillance, and the Power of Digital Cartography', 7 October 2016, <https://networkcultures.org/longform/2016/10/07/google-earth-surveillance-and-the-power-of-digital-cartography/>.

Josip Batinic, 'Digital Comics: Harder, Better, Faster, Stronger?', 21 November 2016, <https://networkcultures.org/longform/2016/11/21/digital-comics-harder-better-faster-stronger/>.

Paul Buckermann, 'On Socialist Cybernetics, Accelerationist Dreams, and Tiquun's Nightmares', 19 December 2016, <https://networkcultures.org/longform/2016/12/19/communication-control-communism-on-socialist-cybernetics-accelerationist-dreams-and-tiquuns-nightmares/>.

Ruben van de Ven, 'Choose How You Feel; You Have Seven Options', 25 January 2017, <https://networkcultures.org/longform/2017/01/25/choose-how-you-feel-you-have-seven-options/>.

Tatjana Seitz, 'Digital Desolation; Amateurs, Aesthetics, and the Ageing of Web's Architecture', 22 March 2017, <https://networkcultures.org/longform/2017/03/22/digital-desolation-amateurs-aesthetics-and-the-aging-of-webs-architecture/>.

Miriam Rasch, 'The Post-digital Condition', 18 May 2017, <https://networkcultures.org/longform/2017/05/18/the-post-digital-condition/>.

Anastasia Kubrak & Sander Manse, 'Luxury & Paranoia, Access & Exclusion On Capital and Public Space', 6 October 2017, <https://networkcultures.org/longform/2017/10/06/luxury-paranoia-access-exclusion-on-capital-and-public-space/>.

Sal Hagen, 'Polandball is of Reddit: How r/polandball Transcends Memes through Carefully Curated Geopolitical Satire', 15 November 2017, <https://networkcultures.org/longform/2017/11/15/polandball-is-of-reddit-how-rpolandball-transcends-memes-through-carefully-curated-geopolitical-satire/>.

Davide Banis, 'Fictiocracy: Media and Politics in the Age of Storytelling', 22 February 2018, <https://networkcultures.org/longform/2018/02/22/fictiocracy-media-and-politics-in-the-age-of-storytelling/>.

Bennet Etsiwah, 'Turing for the Masses', 22 March 2018, <https://networkcultures.org/longform/2018/03/22/turing-for-the-masses/>.

Gustavo Velho Diogo, 'That Others May Die: Autonomous Military Technology and the Changing Ethos on the Battlefield', 25 June 2018, <https://networkcultures.org/longform/2018/06/25/that-others-may-die-autonomous-military-technology-and-the-changing-ethos-in-the-battlefield/>.

Tim Brouwer, 'Proof-of-Transaction: The Materiality of Cryptocurrency', 25 August 2018, <https://networkcultures.org/longform/2018/08/25/proof-of-transaction-the-materiality-of-cryptocurrency/>.

Felix Maschewski & Anna-Verena Nosthoff, 'Res Publica ex Machina: On Neocybernetic Governance and the End of Politics', 18 October 2018, <https://networkcultures.org/longform/2018/10/18/res-publica-ex-machina-on-neocybernetic-governance-and-the-end-of-politics/>.

Pim van den Berg, 'Execute Order 66: How Star Wars Memes Became Indebted to Fascist Dictatorship', 23 November 2018, <https://networkcultures.org/longform/2018/11/23/execute-order-66-how-star-wars-memes-became-indebted-to-fascist-dictatorship/>.

Roberto Simanowski, 'Brave New Screens: Soma, FOMO, and Friendly Fascism after 1984', 18 December 2018, <https://networkcultures.org/longform/2018/12/18/brave-new-screens-soma-fomo-and-friendly-fascism-after-1984/>.

Maisa Imamović, 'How to Nothing', 14 January 2019, <https://networkcultures.org/longform/2019/01/14/how-to-nothing/>.

Liat Berdugo, 'The Halos of Devices: The Neo-Nimbus of Electronic Objects', 21 February 2019, <https://networkcultures.org/longform/2019/02/21/the-halos-of-devices-the-neo-nimbus-of-electronic-objects/>.

Stefano Diana, 'On the Barricades of the Incalculable: Against Algorithm Addiction', 22 March 2019, <https://networkcultures.org/longform/2019/03/22/on-the-barricades-of-the-incalculable-against-algorithm-addiction/>.

Enrico de Angelis, 'The Controversial Archive: Negotiating Horror Images in Syria', 7 May 2019, <https://networkcultures.org/longform/2019/05/07/the-controversial-archive-negotiating-horror-images-in-syria/>.

Marloes de Valk, 'Harness the Power of a Fluid Identity with 3 Simple Strategies', 24 September 2019, <https://networkcultures.org/longform/2019/09/24/harness-the-power-of-a-fluid-identity-with-3-simple-strategies/>.

Maisa Imamović, 'Club-wise, A Theory of Our Time', 4 February 2020, <https://networkcultures.org/longform/2020/02/04/club-wise-the-theory-of-our-time/>.

Tsukino T. Usagi, 'The Cloud Sailor Diary: Shanghai Life in the Time of Coronavirus', 19 March 2020, <https://networkcultures.org/longform/2020/03/19/the-cloud-sailor-diary-shanghai-life-in-the-time-of-coronavirus/>.