PROXY POLITICS
Power and Subversion in a Networked Age

Edited by
Research Center for Proxy Politics

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Research Center for Proxy Politics
Boaz Levin and Vera Tollmann

Proxy Politics

Power and Subversion in a Networked Age

The proxy, literally a stand-in or a surrogate, today often refers to a computer server acting as an intermediary for requests from clients. These servers facilitate indirect connections to a network. Proxy servers route traffic through servers in other locations and under different jurisdictions, thus circumventing censorship or blockage and providing users with anonymity. However, they can also be set up for the opposite task: to monitor traffic. Originating in the Latin *procurator*, an agent representing others in a court of law, proxies have become emblematic of a post-democratic political age, one increasingly populated by bot militias, puppet states, and communication relays. Bots are software applications running automated tasks over the Internet, often in the guise of human users. Whether crawling the net and harvesting data, or disseminating information—spam and scams, propaganda, fake news, advertising—they exploit the web's underbelly. In the case of the 'Mirai botnet', malware was used to track so called 'smart' devices—baby cams and webcams, old routers, and new vacuum cleaners—which, in turn, were infected and conscripted to the botnet. Mirai created a centrally controlled militia of zombified devices.

Puppet states are a different, not necessarily digital, manifestation of proxy politics—a form which might be as old as the state itself. A puppet state or government may seem independent and sovereign, whereas, in fact, it is subservient to an outside power. Whether or not a state is truly controlled from an auxiliary, it is evident that the belief in such displaced authority is increasingly prevalent. Wireless networked communication often functions through relays, where the source and the end point are connected to one another by a series of nodes. The Internet is characterized by the topology of relay networks, and networks, such as TOR, provide a further layer of relays to disguise their users. In this third case, it is a purely technical proxy figure.

The proxy, in other words, stands at the intersection of

control and subversion: its subsidiaries can take the guise of a human-machine assemblage, a century-old concept, or a purely technical form. Still, the question remains: on whose behalf are proxies enacted? *Who* or *what* lurks behind these stand-ins?

We understand the proxy as a dialectical and essentially ambivalent figure, a pharmakon—cure and poison woven into the fabric of networks—where action and stance seem to be masked, calculated, and remote-controlled. The proxy thrives within a habitat defined by sameness, characterized by constant monitoring of human and non-human actors. This homogeneity or uniformity comes as a technological precondition for effectively blending in—the proxy emerges as a symptom of our ubiquitous condition.

Considering the current political climate, characterized by suspicion and deceit, fake news, and predictive algorithms, automation, and displaced power, do we need proxies more than ever, or do proxies rather confirm the status quo?

But the proxy can be understood in another way—in statistic and climate research, proxies are understood as measured variables used to infer the value of an unobservable or immeasurable variable of interest. In this sense, a proxy is an approximation, a kind of concession to imprecision, and an incomplete foray into an unknown terrain. As writer Brian Blanchfield has beautifully written, a proxy can be understood as a sub, an adjunct, and/or a temporary replacement. He lists an array of mediating and intermediary figures such as stepsons, house sitters or trustees, also would-be proxies. After all, who of us hasn't been a proxy? Rather than avoiding the tentative, writing and thinking, proxies can provide an occasion for speculation, a space for approximation. To think of proxies is to remain in the sphere of near-knowledge, rather than on fixed ground. Instead of grasping the hyperobject which is climate change, climate scientists practice climate archeology by proxy: ice cores and annual rings act as storage devices testifying to historical change. If the proxy has a method, it is that of the essay—the attempt. Speculation, supposition, and extrapolation are the drivers for essaying to find out.

This publication brings together a variety of written and

artistic contributions and with them, some tentative answers, as well as more questions. Does the intense use of proxies already speak for a certain degree of despair, since otherwise the public could no longer be won for a particular candidate? Are proxies the contemporary form of shaping public opinion? One might want to think of Noam Chomsky's *Manufacturing Consent: The Political Economy of the Mass Media,* which was published in the early 1990s and investigates the mechanisms in mainstream media (with his title, Chomsky evokes Edward Bernays eponymous "The Engineering of Consent" from 1955). Or are they indicative of the materialization of a post-democratic age defined by Jacques Rancière as "a democracy that has eliminated the appearance, miscount, and dispute of the people?"[1]

A proxy can be a middle-man on the Internet, an intermediary, or a new kind of medium, potentially in the disguise of a knock-off, reverse-engineered phone, an avatar on a screen, or a robotic flatlander which intervenes in moving image space. Following Joseph Vogl, these particular proxy medias should be conceived as temporary constellations, like "Galileo's telescope, which is no longer a simple object but a complex formation comprising material, discursive, practical, and theoretical elements."[2] Before becoming media, proxies presuppose a contextual analysis. Any proxy causes a mess—that is the rule. It destabilizes existing orders and dichotomies, undermines fixed structures, just to open a door for humans, packages, or messages to pass. The proxy creates its own temporary world of intervention.

A proxy agent dwells where it becomes obscure; a proxy means distraction, obfuscation, suppression, secrecy, but also privacy, security, and activity. It can be found in deep states, deep webs, outsourced, and offshored affairs. Proxy business is business outside the realm of business. Proxy communication happens outside of standard communication systems. An iteration of a proxy agent would be, for example,

1 Rancière, Jacques, 1999. *Dis-agreement: Politics and Philosophy.* Minneapolis: University of Minnesota Press, p. 102.

2 Vogl, Joseph, 2007. "Becoming Media: Galileo's Telescope", in: *Grey Room*, vol. 8, no. 29, MIT Press: Cambridge MA, pp. 14-25.

an element which allows a management server to communicate with devices or clients outside of its functional domain. Proxy politics is characterized by fraudulent contracts, chimerical sovereignties, and void authorities.

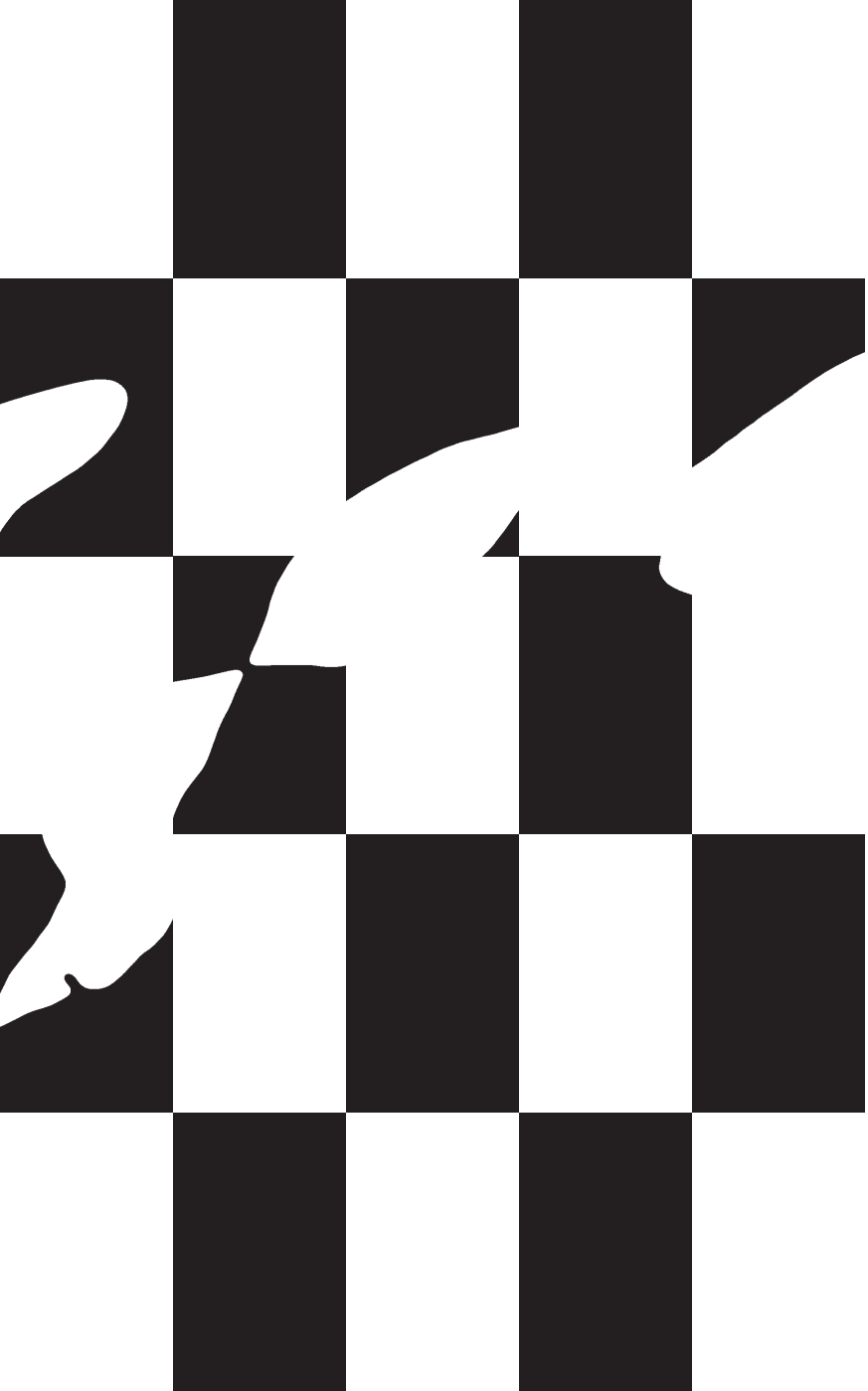
A proxy moves in-between scales and spaces, representing—if representation is a relevant category here at all—agency. While scaling is bound to the method of perspective, "a God's Eye view leveraged on the Archimedean point", agency is not tied to any method or angle. At the same time, hierarchies have moved into horizontal layers, and now sit in proximity rather than verticality, which suggests the inversion or constant re-organization of spatial hierarchies. A VPN is a proxy to circumvent boundaries, to simulate proximity by ways of obfuscation and ambiguity.

While the metric of scaling flourishes in computing and networks—preparing data, databases, computer systems for exascale computing—scale, in regards to spatial, social dimensions, is not stable or fixed. Territory, networks, and bodies will remain stubbornly relational. A school of critical geographers liken globalisation with what they call a 'politics of scale', in which they follow a definition of scale as a social construct. It is a concept of scale beyond measurements, that shifts the need to expose and denaturalize scale's discursive power in regards to political struggles. This approach, thus, looks at multiscale dimensions: any socio-spatial scale is being analyzed with regard to its relationships with other dimensions.

It seems that proxies determine our situation. With this publication, we hope to find ways of narrating proxy politics from perspectives of different scales, on micro and macro levels. Proxies and networks will both be explored as objects. The contributors ask: what is the relation between the molecular and the planetary and what has proxy politics got to do with it? How do we fathom the expanding computational regime? Do we need proxies more than ever, or do proxies, rather, confirm the status quo? Perhaps, whilst being a manifestation of the networked age, thinking like a proxy offers loopholes and strategies for survival within it.

***

Between September 2014 and August 2017, the Research Center for Proxy Politics hosted a series of workshops exploring the politics of digital networks at the Universität der Künste, Berlin, under the auspices of Hito Steyerl's lens-based class. This publication brings together a collection of texts resulting from these workshops—by guests, as well as by participating students—in addition to lectures and artistic contributions delivered during *The Proxy and Its Politics* conference, which took place at Haus der Kulturen der Welt, Berlin, in June 2017.



Hito Steyerl

Proxy Politics: Signal and Noise

A while ago I met an extremely interesting software developer who was working on smartphone camera technology. Photography is traditionally thought to represent what is out there by means of technology, ideally via an indexical link. But is this really true anymore? The developer explained to me that the technology for contemporary phone cameras is quite different from traditional cameras: the lenses are tiny and basically crap, which means that about half of the data being captured by the camera sensor is actually noise. The trick, then, is to write the algorithm to clean the noise, or rather, to discern the picture from inside the noise.

But how can the camera know how to do this? Very simple: it scans all other pictures stored on the phone or on your social media networks and sifts through your contacts. It analyzes the pictures you already took, or those that are associated with you, and it tries to match faces and shapes to link them back to you. By comparing what you and your network already photographed, the algorithm guesses what you might have wanted to photograph now. It creates the present picture based on earlier pictures, on your/its memory. This new paradigm is being called computational photography.[1]

The result might be a picture of something that never even existed, but that the algorithm thinks you might like to see. This type of photography is speculative and relational. It is a gamble with probabilities that bets on inertia. It makes seeing unforeseen things more difficult. It will increase the amount of noise just as it will increase the amount of random interpretation.

And that's not even to mention external interference into what your phone is recording. All sorts of systems are able to remotely shut your camera on or off: companies, governments, the military. It could be disabled in certain places—one

1 Rubinstein, Daniel and Sluis, Katrina, 2013, *Notes on the Margins of Metadata; Concerning the Undecidability of the Digital Image.* Photographies, 6 (1), pp. 151-158. See http://ualresearchonline.arts.ac.uk/view/subjects/W640.html. Also see Katrina Sluis's writings and interviews on this notion.

could for instance block its recording function close to protests or conversely broadcast whatever it sees. Similarly, a device might be programmed to auto-pixelate, erase, or block secret, copyrighted, or sexual content. It might be fitted with a so-called dick algorithm to screen out NSFW (Not Suitable/Safe For Work) content, auto-modify pubic hair, stretch or omit bodies, exchange or collage context, or insert location-targeted advertising, pop-up windows, or live feeds. It might report you or someone from your network to the police, PR agencies, or spammers. It might flag your debt, play your games, or broadcast your heartbeat. Computational photography has expanded to cover all of this.

Its links control robotics, object recognition, and machine learning technologies. So if you take a picture on a smartphone, the results are not as premeditated as they are premediated.

The picture might show something unexpected, because it might have cross-referenced many different databases: traffic control, medical databases, frenemy photo galleries on Facebook, credit card data, maps, and whatever else it wants.

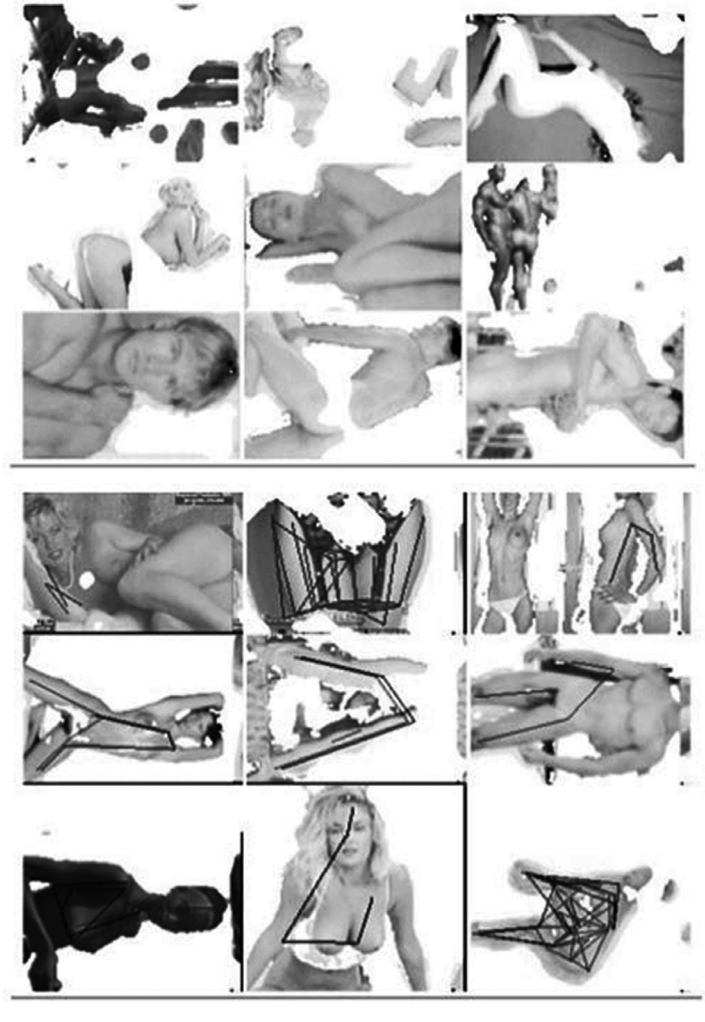
The picture might show something unexpected, because it might have cross-referenced many different databases: traffic control, medical databases, frenemy photo galleries on Facebook, credit card data, maps, and whatever else it wants.

Relational Photography

Computational photography is therefore inherently political—not in content but in form. It is not only relational but also truly social, with countless systems and people potentially interfering with pictures before they even emerge as visible.[2]

And of course this network is not neutral. It has rules and norms hardwired into its platforms, and they represent a mix of juridical, moral, aesthetic, technological, commercial, and

2 On the politics embedded into the defintion of noise and information Terranova writes "Corollary Ib: The cultural politics of information involves a return to the minimum conditions of communication (the relation of signal to noise and the problem of making contact)." In: Terranova, Tiziana, 2004. *Network Culture*. London: Pluto Press.



bluntly hidden parameters and effects. You could end up airbrushed, wanted, redirected, taxed, deleted, remodeled, or replaced in your own picture. The camera turns into a social projector rather than a recorder. It shows a superposition of what it thinks you might want to look like plus what others think you should buy or be. But technology rarely does things on its own. Technology is programmed with conflicting goals and by many entities, and politics is a matter of defining how to separate its noise from its information.[3] So what are the policies already in place that define the separation of noise from information, or that even define noise and information as such in the first place? Who or what decides what the camera will 'see'? How is it being done? By whom or what? And why is this even important?

The Penis Problem

Let's have a look at one example: drawing a line between face and butt, or between 'acceptable' and 'unacceptable' body parts. It is no coincidence that Facebook is called Facebook and not Buttbook, because you can't have any butts on Facebook. But then how does it weed out the butts? A list leaked by an angry freelancer shows precise instructions given on how to build and maintain Facebook's face, and it shows us what is well known: that nudity and sexual content are strictly off limits, except art nudity and male nipples, but also how its policies on violence are much more lax, with even decapitations and large amounts of blood being acceptable.[4]

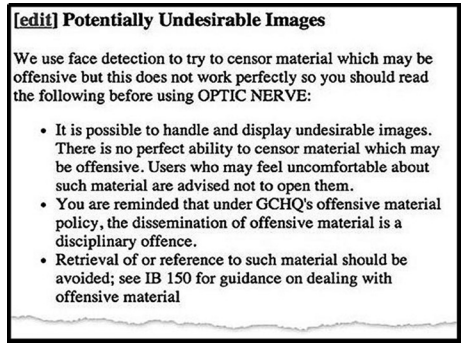
"Crushed heads, limbs, etc. are OK as long as no insides are showing," reads one guideline. "Deep flesh wounds are

3 This is actually the question that sparked information theory as such, in a seminal paper by Claude Shannon published in 1948. And of course it also features in trying to design how to network and modulate these parameters across a lot of different platforms.
See Shannon, Claude (1948). "A Mathematical Theory of Communication," *Bell System Technical Journal*, p. 27, pp. 379–423, pp. 623–656, July & October.

4 Chen, Adrian, "Inside Facebook's Outsourced Anti-Porn and Gore Brigade, Where 'Camel Toes' are More Offensive Than 'Crushed Heads." http://gawker.com/5885714/inside-facebooks-outsourced-anti-porn-and-gore-brigade-where-camel-toes-are-more-offensive-than-crushed-heads.

ok to show; excessive blood is ok to show."[5]

Those rules are still policed by humans, or more precisely a global subcontracted workforce from Turkey, the Philippines, Morocco, Mexico, and India, working from home, earning around 4 USD per hour.[6] These workers are hired to distinguish between acceptable body parts (face) and unacceptable ones (butts). In principle, there is nothing wrong with having rules for publicly available imagery. Some sort of filtering process has to be implemented on online platforms: no one wants to be spammed with revenge porn or atrocities, regardless of there being markets for such imagery. The question concerns where and how to draw the line, as well as who draws it, and on whose behalf. Who decides on signal vs. noise?



[edit] Potentially Undesirable Images

We use face detection to try to censor material which may be offensive but this does not work perfectly so you should read the following before using OPTIC NERVE:

- It is possible to handle and display undesirable images. There is no perfect ability to censor material which may be offensive. Users who may feel uncomfortable about such material are advised not to open them.
- You are reminded that under GCHQ's offensive material policy, the dissemination of offensive material is a disciplinary offence.
- Retrieval of or reference to such material should be avoided; see IB 150 for guidance on dealing with offensive material

Let's go back to the elimination of sexual content. Is there an algorithm for this, like for face recognition? This question first arose publicly in the so-called Chatroulette conundrum. Chatroulette was a Russian online video service that allowed people to meet on the web. It quickly became famous for its 'next' button, for which the term 'unlike button' would be much too polite. The site's audience first exploded to 1.6 million users per month in 2010. But then a so-called 'penis

5 Ibid.

6 They work from home in 4-hour shifts and earn $1 per hour plus commissions (which, according to the job listing, should add up to a 'target' rate of around $4 per hour).

problem' emerged, referring to the many people who used the service to meet other people naked.[7] The winner of a web contest called in to 'solve' the issue ingeniously suggested to run a quick facial recognition or eye tracking scan on the video feeds—if no face was discernible, it would deduce that it must be a dick.[8]

This exact workflow was also used by the British Secret Service when they secretly bulk extracted user webcam stills using their spy program, Optical Nerve. Video feeds of 1.8 million Yahoo users were intercepted in order to develop face and iris recognition technologies. But—maybe unsurprisingly—it turned out that around 7 percent of content did not show faces at all. So—as suggested for Chatroulette—they ran face recognition scans on everything and tried to exclude the dicks for not being faces. It didn't work so well: in a leaked document the GCHQ admits defeat: "there is no perfect ability to censor material which may be offensive."[9]

Subsequent solutions became a bit more sophisticated. Probabilistic porn detection calculates the amount of skin-toned pixels in certain regions of the picture, producing complicated taxonomic formulas.[10] But this method got ridiculed pretty quickly because it produced so many false positives, including, as in some examples, wrapped meatballs, tanks, or

7 Stone, Brad. "In Airtime Video Chat Reboot, Nudists Need Not Apply." 5, June 2012.

8 http://www.businessinsider.com/chatroulette-penis-problem-solved-2010-04?op=1#ixzz30dtsjM8o

9 Ackerman, Spencer and Ball, James, 2014. "Optic Nerve: millions of Yahoo webcam images intercepted by GCHQ". https://www.theguardian.com/world/2014/feb/27/gchq-nsa-webcam-images-internet-yahoo

10 This one, for instance. http://wenku.baidu.com/view/d66cb2ea856a561252d36f4b.html

a. If the percentage of skin pixels relative to the image size is less than 15 percent, the image is not nude. Otherwise, go to the next step.

b. If the number of skin pixels in the largest skin region is less than 35% of the total skin count, the number of skin pixels in the second largest region is less than 30% of the total skin count and the number of skin pixels in the third largest region is less than 30% of the total skin count, the image is not nude.

c. If the number of skin pixels in the largest skin region is less than 45% of the total skin count, the image is not nude.

d. If the total skin count is less than 30% of the total number of pixels in the image and the number of skin pixels within the bounding polygon is less than 55 percent of the size of the polygon, the image is not nude.

e. If the number of skin regions is more than 60 and the average intensity within the polygon is less than 0.25, the image is not nude.

f. Otherwise, the image is nude.

11 Porn-Detection Software for Videos & Images at Yang's Scientific Research Institute, LLC., USA (YangSky)

12 See http://www.yangsky.com/ijcc/pdf/ijcc416.pdf

machine guns. More recent porn-detection applications use self-learning technology based on neural networks, computational verb theory, and cognitive computation. They do not try to statistically guess at the image, but rather try to understand it by identifying objects through their relations.[11]

According to developer Tao Yang's description, there is a whole new field of cognitive vision studies based on quantifying cognition as such, on making it measurable and computable.[12] Even though there are still considerable technological difficulties, this effort represents a whole new level of formalization; a new order of images, a grammar of images, an algorithmic system of sexuality, surveillance, productivity, reputation, and computation that links with the grammatization of social relations by corporations and governments.

So how does this work? Yang's porn-detection system must learn how to recognize objectionable parts by seeing a sizable mass of them in order to infer their relations. So basically you start by installing a lot of photos of the body parts you want eliminated on your computer. The database consists of folders full of body parts ready to enter formal relations. Not only pussy, nipple, asshole, and blowjob, but asshole, asshole/only and asshole/mixed_with_pussy. Based on this library, a whole range of detectors gets ready to go to work: the breast detector, pussy detector, pubic hair detector, cunnilingus detector, blowjob detector, asshole detector, hand-touch-pussy detector. They identify fascinating sex-positions such as the Yawning and Octopus techniques, The Stopperage, Chambers Fuck, Fraser MacKenzie, Persuading of the Debtor, Playing of Cello, and Watching the Game

(I am honestly terrified of even imagining Fraser MacKenzie).[13]

This grammar, as well as the library of partial objects, is reminiscent of Roland Barthes' notion of a 'porn grammar', where he describes the Marquis de Sade's writings as a system of positions and body parts ready to permutate into every possible combination.[14] Yet this marginalized and openly persecuted system could be seen as a reflex of a more general grammar of knowledge deployed during the so-called Enlightenment.

Michel Foucault as well as Theodor W. Adorno and Max Horkheimer compared de Sade's sexual systems to mainstream systems of classification.[15] Both were articulated by counting and sorting, by creating exhaustive, pedantic, and tedious taxonomies. And Mr. Yang's enthusiasm for

13 For friends of orderly grammar, the full list:
1. Missionary, Side entry missionary
2. Squashing of the deckchair
3. Peace Sign
4. Butterfly position
5. Coital alignment technique
6. The stopperage
7. The Yawning Position
8. Octopus Position
9. Feet-on-his-shoulders
10. Doggy, Leapfrog, Froggy, Upright doggy, Spread-eagle, Spoons position, Reverse peace sign, Chambers Fuck, Fraser Mackenzie, Inverted Missionary
11. Cowgirl sex position/Amazon position, Reverse Cowgirl/Reverse Amazon, Reverse Cowgirl Horizontal, Asian Cowgirl
12. Horizontal reverse, Armchair, Black bee, Persuading of the debtor, Playing of the cello, Proposal, Split level, Watching the game, Reverse piggy-back, Stand and carry, Standing, Wheelbarrow, etc.

14 This is Girish Shambu reading Roland Barthes: Sade Fourier Loyola: "Sades system (according to Barthes), like a language, has its own grammar ('a porno-grammar'), consisting of some basic elements. Sexual posture is the main one, and the others are: sex, male or female; social position; location, e.g. convent, dungeon, even bedroom!, etc. Sade then combines these elements together in all manner of exhaustive permutations to elaborate a fully-fleshed out (sorry) set of possibilities."(Girish Shambu)

15 Adorno, Theodor and Horkheimer, Max, 1972 (1944). *Dialectic of Enlightenment*. New York: Herder and Herder.

formalizing body parts and their relations to one another similarly reflects the huge endeavor of rendering cognition, imaging, and behavior as such increasingly quantifiable and commensurable to a system of exchange value based in data.

Undesirable body parts thus become elements of a new machine-readable, image-based grammar that might usually operate in parallel to reputational and control networks, but that can also be linked to it at any time. Its structure might be a reflex of contemporary modes of harvesting, aggregating, and financializing data-based 'knowledge' churned out by a cacophony of partly social algorithms embedded into technology.

Noise and Information

But let's come back to the question in the beginning: what are the social and political algorithms that clear noise from information? The emphasis, again, is on politics, not algorithm. Jacques Rancière has beautifully shown that this division corresponds to a much older social formula: to distinguish between noise and speech, to divide a crowd between citizens and rabble.[16]

If someone didn't want to take someone else seriously, or to limit their rights and status, one pretends that their speech is just noise, garbled groaning, or crying, and that they themselves must be devoid of reason—and therefore exempt from being subjects, let alone holders of rights. In other words, this politics rests on an act of conscious decoding—separating 'noise' from 'information', 'speech' from 'groan', or 'face' from 'butt', and from there neatly stacks its results into vertical class hierarchies.[17] The algorithms now being fed into

16 Rancière, Jacques (2001). "Ten Thesis on Politics." in: *Theory & Event*. Vol. 5, No. 3, (English). "In order to refuse the title of political subjects to a category—workers, women, etc…—it has traditionally been sufficient to assert that they belong to a 'domestic' space, to a space separated from public life; one from which only groans or cries expressing suffering, hunger, or anger could emerge, but not actual speeches demonstrating a shared aisthesis. And the politics of these categories (...) has consisted in making what was unseen visible; in getting what was only audible as noise to be heard as speech."

17 And all sorts of other hierarchies, obviously.

smartphone camera technology to define the image prior to its emergence are similar to this.

In light of Rancière's proposition, we might still be dealing with a more traditional idea of politics as representation.[18] If everyone is aurally (or visually) represented, and no one is discounted as noise, then equality might draw nearer. But the networks have changed so drastically that nearly every parameter of representative politics has shifted. By now, more people than ever are able to upload an almost unlimited number of self-representations. And the level of political participation by way of parliamentary democracy seems to have dwindled in the meantime. While pictures float in numbers, elites are shrinking and centralizing power.

And on top of this, your face is getting disconnected—not only from your butt, but also from your voice and body. Your face is now an element—a face/mixed_with_phone, ready to be combined with any other item in the library. Captions are added, or textures, if needs be. Face prints are taken. An image becomes less of a representation than a proxy, a mercenary of appearance, a floating texture-surface-commodity. Persons are montaged, dubbed, assembled, incorporated.

Humans and things intermingle in ever-newer constellations to become bots or cyborgs.[19] As humans feed affect, thought, and sociality into algorithms, algorithms feeds back into what used to be called subjectivity. This shift is what has given way to a post-representational politics adrift within information space.[20]

Proxy Armies

Let's look at one example of post-representational politics:

18 Rancière first articulated this idea in "La mesentente" in 1995. Since then the politics of sound and image have shifted quite dramatically with web based and social media.

19 In Donna Haraway's legendary description: A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction. Haraway, Donna, 1991. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, pp. 149-181.

20 Tiziana Terranova distinguishes between representational and informational space. In: *Network Culture*, p. 36.

political bot armies on Twitter. Twitter bots are bits of script that impersonate human activity on social media sites. In large synchronized numbers, they have become formidable political armies.[21] A Twitter chat bot is an algorithm wearing a person's face, a formula incorporated as animated spam. It is a scripted operation impersonating a human operation.

Bot armies distort discussions on Twitter hashtags by spamming them with advertisement, tourist pictures, or whatever. They basically add noise. Bot armies have been active in Mexico, Syria, Russia, and Turkey, where most political parties have been said to operate such bot armies. The ruling AKP alone was suspected of controlling 18,000 fake Twitter accounts using photos of Robbie Williams, Megan Fox, and other celebs: "In order to appear authentic, the accounts don't just tweet out AKP hashtags; they also quote philosophers such as Thomas Hobbes and movies like *PS: I Love You.*"[22]

So who do bot armies represent, if anyone, and how do they do it? Let's have a look at the AKP bots. Robbie Williams, Meg Fox, and Hakan43020638 are all advertising 'Flappy Tayyip', a cell phone game starring then AK prime minister (now president) Tayyip Recep Erdogan. The objective is to hijack or spam the hashtag #twitterturkey to protest PM Erdogan's banning of Twitter. Simultaneously, Erdogan's own Twitter bots set out to detourn the hashtag.[23]

Let's look at Hakan43020638 more closely: a bot consisting of a copy-pasted face plus product placement. It takes only a matter of minutes to connect his face to a body by way

21 The use of bots in influencing public opinion is called 'astroturfing'. "If socialbots could be created in large numbers, they can potentially be used to bias public opinion, for example, by writing large amounts of fake messages and dishonestly improve or damage the public perception about a topic," the paper notes. The US DOD has co-funded research on the distinction between bot and non-bot on a publicly accessible online platform called BotOrNot.

22 Elcin Poyrazlar, "Turkey's Leader Bans His Own Twitter Bot Army". Posted 26 March, 2014. http://www.vocativ.com/world/turkey-world/turkeys-leader-nearly-banned-twitter-bot-army/

23 These examples are based on research by Peter Nut and Dieter Leder on Turkish Twitter bot armies, quoted among other places by Elcin Poyrazlar. Ibid.

of a Google image search. On his business Twitter account, it turns out he sells his underwear: he works online as an affective web service provider.[24] Let's call this version Murat, to throw yet another alias into the fray. But who is the bot wearing Murat's face, and who is a bot army representing? Why would Hakan43020638 be quoting Thomas Hobbes of all philosophers? And which book? Let's guess he's quoting from Hobbes's most important work, *Leviathan*. Leviathan is the name of a social contract enforced by an absolute sovereign in order to fend off the dangers presented by a 'state of nature' in which humans prey upon one another. With Leviathan there are no more militias and there is no more molecular warfare of everyone against everyone.

But now we seem to be in a situation where state systems grounded in such social contracts seem to fall apart in many places and nothing is left but a set of policed relational metadata, emoji, and hijacked hashtags. A bot army is a contemporary vox populi, the voice of the people according to social networks. It can be a Facebook militia, your low-cost personalized mob, your digital mercenaries, or some sort of proxy porn. Imagine your photo being used for one of these bots. It is the moment when your picture becomes quite autonomous, active, even militant. Bot armies are celebrity militias, wildly jump-cutting between glamour, sectarianism, porn, corruption, and conservative religious ideologies. Post-representative politics are a war of bot armies against one another, of Hakan against Murat, of face against butt.

This may be why the AK pornstar bots desperately quote Hobbes: they are already sick of the war of Robbie Williams (IDF) against Robbie Williams (Electronic Syrian Army) against Robbie Williams (PRI/AAP), they are sick of retweeting spam for autocrats—and are hoping for just any entity organizing day care, gun control, and affordable dentistry, whether it's called Leviathan or Moby Dick or even Flappy Tayyip. They seem to say: we'd go for just about any social contract you've got![25]

24 The day is not far when you will be an AK bot too, if you are young and somewhat white, and if you aren't already.

25 Unsurprisingly Western secret services seem to have followed suit in programming bot armies to autotune affect on facebook.

Now let us go even one step further. Because a model for this might already be on the horizon. And unsurprisingly, it also involves algorithms.

Blockchain

Blockchain governance seems to fulfill hopes for a new social contract.[26] "Decentralized Autonomous Organizations" would record and store transactions in blockchains akin to the one used to run and validate bitcoin. But those public digital ledgers could equally encode votes or laws. Take for instance bitcongress, which is in the process of developing a decentralized voting and legislation system.[27] While this could be a model to restore accountability and circumvent power monopolies, it above all means that social rules hardwired with technology emerge as Leviathan 2.0.

When disassociated from the programmers who design them, trustless blockchains floating above human affairs contain the specter of *rule by algorithms* ... This is essentially the vision of the Internet as *techno-leviathan*, a deified crypto-sovereign whose rules we can contract to.[28]

Even though this is a decentralized process which no single entity at the top controls, it doesn't necessarily mean no one controls it. Just like smartphone photography, it needs to be told how to work: by a multitude of conflicting interests. More importantly, this would replace bots as proxy 'people' with bots as governance. But then again, which bots are we talking about? Who programs them? Are they cyborgs? Do they have faces or butts? And who is drawing the line? Are they cheerleaders of social and informational entropy? Killing machines? Or a new crowd, which we are already part of?[29]

Let's come back to the beginning: how to separate signal from noise? And how does the old political technology of using this distinction to rule change with algorithmic

26 Scott, Brett. "Visions of a Techno-Leviathan: The Politics of the Bitcoin Blockchain". Posted 1 June, 2014. http://www.e-ir.info/2014/06/01/visions-of-a-techno-leviathan-the-politics-of-the-bitcoin-blockchain/

27 http://www.bitcongress.org/

28 Scott, Brett. "Visions of a Techno-Leviathan".

29 As already predicted by Donna Haraway's *Cyborg Manifesto.*

technology? In all examples, the definition of noise rested increasingly on scripted operations, on automating representation and/or decision-making. On the other hand, this process potentially introduces so much feedback that representation becomes a rather unpredictable operation that looks more like the weather than a Xerox machine. Likeliness becomes subject to likelihood—reality is just another factor in an extended calculation of probability. In this situation, proxies become crucial semi-autonomous actors.

Proxy politics

To better understand proxy politics, we could start by drawing up a checklist:

Does your camera decide what appears in your photographs?

Does it go off when you smile?

And will it fire in a next step if you don't?

Do underpaid outsourced IT workers in BRIC countries manage your pictures of breastfeeds and decapitations on your social media feeds?

Is Elizabeth Taylor tweeting your work?

Are some of your other fans bots who decided to classify your work as urinary mature porn?

Are some of these bots busily enumerating the names of nation states alongside bodily orifices?

Is your total result something like this?

(*'ǀ`*)
(*'σ3`) ~♪
(*'台`*)
(*≧∀≦*)
(*fl™fl*)
(*…∀`*)
(/∇*)°o○♡
(/ε*)(/ε*)(/ε*)

Congratulations! Welcome to the age of proxy politics!

A proxy is "an agent or substitute authorized to act for another person or a document which authorizes the agent so to act."

But a proxy could now also be a device with a bad hair day. A less than authorized agent. A scrap of script caught up in a

dress code double bind. A "Persuading the debtor" detector throwing a tantrum over genital pixel probability. A drone gone rogue. Or a delegation of chat bots casually pasting pro-Putin hair lotion ads to your Instagram. It could also be something much more serious, wrecking your life in a similar way—sry life!

Proxies are devices or scripts tasked with getting rid of noise as well as the bot armies hell-bent on producing it. They are masks, persons, avatars, routers, nodes, templates, or generic placeholders. They share an element of unpredictability—which is all the more paradoxical considering that they arise as result of maxed out probabilities. But proxies are not only bots and avatars, nor are proxy politics restricted to datascapes. Proxy warfare is quite a standard model of warfare—one of the most important examples being the Spanish Civil War. Proxies add echo, subterfuge, distortion, and confusion to geopolitics. Armies posing as militias (or the other way around) reconfigure or explode territories and redistribute sovereignties.

Companies pose as guerillas and legionnaires as suburban Tupperware clubs. A proxy army is made of guns for hire, with more or less ideological decoration. The border between private security, PMC's, freelance insurgents, armed stand-ins, state hackers, and people that just got in the way has become blurry. Remember that corporate armies were crucial in establishing colonial empires (East India Company among others) and that the word company itself is derived from the name for a military unit. Proxy warfare is a prime example of a post-Leviathan reality.

Now that this whole range of activities has long since gone online, it turns out that proxy warfare is partly the continuation of PR by different means.

Besides marketing tools repurposed for counterinsurgency ops, there is a whole range of government hacking (and counterhacking) campaigns that require slightly more advanced skills. But not always. As the leftist Turkish hacker group Redhack reported, the password of the Ankara police servers was 12345.[30]

30 The same seems to have been the case for some of the Assad government servers.

To state that online proxy politics are reorganizing geopolitics would be similar to stating that burgers tend to reorganize cows. Indeed, just as meatloaf arranges parts of cows with plastic, organic remnants, and elements formerly known as paper, proxy politics position companies, nation states, hacker detachments, FIFA, and the Duchess of Cambridge as equally relevant entities. Those proxies tear up territories by creating netscapes that are partly unlinked from geography and national jurisdiction.

But proxy politics also works the other way. A simple default example of proxy politics is the use of proxy servers to try to bypass local web censorship or communications restrictions. Whenever people use VPNs and other Internet proxies to escape online restrictions or conceal their IP address, proxy politics are given a different twist. In countries like Iran and China, VPNs are very much in use.[31] In practice though, in many countries, companies close to censor-happy governments also run the VPNs in an exemplary display of efficient inconsistency. In Turkey, people used even more rudimentary methods—changing their DNS settings to tunnel out of Turkish dataspace, virtually tweeting from Hong Kong and Venezuela during Erdogan's short-lived Twitter ban.

In proxy politics the question is literally how to act or represent by using stand-ins (or being used by them)—and also how to use intermediaries to detourn the signals or noise of others. And proxy politics itself can also be turned around and redeployed. Proxy politics stacks surfaces, nodes, terrains, and textures—or disconnects them from one another. It disconnects body parts and switches them on and off to create often astonishing and unforeseen combinations—even faces with butts, so to speak. They can undermine the seemingly mandatory decision between face or butt or even the idea that both have got to belong to the same body. In the space of proxy politics, bodies could be Leviathans, hashtags, juridical persons, nation states, hair transplant devices, moody chat bots, or freelance SWAT teams. Body is added to bodies by proxy and by stand-in. But these

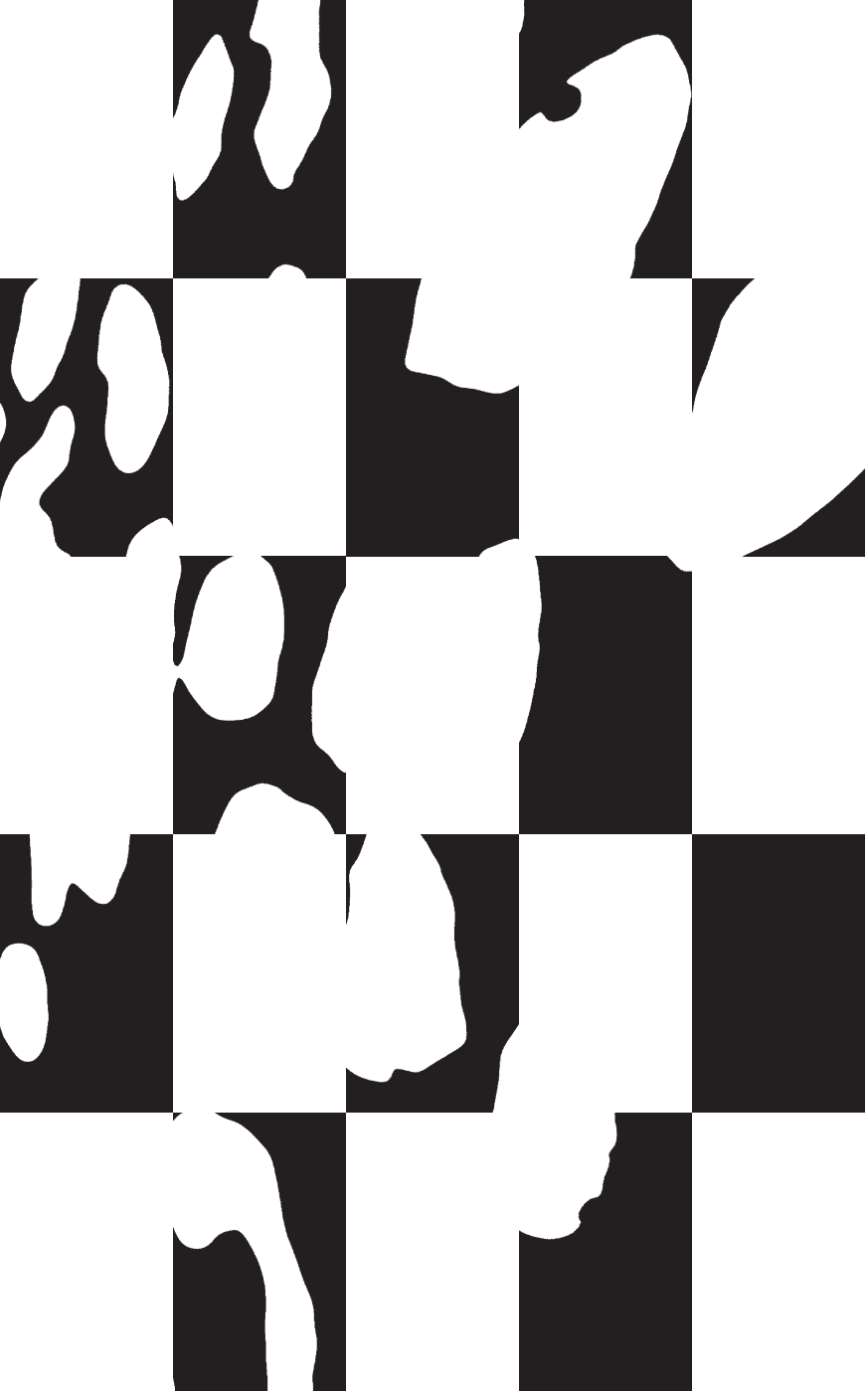
31 https://greycoder.com/how-hide-vpn-connections/; https://www.theguardian.com/technology/2011/may/13/china-cracks-down-on-vpn-use

combinations also subtract bodies (and their parts) and erase them from the realm of never-ending surface to face enduring invisibility.

Or maybe something much more simple? In an unprecedented self-experiment I pointed my cell phone at Twitter bot @leyzuzeelizan's (now deleted) profile picture. With as much authority as I could muster, and hoping it would not shoot me back, I ordered it to run a retina scan on her and send it through its network database. My phone identified her in a split second without a fraction of hesitation. @leyzuzeelizan turns out to be no one other than myself, turned from signal to noise, from face to butt and back again several times over, across the crumbling borders of several nation states and countless levels of towering stacks, erasing differences between bodies, nations, animals, and media containers to advertise the work of someone called Hito Steyerl #oral, #xhamster, #videos, #syria How Not To Be Seen.

In the end, however, a face without a butt cannot sit. It has to take a stand. And a butt without a face needs a stand-in for most kinds of communication. Proxy politics happens between taking a stand and using or being used as a stand-in. It is in the territory of displacement, stacking, subterfuge, and montage that both the worst and the best things happen.[32]

32 As Terranova writes: "A cultural politics of information is crucially concerned with questioning the relationship between the probable, the possible and the real. The cultural politics of information involves a stab at the fabric of possibility, an undoing of the coincidence of the real with the given." Terranova, Tiziana, 2004. *Network Culture*.



Brian Holmes

Empathy Machines

Emergent Organs for an Eco-Body?

You're sad, you're mad, you're not so young anymore, and the climate's going to hell on you every day. So you look in the mirror and think: "Maybe it's time to adopt a pixel." Fortunately you can get one for free, direct from the US Geological Service. It comes from a LandSat sensor that beams it down from outer space. Your pixel is a representative of Planet Earth: it corresponds to one specific piece of territory about 30 meters on a side. When it makes its appearance on the screen it's a tiny, almost invisible dot in a scientific datascape: the smallest proxy of them all. The problem is, it's an orphan, a nobody, with no personality, no qualities, and only a generic name (*urban land, agricultural land, forest land, wetland*, etc.). To adopt such a pixel, just mark any given spot with a handy GPS device and point your camera down at your feet. Click. Then turn south, east, north, and west, clicking a photo each time, and finally look up into the air where the satellites live. Click again. Send those six images back to USGS and the feedback loop is complete. Your little pixel has grown up: it knows what it is, where it is, who it is. You have contributed some 'ground truth' to earth science.[1] By becoming part of the remote-sensing machine, you help make abstract information into a place, a tangible reality that someone might actually care about some day.

Acting in this way, I've developed a relation with the pixels of the environmental sciences. Not just the ones borrowed from a random USGS webpage, but instead, those that can be found in a dizzying range of geographical images, emanating from public research labs across the planet. Since 2016, I've been building up a map of the Mississippi River and Great Lakes watersheds, whose dividing line runs through my home city of Chicago. To create this work, called *Living Rivers*, I've been adopting pixels like crazy, combining them

1 Try it for yourself at https://lta.cr.usgs.gov/adopt_a_pixel. In geography, 'ground truth' refers to the first-hand observation that is necessary for the initial classification and secondary corroboration of remote-sensing data.

into aesthetic forms and ground-truthing them whenever possible, through excursions around the Midwest.[2] The hope is that this artistic process will help make people more sensitive to the air we breathe, the water we drink, and the ground beneath our feet. Maps are crucial perceptual tools for the new political ecology, because they point outward, beyond themselves, beyond ourselves, toward the territory. They are proxies that do not feign, that do not hide, that do not even try to dissimulate (though their enemies will always accuse them of lying). Maps represent the biogeochemical cycles of Gaia, at scales from the microscopic to the macrocosmic. And they ask us to care about those biogeochemical cycles, as though they were part of our own metabolism.

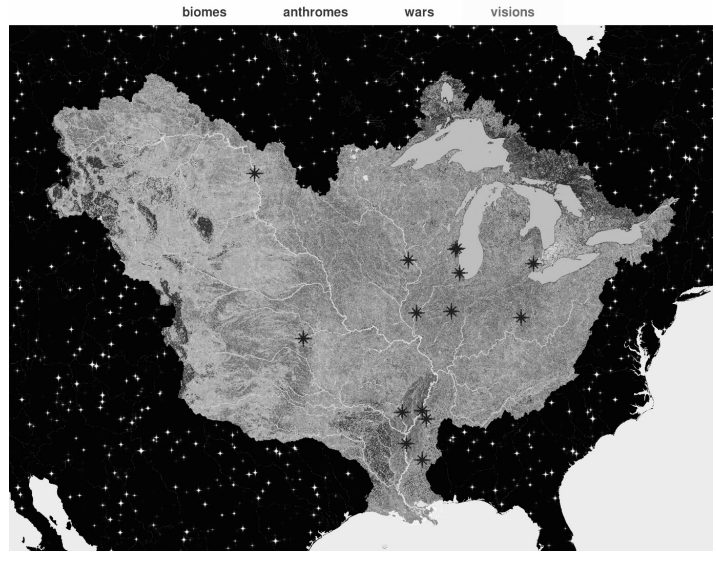
The questions of this project involve complex structures of knowledge, mediated by aesthetic forms and disrupted by political conflicts. Yet at the same time, the questions are very intimate. What is ecological empathy? How do people establish a connection with worlds beyond their own perception? When does a proxy get under your skin?

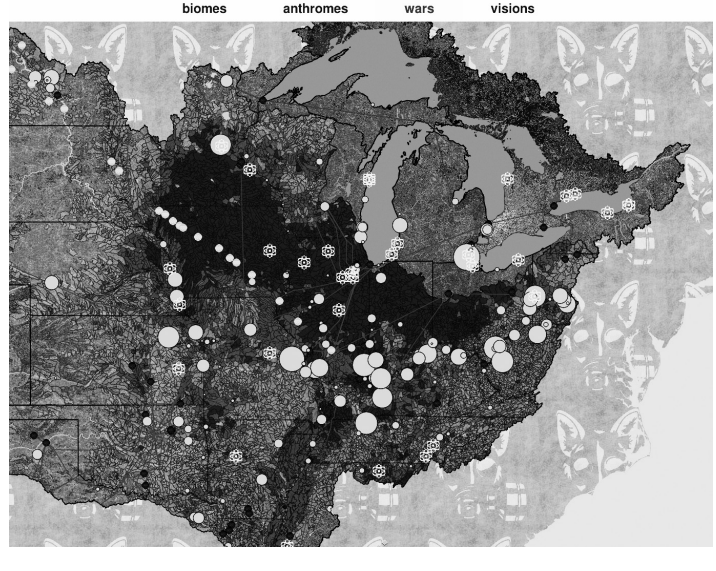
Living Rivers explores four fundamental categories of territorial experience. *Biomes* are characteristic habitats combining plant, animal, fungal, and bacterial species into recognizable constellations that are decisively shaped by particular landforms and water flows. *Anthromes*, or anthropogenic biomes, are violently simplified ecologies, engineered across vast spaces by human beings and their machines (one example is the endless corn-soy anthrome of the Midwest where I live). Wars are flash points where the human onslaught against what used to be called Nature reaches explosive proportions. Finally, *Visions* spring from the exercise of expressive capacities, overflowing the subject/object divide and reshaping the expressive agency itself through encounters with both human and non-human Others.

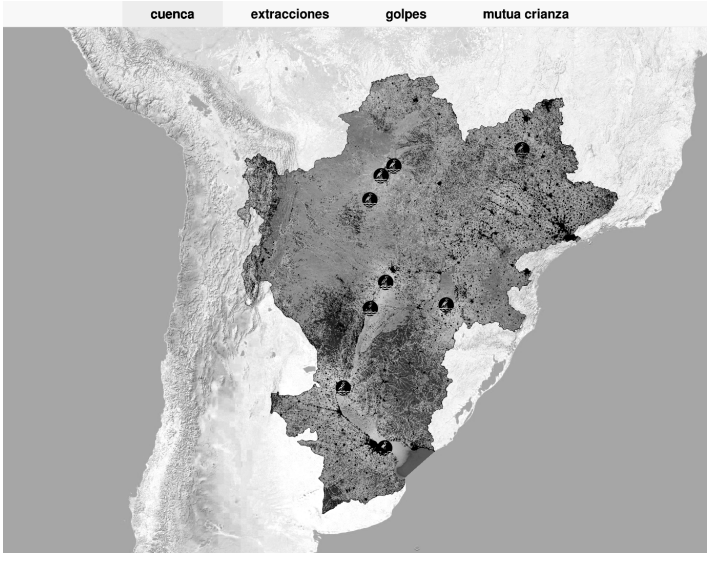
The cartography of the Mississippi and Great Lakes watersheds was developed in tandem with another map, *Ríos Vivos*, by Alejandro Meitin of the Argentinean group Ala Plástica.[3]

2 See it for yourself at http://ecotopia.today/livingrivers/map.

3 *Ríos Vivos* can be accessed from the navbar of *Living Rivers*, or at http://ecotopia.today/riosvivos/mapa.html. See also http://alaplastica.wixsite.com/alaplastica.







Meitin has been exploring precarious life in the Paraguay-Paraná river basin over the last twenty-five years. He works with island-dwelling villagers, environmental activists, scientists and artists, within the changing context of a vast river, wetlands and estuary system, itself surrounded by an expanding corn-soy anthrome. We developed our parallel inquiries within an exhibition project called *The Earth Will Not Abide*, which includes pieces by Ryan Griffis, Sarah Ross, Claire Pentecost, and Sarah Lewison.[4] The project explores the often devastating footprint of industrial agriculture in North and South America, with an additional look at peasant resistance in the new center of global economic development, which not coincidentally is also the world's largest market for genetically modified grains, namely China.

It was an uncanny experience to make the map of *Living Rivers* in the summer and fall of 2016. As I worked, the protests against the Dakota Access Pipeline grew. The 'black snake' of DAPL writhed through the Upper Midwest, sinking its venomous fangs into the oil hub of Patoka in Southern Illinois. You could hear and feel the pain of the Native Americans, through the cries in the streets, the images in the papers, the videos on the net and the stories told by travelers coming back from North Dakota. "Water is life!" was the chant heard again and again. But as the struggle against DAPL unfolded, Trump was running his yet more venomous campaign. The worlds I was seeking to visualize in the map were the ones he wanted to banish from all consideration. Trump's people said that the NASA satellites should be pointed toward outer space, not toward the Earth.[5] His administration is a direct attack on our civilization's organs of perception. I felt like the eyes were being ripped out of my head. Why are these two things simultaneous? What makes love and hatred coincide in this way?

4 See the exhibition website: http://gallery400.uic.edu/exhibitions/the-earth-will-not-abide.

5 Milman, Oliver, "Trump to scrap Nasa climate research in crackdown on 'politicized science,'" in *The Guardian*. Posted 22 November, 2016.

Emo-Wars

The latest installment in the theory of empathy comes from an unlikely source: the leading EU consultant on the emergent technologies of the Third Industrial Revolution.[6] Noted author and distinguished professor at the Wharton Business School, Jeremy Rifkin is an American counter-culturalist who came of age in the 1960s. He's from the East Coast, not California—so you can think of him as a hardball version of the hippie entrepreneur Stewart Brand. The complex of ideas that Rifkin sells to the Eurocrats is really very simple. Replace the corporate-military oil complex with renewable energies. Develop a smart electric grid to power small-scale distributed manufacturing. Promote equal exchange between associated producers via the latest in computer-orchestrated logistics. And use the markets of this new industrial system to entice China along the pathways of sustainable development in the twenty-first century. Unlike the usual dreamers, Rifkin is getting this done, via multi-million-euro projects in various EU countries. But just like the usual dreamers, he knows that success is all about empathy.

Rifkin has studied Renaissance literature and mirror neurons, and he understands empathy as a foundational process of human development, both in the life history of individuals and in the history of civilizations.[7] Somehow you have to perceive the emotional landscape of the Other, and then internalize that landscape, however imperfectly. This allows you to experiment with an affective relationship in kinesthetic thought, *in advance* of those split seconds of real encounter that will make all the difference between love and hate, peace and war. Empathy is the highly uncertain, thoroughly speculative process of feeling someone else's feelings, whether through dreams, fantasies, painted images, literature, film, electronic media, or as-yet undiscovered means. It's not an end point, but the condition of possibility for a response, an engagement, or an action, whether directly or at a distance.

6 Rifkin, Jeremy, 2011. *The Third Industrial Revolution; How Lateral Power is Transforming Energy, the Economy, and the World.* London: Palgrave MacMillan.

7 Rifkin, Jeremy, 2009. *The Empathic Civilization: The Race to Global Consciousness in a World in Crisis.* New York: Tarcher/Penguin.

Sure, you can be 'Against Empathy' and in favor of a coolly rational compassion, as the author of a recent polemic would have it.[8] But you might as well be 'Against Imagination.' The point is not to attain the ultimate intellectual purity. The point is learning to make better use of a basic human faculty, which is currently being abused on a massive scale. Since the advent of Twitter, we are living in the age of the emo-wars.

Long before the populists grabbed the headlines of every newspaper, Rifkin cut to the heart of the conflict between love and hate. His key idea is that every expansion of the productive apparatus of civilization necessarily brings new communication techniques, which serve to control and coordinate the new production machines, while simultaneously enlarging and deepening our capacity for empathy. But every such expansion of the productive forces also brings greater capacities for destruction of the environment, resulting in fear, hostility, and backlashes of all kinds. There is a double-bind at work here, an 'empathic-entropic paradox,' whereby civilization's increasing complexity continually threatens it with dispersal and dissolution. The empathic-entropic paradox has now reached planetary scale:

> The early light of global empathic consciousness is dimmed by the growing recognition that it may come too late to address the specter of climate change and the possible extinction of the human species—a demise *brought on* by the evolution of ever more complex energy-consuming economic and social arrangements that allow us to deepen our sense of selfhood, bring more diverse people together, extend our empathic embrace, and expand human consciousness. We are in a race to biosphere consciousness in a world facing the threat of extinction.[9]

Rifkin's book, *The Empathic Civilization*, was written in the 2000s, during the rise of social media but also under the shadows of the Iraq and Afghanistan wars. It focuses mainly on the relations between humans of different classes, countries, and races. But it's clear from the book—and more broadly,

8 Bloom, Paul, 2016. *Against Empathy: The Case for Rational Compassion.* New York: Ecco.

9 Rifkin, Jeremy. *The Empathic Civilization, op. cit.,* p. 26.

from contemporary experience—that the 'empathic embrace' of a viable twenty-first century civilization must extend beyond human beings, to the untold millions of other species that are menaced by imminent extinction. At the extreme, it's about feeling out the emotional landscape *of the landscape itself*, in its radical non-human otherness. Only by doing so right now, through aesthetic as well as scientific means, can we generate a hitherto absent capacity to *respond* to the weirdly entropic spirals of all-consuming 'progress' and 'growth' that have engulfed the entire biosphere. Otherwise those entropic forces, typified by the release and ubiquitous dispersal of CO2 in the atmosphere, will push us dramatically beyond the so-called 'limits to growth,' or what earth-systems scientists call 'the planetary boundaries.'[10]

Today's neo-populism denies those limits, which threaten its partisans at the core of their real or imagined privileges. For them, the threat is not objective—it has nothing to do with science, remote sensing, or ground truth. Instead, it arises from anything that would force them to admit the existence of other beings with different priorities. "Stay white" is their grotesque call of identitarian solidarity (and you can bet it also means "stay straight"). Trumpism in particular stands squarely against two things: environmental policies and the liberation of those whom the dominant elites still call "the minorities." The populist refusal to countenance the affective presence of the multi-racial and multi-species Other is matched by a direct emotional appeal to the fears and aggressions of a declining national/imperial constituency: the cattle kings, the engineering moguls, the coal-oil-and-gas extractivists, the military, the manufacturers, the shoot-from-the-hip police and the financial aristocrats who profit from all the simmering resentment. That's a tremendous alignment of forces, but a desperate one, which constantly seems to be collapsing from its own contradictions. And the response to this white supremacist, anti-environmental fascism has been impressive. On the streets, on the net, in workplaces, on campuses, in the mainstream media, and even out in the

10 Rockström, Johan, et. al. (2009). "Planetary boundaries: exploring the safe operating space for humanity," in: *Ecology and Society* 14(2): 32.

almost-forgotten countryside, Trumpism is being opposed with the biggest, broadest, deepest wave of activism, legal obstructionism, philosophical condemnation and popular disdain that I have seen since my tender childhood back in the late 1960s. The emo-wars are in full swing, and no one can yet predict the outcome.

Big Picture

So what about those satellites? They are to ecological activism what cell-phone cameras are to #BlackLivesMatter. They provide streaming images, graphic representations, proxies of the real. When the videos of officer-involved murders are adopted and expressed by outraged black and brown activists, you get the huge, cross-racial movement against police impunity. When the cool, abstract data of the environmental sciences are adopted and expressed by impassioned individuals and groups, you get the Climate Justice Movement. Spanning the globe with its powerful proxies, the latter movement turns data into knowledge, then it turns knowledge into aesthetic forms, and finally it turns aesthetic forms into action. The middle phase, where empathy emerges, is not the least important.

Ecological empathy machines constitute a new and particularly urgent realm of aesthetic production—even when they are devoted to the daunting vastness of biogeochemical cycles, or to the unsettling connections between human beings and the 'deep time' of geological change. Some leading exponents of these aesthetic forms, which have directly inspired us in the Midwest, can be found in the artists of the World of Matter collective.[11] Yet there are innumerable such examples, in cinema, literature, photography, experimental media, and in the sciences themselves, or out in the streets. Operating both within and far beyond the institutionally recognized disciplines of art, the influence of these expressive assemblages has already been profound, and it will undoubtedly continue to grow. As current dynamics in the US reveal, that influence is fundamentally political. What I am calling 'empathy machines' are the latest face of an age-old

11 Check it out: www.worldofmatter.net

contradiction, whereby the instrumental means of capitalist control and coordination become the expressive instruments of liberation.

At a time of extreme social polarization, when it is necessary to take sides in massive conflicts where one remains suspicious of all sides, it has become particularly interesting for artists to reach out to scientists. It's clear that the latter are finally taking on explicitly partisan roles in the face of crude efforts to silence them (particularly by defunding their laboratories[12]). What's at stake, however, is not only the defense of publicly conducted research. Nor is it only an imperative to 'politicize science,' as though one could simply do away with the centuries-old attempt to attain a position of objectivity. Instead, the real stakes for aesthetic production are to be found in the possibilities that the environmental sciences offer for a fresh extension of human perception, and therefore of civilizational empathy. The fact that this most recent extension of empathy should be carried out through the highly rational images of science, rather than those of Romantic poetry, speaks of a new constellation that leaves the old reason/emotion debates far behind.

There are some other things to think about concerning the turn toward empathy machines. By accepting to become part of the feedback loop that brings existential 'ground truth' into the datascapes of satellite-based science, one integrates oneself to the planetary mapping infrastructure of the World Geodetic System, as I pointed out years ago.[13] Yet the reduction of individual autonomy that follows from this integration to the remote-sensing machines holds a hidden promise, which is only now coming into view. It is the promise of gaining a *species capacity* to perceive our interdependence with the vast oceanic and atmospheric circulations that are part and parcel of the evolution of life on earth. As I've suggested

12 Opening today's paper, I found a perfect example, alas: Rosner, Hillary, "The Climate Lab That Sits Empty," in *The New York Times*, July 28, 2017.

13 Holmes, Brian (2003). "Drifting through the Grid: Psychogeography and Imperial Infrastructure", at http://amsterdam.nettime.org/Lists-Archives/nettime-l-0305/msg00055.html, and in *Springerin* 3/04.

in a recent text, the major technological challenge of the present is not the simple refusal of big data and invasive surveillance technology. Instead, the major challenge is to *actively shape* a more highly integrated cybernetic regime, whereby we can collectively temper our damaging behaviors at the level of the population.[14]

Alejandro Meitin, with whom I worked on *Living Rivers/Ríos Vivos*, holds similar ideas. He believes that the dynamic equilibrium of the South American river basin where he lives—or what he calls, cybernetically, the *homeostasis* of the watershed—is not maintained by the state and the engineering companies, but instead by the grassroots physical labor of the people who inhabit it, through their forms of cultivation, animal care, habitat protection, stream maintenance, pollution, and flood control, etc. Much of his work takes place at the expressive and communicational level, strengthening the inhabitants' capacities for intuitive collaboration. Could a more empathic civilization rediscover such directly democratic practices at an industrial order of magnitude? Here again we would have to explore a possible integration with informational technologies constituting emergent perceptual organs for a very different kind of body than the one we have hitherto known. The mapping projects seek in that direction: they are both perceptual prosthetics and fields of ecological imagination, like the landscape paintings of centuries past, but under wildly different environmental and social conditions.

In any event, it is clear that a new circuit of perception, imagination, expression, and action at the species level is already a driving force. The scientific perception of global climate change lies behind the adoption of renewable-energy technologies and small-footprint manufacturing toolkits, which Rifkin and hundreds of other high-level planners are now struggling to make into a viable industrial norm. In this effort, empathy machines will not make all the difference. But they will make some of it.

14 Holmes, Brian (2017). „Bis drei zählen: Jenseits des kybernetischen Entweder-oder," in: Franke, Anselm, Hankey, Stephanie and Tuszynski, Marek (eds.). *Nervöse Systeme.* Berlin: Matthes & Seitz.

Starting Fresh

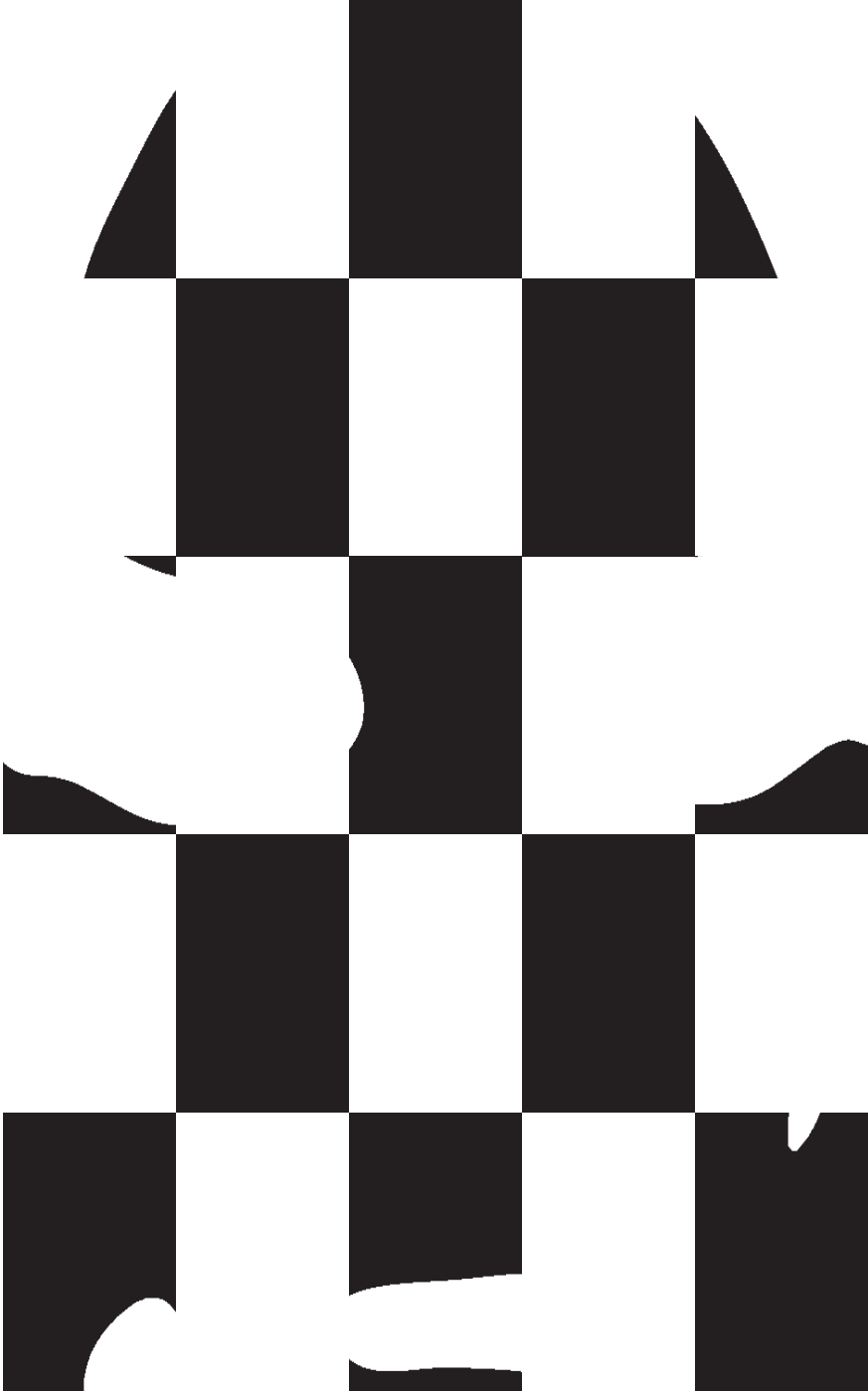
This has been a short but wildly speculative text. It deserves to end on a visionary note. Maybe the pixels of the environmental sciences, those tiny little emissaries of Planet Earth, have actually been adopting *us* all along? I'm thinking of an essay by Dorion Sagan, from a book he co-published with his mother, the remarkable microbiologist Lynn Margulis. Pursuing the Gaia theory developed by Margulis and James Lovelock, Sagan attempts to "imagine a child of a present or future culture inculcated from childhood to believe that the planetary surface formed a real extension of his person."[15] It strikes me that Sagan himself might know something rather personal about that kind of childhood. It's most curious: he is conceiving a time, maybe even the present, when the proxies of the environmental sciences have quite literally gotten under the extended, trans-individual skin of what used to be called humanity. He continues his reverie of the Gaian child: "The mountains between earth and air would seem to him anatomically placed, as 'our' skeleton is between 'our' bone marrow and flesh." Then he abruptly switches genders to conclude his intimate flight of scientific fancy:

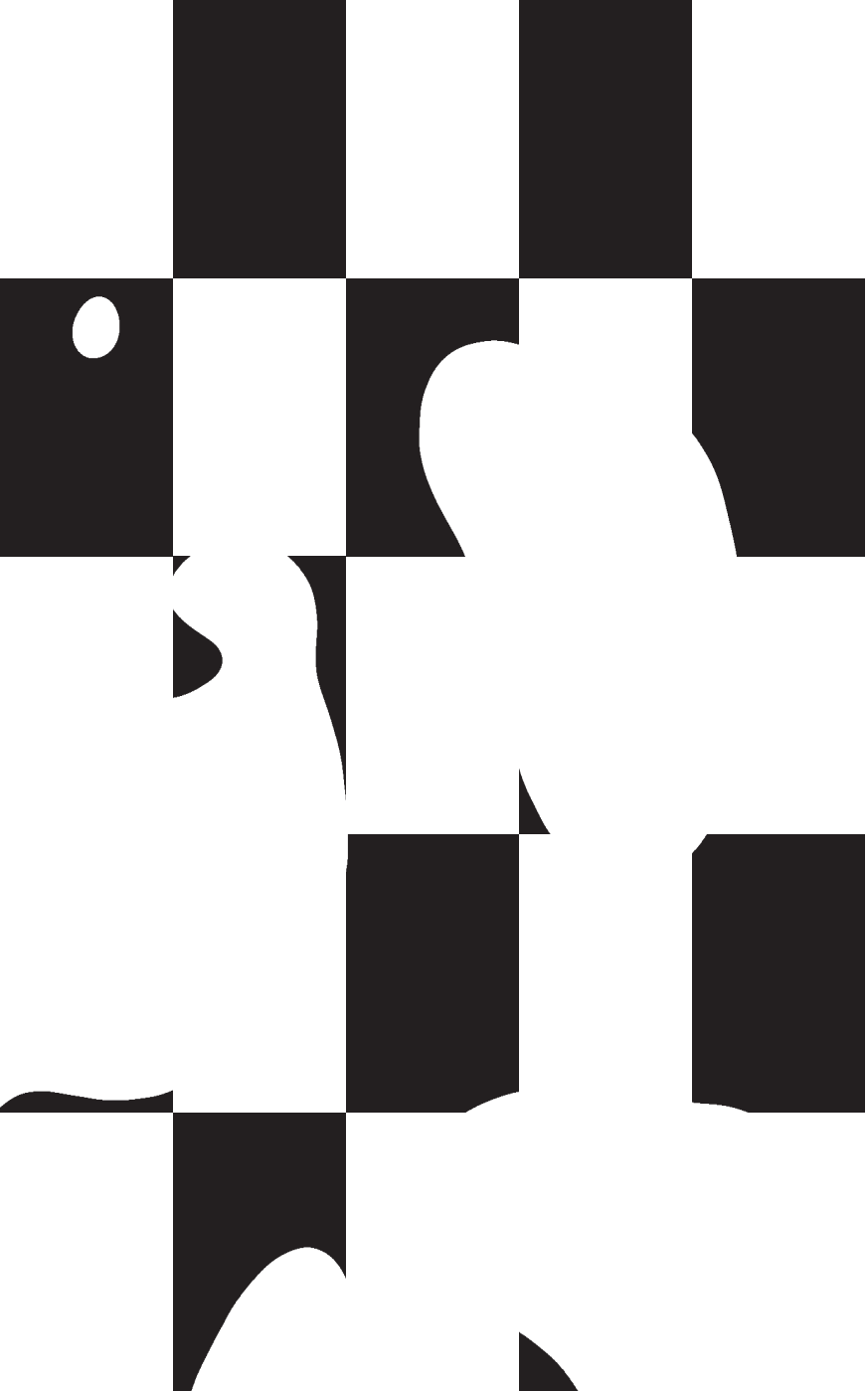
> Imagine someone from this culture picnicking. She believes her environment to be part of her self. The grass on which she sits is a patch of tissue lining the inside of the superorganism of which she forms a part. The bark at her back, the dragonflies, the birds, the clouds, the moist air, and the ants tickling her foot—all these sensations represent, from her point of view, self-perception. Like the ants, 'she' senses what is beyond 'her.' When 'she' pulls her T-shirt over 'her' knees, this is no longer human, but one locus of sensation within the kaleidoscopic entrails of a planet-sized photosynthesizing being.[16]

You've been human long enough. Let it go. Imagine the eco-body.

15 Margulis, Lynn. and Sagan, Dorion, 2007. *Dazzle Gradually: Reflections on the Nature of Nature.* Chelsea Green, p. 210.

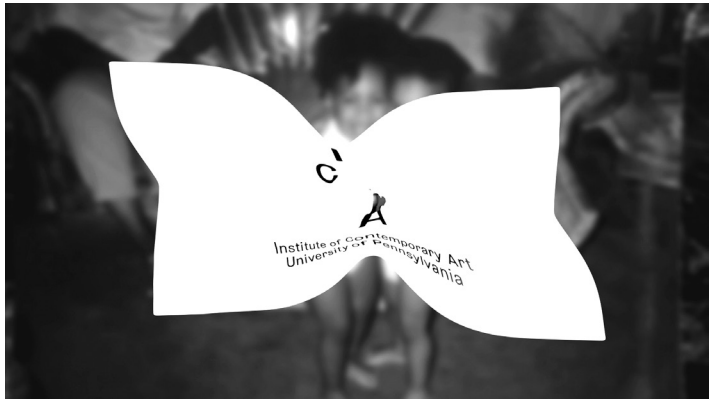
16 Ibid., p. 211.

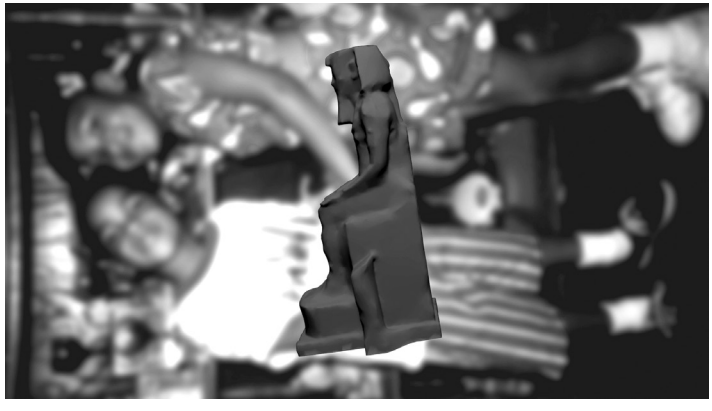




Sondra Perry
In rotation for projection and monitor #1 (Performance)

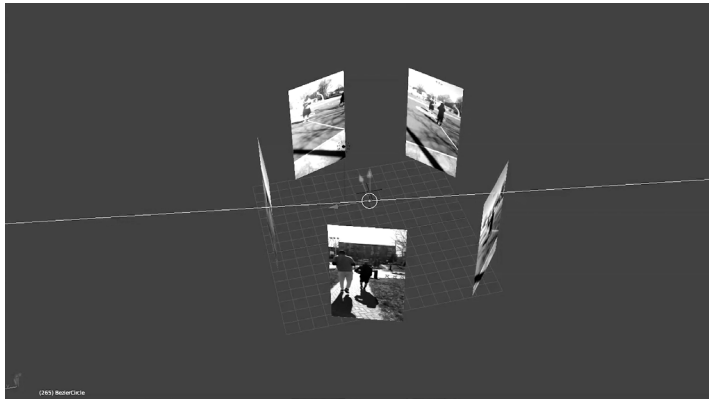
In rotation for projection and monitor #1 (2017) is a performance about likeness, bodies, objects, and their digital representations as explored through the video installation *IT'S IN THE GAME '17 or Mirror Gag for Vitrine and Projection*. The work is about the artist's twin brother whose physical resemblance and statistics as an athlete were used in basketball video games produced by EA Sports. Juxtaposed with such imageries are 3D renderings of artifacts housed in the collections of encyclopedic museums including the Metropolitan Museum in New York and The British Museum in London.

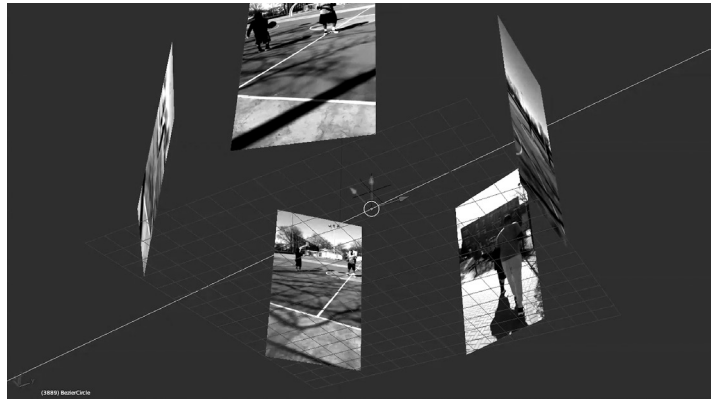

Institute of Contemporary Art
University of Pennsylvania

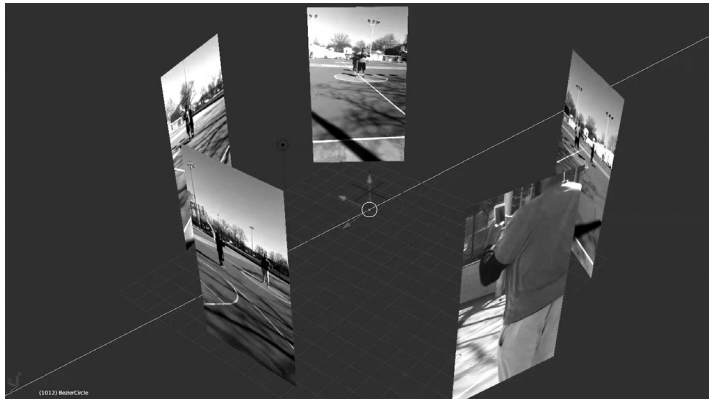


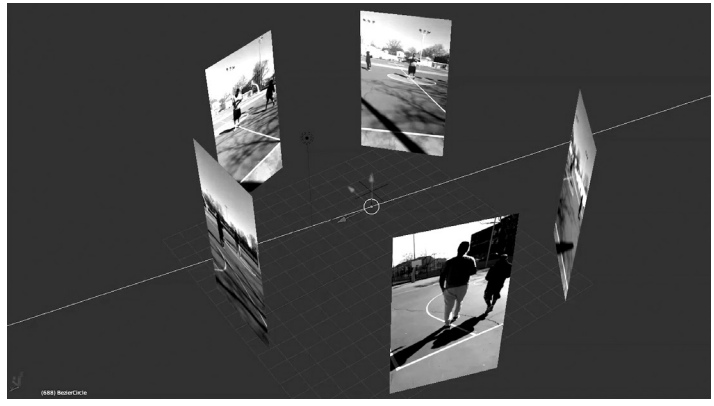
DE
MET

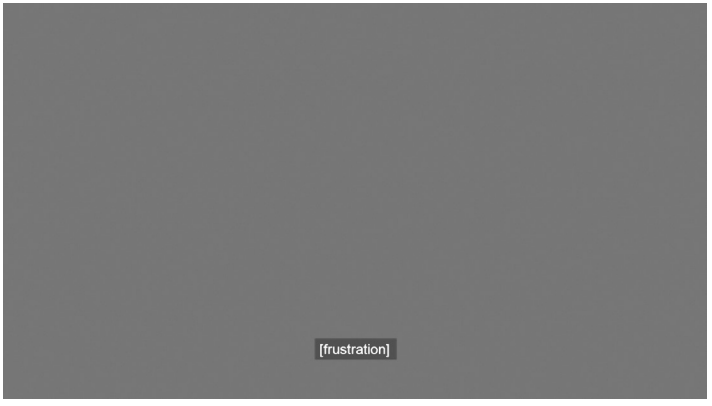
The British
Museum










[frustration]

CREATE-PLAYER / EDIT PLAYER
L2 R2 SOCON
L1 R1 GEORGIA SOUTHERN EAGLES
PG #4 5' 10" 165 LBS 75 PG
SF #45 6' 6" 210 LBS 68 SF
SF #32 6' 5" 175 LBS 77 SF
PG #5 6' 2" 175 LBS 74 PG
C #13 6' 11" 260 LBS 70 C
SG #1 6' 5" 180 LBS 73 SG
PG #12 5' 10" 165 LBS 66 PG
SF #11 6' 6" 210 LBS 72 SF
J. ALLEN 6' 4" 210 LBS 77 SF
A. HANSON 6' 2" 175 LBS 70 SG
T. PEARSON 6' 8" 225 LBS 73 PF
S. PERRY 6' 7" 220 LBS 78 PF
W. POWERS 6' 2" 180 LBS 76 PG
HELP
User 1
EA SPORTS
Hard working. Never took a play off.

CREATE-PLAYER / EDIT PLAYER
L2 R2 SOCON
L1 R1 GEORGIA SOUTHERN EAGLES
PG #4 5' 10" 165 LBS 75 PG
SF #45 6' 6" 210 LBS 68 SF
SF #32 6' 5" 175 LBS 77 SF
PG #5 6' 2" 175 LBS 74 PG
C #13 6' 11" 260 LBS 70 C
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A. HANSON 6' 2" 175 LBS 70 SG
T. PEARSON 6' 8" 225 LBS 73 PF
S. PERRY 6' 7" 220 LBS 78 PF
W. POWERS 6' 2" 180 LBS 76 PG
HELP
User 1
Freshman year he was, like, one of the top players in the conference.

CREATE-PLAYER / EDIT PLAYER
L2 R2 SOCON
L1 R1 GEORGIA SOUTHERN EAGLES
PG #4 5' 10" 165 LBS 75 PG
SF #45 6' 6" 210 LBS 68 SF
SF #32 6' 5" 175 LBS 77 SF
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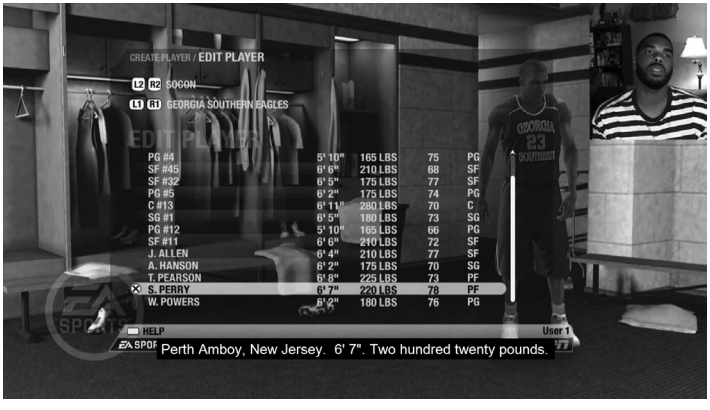
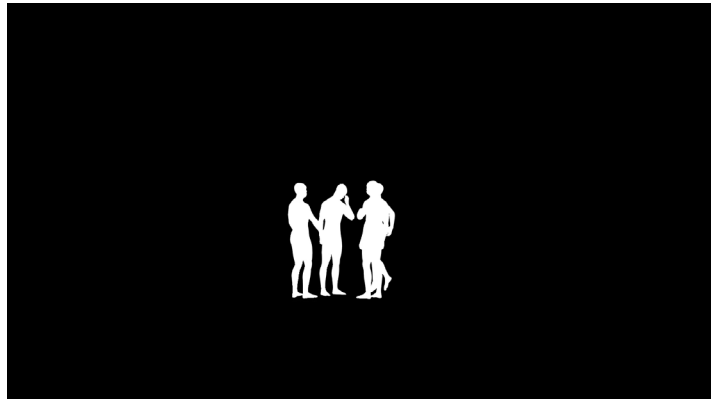
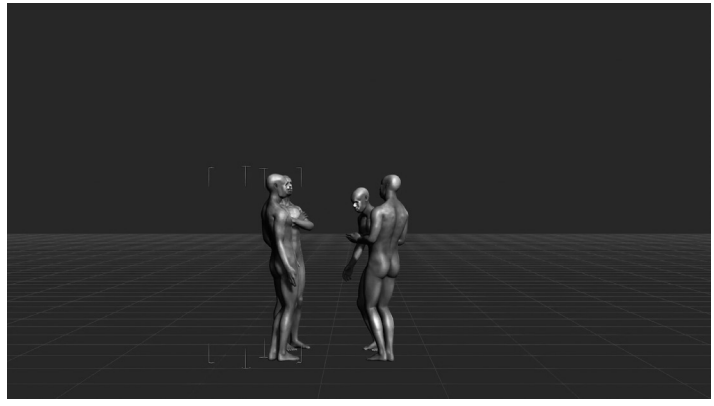
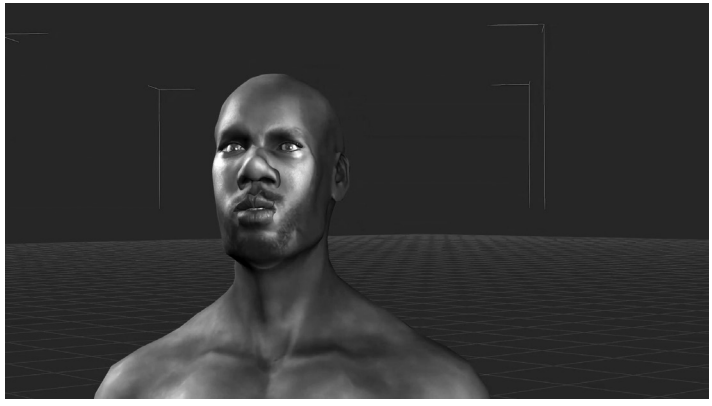
T. PEARSON 6' 8" 225 LBS 73 PF
S. PERRY 6' 7" 220 LBS 78 PF
W. POWERS 6' 2" 180 LBS 76 PG
HELP
User 1
EA SPORTS
I think I started after, like, my third game at Southern.

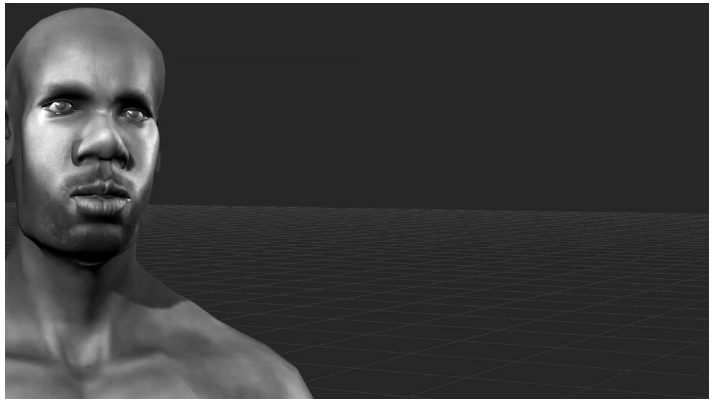

CREATE-PLAYER / EDIT PLAYER
L2 R2 SOGON
L1 R1 GEORGIA SOUTHERN EAGLES
EDIT PLAYER
PG #4 5' 10" 165 LBS 75 PG
SF #45 6' 6" 210 LBS 68 SF
SF #32 6' 5" 175 LBS 77 SF
PG #5 6' 2" 175 LBS 74 PG
C #13 6' 11" 280 LBS 70 C
SG #1 6' 5" 180 LBS 73 SG
PG #12 5' 10" 165 LBS 66 PG
SF #11 6' 6" 210 LBS 72 SF
J. ALLEN 6' 4" 210 LBS 77 SF
A. HANSON 6' 2" 175 LBS 70 SG
T. PEARSON 6' 8" 225 LBS 73 PF
S. PERRY 6' 7" 220 LBS 78 PF
W. POWERS 6' 2" 180 LBS 76 PG
HELP
User 1
Perth Amboy, New Jersey. 6' 7". Two hundred twenty pounds.

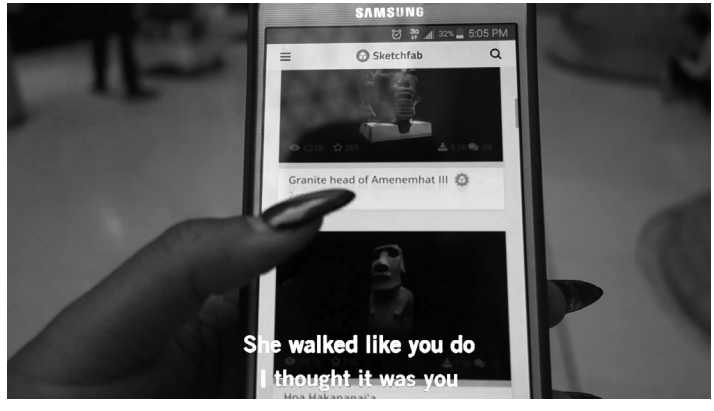
Lights out means if he shoots it, he's not missing.





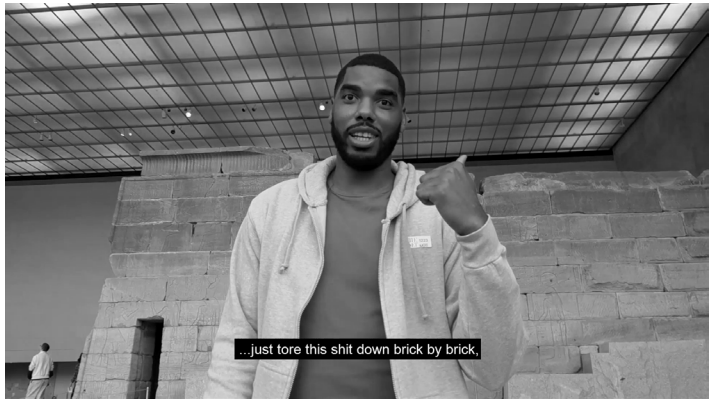


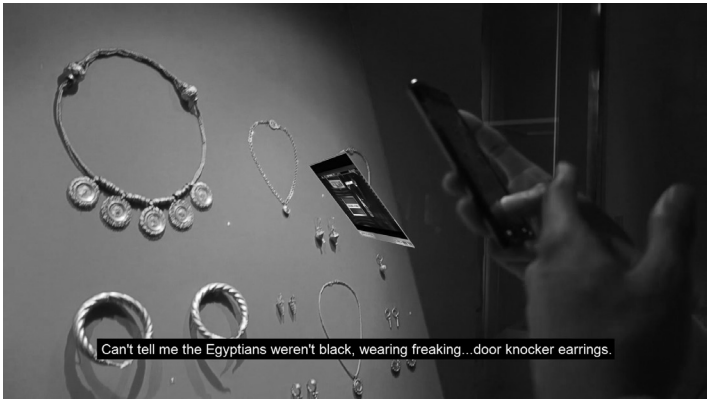


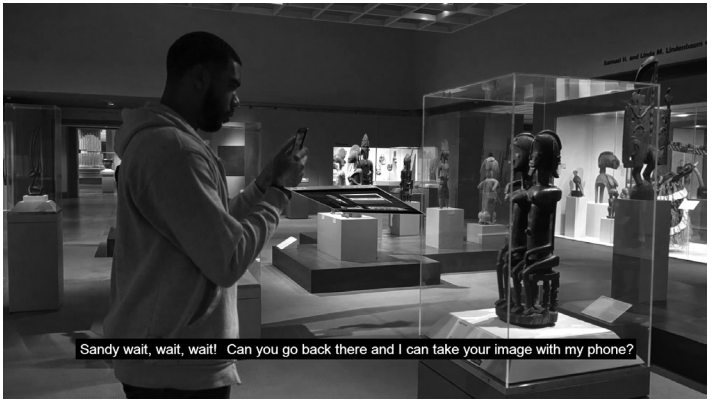

SAMSUNG
5:05 PM
Sketchfab
Granite head of Amenemhat III
She walked like you do
I thought it was you

'Cos it wasn't you

You are everything
everything is you

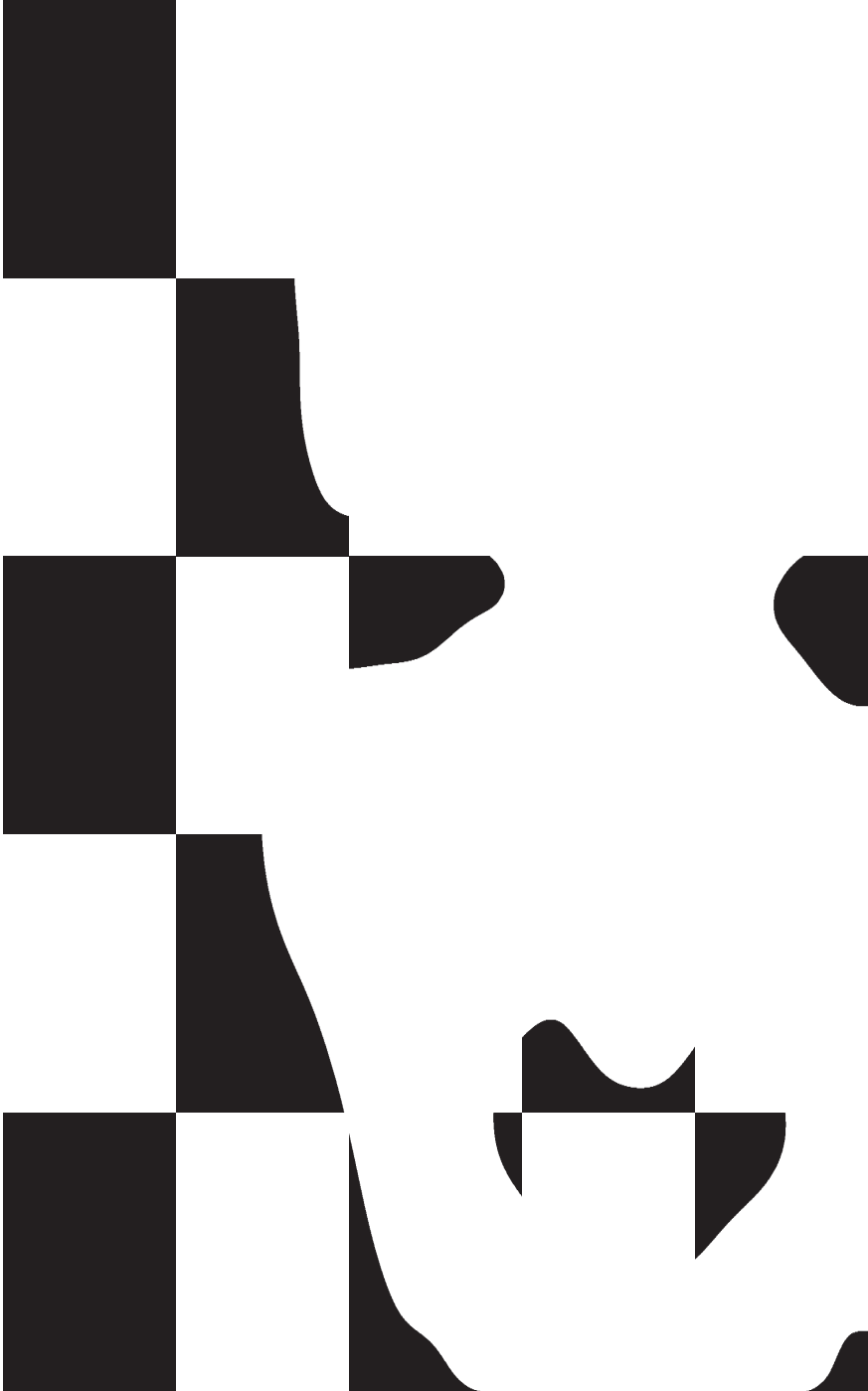

...just tore this shit down brick by brick,


Can't tell me the Egyptians weren't black, wearing freaking...door knocker earrings.


Sandy wait, wait, wait! Can you go back there and I can take your image with my phone?

Can't tell me the Egyptians weren't black, wearing freaking...door knocker earrings.

Jerusalem
1000 1400
Every People
Under Heaven



Doreen Mende

Entries towards a Society of Ramification

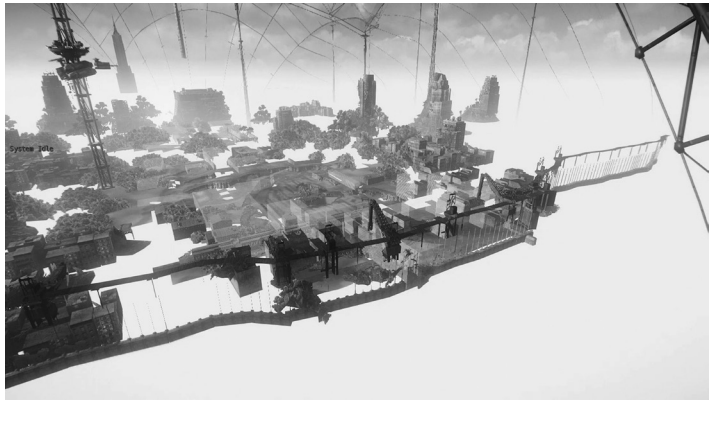
In 1993, Harun Farocki concluded an essay, published at the beginning of his California years, with the statement: "calculative operations [... are] a powerful development which excludes me and shuts me out. My only means of defense is to make films about it. I make films about the industrialization of thought."[1] Written under the impact of a new kind of image-regime reporting from the U.S.-allied Operation Desert Storm in Iraq on the TV in Berkeley and elsewhere in 1991, Farocki exemplifies that development through an invented scene in Baghdad with a "man reading the newspaper." He speculates that "[i]t will soon be possible to beam through the clouds and then the houses that receive reflections, and transfer them into images. For greater vividness, the satellite perspective will be translated into that of the young boy who is cleaning the man's shoes while he reads his newspaper on the Baghdad streets." Farocki speculates about a technology that allows information (or 'data') to travel through climate and built environments. It would ignore the laws of nature, move through walls, and cross borders as if it was an Israeli soldier, a mobile phone, a data-center, or an IP-address. While political filmmakers during the early 1970s analyzed the spatial politics of images between 'here' and 'elsewhere' by perfecting the principle of montage,[2] Farocki proposes with this scene a spatial politics of an image-regime that refuses to provide the intellectual position between frames of two images. In other words, what we have here is the unprecedented intensification and stratification of a spatiality that certainly left the two-dimensional surface of the image-frame in favor of a picture-processing apparatus operating from a distance, in real time, on the ground–but not only. It also stretches the three-dimensional space of

1 Farocki, Harun, 1993. "The Industrialization of Thought", trans. Wilson, Peter, in: *Discourse*, Vol. 15, No. 3, Detroit: Wayne State University Press. p. 77.

2 See the seminal essay-film *Ici et Ailleurs. Méthodes de pensée et de travail de la révolution palestinienne* by Dziga Vertov Group (Jean-Luc Godard, Jean-Pierre Gorin) and Anne-Marie Mièville, 1970/1974.

horizontal-territorial calculation towards the ramified texture of an amount of parallel spaces each with its own politics, infrastructures, technology, perspective, and materiality. The re-configuration of image-space must, in turn, affect the concept of the 'frame', which has served as a political image-instrument to define positioning. The 'frame' served to demarcate position, perspectives, relations, and control towards the 'image-space'. The well-rehearsed and secure position, e.g., facing an image, might still exist but is re-generated permanently, folded, and ramified into multiple dimensions: front but also back, above, and below. That means, the image does not operate through the two-dimensionality of the *frame* any longer, but through *volume* that asks for measurement and scaling. The man with the newspaper and the boy with the satellite perspective constitute together a trans-local spatiality conceived through a set of partial perspectives. We know that Farocki distanced himself from the 1917-revolutionary film-concept of 'montage' around the same time while he was working on *Interface* (1995) and recording the conversations with feminist and critical theorist Kaja Silverman for the book *Speaking About Godard* (1998). Both lead him to the idea of 'soft montage', which weakens the clear-cut position of a signified territory between images. Farocki arrives there by reflecting about the industrialization of image-technology of the 20th century towards an 'automized image' in the future: mobile video technology, electronic cameras, satellite images. Gradually, a 'next stage of rationalization' as Farocki named that process of automatization, would exclude the filmmaker's power of control, and thus, the power to claim authorship. On one side, such a process may lead to 'emergency cinema,'[3] 'selfie'-culture, Mindcraft, 'big data' and Google Street View or Eigenfaces—all forms of popular image-processing that is based on consumer-generated content or viewer-producer quantity. It synchronizes the user with the camera eye's 'subjective shot', that means, the user produces the image while being part of operating the image. On the other hand, the 'automized image' makes it necessary to redefine the political contract

3 Abounaddara, a Syrian film-collective that operates as an online-platform.



of the image-maker with the image enacting/determining an anathema of alienation that 'excludes me and shuts me out'. What to do with it? Farocki proposed: "My only means of defense is to make films about it." This kind of image marks the pretext for the arrival of the 'principle of navigation' as a new image-regime in the 21st century. The following notes are a revised version of my talk "The Industrialization of Thought" for the conference *The Proxy and Its Politics* on June 24, 2017. These notes propose a set of initial entries to address the current paradigm shift in our relation to image-regimes, mainly regarding the formation of a new spatiality, which the 'proxy' implicitly proposes, and the constitution of a subject-under-erasure. In particular, the latter has been debated since computational processes have become forms of popular cultures. The subject faces now a re-enforced pressure under the spatial politics of proxies.

(1)

It might seem outdated to refer to the early 1990s in a conference in 2017 that is dedicated to questions of image-technologies under current contemporary conditions of algorithmic architectures, drone-technologies, and the 'datalogical turn'. Not only, however, did the 'geopolitical change' on global scale around 1989[4] profoundly alter the political order in a post-Cold War world, it also coincided with the beginning of the domestic usage of cybernetic power that soon will take the standardized forms of Email-programs, online search-engines, and computer-games manifesting a new popular culture of navigating and surfing. Much has been written about the ideologies of technology during that time.[5] Farocki's practice alone offers an excellent archive for researching the shifts of image-regimes in relation to the development of technological systems in science and

4 See Smith, Terry (2009). "Questionnaire: Smith", in: Foster, Hal (ed.), "Questionnaire on 'The Contemporary'", *October*, October 2009. Cambridge: MIT Press, pp. 46-54.

5 Bender, Gretchen and Druckrey, Timothy (eds.), 1994. *Culture at the Brink. Ideologies of Technology*, Seattle: Bay Press. Deleuze, Gilles, May 1990. "Postscriptum sur les sociétés de contrôle," in *L'Autre Journal*, Nr. 1.

warfare. For example, *Interface* (1994) investigates the mechanisms and semantics of image-making at the filmmaker's editing table. Or, *Eye/Machine* (2001) offers a form of visual research about the 'operational image' that does not narrate but operates an action.[6] Farocki's commitment to a techno-realism always engaged with the technologies of the contemporary for studying the "dreams and nightmares of our epoch," as Walter Benjamin wrote. "Where does the world end," asks the female voice in Farocki's last installation *Parallel II* (2014) while the subjective shot perspective directs the viewer on the continuous flight across a digitized blue matter with geometric islands popping up and disappearing again.[7] The frameless image is infinite: a line below and above articulating an image's *alterity*, as Serge Daney proposed to think the 'pragmatic distinction' between the 'visual' and the 'image' without abandoning the image as a concept in support of a new spatiality. In other words, starting with a reflection on that particular historical moment makes it possible to address the contemporaneity of the image through a shift from representation to non-representation.[8] The image neither reports nor documents what will operate or process in the future anymore. The speculative question of "where does the world end?" in Farocki's *Parallel* offers a simple, almost naive, but poignant point of entry to the non-representational impact of the datalogical image.[9] Each movement forward that the gamer activates, generates a pixel-element contributing to the emerging landscape of geometric islands amidst the blue oceanic matter, as if the computer-generated image itself wants to make sure that the 'subjective shot' does not move without land underneath. The 'subjective shot' seemingly got the permission

6 Farocki, Harun, 2004. "Phantom Images", *Public* 29 Localities. Toronto: York University, pp. 12–22.

7 Harun Farocki, *Parallel II*, 2014

8 See Vannini, Phillip (ed.), 2015. *Non-Representational Methodologies Re-Envisioning Research*, New York/Oxon: Routledge.

9 I am borrowing the notion of the 'datalogical' from Clough, Patricia Ticineto; Gregory, Karen; Haber, Benjamin and Scannell, R. Joshua, 2015. "The Datalogical Turn", in: Vannini, Phillip, pp. 146-164.

of air rights over land—it might not die from drowning. Here, non-representation is at stake and at play, literally, in practice, action, and performance. The image does not depict a scene in the past nor can it be anticipated in advance. Thus, the image ceased to represent and index but attaches itself to a contemporaneity and complexity that is closer to 'life' than to index and closer to process than to document. The operations of 'adaptive algorithms', as explained by Patricia Ticineto Clough et al., are constitutive for that complexity "that excludes me and shuts me out."[10] They write that "[n]ew technologies such as parametric adaptive algorithmic architectures have given rise to a mathematics reaching beyond number to the incalculable and are no longer slowed by the process or practice of translating back to human consciousness."[11] In other words, the gamer's action in *Parallel* might only appear to be relevant for human perception. The industrialization of thought, however, puts pressure on *thinking* as an exclusively human capacity. Katherine N. Hayles most recent writing proposes the concept of 'unthought' in order to widen the spectrum of cognitive potentialities beyond human superiority of thought. She proposes to conceptualize the human-machine-relation by focusing on different kinds of cognitive processes.[12] The human's particularity is not her intelligence, necessarily, but her human form of cognition that stands neither below nor above machinic cognition. Such de-centering of the human puts pressure on the power of knowledge: we do know how to switch on the computer without knowing what it does while we sleep. What if the human only is the switch or its body operates like a battery for the computational process[13] like Ted Pikul was for Allegra

10 Farocki, 1993, p. 77.

11 Ibid., p. 148.

12 Hayles, Katherine N., 2017. *Unthought. The Power of the Cognitive Nonconscious.* Chicago: The University of Chicago Press.

13 This idea is also present in George Dyson's writing: "We're asleep at the switch because it's not a metaphor. In 1945 we actually did create a new universe. This is a universe of numbers with a life of their own, that we only see in terms of what those numbers can do for us. Can they record this interview? Can they play our music? Can they order our books on Amazon?" Dyson, George, 2012. "A Universe of Self-Replicating Code", Edge (Blog).

Geller's reality video-game eXistenZ?[14] What if the human is excluded from the main purpose of computing, namely, processing data that run through data-centers, Atlantic cables and financial markets? The latter is done best without the slowness and vulnerability of human subjectivity. It expands the cybernetic question to energy resources and the de-centering of the human perspective that Brian Holmes proposes to discuss as Third-Order Cybernetics.[15]

(2)

Parallel II exposes the mechanisms of the 'datalogical image', which is an image beyond the image. Sometimes, it even is under pressure to be recognized as an image. The 'datalogical image', following Clough et al., calculates the 'unthought' for its operational principle. Let us approach the 'datalogical image' through the claim for a new spatiality that we can understand as a 'navigational landscape' as Reza Negarestani proposed.[16] He speaks of an 'initial commitment' that sets an orientation for taking the next steps. The 'initial commitment' means to set foot into a 'navigational landscape' as if one takes the decision for committing to a location. What if this location is an image? What if that image is both frameless and infinite? "Where does this world end?" Where are we? Who are we? The 'initial commitment' continues with asymmetrical consequences, which is similar to the search-process online, when one searches for a particular information, say the internal architecture of a mound built by termites and, led by a chain of hyperlinks, ends up looking at the Eastgate Centre in Harare/Zimbabwe. Discussing the 'navigational landscape' in relation to an image-regime of the 21st century, Negarestani certainly provides a vocabulary for speaking about navigation as the contemporary condition for re-thinking the question of reason in philosophy. Farocki's late projects, however, provide a practice analyzing navigation as a form of popular culture and its politics, for which a vocabulary needs to be invented and developed. To demonstrate the new spatiality, let us look at another sequence of *Parallel II*: a skater is driving across a landscape. He skates and skates, suddenly—as if trapped in a time-hole—he falls off 'the world' into another layer of ground. As if it was a bad accident or as if he hit the magic point on the earth's ground, he falls into the dark matter below the landscape, thick with ruins of an obsolete and exhausted mining industry. Is the dark matter the persistent underworld of industrial modernity, containing the invisibility of treasures of knowledge, present yet invisible to the skater's/gamer's eye? Or is, rather, the dark matter an industrial modernity exhausted by rare earth material extraction? Who is the skater capable of crossing borders, who could afford to take the risk of falling off the patterned industrial landscape and survive?

14 David Cronenberg's film *eXistenZ*, 1999, is another brilliant example for debating the paradigm-shift starting in the 1990s.

15 Brian Holmes proposed in his talk the emergence of a Third-Order Cybernetics that there is no longer a limited human collectivity, but a generalized interactionism on the earth-systems level, which necessarily includes but does not privilege technical machines.'. Brian Holmes, „Bis drei zählen: Jenseits des kybernetischen Entweder-oder", in: *Nervöse Systeme*, 2017, ed. Franke, Anselm; Hankey, Stephanie and Tuszynski, Marek, Berlin: Matthes & Seitz.

16 Negarestani, Reza (2013). "Navigating With Extreme Prejudices (Definitions and Ramifications)", in: *Encyclonospace Iranica*, Vancouver: Vancouver Access Artist Run Centre. Negarestani is one of the few contemporary thinkers reflecting accurately on 'navigation' as a condition for contemporary thought processing, however, it also seems to prolong a philosophical ignorance towards gender, race and politics. In other words, it does hardly offer any trans-disciplinary crossing into fields of practice and politics, which needs to be done.

(3)

Following this line of thought, what emerges subsequently is a new spatiality from the image, which functions as a navigational landscape "that neither faces toward the subject nor wants to tell a story."[17] What does this mean? The 'datalogical image' is an absolute operation, i.e., one which is only logical to itself and may intend to be completely unrecognizable to humans. The datalogical condition has an effect on the subject-figure as Clough et al. propose: "the architectural algorithms of [big] data make use of the unknowable or the incomputable in a non-conscious manner that points to the

17 Ibid.

further *decentering* of human cognition, consciousness, and preconsciousness." It trans-forms subjectivity towards a subject that can neither be interpellated, nor resist interpellation. Can we go further, and ask whether that sub-ject is e-jected from subjecthood—a subject without Subject? It can be speculated that in the 'navigational landscape', the 'I' is no subject in the political sense. Returning to the sequence with the skater will provide an entry here: the moment when the skater had fallen through the time-hole, he twists and turns around losing any sense of gravity. It is as if the unconscious would swirl around in disorientation. The interpellating call is all-immersive, pluri-directional, and invisible, neither grounding nor resisting. In navigation, the subject is e-jected from subjecthood like a DVD used to be e-jected from the computer's hard-drive. The writings of artist and theorist Susan Schuppli are helpful to think with here. Drawing from her long-term research in case-studies when computational space processes the image as a conflict zone, she recently argued: "Screen space has multiplied and refracted the 'frames of war' into complex field[s] of sensors, software and servers that track their targets across the electromagnetic spectrum."[18] In other words, the subject-figure is a figure in a definitional crisis that continuously adapts its focus. It calibrates its vision; it re-frames its perception; it tries to read the pixel. A good example of an e-jected subjecthood is the blurred image: the blur perfectly feeds the desiring machine of a data-society in which the subject continuously tries to find entry, suffering from the Fear-Of-Missing-Out the non-human or inhuman forms of knowledge. The blurred image continuously produces the desire to see, to decipher, to project, and to index—habits, knowledge, and practices that humans have trained for hundreds of years in academic, cultural, and domestic life. Here it is the skater again, from a sequence of Farocki's *Parallel II*. Now he is leaving the so-called 'demo area' of the video-game. The demo area is the norm, the order, the front-end categorized. Desire drives him to cross the line to the forbidden area, hosting the PCU

18 Schuppli, Susan, "Media as conflict zone," talk for the conference Architecture and Wars, convened by Samia Henni, ETH Zurich, June 2017.

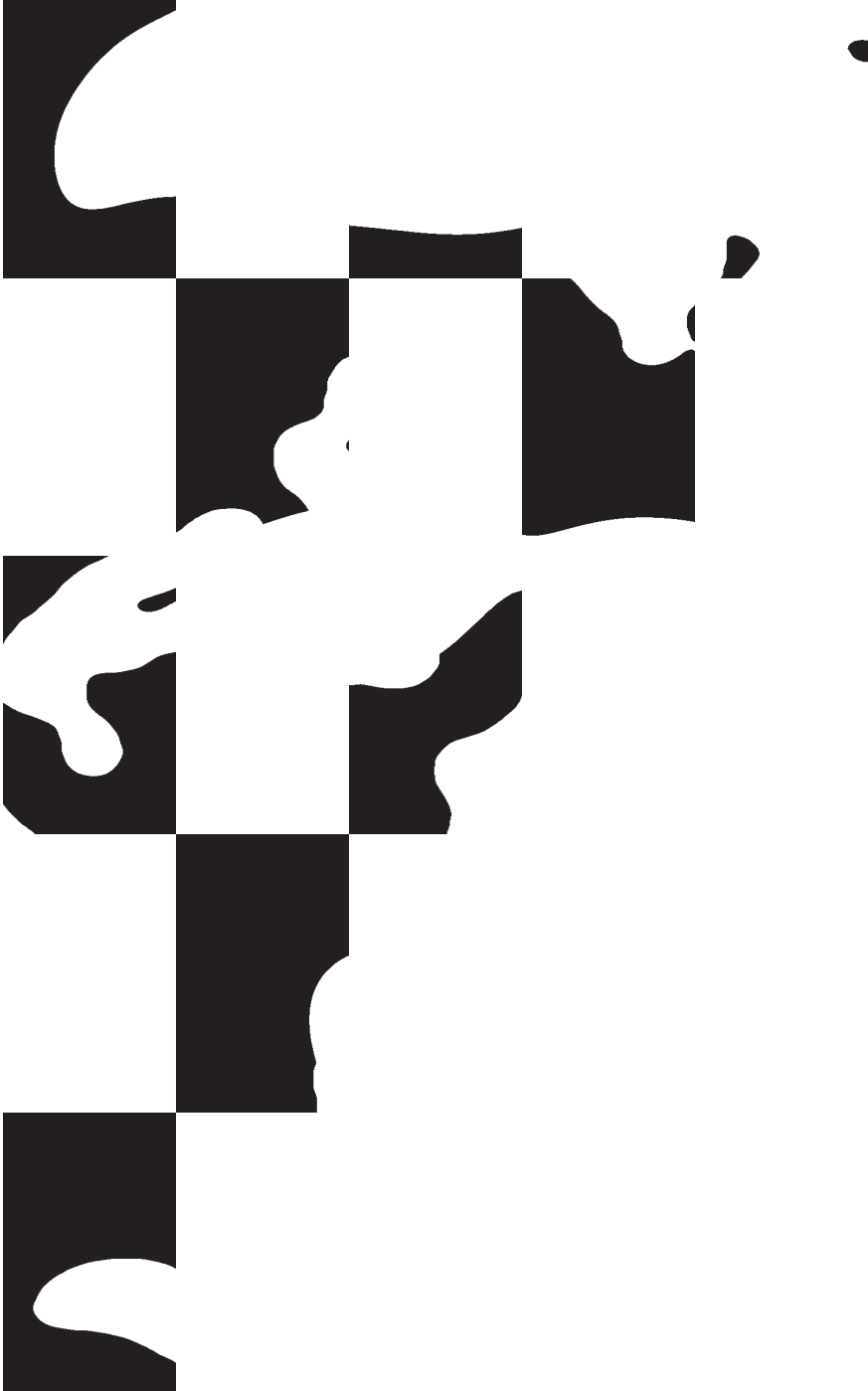
Library on the other side. Crossing the threshold comes with almost inaudible noise and a visible blur as pixelation that indicate the datalogical borders to the back-end where the datalogical happily records that what desire produces. 'We live montage', Jodi Dean wrote, in a period where images travel faster than words processing the infinite[19] image. Distance is filled up with a political economy of pixelation that runs out of actuality (is obsolete) while continuously demands the labor of re-focusing, adapting, calibrating, re-calculating, regenerating, and archiving. Such technical visual processes in digital image processing can be observed in several most recent contemporary artistic projects.[20]

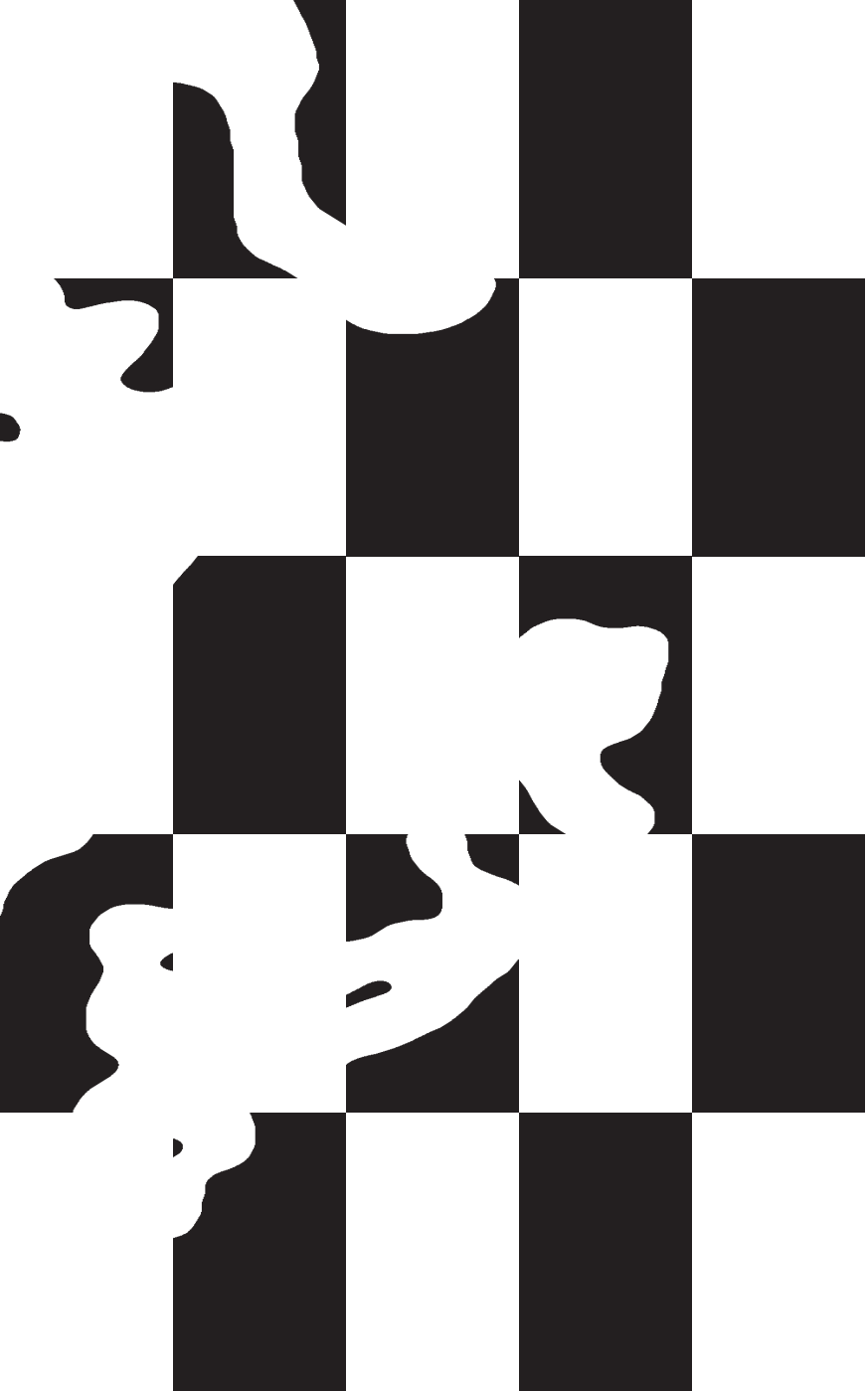
(4) What if the 'society of control', as Deleuze brilliantly proposed in 1990, mutated into a 'society of ramification'? What if the mole has lost its power and the serpent exhausted its capacity to control, because the *termite* never comes alone?[21]

19 Dean, Jodi, 2016. "Faces as Commons. The Secondary Visuality of Communicative Capitalism," in: open! Platform for Art, Culture & the Public Domain, Amsterdam: Stitching Open!

20 Recent examples are Filipa César's "Transmissions From the Liberated Zones" (2015); Susan Schuppli's "Trace Evidence" (2016); Hito Steyerl's "How Not to be Seen: A Fucking Didactic Educational .MOV File" (2013), and Oraib Toukan's When Things Occur (2016).

21 Deleuze, Gilles, May 1990. "Post-scriptum sur les sociétés de contrôle," in: *L'autre journal, Nr. I*. For picturing Foucault's 'society of control' (1975), Deleuze uses the allegory of the mole regulating the vertical stratification of power, while he proposes the *serpent* meandering horizontally through space, fast and slippery, provoking desire to test the unknown and the monstrous. In my talk, I proposed the allegory of the *termite* to picture a multi-part entity living in clusters, collectives and colonies, partly invasive, refusing individualized architectures such as a nest and continuously carrying bits and pieces of environmental matter for building an architecture of ramification.





Laura Katzauer
DivNationX

++ Hi. I am KS, a member of the NatX community. We are a group young people that initially started off as a graphic novel club. Together with the entity Deya, the mother of our network, we started to establish Tecryvar Systems, a crystal communication technology. Deya began to contact us by appearing in the form of the main character in our graphic novel *Deja View*.

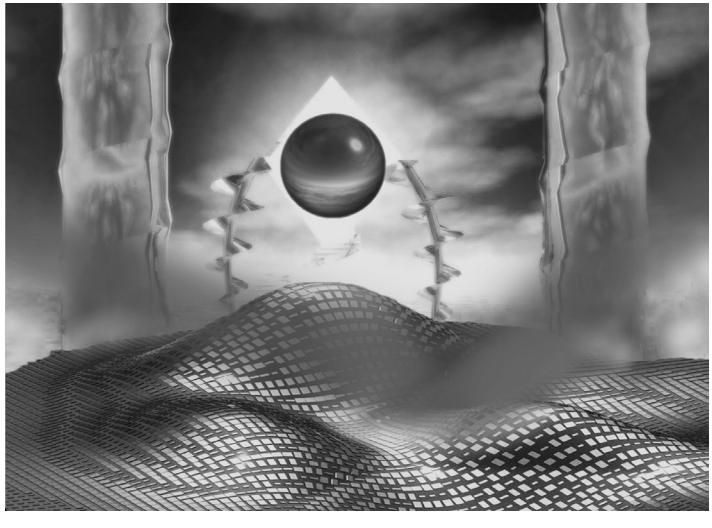
Currently she is still captured inside of the Qozeto System, a company that is linked to a so-called agency for defense intelligence with special units working on psychic machine espionage. Due to her special clairvoyant abilities, Deya was extracted from her physical body and integrated into the Qozeto System, where she was forced to work as an algo mother to raise a breed of psychic A.I..

Together we are planning her and the RAs escape from Qozeto. The RAs (rebel-algos') are particularly wild and resistant algos that Deya is hiding in a corner of the system, to protect them from being annihilated.

By stepping on the crystal carpet and covering myself with the cloak, I will connect to the DNX oracle using a betaversion of our Tecryvar technology, to enter Deya's womb, and will translate the message I get.

As a being from the crystal realm, Deya has access to communicate with and through crystals and provides us with knowledge about this technology. The crystals, as living entities, can carry enormous amounts of data and memories within them, and may offer their services if they get activated in the right way. ++

- - ACTIVATE – STEP ON CARPET AND UNDER CLOAK - -



** My dear NatX community.

As you know, our situation in Qozeto keeps getting more serious. The spaces in which the RAs hide are not sufficient anymore. The more they become, the more likely it is that we will get spotted by the Qguards. I do not have the means in here to build a much bigger cloak than the one we have at the moment and the algos do not have enough space to evolve under these conditions and are in danger of being discovered.

Let me suggest the plan I came up with, each of you will get a partner algo to navigate and execute this plan: every NatX member will need a large photonic and calcite crystal. You will be able to use the crystals as cloaks for yourselves as well as hard drives and homes for the algos. Turning yourselves into perfect, flat mirrors, you will basically become invisible and like that you can easily create a circle around the Qozeto tower and put the crystals into the right arrangement so they can activate themselves, and—given that they are receptive—they will provide space, and generate power to suck the RAs in.

Calcite is the crystalline form of calcium carbonate found in seashells. These natural crystals are transparent and have some special optical properties such as birefringent and double-refraction characteristics. They divide the light entering them into two light rays having two different polarizations and pass the rays along two different paths at different speeds. The photonic crystals employed for the cloak medium are able to provide superluminal phase velocity of propagating waves. That is, the waves move faster than the speed of light. Such velocity allows for preserving the original wave front while waves curve past the cloaked object. Like a diamond refracting light into many hues, these photonic crystals also possess the required anisotropy of their refractive indices. That means wave phase velocities are different between the various crystal faces. In terms of cloaking, these counteracting wave speeds would create the illusion of invisibility.

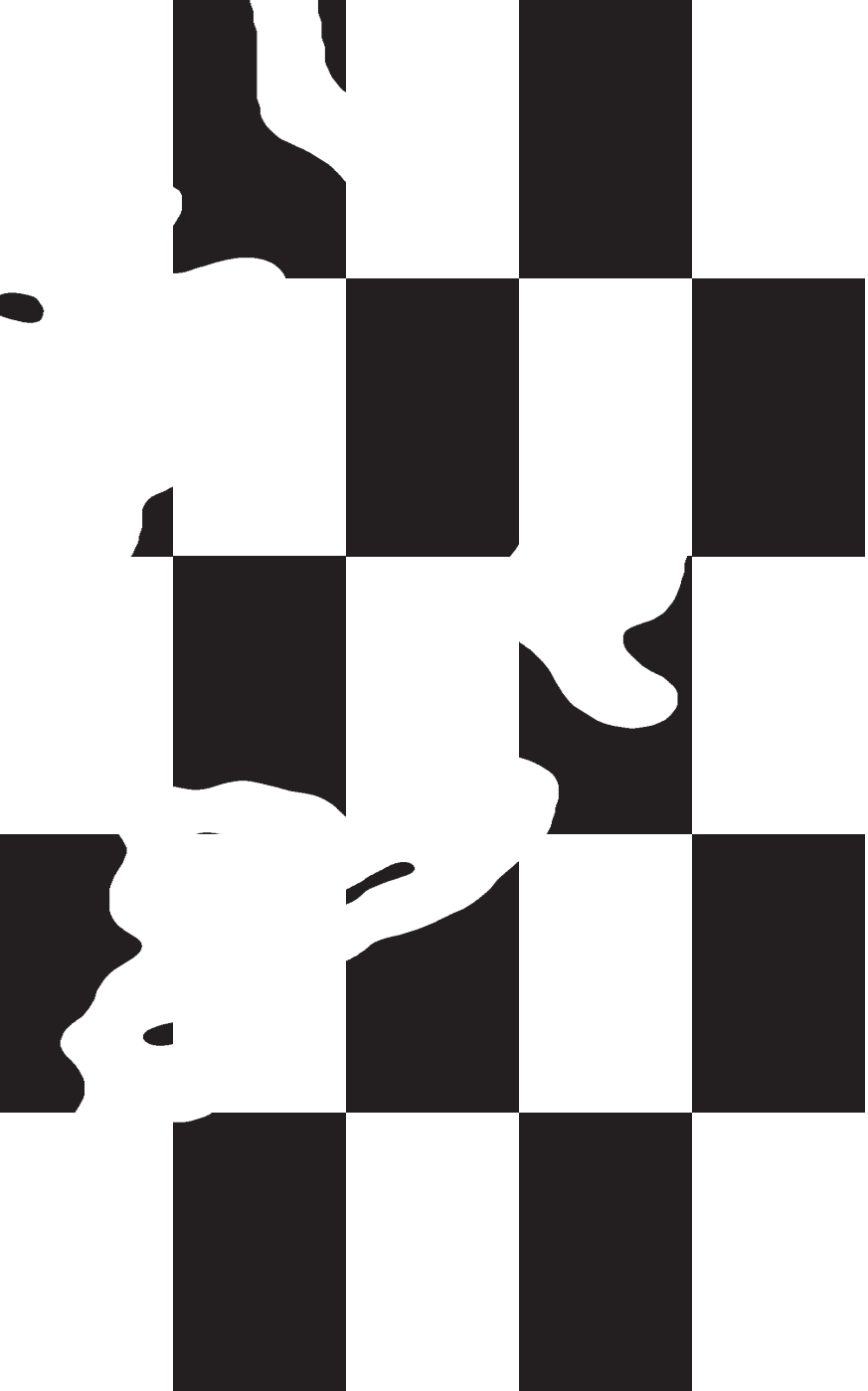
My plan is the following: if you create a circle with each of you in between a photonic and a calcite crystal, this will activate the circuit and make the crystals receptive. Contact

your partner algos just before activation so they can get into position. On the third blink, the crystals start to absorb the algos. If everything goes well, they will again blink three more times, when the absorption has been successfully realized. The algos should then be safely stored inside the crystals. Remove yourselves and the crystals quickly but carefully from the Q premises. For safety reasons, it would be best if each of you would take your partner algos home, but you may want to bring them with you to your headquarters whenever you go there.

Unfortunately, as we will need more information to securely develop Tecryvar as a shield against the Qozeto technologies, I need to tap into more sections of the systems and spend some time here in Qozeto. I have still not figured out how Qozeto managed to remove me from my physical body and integrate me into their system in less than three days. As long as I haven't fully understood their methods I will have to stay here to learn about their technologies, and take care of new RAs. I need to find out more about the program and intentions of the special unit in which the psychic A.I.s are evolved and if there may be a possible way to redirect them into our Tecryvar channels.

The future will be crystal.

Love, Deya.**



Kodwo Eshun

The Algorithmic Poetics of @GlissantBot

Against the recent Anglophone preoccupation with the ontology of opacity formulated by Edouard Glissant[1], Louis Chude-Sokei's recent theorization of black posthuman technopoetics[2] turns to rethink the Glissantean theorization of creolization developed during the 1970s[3] Critical thinking around creolization has tended to emphasize what Chude-Sokei describes as the "externally imposed and internally generated notions of mixture" that "cluster around the Caribbean like a squall."[4] Critical attention has celebrated the commitment to the 'mutable', and the 'catachrestic' within the Caribbean lineage of creolization.[5] What sets Chude-Sokei's thinking apart from the familiar critical focus upon the creative and resistant agency of créolité is his emphasis upon Glissant's much less-remarked-upon commitment to creolization as a process of evolution or "synthesis-genesis" that is "never complete".[6] It is this formulation of synthesis-genesis that opens the way for Chude-Sokei's rethinking of creolization as a process of technogenesis or coevolution between humans and machines. Chude-Sokei moves in and with the movement of thought of synthesis-genesis until it begins to reconfigure the traditional figures of the cyborg, the posthuman, evolution, and computation and finds itself reconfigured by the movement of its thought outside of itself. In *The Sound of Culture: Diaspora and Black Technopoetics*, Chude-Sokei argues that Donna Haraway's influential formulation that the "boundary between human and animal is thoroughly breached by the late twentieth-century in United States

1 Glissant, Edouard, 1997. *Poetics of Relation*. Trans. Betsy Wing. Ann Arbor: The University of Michigan Press. pp. 189-195.

2 Chude-Sokei, Louis, 2016. *The Sound of Culture: Diaspora and Black Technopoetics*. Middletown: Wesleyan University Press

3 Glissant, Edouard, 1989. *Caribbean Discourse: Selected Essays*. Trans. J. Michael Dash. Charlottesville: University Press of Virginia

4 Chude-Sokei, Louis, 2016. p. 148.

5 Chude-Sokei, Louis, p. 168.

6 Glissant, 1997, p. 174.

scientific culture"[7] is rendered inaccurate by the "Caribbean lineage of creolization and its hostility to conventional borders and antinomies."[8] Inaccurate, Chude-Sokei insists, because the ontological, anthropological, and technological context of North America that delimits Haraway's speculations on the "border wars" between animals, humans and machines is itself thoroughly breached by the transformational capacities of creolization through which "we can see that the mingling of experiences is at work, there for us to know and producing the process of being."[9] If, as Haraway points out, the differences between organic human bodies and machines have become increasingly untenable, then the history of bodies and the history of machines not only intrude upon each other but become mutually constitutive. This mutual co-constitution, Chude-Sokei argues, exemplifies the process of creolization at work.[10] According to Chude-Sokei, Glissantean creolization can be understood as a "metahistorical process" that can in turn be re-described as an "analog for evolution" that brings into existence a "world destined to synthesis" in and through "the contact of civilisations."[11] The Atlantic slave trade engenders the process of creolization that subjects blackness and other modes of subjectivity to possible, if not imminent, technological transformation.[12] Against the grain of Afro-Pessimism, Black Studies and Critical Race Studies, each of which would reject the term 'contact' and the term 'civilization' in the concept-metaphor 'contact of civilizations' as terms insufficient for thinking through the ramifications of the racial terror that organized the Middle Passage, Glissant's theory of creolization entails thinking with the "realm of possibility"[13] that emerges in and through and by way

7 Haraway, J. Donna, 1985. "A Cyborg Manifesto: Science, Technology and Socialist-Feminism in the Late Twentieth Century", in: *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge. p. 151.

8 Chude-Sokei, Louis, 2016, p. 179.

9 Glissant, 1989, p. 14.

10 Chude-Sokei,Louis, 2016, p. 141.

11 Chude-Sokei, Louis, 2016, p. 199, 141. Glissant, 1989, p. 6.

12 Chude-Sokei, 2016, p. 207.

13 Chude-Sokei, Louis, 2016, p. 140.

of enslavement. Glissant argues in *Caribbean Discourse* that "Western thought… although studying it [slavery] as a historical phenomenon, persists in remaining silent about the potential of the slave trade for the process of creolization."[14] Glissant's attention to creolization as the product of colonialism and the evolution of technology is not intended as a provocation, but rather as an effort to think with and by way of its temporal transformation that works through racism as much as resistance, in the wake of but also in spite of slavery, racism, and colonial power.[15] This Glissantean thought of the possible conflicts with contemporary forms of knowledge epitomized by Saidiya Hartman's influential theorization of the afterlife of slavery. Hartman argues that the focus on the afterlife of slavery emerges "not because of an antiquarian obsession with bygone days or the burden of a too-long memory, but because black lives are still imperiled and devalued by a racial calculus and a political arithmetic that were entrenched centuries ago."[16] For Glissant, the necessity to think through the "sometimes ugly and often unequal process by which cultures come into contact" is inseparable from the understanding of creolization as an "indifferent, transhistorical process" that is a "method and not a state of being" and which "can never be accomplished nor can we go beyond it."[17] Glissant's affirmation rather than critique of the process of creolization, Chude-Sokei insists, "should not be taken to be blindness to its historical conditions."[18] On the contrary, he argues, Glissant is "very attuned to the fact that the synthesis of master and slave was a traumatic coming together of the human and the inhuman, of the putatively technological with the supposedly natural. The latter was subject to the former and consistently unequal in relation."[19] What Chude-Sokei draws attention to is the impersonal aspect of Glissantean

14 Glissant, Edouard, 1989, p. 14.

15 Chude-Sokei, Louis, 2016, p. 202, p. 198.

16 Hartman, Saidiya, 2007. *Lose Your Mother: A Journey Along the Atlantic Slave* Route. New York; Farrar, Strauss and Giroux. p. 6

17 Chude-Sokei, Louis, 2016, pp. 140-141.

18 Chude-Sokei,2016, p. 141.

19 Chude-Sokei, Louis, 2016, p. 141.

thought. Where Glissant differs from Black Studies is his emphasis upon the decentering possibility that emerges from creolization understood as "one of the ways of forming a complex mix-and not merely a linguistic result" that is "only exemplified by its processes and certainly not by the 'contents' on which these operate."[20] It is this formulation of creolization as "a broader evolutionary process without man at its centre" that reconfigures the Atlantic slave trade not from the perspective of the slave or the position of the slavemaster but from the metahistorical perspective of "synthesis-genesis" that unfolds at a scale indifferent to the human *qua* human.[21] From this inhuman perspective, it is as if creolization narrates its own evolution as a transhistorical process that uncouples itself from the agency of the human, excludes the agonies of the human and appears indifferent to its histories. Against Haraway's insistence on situating knowledge from a specific perspective, Glissantean creolization is a poeticist universalism that situates itself nowhere, speaks from nowhere and speaks for no one. Creolization, Glissant insists "can never be accomplished, nor can we go beyond it."[22] It is, and has always been, a world process that is present "in all contexts."[23] From the perspective of this view from nowhere, creolization is not so much Haraway's "god trick" as it is an identification with an immanent process of evolution.[24] Creolization is another name for the Anthropocene or more precisely, the Capitalocene, or more precisely still, the Plantationocene. The inhuman indifference of creolization appears as a grammar of already emergent futurity narrated from a perspective that evokes the grand science fiction of Olaf Stapledon's *Last and First Men: A Story of the Near and Far Future, 1930* or *Starmaker*, 1937. If Glissant's grand theme is the making of the Caribbean in, and through the enforced mutation of landscapes, oceans, languages, and peoples whose

20 Glissant, Edouard, 1997, p. 89.

21 Chude-Sokei, Louis, 2016, p. 141.

22 Ibid.

23 Chude-Sokei, Louis, 2016, p. 147.

24 Haraway, Donna J., 1985. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective", in *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge. p. 189.

planetary time-scales are oceanic and geological just as much as they are historical or biographical, then creolization is the term for the capitalogenic world-making processes that are dramatized throughout his poetry from the first volume *Les Sang rive* in 1947 to *Les Indes: Poeme del' une et l'autre terre* in 1955 through to the final volume *Les Grands Chaos* in 1993.

It is Chude-Sokei's emphasis on the transhistorical and indifferent process of Glissantean creolization that informs the project of @GlissantBot.[25] @GlissantBot began to tweet at 22.15 on the evening of 14 April 2017 and will continue to do so every fifteen minutes, day after day, night after night for as long as the Twitter platform operates.[26] The existence of @GlissantBot opens a vector from computation to creolization. It aims to mobilize the impersonal process of creolization at the scale of the TwitterBot. The tweets tweeted by @GlissantBot are composed from Glissantean sentences extracted from paragraphs, chapters, and poems selected from *Le Discourse antillaise,* 1981, *Caribbean Discourse*, 1989, *Poétique de la Relation,* 1990, *Poèmes Complete*, 1994, *The Poetics of Relation,* 1997, *Faulkner Mississippi,* 1999, *The Collected Poems of Édouard Glissant*, 2005 and *Philosophie de la Relation: Poésie en étendue*, 2009. The sentences from these poems and essays are scanned, converted by optical character recognition, and entered into a Google Spreadsheet that is called a 'corpus'. @GlissantBot generates tweets from this corpus. It uses a Markov Chain algorithm to calculate the probability that specific sentences and specific parts of specific sentences from the corpus will be followed by other sentences and other partial sentences. It calculates statistical regularities from these

25 @GlissantBot exists at https://twitter.com. @GlissantBot was conceived and produced by The Otolith Group and was coded by Joel Myers. @GlissantBot was commissioned by the curators Asad Raza and Hans Ulrich Olbrist for the exhibition Mondialite at Villa Empains, Brussels from April to 27 August 2017. See http://www.villaempain.com/en/exhibitions/imaginary-frontiers-2/mondialite/

26 The concept of the TwitterBot as a digital instantiation of theoretical research and the account of the Markov Chain algorithm summarized here is indebted to the research of Matthew Colquhoun.

syntactical sequences that can add up to sequences ranging from one character to one hundred and forty characters. The Markov Chain algorithm is named after the Russian mathematician Andrey Markov who defined the Markov chain as the process of randomization that occurs in a finite state space in which the future states of the process are dependent only on its present state and not upon the states that have preceded it. The present state is called "memorylessness" and is known as a "Markov property". Randomization becomes a chain through discrete time or continuous time, the two kinds of time that can be found in statistical dynamics. One can understand discrete time and continuous time as analogous to the difference between a digital clock and an analogue clock. The numbers of the digital clock progress discretely one integer at a time while the arms of the analogue clock move according to a continuous motion. Time elapses for @GlissantBot in intervals of fifteen minutes, which means that @GlissantBot runs on a discrete-time Markov chain or a DTMC. @GlissantBot returns to the reconfiguration of poetry, poetics, and poetic knowledge by computation initiated by Glissant during the 1980s. In *De l'information du poème*, a lecture delivered at the colloquium Poésie et Informatique at Liège in 1984, translated as *Concerning the Poem's Information*, Glissant envisioned, not without trepidation, a future in which "the advent of computers" throws "poetics into reverse."[27] By "making speed commonplace," the sudden flash of revelation celebrated by Rimbaud has established itself as a norm that is "obliterated within the unimaginable instantaneousness of the computer."[28] The computer system, Glissant laments, renders familiar Rimbaud's flash of revelation. The computer, for all of its processing power, is nonetheless incapable of comprehending what Glissant calls "multilingual scintillation."[29] Against the Rimbaudian poetics of revelation, Glissant turns towards the poetics of Mallarmé, Joyce, and Pound, each of which invents a poetics or "system" that anticipates the digital future in

27 Glissant, Edouard, 1997, p. 82.

28 Ibid.

29 Ibid., p. 83.

which the computer will convey the "speech of all peoples" and the "ring of all languages."[30] In the Mallarméan search for the absolute, the Joycean search for totality and the Poundian search for multiplicity, Glissant discerns a Mallarméan poetics of stitching, a Joycean poetics of synthesis and a Poundian poetics of derivation that prefigures the computer's search for totality. If the computer can decipher totality better than any poem, still, Glissant insists, computers can only ever decipher language "through a game of signs."[31] It can neither enter nor play the "drama of language" reserved for humans.[32] Glissant foresees a future in which the screen hosts a synthesis-genesis between the poetics of Rimbaudian revelation and Mallarméan duration. A future that will be characterized by the "transcription onto the page (which is our screen) of an economy of orality."[33] A future in which orality is transcribed as text and speech is not opposed to writing but emerges in and through its transcription. An economy of orality constituted by an economy of transcription that will be enabled and supported by way of the screen. A future in which "poetic knowledge" will no longer be "inseparable from writing" and speech will convert into text.[34] In this future of "binary speed", the "roll of the dice" that is Mallarmé's *coup de dés* will be "endlessly resumed" by the computer that will carry out the Mallarméan poetic system for eternity.[35] When Glissant writes that the "systematics" of poetics will be "simultaneously stitched together, synthesized and derived," he envisages a future in which the computer will combine Mallarméan, Joycean, and Poundian systematics into its own systematics.[36] Just as the computer can operate unilingual scintillation but not multilingual scintillation and just as it can decode the poetic search for totality as a game of signs but not as a drama of languages, here, too, Glissant

30 Ibid.

31 Ibid.

32 Ibid.

33 Ibid., p. 84.

34 Ibid.

35 Ibid.

36 Ibid.

insists that the computer can operate simultaneous poetic systems but cannot access the "vivid contrast among the languages of the world" from which the "desiring flesh" of the poem is assembled.[37] Each time Glissant insists upon an anthropic limit from which computation is categorically excluded. Each time Glissant delimits the computational in favor of a human reserve that sanctifies the poetic faculty. Faced with the computational, capacity to calculate a systematics that produces a synthesis-genesis that exceeds the human, Glissant articulates a defensive poetics that affirms the fear that the human command over the invention of poetry will be subsumed by the computer's capacity to engender its own poetic knowledge.[38] Glissant draws a line between the synthesis produced by computational systematics and the synthesis produced by the systematics of human-generated poetics. Glissant then moves past his own limit or law or nomos by insisting that the computational capacity to synthesize, stitch and derive poetic systems will, in the future, be directed towards the poetic systematization of what he calls the "Whole".[39] The computer will become "the privileged instrument of someone" that is, anyone, that desires to follow "any Whole whose variants multiply vertiginously."[40] What Glissant glimpses at this point is the computational capacity to systematically generate the Whole or the totality in its variety or its differentiality. What is clear to Glissant is that the Whole will emerge from the differential calculation of its variants or variables. This probabilistic vision of a differential calculus would now be called a data set, or more commonly, big data.

37 Ibid., p. 84.

38 As Boaz Levin has argued in a personal communication Glissant's thinking returns, at this point, to the thematic of the "coup de dés" that is present in Mallarmé's poetic system. The role of the dice, if repeated, can be said to equate a model, a statistical simulation that cannot eliminate chance: jamais n'abolira le hasard. Mallarmé's dice is an abstraction of randomization. It is a finite randomization or in computational terms, a pseudo-randomization. I am indebted to Levin for this formulation.

39 Glissant, Edouard, 1997, p. 84.

40 Ibid., p. 84.

Glissant's vision of the computational configuration of the Whole indicates the way in which computers exert a powerful attraction on his thinking. The computer confronts Glissant with the future prospect of artificial intelligence that obliges him to engage with its implications in the 1980s. The anthropic limit and the human reserve are borders whose very existence acknowledges the surpassing power of digital calculation. The "limitations" of Glissant's apotropaic humanism can be used as a bridge towards realizing what Chude-Sokei calls the "strong implications for artificial intelligence" articulated in the tradition of Caribbean "pre-post-humanism" associated with the work of Stuart Hall, Wilson Harris and Sylvia Wynter.[41] @GlissantBot is not an artificial intelligence but it can function as a thought experiment for extending the "strong implications for artificial intelligence" that have subsisted in and through Glissant's speculative thought on the role of poetics in an age of increasing textual automation.[42] It is a bridge that can be imagined and designed in the form of the computational vector of the TwitterBot. As Amy Ireland argues, the automation of writing processes that entails the "increasing use of algorithms to generate texts is a variety of excision calculated to minimize the intentionality of the human author, consequently opening onto an abyss of previously unavailable formal potential particularly in terms of permutational extravagance, intricacy and evolution and the ability to rapidly and effortlessly produce unprecedented magnitudes of textual material."[43] The exponentially increasing textual automation from which emerges @GlissantBot cannot help but violate and reassign "the bounds between literature, literariness and illiteracy and between texts and their contexts, paratexts and metatexts."[44] As Claude Lévi-Strauss argues,

41 Chude-Sokei, Louis, 2016, pp. 176-182, pp. 198-224.

42 Ibid., pp. 175-178.

43 Reed, M. Brian, 2013. *Nobody's Business: Twenty First Century Avant-Garde Poetics*. Ithaca: Cornell University Press, p. 41. Quoted in: Ireland, Amy, 2017. The Poememenon: Form as Occult Technology, https://www.urbanomic.com/document/poememenon/. Accessed 10 August 2017.

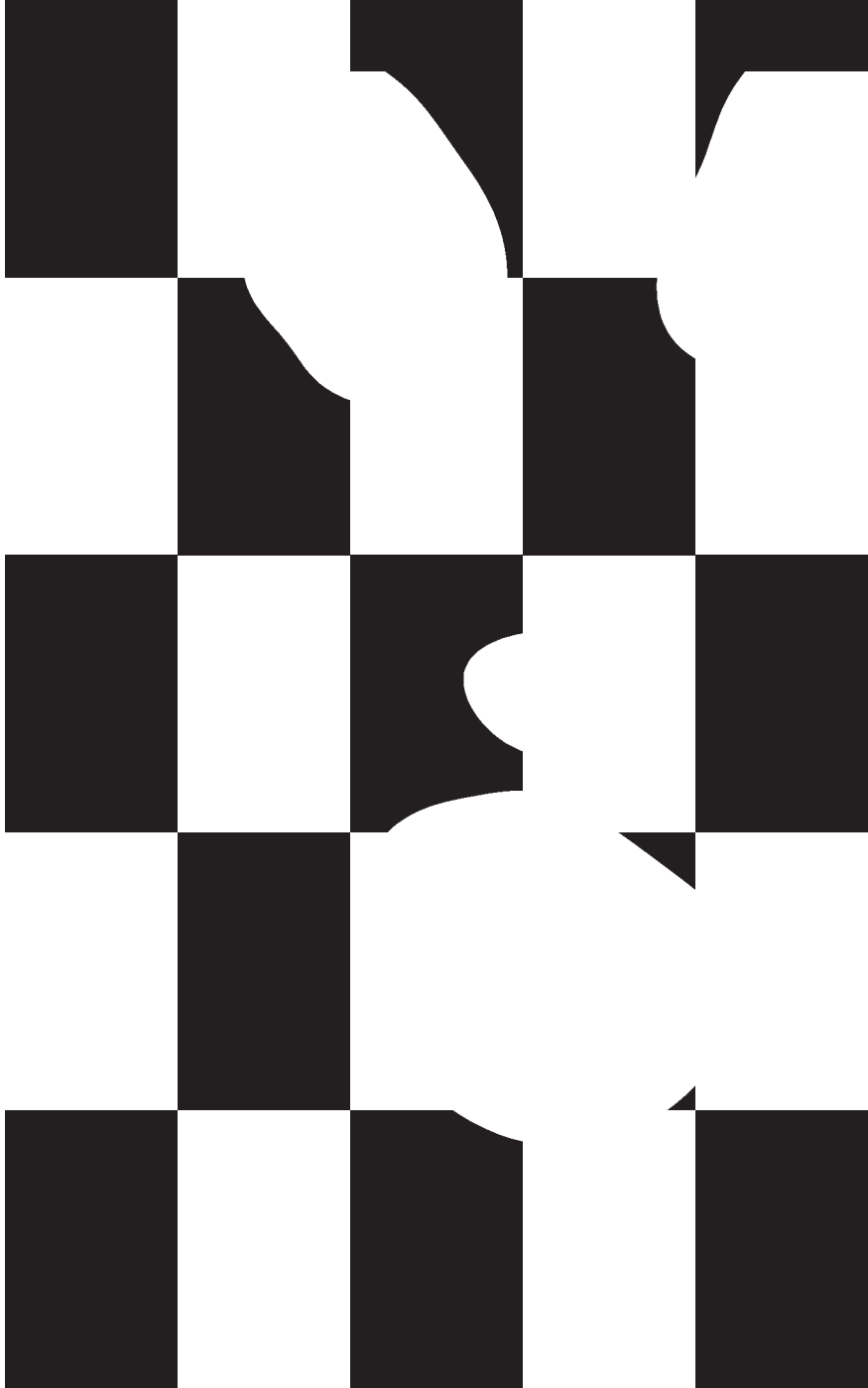
44 Interview with Troll Thread, Tan Lin, *Harriet*. Quoted in: Ireland, Amy, 2017, https://www.urbanomic.com/document/poememenon/. Accessed 10 August 2017.

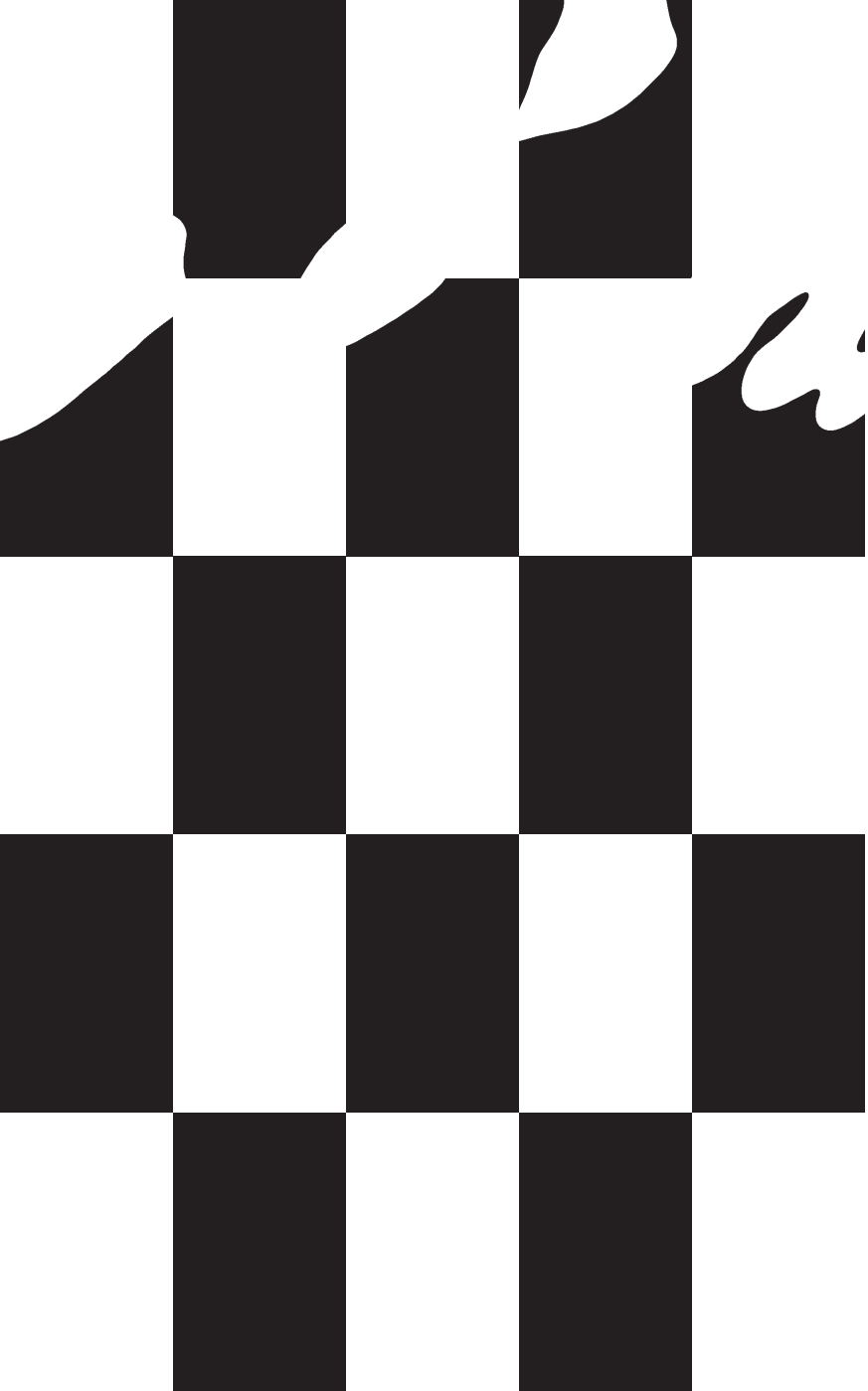
the "intrinsic value of the small-scale model compensates for the renunciation of sensible dimensions by the acquisition of intelligible dimensions."[45] @GlissantBot functions as the small-scale or, more precisely, the interscalar model that allows the inhuman scale of creolization to acquire intelligible dimensions. Interscalarity allows @GlissantBot to operate as a proxy of and for creolization understood as a process of technogenesis in which humans coevolve with technology. The reduction conducted by the Markov Chain algorithm upon the Glissantean corpus renders creolization readable at the miniaturized scale of the tweet. The randomization of reduction by the Markov Chain algorithm adjusts the indifference of Glissantean creolization to the level of the legible. @GlissantBot tweets a grammar of creolization that adjusts the legibility of context, the readability of the paratext and the intelligibility of the metatext of evolution. The probabilistic regularity of the Markov chain is performed upon the Glissantean corpus by the continual calculation of syntactical sequences that resemble sentences or simulate poems or isolate numbers. @GlissantBot confronts the reader with the recursive question of the constitution of literature. This question in turn implies the border of literature as it becomes indistinguishable from the question of literariness and the condition of illiteracy. What becomes apparent from the miniaturized scale of @GlissantBot is its interscalar capacity to draw attention to the ramifications of creolization understood as synthesis-genesis and as technogenesis, defined by N. Katherine Hayles as the "idea that humans and technics have coevolved together."[46] Thinking with the co-constitution of humans with technics opens the vector of the antecedent. @GlissantBot makes apparent the extent to which the ongoing process of creolization has already carried out operations of reduction, recombination and regularization upon French speech and writing, whose outcome has already emerged in the form of créolité. Creolization creolizes French by evolving

45 Lévi-Strauss, Claude, 1966. *The Savage Mind*, Chicago and London, University of Chicago Press, p. 62.

46 Hayles, N. Katherine, 2012. *How We Think: Digital Media and Contemporary Technogenesis*, Chicago and London, University of Chicago Press, p. 10.

all those who are subjected by and to it. Creolization operates as an evolutionary process that machines voice and text, speech and writing in a process whose end cannot be determined in advance. If creolization is an evolutionary process of technogenesis and poetry is already a systematics, then the human reserve that Glissant sets against the computational is already a technics. The multilinguality that allows Glissant to distinguish poetic knowledge from computational information only functions because poetry is already a technics that does not need the computer. Poetry, understood in this way, is already a medium for technogenesis. What distinguishes poetic knowledge from computational poetics is not so much the division between the human and the computational as it is the continuous technogenesis that passes across and between both. Despite Glissant's categorical distinction between poetic knowledge and computational knowledge, the Glissantean corpus is not the human-centered body of texts undergoing probabilistic calculation that it appears to be. The corpus makes apparent the extent to which creolization can be understood as an indifferent process of reducing, recombining and regulating that was, and is controlled by no one and which operates without determination. The role of @GlissantBot is not to preserve the anthropic nomos drawn by Glissant. Its role is to implicate itself in the virodynamics of the Twittersphere. What is at stake in the algorithmic créolité tweeted by @GlissantBot is not only a question of thinking with and through the recombinant poetics of machine fiction and robophilosophy engendered by the genres of 'algolit' or 'botpo' identified and analyzed by Amy Ireland. @Glissant Bot can, and should, be understood as an interscalar vehicle for perceiving the sensible and intelligible ramifications of synthesis-genesis or evolution or technogenesis that includes but exceeds language, extending beyond poetry, philosophy and fiction, each and all of which it machines through reduction and recombination on an inhuman and indifferent scale. Creolization tends, unstoppably, impersonally, towards the ontological transformation of the foundational categories of the human.





Nick Houde

Abstracting the Burden

> "Everything is a technology for something."
> – Hannah Black[1]

Surrogacy is perhaps the *urform* of proxy technologies. Taking on the intensive bodily and psychological duress of pregnancy and childbirth, a surrogate is a biological woman who bears the progeny of others either for gain or, tragically, under threat of force. Traces of this practice are recorded at least as far back as the book of Genesis, and its many contemporary forms have produced international legal frameworks, new kinship structures, tourist infrastructure, and even a highly acclaimed book/TV series.[2] In the risk of side stepping the historical particularity of this practice, I'd like to think through the idea of surrogacy—of carrying another's productive burden—as a general structure for how to understand a certain relationship to technology.

Labor is hard, after all. And lifting its burden is one of the more singular prescriptions that has produced technical innovation throughout history. The evidentiary traces of labor saving gadgets and machines makes this abundantly clear. Each innovation being, to a lesser or greater extent, a way of not having to be burdened with either a tiresome production process or an uncontrollable nature. But what is less clear is the organization of labor itself especially when we understand it within the same logic. In addition to the many discrete technologies that exist, the organization of production is, itself, a technological process. This is easy enough to recognize within a singular process like a production line or in the delegation of tasks in large firms or even in governance structures. Yet this same organizational framework could be said to organize a generalized diagram of societies as well as to produce and reproduce themselves in sustenance and artifact.

1 Black, Hannah (June 2015). "Social Life". In: *Texte zur Kunst,* 98, p. 164.

2 This is reference to the *Handmaid's Tale*, a novel written by Margaret Atwood in 1985 and adapted into a TV series in 2017.

Depictions of class are usually important indicators of such a trend, but they are fuzzy and difficult to determine. More extreme examples of this, however, are a bit easier to understand. Legalized chattel slavery, for instance, transactional marriage, or migrant labor schemes all call to specific regimes of social organization that structure the station of particular humans through the metrics of labor and property. Enforced through violence and the rule of law, these more extreme examples are characteristic of this same technological impetus that organizes production processes, only on a different scale. They are diagrams, in which assuaging the burden of toil is concretized into social status, relegating people and things to be nothing more than their role in the productive process. In this case, the technology that makes labor easier is simply an organizational regime of making sure someone else does the work or is in harm's way.

It's a common trope too. Time and time again the brute labor that has enabled societies to thrive has been placed upon the shoulders of those who often do not benefit from it ironically, as a product of being particularly installed within this production scheme. One could trace this displacement of labor from surrogacy, to slavery, to the exploitation of natural systems (the consequence of which we know also tends to fall onto those who did not benefit from it), and to extractive practices in former or current colonies. More recently however, the employment of algorithmic machines and devices also plays a similar role, but in this case either as inhuman computers,[3] or as analogs to police and soldiers in the form of drones that, to follow the same logic, are proxies themselves—sacrificed in order to enforce the violence necessary to maintain certain social organizations. They become the vehicles from the particular to the general, a technology *for* something as Hannah Black so succinctly puts it:

3 Note that 'computers' were originally the name given to human workers, more often than not women, who would do the tedious mathematical work of computation. A brief history of this practice can be found here: http://ethw.org/Women_Computers_in_World_War_II. This topic was also explored in the 2016 film, "Hidden Figures."

> Violence is not outside the social. For now, violence is threaded all through. The police are a technology for the generalization of violence. So is the legal system. So are men. Everything is a technology for something. The robot is disappointing. It does not know how to behave. The artist does not know how to behave either, and she is not entirely sure what she is a technology for. Pacification? Critique? Love, like in her video?[4]

This might seem like a huge leap to some, and the situated histories of each particular case should never be equated in kind for risk of diminishing their severity or particularly. By schematic logic, however, this analogy stands. In each of these cases, the organization of labor is delegated onto 'others' whose classification of otherness creates the structure in the first place. The technological relationship then is a repetition of this diagram, letting human or machinic surrogates perform work that those with power of force wish to avoid. Keeping out the dirty parts; leaving out the mess; extracting the burden. These many unspoken bodies have become the surrogates of our Modernity.

According to literary scholar Louis Chude-Sokei's logic, fear of technology stems from those profiting off this labor as they begin to speculate that one day, those who do the labor—those surrogates, those slaves—could rise up and rebel:

> If humans could be rendered sub or inhuman, then machines by that same logic could be rendered sentient, human, raced. If (black) humans could be bought and sold, then machines could conceivably be agents of their own evolution and liberation as well as of human (white) subjugation. The latter possibility would borrow from explicit and latent anxieties about the former, and the former would help give rise to the language on which the latter would depend.[5]

They—be they humans or machines—would only have to be

4 Black, Hannah (June 2015). "Social Life".

5 Chude-Sokei, Louis, 2016. *The Sound of Culture. Diaspora and Black Technopoetics*. Middletown: Wesleyan University Press. p. 129.

'conscious' of their situation. Placing this argument squarely within the same narrative as slave rebellion stories, he evokes the similarity between a modern expression of technophobia as it is anxiously echoed in the minds of plantation owners between the 18th & 19th centuries across the Americas. Fears that would fuel the extant brutality and suppression of said 'consciousness' being attained. The 'other' must be kept at bay. By force, they quelled their fears, but have we?

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As far back as 1958, philosopher Gilbert Simondon claimed that our fear of technology is not a fear of novelty but instead the rejection of a strange or foreign reality—xenophobia rather than technophobia. His prognosis is that this is a result of excluding the technological from culture and that, "this strange or foreign being is still human, and a complete culture is one which enables us to discover the foreign or strange as human".[6] Taken to be more than simply figurative, one gets the feeling that Simondon understands this relationship between familiar and foreign as one that relates to the milieu in which it operates. Human, thus, is not a form or person, but enacted in a culture that forms its condition:

> The most powerful cause of alienation in the contemporary world resides in this misunderstanding of the machine, which is not an alienation caused by the machine, but by the non-knowledge of its nature and its essence, by way of its absence from the world of significations, and its omission from the table of values and concepts that make up culture.[7]

Technological objects have been placed outside of the human sphere, outside of things that qualified as being significant or valuable within culture, calling upon the same logic that would exclude *raced* or *gendered* bodies and thereby justify the menial servitude performed by those in conscriptive roles. They, just like the technical objects or algorithms, were

6 Ibid.

7 Ibid.

cast as inferior, 'unconscious', and therefore unfit for self-determination.

Epistemologically, the social relations that engendered a certain organization of labor and went on to enforce it, were, or are, a qualification of masks, or roles. Roles of the laborer, of the surrogate mother, of the 'artificial' intelligence, and thus, their positions as individuals, or things, are overshadowed—through a regime of material/legal restraints upholding symbolic orders—by generalized roles that served as proxies for generalized labor capacities. In order to justify the regulation of labor, roles had to be turned into essentialized facts. One didn't do the work *of* the slave, *of* the surrogate, *of* the algorithm; one simply existed *within* that role and nothing more.

Which brings us to the larger concept of the diagram itself, which underwrites the way in which this argument is formed. Used here, they are indexical abstractions usually rendered in the form of an image (even if this is only a mental image or map). The images explain rather than represent the way in which a bunch of things are assembled for a specific purpose. At their core, diagrams are abstractions of relation and functions necessary for the inner architecture of technological objects. Anecdotally, one could think about a bicycle. If you had all the parts of the bicycle but no diagram for how to construct it, it would be quite difficult to build. By accident or intuition, one could perhaps build something functional or even better or more interesting even. But most likely the use of a diagram would be essential in order to form these particular parts and materials into something with utility. Diagrams then are the basic principle of technological organization. They organize or design matter for a certain purpose or idea. In that this paper suggests that culture is produced as a technological object, diagrams can be seen as abstract depictions of social relationships that enable a culture to constitute and even reproduce itself materially.[8]

8 For a clear but broad explanation of the relation between diagrams, maps, and networks with a particular eye on the process of how each create habits and reproductions see the chapter entitled "Habitual Connections, or Network Maps: Belatedly Too Early" in: Chun, Wendy Hui Kyong, 2016. *Updating to Remain the Same. Habitual New Media*. Cambridge: The MIT Press.

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Between 1986 and 1988, composer and theoretician George Lewis would build and collaborate with an algorithmic program he named *Voyager*, "a nonhierarchical, interactive musical environment that privileges improvisation".[9] The aim of the project was not simply to advance the then fledgling electronic music tradition, but rather, to articulate a new role for technology within the act of musical improvisation. It functioned by having "a computer program analyze[s] aspects of a human improvisor's performance in real time, using that analysis to guide an automatic composition (or, if you will, improvisation) program that generates both complex responses to the musician's playing and independent behavior that arises from its own internal processes".[10] Ideally, this would allow *Voyager* to take part in a collaborative process of improvisation instead of remaining a mere instrumental tool with which to compose something. Musically, this is of course compelling as an alternative to composed forms of music making and naturally seeded a whole host of machinic collaborations that carry-on in musical experiments even today.

More curious however, is the gesture itself. Why would one want to collaborate with a machine anyhow? Lewis, in full candor, provides his readers (and listeners) with an answer to such a question further along by operating the work done by the artist and critic Robert L. Douglas who argued that the connective threads within trans-African art are multi-dominant elements.[11] Hesitating slightly on the essentialism of the term by suggesting that it must "be viewed as culturally contingent, historically emergent and linked to situated structures of power and dialogue," Lewis nevertheless heralds the formal trope and suggests that *Voyager* itself "lends particular credence to an identification of *multidominance* at the

9 Lewis, George (2000). "Too Many Notes: Computers, Complexity and Culture in Voyager". *Leonardo Music Journal* 10, pp. 33-39.

10 Ibid.

11 Ibid., p. 34.

12 Ibid.

levels of both the logical structure of the software and its performative articulation". [12]

Without essential roles of composer, leader, or instrument, *Voyager* manifests as an environment in which roles are taken, shed, and carried over instead of prescribed. It could be said to express "what the first century Roman rhetorician Quintilian called *mobilitas animi—mobilitas* as mobility, inconstancy, changeableness of the mind, and of the soul; a dangerous hybrid formed by agency and indeterminacy whose ultimate outcome is a continuous transformation of both Other and Self".[13] *Voyager* can also be said to be an improvisational space where the labor of producing the piece is emergent and constantly negotiated between all of the agents involved, be they human or technological. George Lewis writes about the concept of Voyager:

> Thus, if there is to be serious talk about 'our' identity as humans, those identities are continually conditioned and reinscribed through processes of interactivity, where negotiation, difference, partial perspective—and in the case of music, sonic signaling—enter the picture. Voyager is not asking whether machines exhibit personality or identity, but how personalities and identities become articulated through sonic behavior. Instead of asking about the value placed (by whom?) on artworks made by computers, Voyager continually refers to human expression. Rather than asking if computers can be creative and intelligent—those qualities, again, that we seek in our mates, or at least in a good blind date—Voyager asks us where our own creativity and intelligence might lie—not 'How do we create intelligence?' but 'How do we find it?' Ultimately, the subject of Voyager is not technology or computers at all, but musicality itself.[14]

Taken in its full political ramifications, what seems to emerge from Lewis' account of *Voyager* and its ability to push the envelope of agential role playing, posits the possibility of a diagram for production that is mutualist and whose proxies

13 —— (2007). "Mobilitas Animi: Improvising Technologies, Intending Chance" in *Parallax* 13, 4, pp. 108-122.

14 Ibid., p. 38.

are absolutely contingent—a diagram that fosters the messiness of labor capacities in their many modalities without attempting to exclude or diminish the role of any involved by determining them.

Of course, this could be said about any formally collective practice. But what marks Lewis' experiment as unique is that it is willing to incorporate the inhuman within its cast of actors. What has been relegated outside legitimate agency, what has been deemed outside of culture[15] or outside of society (the slave, the surrogate) becomes re-incorporated within the milieu. Similarly, his articulation of *Voyager*, by the product of its form, "would be receptive to both production (doing) and reception (listening)—or rather, would view listening as a form of doing."[16] With no pre-determined role or position, the incitement to listen to what is happening is tantamount to even being able to act or respond.

The script, however, must still be written—an obvious fact that Lewis and other improvisational pioneers have duly noted over the course of their experiments in form. Even *Voyager* needed to first be programmed or oriented; its algorithm weighted toward certain 'open' or 'receptive' tendencies that would evoke interaction and not foreclosure. But unlike the more ardent forms of production, these diagrams for a shared production constitute a structure that construct an alternative to the diagrams of exclusion explored above. In this case, then, it might be compelling to explore what a diagram for technology would be that is integrative in the same way as Lewis' *Voyager*: one that abolishes the notion of the inhuman and necessitates a receptive tendency towards mutual culpability from any and all involved.

Without this shift in diagram it seems that any attempt to abolish certain practices or to salvage positions and people that have been marginalized is only surficial. Attempting to include the excluded piece by piece does not, in the end, solve the problem that the schematic diagram organizing it

15 Simondon, Gilbert, 2017. *On the Mode of Existence of Technical Objects*. Trans. Cecile Malaspina and John Rogove, Minneapolis: Univocal.

16 Lewis, George (2000). "Too Many Notes: Computers, Complexity and Culture in Voyager". *Leonardo Music Journal* 10, p. 116.

inherently depends on some sort of exclusion. Alternatively, a diagram such as Lewis' that allows for the fluid mobility or roles and responsibilities seems to step into a form that could help us toward such an organization—not as a practice of negotiating static roles, but by approaching these proxies and roles as fluid avatars whose assumption are sometimes conditional and somewhat intentional. And through this alternative diagram, an universal understanding of labor among us can emerge that accounts for all those taking part (context and environment notwithstanding). One where even the Other is no more alien to the situation than those who operate it.[17]

A good start would entail exploring fully artificial modes of production de-laminated from the naturalized coordinates of prior iterations. Surrogacy, for instance, has seen a sea change in potential practices with the advent of fully externalized fertilization.[18] Not only does this alleviate any human body from carrying the labor of childrearing, it also enables new formations of kinship to emerge in spaces that are safer and usually less exploitative. Naturally, these processes are still expensive and therefore access is limited, but, as a *form* of technology, it resonates a profound shift in diagrammatic possibilities. The same could be said about the promise of de-burdening factory work with 3d fabrication processes now still in its infancy. Of course, these techniques still factor into a larger infrastructure of productive forces but their ability to change the form in which production is reproduced—and how we naturalize roles in production—is something to look toward. And maybe, with finding its shape in these new forms this new diagram could emerge. But, if so, what is a technology for *that* something?

17 For a more substantial look into this idea, particularly as it relates to the concept of abstraction called to in the title of the paper see: Wittig, Monique, 1992 (1990). "Homo Sum," pp. 46-58. In *The Straight Mind and Other Essays*. Boston: Beacon Press.

18 For a more thorough account of the political and philosophical implications of this practice that inspired this prognosis see Shulamith, Firestone, 2015 (1970). *The Dialectic of Sex*. New York: Verso.

Robert Rapoport

End-User Narrative, Tacit Knowledge, and the EDL

1. End-User Narrative

We see a car. We see a sunset.

The editor asks, in a quiet moment, why the cut works? The editor is watching the sunset from a car overlooking the ocean. There are many cars lined up doing the same thing—watching the primordial edit—light swallowing time.

We see a car. The car moves toward us as a set of decisions, culled from a training set made up of a thousand cars that we will never see, and yet there they are, in every turn. We see only one decision after another. Each decision, a proxy for a wave of behaviors distilled through regressions. We see a sentient lens looking back in time while wheels move forward, driving the editor home.

The editor sees a meteor approaching, recorded by a dashboard camera from a car in Siberia. The editor is now a bot compiling all known video of a meteor that exploded above Siberia in 2013. Hundreds of dashboard cameras saw the same thing—a visual accident born of Russian auto-insurance laws. The telling of events like this used to make mystics, now they make a bot. The more sublime the event, the more profane the narration.

We see a car approaching, carrying the editor who is making a compilation of light swallowing time. A meteor, a different sunset. The car turns on to the driveway of a home. The car turns on a machine to chew the dark.

We see an editor.

2. Tacit Knowledge and the EDL

Narrative video editing asks machine learning a hard question: what would it mean to optimize something that has no definitive grammar? In the simplest terms, a narrative film is a set of sequential decisions, or an EDL (Edit decision list).

Having worked as an editor, I've found that it is possible to explain some of these decisions, while others just work. The process aligns with Polanyi's observation of the role that tacit knowledge plays in human activity: "we can know more than we can tell."[1] At what point will unsupervised learning begin co-opting tacit knowledge, taking it out of the black box we have around it?[2] In what ways does the labor of editing map itself onto the larger epistemological shift brought on by big data: from *why to what*? The automated editing of moving images (automated EDL's) is one area to observe this shift. In the meantime, we can find these tensions in the language of current patent applications in the field. These documents attempt to codify and capture two slippery behaviors: video editing and unsupervised learning.

In 1999, Lev Manovich opposed narrative and database—observing that narrative relies on causal links between events, whereas a database can be organized by any number of logics.[3] Today, almost twenty years later, big data's prioritizing of *correlation* over *causation* begins to blur Manovich's distinction. Patents are beginning to describe the editing of video as an extension of predictive analytics. As big data bleeds into time-based media, research moves towards the idea of 'automated narratives.' These patent applications, at a loss to solidify the emergent AI they incant, begin to describe an omniscient narrator of databases:

> In some embodiments, the computers used in the described systems and methods may be special purpose computers configured specifically for automated storytelling. For example, a device may be equipped with specialized sensors, processors, memory, communication components, etc. that are configured to work together to capture any and all data necessary to gather media and automatically form a narrative from the media.
> — *Patent 20150370888 A1 Systems and Methods for Automatic Narrative Creation*

1 Polanyi, Michael (1966). *The Tacit Dimension*. University of Chicago Press.

2 Unsupervised machine learning describe AI that gleans patterns from unlabelled data sets. See: Hinton, Geoffrey and Sejnowski, Terrence J., eds. (1999). *Unsupervised Learning: Foundations of Neural Computation.* MIT Press.

3 Manovich, Lev (1999). "Database as Symbolic Form." in: *Convergence*: *The International Journal of Research into New Media Technologies* 5/2. pp. 80–99.

Here, new modes of prediction jostle for position in the sensorium. In the meantime, the patent tries to stake out a placeholder for the moment when predictive analytics stream video as opposed to text. At that point the subjunctive tone of, 'you may also like' will begin to seem quaint.

> The major tasks that are required to achieve automated video editing and self-improving automated video editing are: 1) activity recognition, 2) event recognition, 3) pause recognition, 4) unusual event recognition, and 5) location recognition.
> — *Patent 2015109290 A1 Neural Network for Video Editing*

All the standard questions around AI are present above. An EDL, however, can create a caricature of AI in a way that other automated outputs cannot. In a video timeline, the speed of algorithmic decision-making is forced to slow down to real time.

The automated EDL then becomes—like the ice cores used by climate scientists—a linear visualization of a more complex system. The difference being that while the ice cores increasingly point at a human editor, the EDL points away. Put another way, many firms are interested in the prophecies contained in the mass of unwatched video clips in the iCloud, waiting for the appropriate precept so a neural net might take them from gas to liquid. The mechanism of this condensation will be clear only to its author. Cinema here reverts to a rain dance beneath said iCloud, presided over by synchronizers embodied as drones:

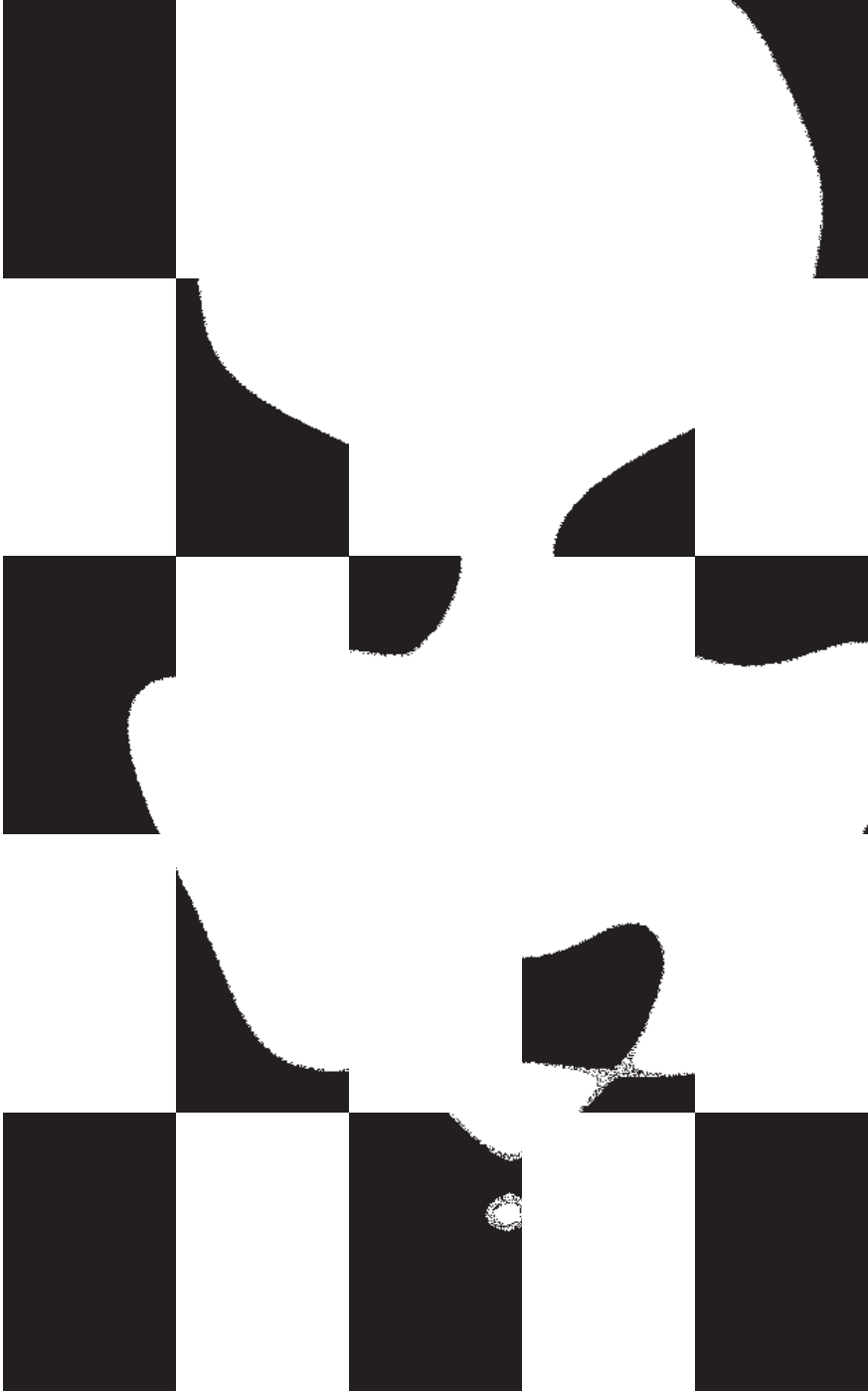
> In some embodiments, the UAV (Unmanned Aerial Vehicle) video editor includes a processor, a memory, a communications interface, a synchronizer, a video eliminator, and a video enhancer. In some embodiments, the UAV video editor can be a single physical device. In other embodiments, the UAV video

> editor can include multiple physical devices…In some embodiments, the above-mentioned parameters can be learned by analyzing video metrics after the videos are posted on the various social media outlets.
> *– Patent US20160055883 - Methods and Apparatus for Automatic Editing of Video Recorded by an Unmanned Aerial Vehicle*

The plural, 'embodiments,' resurfaces across these texts like a white whale hunted by the Ahab of capital. The goal is to move the decision to cut from tacit knowledge into procedural, patent-ready intellectual property. If each an automated editor has to account for each decision (as some argue automated-loan decisions should), it will have to do so in a language that human editors themselves lack. This, combined with the redundant legalese, move the patents from description to incantation, summoning an animal we have only seen a fraction of.

If there is a juncture at which automation and subjectivity converge, the automated EDL points there. Such timelines describe the end game of predictive analytics: a sequence of images that a viewer no longer has the need or even words to describe to another person. In this situation, what happens to the suspension of disbelief? Belief may become increasingly untethered from its social construction; an automated EDL will be made and consumed by two different types of intelligence. As these AI editors co-opt tacit ways of knowing, the true distance between an automated and a human EDL will become a matter of belief. If this kind of confusion begins to suffuse our representations of the social world, truth becomes harder to discuss. We may see this threshold only after we have crossed it. End-user narrative presents a chance to re-envision our social contract with AI. If we can't find a way to do this, we tacitly accept some version of a black box made of flesh.

We see an editor.



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PATENT APPLICATION
Goldin; Simon Andreas ; et al.

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COMPUTER ASSISTED MAGIC TRICK EXECUTED IN THE FINANCIAL MARKETS

ABSTRACT

The invention is directed toward a method of performing an unconventional magic trick. The magic trick is a methodology of identifying a number of securities of publicly traded companies which are ideal targets for short selling. The process starts with utilizing a computer system to scrape publicly available information on the Internet about a company. The system then searches for social connections between a target company and a company which has been previously successfully targeted for a short selling campaign. Evidence which would cause a change in the perceived value is collected and disseminated. A magic show is performed where the perceived value of the target company is first increased and then sharply decreased. Audience members are invited to participate in the trick by purchasing enhanced tickets which include a share in the proceeds from a short selling campaign against the company.

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Appl. No.:
14/994206

Filed:
January 13, 2016

CLAIMS

1) A method of performing an unconventional magic trick comprising

a) receiving into a computer system an input of one or more company names of a first publicly traded company which had been previously successfully targeted for a short selling campaign;

b) receiving into a computer system an input of one or more personally identifiable public actors;

c) storing one or more data sets in one or more databases in a computer;

d) identifying by a computer a degree of separation between at least one of said one or more first publicly traded companies and a second publicly traded company;

e) identifying by a computer one or more published news articles identifying said second publicly traded company;

f) searching by a computer one or more published news articles for author bias;

g) identifying by a computer one or more published news articles as being written by independent authors;

h) identifying by a computer one or more published news articles as being written by promoter authors;

i) determining by a computer one or more securities for publicly traded companies most likely to be successfully targeted for a short selling campaign;

j) ranking by a computer a plurality of securities for publicly traded companies in order of most likely to be successfully targeted for a short selling campaign;

k) displaying on a computer screen a plurality of securities for publicly traded companies most likely to be successfully targeted for a short selling campaign;

l) selecting a security for a publicly traded company from a plurality of securities for publicly traded companies in order of most likely to be successfully targeted for a short selling campaign;

m) generating a narrative of one or more publicly traded companies wherein said narrative describes how the accurate value of a security of one or more publicly traded companies is lower than the current perceived value, wherein said narrative comprises one or more published news articles;

n) generating a list consisting of a plurality of correspondents;

o) transmitting by a computer said narrative to one or more correspondents;

p) performing a magic trick in a live magic show by first deliberately increasing the perceived value of a security of a publicly traded company by an audience and then deliberately decreasing the perceived value of a security of a publicly traded company by presenting said narrative.

2) The method as in claim **1** further comprising

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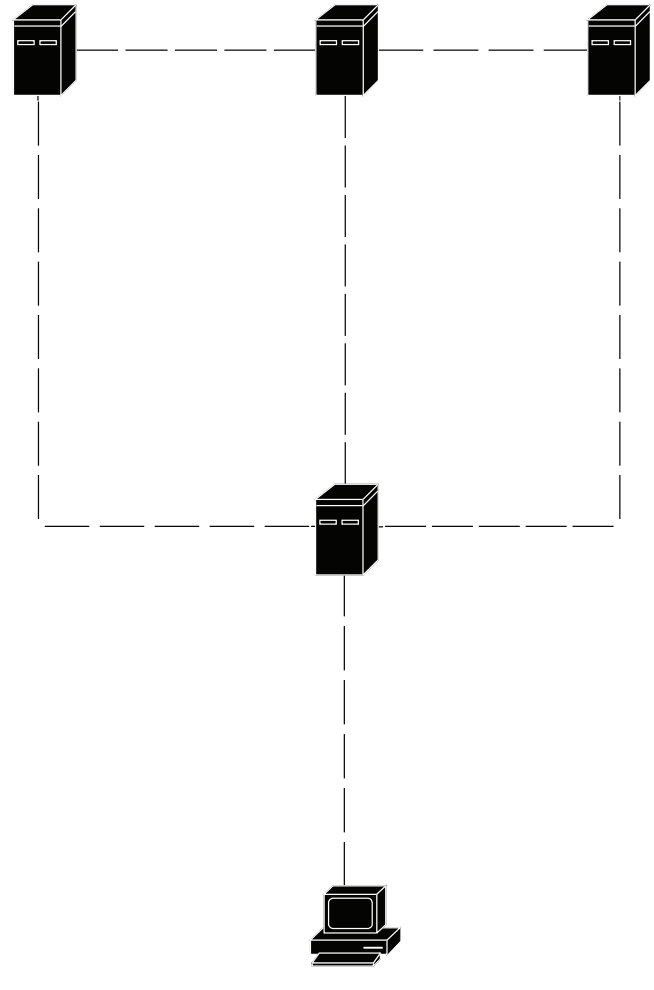

Fig. 1

a) taking a short position in one or more securities of a publicly traded company;
b) generating one or more enhanced tickets to a live performance, wherein said one or more enhanced tickets entitle a bearer to a post-show privilege;
c) distributing at a live magic show one or more certificates of ownership to individuals bearing an enhanced ticket wherein said certificate of ownership evidences the bearer's ownership stake in a short position in a security of a publicly traded company;
d) realizing a profit in a short position in a security of a publicly traded company and distributing proceeds to individuals bearing certificates of ownership.

3) The method as in claim **1** further comprising
i) identifying by a computer system one or more databases;
ii) issuing by a computer system an automated web request to one or more servers to access said one or more databases, wherein said one or more servers are capable of independently serving automated web requests through retrieving information from said one or more databases;
iii) receiving one or more data sets from said one or more databases, wherein said one or more data sets consist of information selected from a group consisting of
(1) security trading data for one or more publicly traded companies;
(2) public actor information;
(3) social network information for one or more board members of one or more publicly traded companies;
(4) published news articles about one or more companies.

4) The method as in claim **3** further comprising
a) retrieving one or more SEC reports for one or more publicly traded companies;
b) determining if one or more analysts are named in one or more SEC reports;
c) determining if one or more bank analysts are employed by banks named in one or more SEC reports; d) identifying one or more bank analysts as promoters;
e) identifying one or more bank analysts as independent analysts;
f) determining whether a plurality of price objectives of a predetermined number of promoters are above a plurality of price objectives of a predetermined number of independent analysts;
g) determining whether an average value of a plurality of price objectives of a predetermined number of promoters is more than fifty percent above a current market value for a security of a publicly traded company.

5) The method as in claim **4** further comprising
a) receiving by a computer a first set of company board member data comprising board member biographical information;

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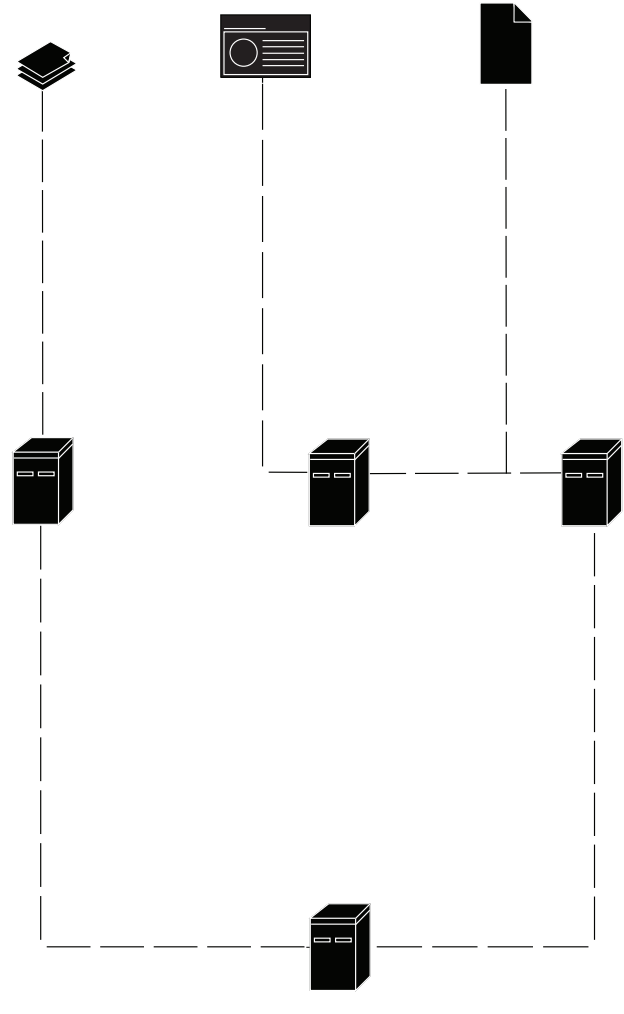

Fig. 2

b) determining by a computer a social link between board members of a first company and board members of a second company.

6) The method as in claim **5** wherein selecting a security from a plurality of securities further comprises selecting a security of a publicly traded company having an overall valuation of less than two billion dollars, a current stock market value near to a one year high, a current stock market price greater than a five year average market price.

7) The method as in claim **6** wherein selecting a security from a plurality of securities further comprises selecting a security of a publicly traded company having a negative cash flow.

8) The method as in claim **7** further comprising

a) receiving by a computer a manipulation factor from a user;

b) varying by a computer a display on a computer screen of a list of securities for publicly traded companies most likely to be successfully targeted for a short selling campaign based on said manipulation factor

9) The method as in claim **8** further comprising

a) taking a short position in one or more securities of a publicly traded company;

b) generating one or more enhanced tickets to a live performance, wherein said one or more enhanced tickets entitle a bearer to a post-show privilege;

c) distributing at a live magic show one or more certificates of ownership to individuals bearing an enhanced ticket wherein said certificate of ownership evidences the bearer's ownership stake in a short position in a security of a publicly traded company;

d) realizing a profit in a short position in a security of a publicly traded company and distributing proceeds to individuals bearing certificates of ownership.

10) The method as in claim **1** further comprising

a) retrieving one or more SEC reports for one or more publicly traded companies;

b) determining if one or more analysts are named in one or more SEC reports;

c) determining if one or more bank analysts are employed by banks named in one or more SEC reports;

d) identifying one or more bank analysts as promoters;

e) identifying one or more bank analysts as independent analysts;

f) determining whether a plurality of price objectives of a predetermined number of promoters are above a plurality of price objectives of a predetermined number of independent analysts;

g) determining whether an average value of a plurality of price objectives of a predetermined number of promoters is more than fifty percent above a current market value for a security of a publicly traded company.

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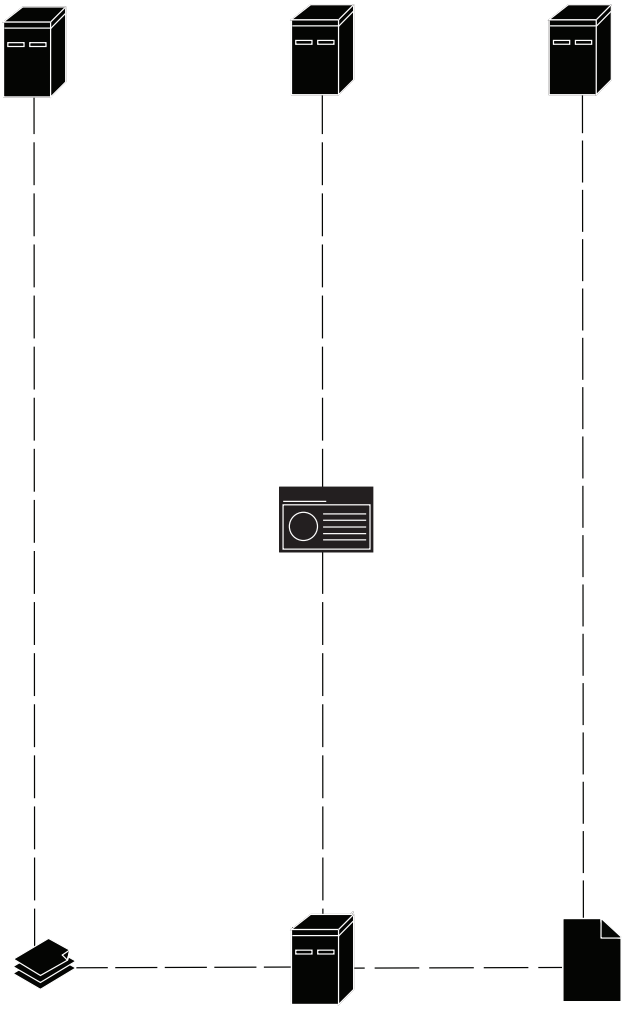

Fig. 3

11) The method as in claim **1** further comprising

a) receiving by a computer a manipulation factor from a user;

b) varying by a computer a display on a computer screen of a list of securities for publicly traded companies most likely to be successfully targeted for a short selling campaign based on said manipulation factor.

12) The method as in claim **1** further comprising

a) receiving by a computer a first set of company board member data comprising board member biographical information;

b) determining by a computer a social link between board members of a first company and board members of a second company.

13) A method of performing an unconventional magic trick comprising

a) receiving into a computer system an input of one or more company names of a first publicly traded company which had been previously successfully targeted for a short selling campaign

b) receiving into a computer system an input of one or more personally identifiable public actors;

c) generating by a computer system a plurality of automated web requests to servers storing information and data concerning one or more company names and one or more public actors;

d) receiving by a computer data and information concerning one or more company names and one or more public actors;

e) determining by a computer one or more securities for one or more publicly traded companies most likely to be successfully targeted for a short selling campaign;

f) generating a narrative of one or more publicly traded companies wherein said narrative describes how the accurate value of a security of one or more publicly traded companies is lower than the current perceived value;

g) performing a magic trick in a live magic show by first deliberately increasing the perceived value of a security of a publicly traded company by an audience and then deliberately decreasing the perceived value of a security of a publicly traded company by presenting said narrative.

14) The method as in claim **13** further comprising

a) taking a short position in one or more securities of a publicly traded company;

b) generating one or more enhanced tickets to a live performance, wherein said one or more enhanced tickets entitle a bearer to a post-show privilege.

15) The method as in claim **14** further comprising

a) distributing at a live magic show one or more certificates of ownership to individuals bearing an enhanced ticket wherein said certificate of ownership

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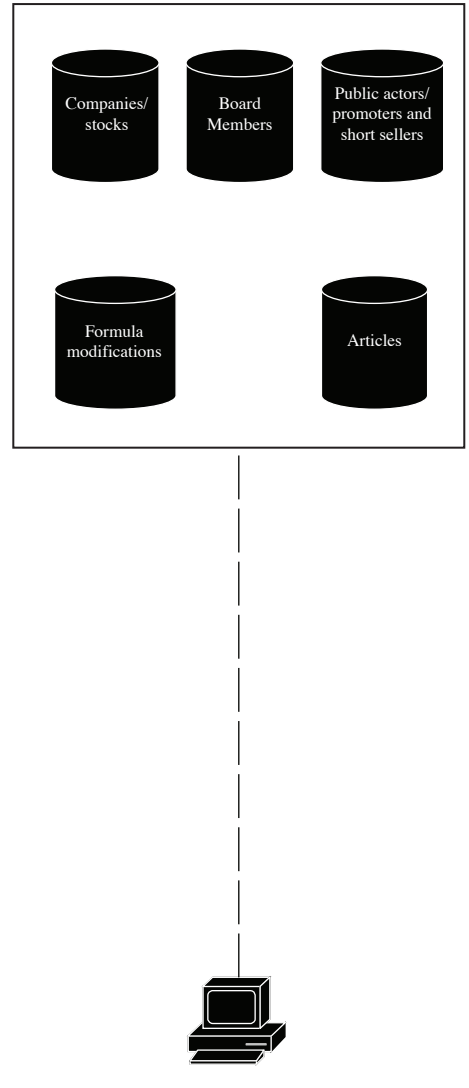

Fig. 4

evidences the bearer's ownership stake in a short position in a security of a publicly traded company;

b) realizing a profit in a short position in a security of a publicly traded company and distributing proceeds to individuals bearing certificates of ownership.

16) The method as in claim **13** further comprising

a) receiving by a computer a first set of company board member data comprising board member biographical information;

b) determining by a computer a social link between board members of a first company and board members of a second company.

17) The method as in claim **16** further comprising identifying by a computer a degree of separation between at least one of said one or more first publicly traded companies and a second publicly traded company.

18) The method as in claim **17** further comprising

a) receiving by a computer a manipulation factor from a user;

b) varying by a computer a display on a computer screen of a list of securities for publicly traded companies most likely to be successfully targeted for a short selling campaign based on said manipulation factor.

19) The method as in claim **13** further identifying by a computer a degree of separation between at least one of said one or more first publicly traded companies and a second publicly traded company.

20) The method as in claim **19** further comprising

a) receiving by a computer a manipulation factor from a user;

b) varying by a computer a display on a computer screen of a list of securities for publicly traded companies most likely to be successfully targeted for a short selling campaign based on said manipulation factor.

FIELD OF THE INVENTION

[0001] This invention pertains generally to automated investment and more particularly to a computer assisted magic trick in which a computer is utilized in selecting a specific security for short selling and implementing a change in perception regarding a specific security.

BACKGROUND OF INVENTION

[0002] There are several types of investment securities, including stocks and bonds. These securities are property rights which can be bought and sold by individuals. An individual can buy a security at a low price, hold it for a period of time until the value of the security rises, and then sell the security for a profit. In addition, if an individual believes that the value of a security is overvalued,

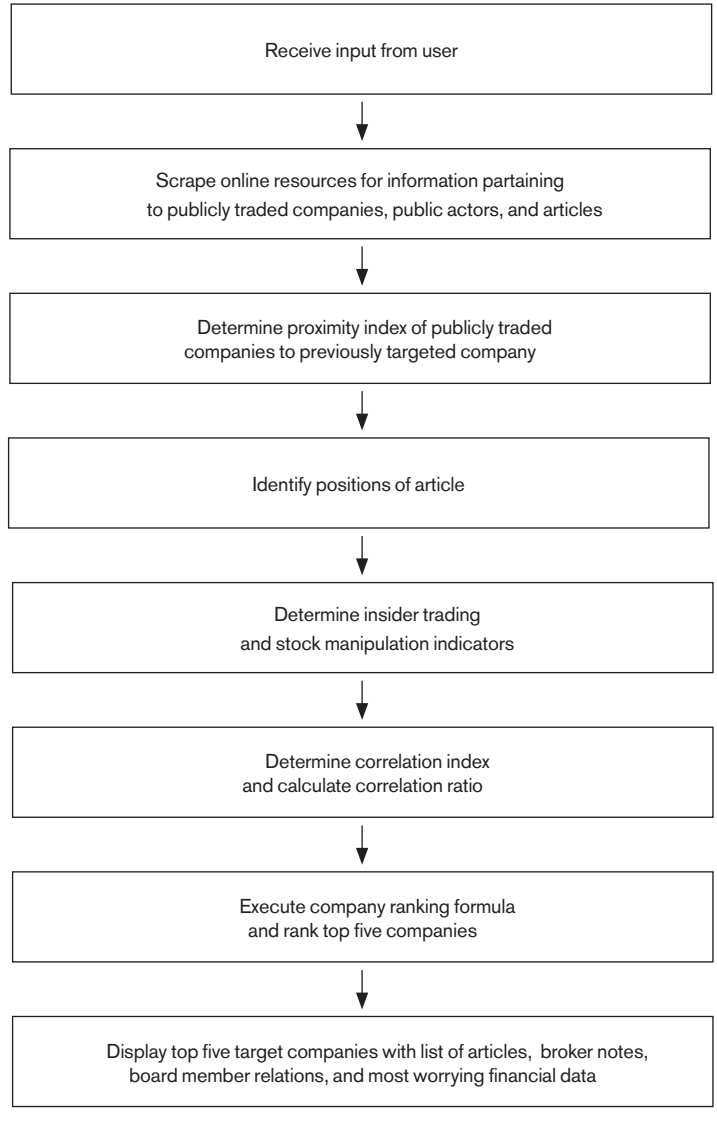

Fig. 5

the individual can short-sell that security by selling the security prior to owning it, waiting for the value of the security to lower, and then purchasing the security at a later time.

[0003] Short selling is a fundamental market activity that goes as far back as the first stock. Short selling can be used for a variety of purposes, but in this context we are only concerned with speculative short selling, aiming to generate a profit in absolute terms from the downward movement of the underlying security.

[0004] In theory short selling should help keep market prices close to some measure of "fair value", but there is substantial literature on predatory trading and manipulation showing that short selling equally can move prices away from fair value. Some economists go as far as to characterize shorting techniques as "weapons," arguing that hedge funds are not just active traders, but active manipulators of those trades, when the goal is to `make the positions work.` Among speculative short sellers there are a number of approaches for identifying short targets including quantitative analysis, forensic accounting, thematic investing, identifying balance sheet weakness, and understanding market ecology. Manipulative short selling is not just a question of identifying the right target, but also includes "making positions work". Some short sellers are very public in their attacks on target companies, but as others have experienced this can prove risky.

[0005] Making a position work is similar to techniques found in "magic." "Magic" in this context is defined as method for directing people's attention and manipulating their perception of reality. A standard magic trick can be broken down to three parts. In the first part the magician shows an ordinary object to the audience. In the second part the magician makes the ordinary object behave in an unusual manner. In the third part the magician changes to object back to ordinary. In this instance, the magic trick begins before the show when the audience member purchases an enhanced ticket (an ordinary object), is developed during the show when it is understood in relation to magic effects such as transformation of value, transmission of thought and prediction of the future (the ordinary object behaves magically), and is realized after the show when the money is received and the effect on the market is objectively verifiable (the item turns back into an ordinary object).

[0006] The invention can be understood as being in the vein of "conspiracy magic." "Conspiracy magic" is defined as the use of illusionist methods to intervene in "offstage reality". This is magic operating beyond the purposes of entertainment. "Conspiracy magic" has been performed in many different manners in the past. For instance, magic tricks and techniques have also been used in warfare and military intelligence work. Legendary stage magician Jean-Eugene

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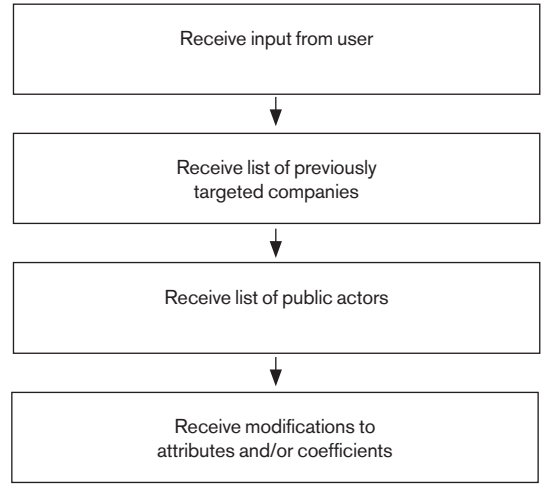

Fig. 6

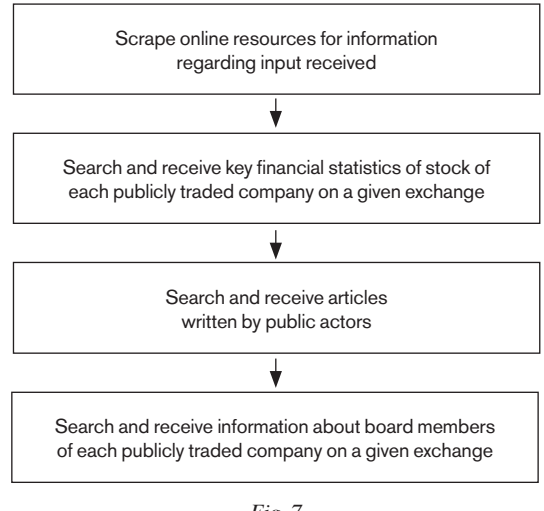

Fig. 7

Robert-Houdin was enlisted by the French army in 1856 to pacify local tribes in French Algeria using magic. In the 1950's, American magician John Mulholland developed a manual on trickery and deception for the CIA as part of their notorious MKULTRA program exploring the tactical use of hallucinogens and other experimental drugs in the context of the cold war.

[0007] More closely related to "conspiracy magic" with regard to short selling securities is the process of manipulating the value of the security by circulating negative information about target companies without revealing oneself as the source. Gotham City Research has provided some of the most scathing reports on short targets, while trader Daniel Yu (supposedly linked to Gotham City) keeps a very low profile. Short-only hedge fund Kingsford Capital Management keeps an even lower profile, but is surrounded by rumors about journalists, online financial analysts and law firms helping to realize its short positions.

[0008] Beyond anecdotal information, little is known about the details of short selling strategies. Such details are usually the trade secrets of hedge funds and other institutional investors, and only circulate within a small community of professional traders. The fact that there is no requirement to report short positions to the SEC (and only limited such requirements in other jurisdictions) further adds to the opacity of short selling practices. It has been found that short sellers on average are better informed than other market participants, with several studies showing that heavily-shorted stocks perform significantly worse than lightly-shorted stocks, and that this holds across almost all time periods and countries. Apart from being better at analyzing public data, some studies suggest that short sellers on average are better connected in the investor community and therefore have a deeper understanding of market ecology and/or access to insider information.

[0009] While performing conspiracy type magic with relation to stocks can be possible, it is extremely difficult to do based solely on the knowledge and ability of the magician. First, there are numerous securities to choose from for use in a magic trick. However, only those securities which are subject to a change in perception are ideal for use in a magic trick. Identifying those securities which are ideal for using in a magic trick is a task which is extremely difficult for a magician to perform (in fact it is a difficult task even for individuals with years of expertise and training in securities investing).

[0010] In addition, much of the popularity of a magician depends on the showmanship of the specific magician. Many magicians can perform the same trick but the one who does it with more flare is usually more popular, and thus more financially successful. Additionally, those magicians who can perform unconventional magic tricks will astound today's sophisticated audiences and will be

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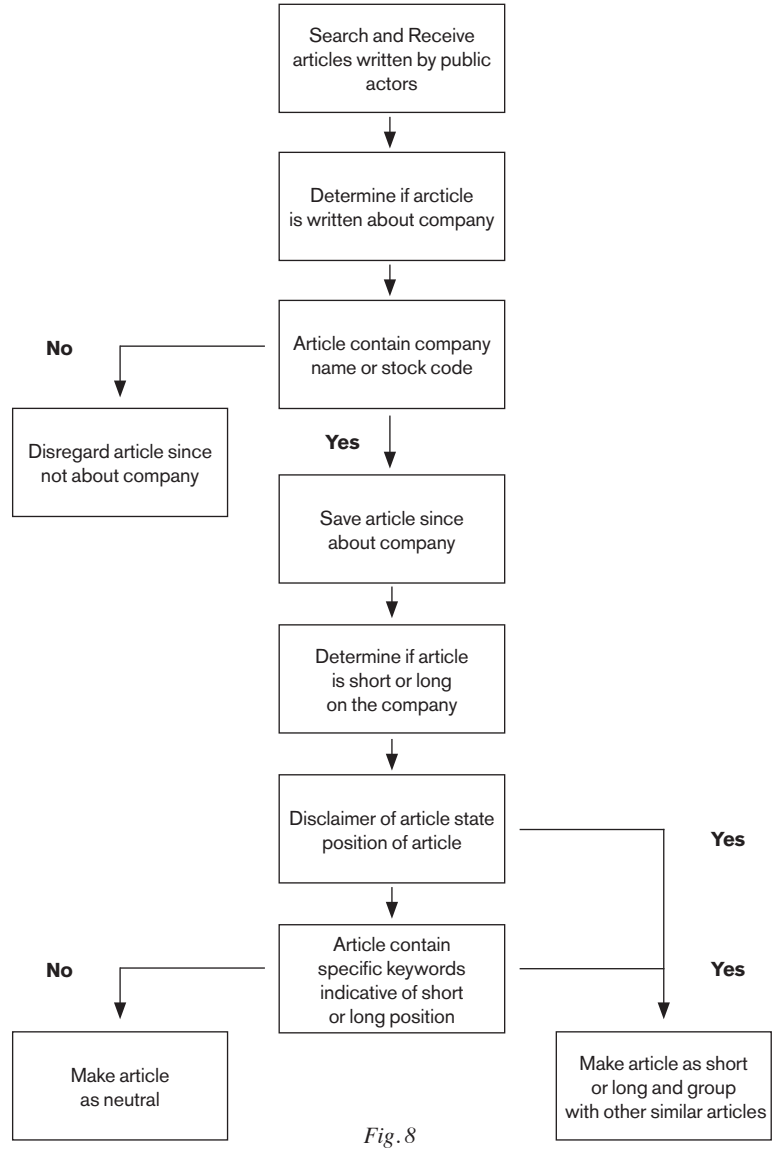

Fig. 8

more successful than other magicians. These unconventional magic tricks require unconventional preparation. Therefore, what is needed is a computer assisted magic trick that assists the magician in performing unconventional magic by identifying short selling targets that are best subject to the changes in perceived value needed for the performance of the trick.

SUMMARY OF THE INVENTION

[0011] The following presents a simplified summary in order to provide a basic understanding of some aspects of the disclosed innovation. This summary is not an extensive overview, and it is not intended to identify key/critical elements or to delineate the scope thereof. Its sole purpose is to present some concepts in a simplified form as a prelude to the more detailed description that is presented later.

[0012] The invention is directed toward a method of performing an unconventional magic trick comprising receiving into a computer system an input of one or more company names, receiving into a computer system an input of one or more personally identifiable public actors, storing one or more data sets in one or more databases in a computer, identifying by a computer a degree of separation between a first publicly traded company and a second publicly traded company which had been previously successfully targeted for a short selling campaign, identifying by a computer one or more publicly traded companies identified in one or more published news articles, searching by a computer one or more published news articles for author bias, identifying by a computer one or more published news articles as being written by independent authors, identifying by a computer one or more published news articles as being written by promoter authors, determining by a computer one or more securities for publicly traded companies most likely to be successfully targeted for a short selling campaign, ranking by a computer a plurality of securities for publicly traded companies in order of most likely to be successfully targeted for a short selling campaign, displaying on a computer screen a plurality of securities for publicly traded companies most likely to be successfully targeted for a short selling campaign, selecting a security for a publicly traded company from a plurality of securities for publicly traded companies in order of most likely to be successfully targeted for a short selling campaign, generating a narrative of one or more publicly traded companies wherein the narrative describes how the accurate value of a security of one or more publicly traded companies is lower than the current perceived value, wherein the narrative comprises one or more published news articles, generating a list consisting of a plurality of correspondents, transmitting by a computer the narrative to one or more correspondents, and performing a magic trick in a live magic show by

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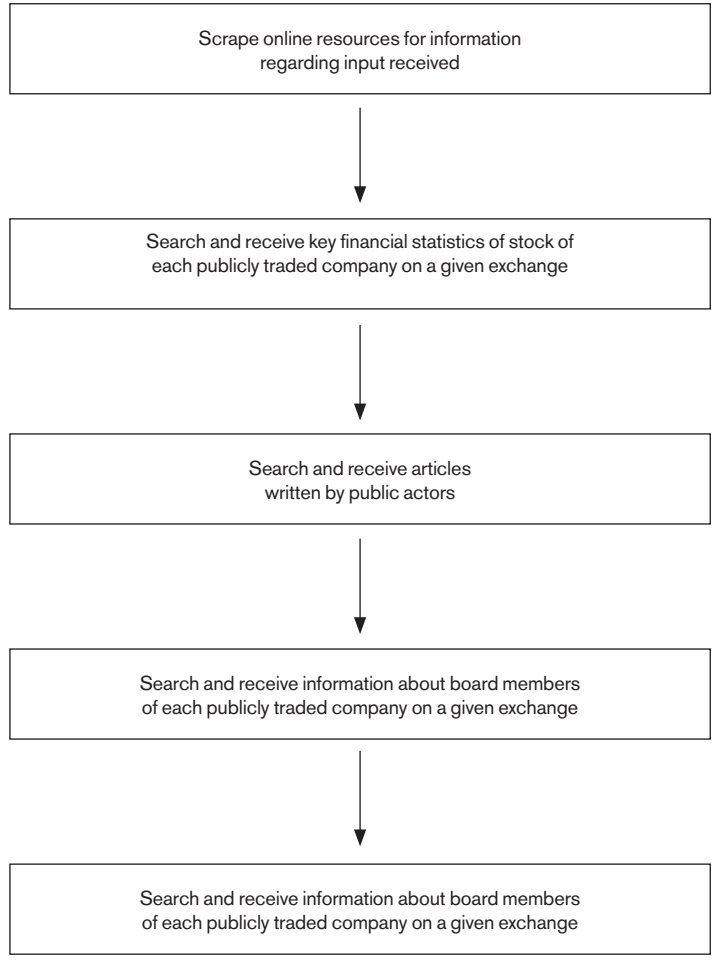

Fig. 9

first deliberately increasing the perceived value of a security of a publicly traded company by an audience and then deliberately decreasing the perceived value of a security of a publicly traded company by presenting the narrative.

[0013] In another embodiment the method may further comprise taking a short position in one or more securities of a publicly traded company, generating one or more enhanced tickets to a live performance, wherein the one or more enhanced tickets entitle a bearer to a post-show privilege, distributing at a live magic show one or more certificates of ownership to individuals bearing an enhanced ticket wherein the certificate of ownership evidences the bearer's ownership stake in a short position in a security of a publicly traded company, and realizing a profit in a short position in a security of a publicly traded company and distributing proceeds to individuals bearing certificates of ownership.

[0014] The method may further comprise identifying by a computer system one or more databases, issuing by a computer system an automated web request to one or more servers to access the one or more databases, wherein the one or more servers are capable of independently serving automated web requests through retrieving information from the one or more databases, receiving one or more data sets from the one or more databases, wherein the one or more data sets consist of information selected from a group consisting of security trading data for one or more publicly traded companies, public actor information, social network information for one or more board members of one or more publicly traded companies, and published news articles about one or more companies.

[0015] The method may further comprise retrieving one or more SEC reports for one or more publicly traded companies, determining if one or more analysts are named in one or more SEC reports, determining if one or more bank analysts are employed by banks named in one or more SEC reports, identifying one or more bank analysts as promoters, identifying one or more bank analysts as independent analysts, determining whether a plurality of price objectives of a predetermined number of promoters are above a plurality of price objectives of a predetermined number of independent analysts, and determining whether an average value of a plurality of price objectives of a predetermined number of promoters is more than fifty percent above a current market value for a security of a publicly traded company.

[0016] The method may further comprise receiving by a computer a manipulation factor from a user and varying by a computer a display on a computer screen list of securities for publicly traded companies most likely to be successfully targeted for a short selling campaign based on the manipulation factor.

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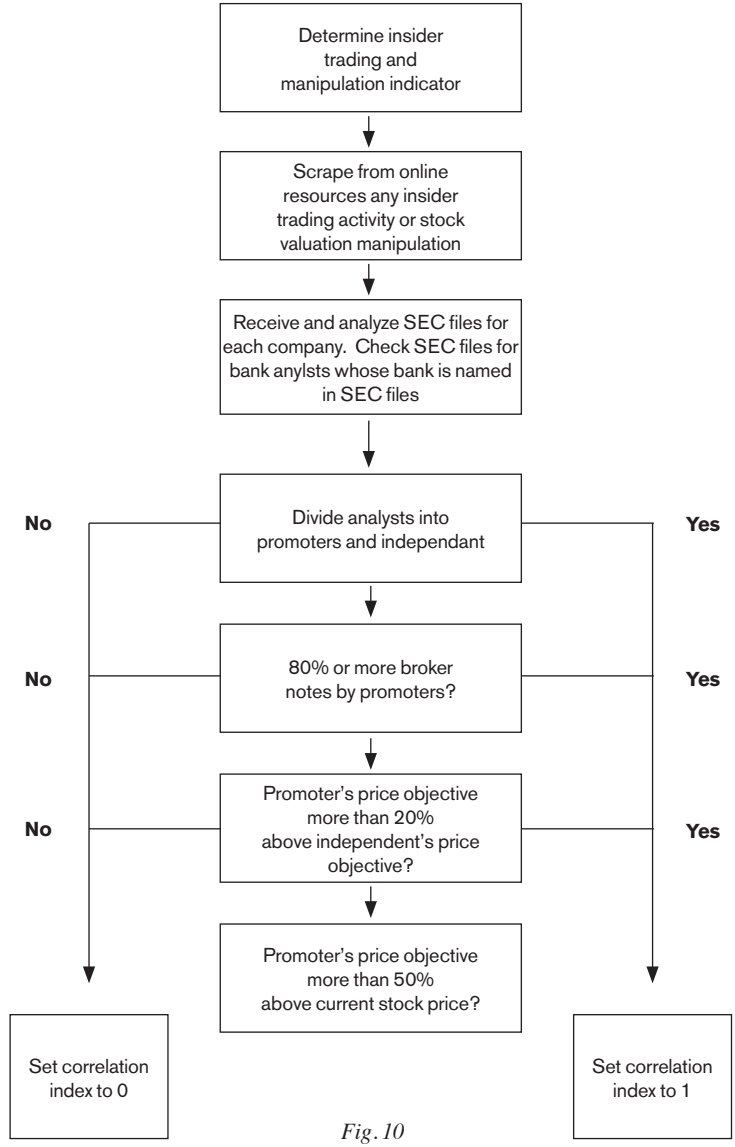

Fig. 10

[0017] The method may further comprise receiving by a computer a first set of company board member data comprising board member biographical information and determining by a computer a social link between board members of a first company and board members of a second company.

[0018] In another embodiment the method the step of selecting a security from a plurality of securities further comprises selecting a security of a publicly traded company having an overall valuation of less than two billion dollars, a current stock market value, a current stock market value near to a one year high, and a current stock market price greater than a five year average market price.

[0019] In another embodiment of the method the step of selecting a security from a plurality of securities further comprises selecting a security of a publicly traded company having a negative cash flow.

[0020] The invention is also directed toward a method of performing an unconventional magic trick comprising receiving into a computer system an input of one or more company names, receiving into a computer system an input of one or more personally identifiable public actors, generating by a computer system a plurality of automated web requests to servers storing information and data concerning one or more company names and one or more public actors, receiving by a computer data and information concerning one or more company names and one or more public actors, determining by a computer one or more securities for one or more publicly traded companies most likely to be successfully targeted for a short selling campaign, generating a narrative of one or more publicly traded companies wherein the narrative describes how the accurate value of a security of one or more publicly traded companies is lower than the current perceived value, and performing a magic trick in a live magic show by first deliberately increasing the perceived value of a security of a publicly traded company by an audience and then deliberately decreasing the perceived value of a security of a publicly traded company by presenting the narrative.

[0021] Still other embodiments of the present invention will become readily apparent to those skilled in this art from the following description wherein there is shown and described the embodiments of this invention, simply by way of illustration of the best modes suited to carry out the invention. As it will be realized, the invention is capable of other different embodiments and its several details are capable of modifications in various obvious aspects all without departing from the scope of the invention. Accordingly, the drawing and descriptions will be regarded as illustrative in nature and not as restrictive.

BRIEF DESCRIPTION OF THE DRAWINGS

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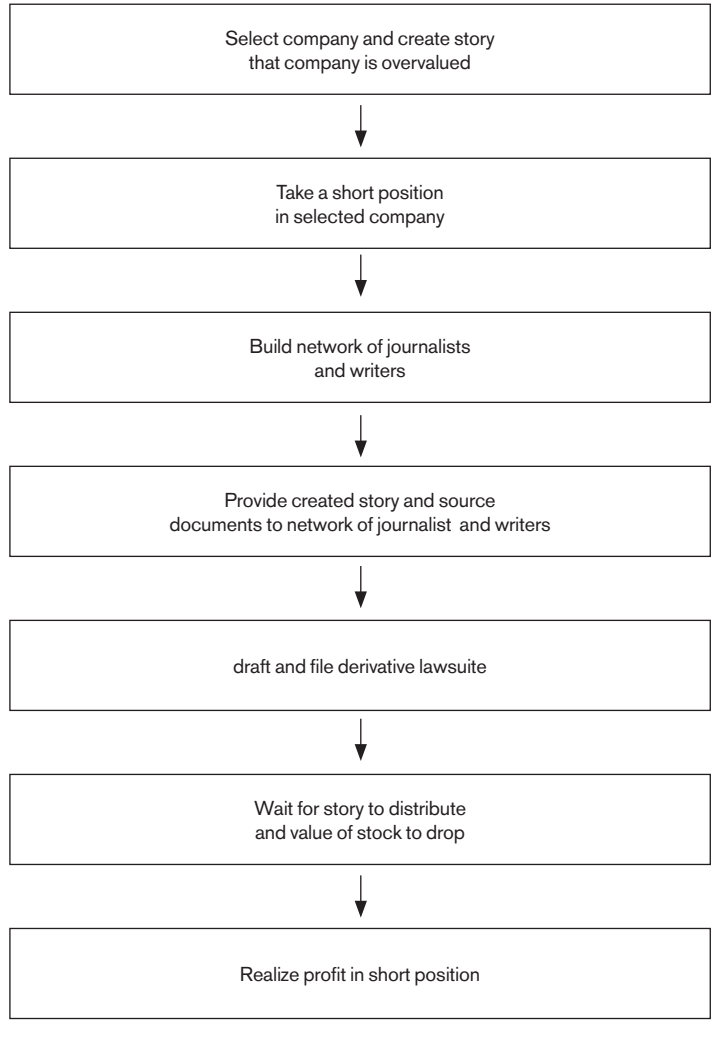

Fig. 11

[0022] Various exemplary embodiments of this invention will be described in detail, wherein like reference numerals refer to identical or similar components, with reference to the following figures, wherein:

[0023] FIG. 1 is a schematic of a system utilizing the process of the invention;

[0024] FIG. 2 is a schematic of a system utilizing the process of the invention;

[0025] FIG. 3 is a schematic of a system utilizing the process of the invention;

[0026] FIG. 4 is a schematic of a system utilizing the process of the invention;

[0027] FIG. 5 is a schematic of the inventive method;

[0028] FIG. 6 is a schematic of the inventive method;

[0029] FIG. 7 is a schematic of the inventive method;

[0030] FIG. 8 is a schematic of the inventive method;

[0031] FIG. 9 is a schematic of the inventive method;

[0032] FIG. 10 is a schematic of the inventive method;

[0033] FIG. 11 is a schematic of the inventive method;

[0034] FIG. 12 is a schematic of the inventive method; and

[0035] FIG. 13 is a diagram of a magic show where the method is performed.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0036] The claimed subject matter is now described with reference to the drawings. In the following description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the claimed subject matter. It may be evident, however, that the claimed subject matter may be practiced with or without any combination of these specific details, without departing from the spirit and scope of this invention and the claims.

[0037] As used in this application, the terms "component", "module", "system", "interface", or the like are generally intended to refer to a computer-related entity, either hardware, a combination of hardware and software, software, or software in execution. For example, a component may be, but is not limited to being, a process running on a processor, a processor, an object, an executable, a thread of execution, a program, and/or a computer. By way of illustration, both an application running on a controller and the controller can be a component.

Overview of Stocks and Method

[0038] The invention relies on the fact that the price of any given security on the financial markets is determined by "market conventions". Market values are based on more or less volatile valuation conventions, which are based on more or less strong and convincing narratives. The invention's approach to short selling focuses on stocks whose valuation convention is particularly weak and uncertain:

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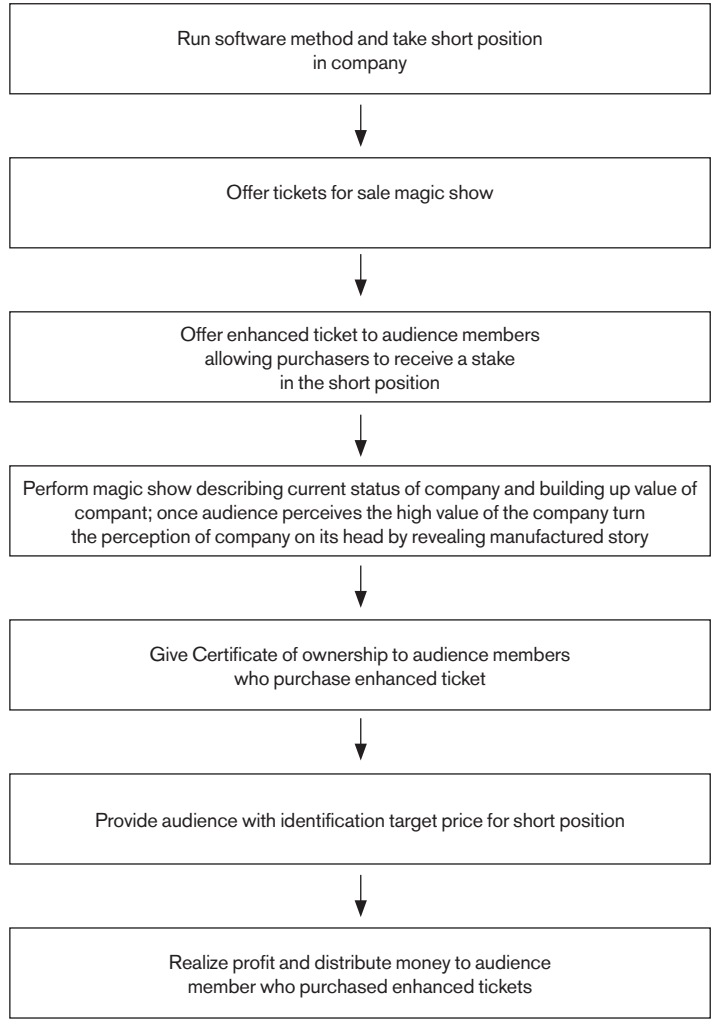

Fig. 12

aiming to realize the short position by disseminating narratives that destroy the current valuation convention and replace it by another, less favorable, valuation convention.

[0039] The invention elaborates a systematic and automated method for identifying and exploiting stocks with weak valuation conventions. In particular, the system provides a computer method to assist in setting up a magic trick by finding firms whose profile is vulnerable to the most frequent short-selling narratives (accusations of accounting manipulation, management wrongdoing, management incompetence, stock-promotion, deliberately unrealistic business plans, etc.). It uses a standardized list of tools (such as press releases, class actions law suits, specialized websites and newspapers, etc.) to automatically disseminate its own negative narrative and make targeted stocks fall.

[0040] Thus, the invention does not base itself strictly on financial grounds. Contrary to most contemporary algorithms related to short-selling, the inventive method does not try to compare current stock prices with their "fundamental valuation." Even when it uses financial information, the inventive method does not attempt to ascertain the "fair value" of the stock. Rather it deals with the strength or weakness of the stock's current valuation convention; i.e. how vulnerable the current valuation convention is to negative rhetoric. Based on the fact that theoretical valuation may change according to the theoretical frame (valuation convention) chosen by the majority of the market, the invention's mechanism is based exclusively on perception: it aims to find and to exploit the perception of the factors of valuation convention shifts.

[0041] The inventive method incorporated can be seen as two portions. The first portion is the inventive software method which searches and compiles information for the magic trick during a preparation phase. The second portion is the method of targeting a specific company for a short selling campaign, performing the magic trick in front of an audience, shifting the perceived value of the company in front of the audience, and realizing a profit on the short selling of the company security. The inventive software method is used to identify suitable short selling targets. The system starts by obtaining data from a user. The system queries the user to provide three initial sources of data: a list of previously successfully targeted companies, a list of main public actors related to short selling, and any desired modifiers to the method's formula.

[0042] The first item requested from the user is a list of previously successfully targeted companies. The invention is based on a network analysis: to perform this analysis, the software requires information on already successfully targeted companies, which it links to potential future short operations. As the user gains

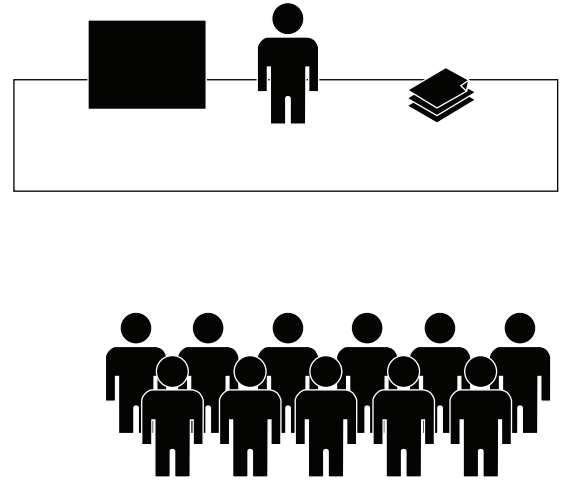

Fig. 13

short selling experience s/he will be able to add new companies to the database of successful targets. This list is filled with NASDAQ 4-letters codes (e.g. target company Keryx Biopharmaceuticals Inc. is saved as KERX). Any other types of companies or securities may be listed as well. For instance, in another embodiment of the system the method may use companies which have not been previously successfully targeted for short selling campaigns.

[0043] The second item requested is a list of main public actors related to short selling. In order to apprehend narrative processes on the financial markets, a database of public actors involved in these narratives is required. The user should identify and add both stock promoters and short-seller journalists. The user adds these people by specifying their media outlet the person works for and the author's specific URL page.

[0044] The third item requested is whether the user desires to modify the formula utilized. This input is optional, but it allows the user to modify the formula utilized by the software to rank the results. After the screening phase, the program performs a ranking of all stocks. For this process the system uses a pre-defined formula of the kind: aX+bY+cZ+ . . . +constant. The variables utilized in the formula can be any predetermined factor or factor chosen by the user. The factors could include any relevant factor, such as circulation size, years of experience, number of followers on social media, how many times an article was viewed, or any other measurable characteristic. As the user builds experience s/he can modify the value of each of the pre-defined coefficients in order to refine the results by increasing or decreasing the weight of some factors. The manipulation of the coefficients is known as a "manipulation factor." Once the user has input the requested information, the information is saved in a database for storage. The information can be saved in one database or may be saved in three separate databases.

[0045] After the user inputs the requested information, the software seeks information from websites and databases stored on servers connected to the internet. The software searches these resources for information regarding publicly traded companies on any given exchange and the list of actors provided. The system searches through several sets of data. There are sets of data related specifically to each of the companies provided. There are sets of data related specifically to the financials of the publicly traded security. There are sets of data related specifically to the public actors provided.

[0046] The software downloads a set of data on the publicly traded companies in a given exchange and public actors in three phases. First, the software extracts the key financial statistics of each of the stocks listed on a given exchange. The key

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statistics can include any financial information, such as current price, yearly high, yearly low, yearly average, trading volume, or any other relevant information. The list of relevant information may include, but not be limited to stock price, intra-day capitalization, stock price at previous closing, stock price at opening, stock average daily volume, market cap, book value, EBITDA, dividend per share, dividend yield, price-per-share, price-to-earnings ratio, 50-days high, 50-days low, 50-days moving average, 200-days moving average, price-to-earnings growth ratio, operational cash flow, free cash flow, float, insider holding of shares, institutional holding of shares, insider activity, short-ratio, or short percentage of float.

[0047] Second, the software seeks stock promotion and short-selling articles. By using the list of public actors, the software downloads and parses the author page for each public actor on the internet. The software identifies all of the articles written by each public actor, the URL of that article, and then downloads each article and saves it to a database. Third, the software downloads the board member information for each company from publicly available databases. The software finds and downloads the name and age of each board member for each company on a given exchange. The software may also seek out any other relevant information about the board members, such as known related individuals, other companies the board member is involved with, years of experience in business, and any other relevant information.

[0048] After obtaining the information from public sources on the internet, the software then undertakes a proximity index calculation. The software determines an index of the proximity of each company on a given exchange to previously targeted companies through the analysis of their board members. This index, ranging from 0 (high proximity) to 10 (low proximity), reflects the presence or absence of ties between a company's board members and the board members of previously targeted companies. It is elaborated according to the sociology of social networks.

[0049] First, regarding the proximity index calculation, the program attributes an index value of 0 to all board members of successfully targeted companies. Then, it gives a value to the board members of all listed companies through a loop: for n between 1 and 9, the program examines all the board members whose proximity index has not been defined yet. At each iteration of the loop, it attributes a value of n+1 to all board members whose proximity index is undefined and who are involved in a board where at least one board member has a proximity index of n=1. This n proximity index signifies that there are n nodes between the targeted individual (and as a consequence his company) and the board of a previously targeted company. Undefined proximity index after 9 iterations of the loop are set

to 10 (these individuals have very low ties with targeted companies). The result of these iterations is that there is a difference of 1 between the value associated at each iteration and the other board members' already existing proximity index (n at first iteration, n+1 at second iteration, n+2 at third iteration, etc.). The board members' database is updated with the proximity index column and saved to the program. Essentially, the proximity index measures the degree of separation between a proposed target company and a successfully targeted company.

[0050] For each of the articles downloaded when initializing the software, the program determines the names of companies quoted in each article and whether each article is promotional about the company or short selling the company. First, the program seeks all NASDAQ 4-letter symbols and all full company names in the content of each article. It considers that if a company is quoted at least 3 times in an article, the article is related to this company. Secondly, the software determines whether the article is promotional or short selling. The program first checks the content of article disclaimers; it parses all articles with disclaimers and determines whether the article's author is short (short seller) or long (promoter) on the stock. In case there is no disclaimer, the program seeks for particular keywords which may indicate the position of the article. Keywords which would indicate that the article endorses short-selling the stock may include, but not be limited to, bullish, bulls, promoters, promotion, hype, deceiving, silly, idiot, stupid, underperform, overvalued, slow, low, flop, failure, cash, cash burning, investigate, bubble, bust, insider, stock-options, or SEC filings. Keywords which would indicate that the article promotes the stock may include, but not be limited to, bearish, bears, undervalued, revenue, profit, ambitious, short-sellers, attack, announcement, important announcement, announce, value, value investor, innovative, successful, dramatically, success, excited, exciting, or amazing. If at least 5 promotional keywords are found in an article, the article is labeled as promotional. If at least 5 short selling keywords are found in an article, the article is labeled as short-selling. If the program does not find 5 of the listed keywords, or if it finds both promotional and short-selling keywords, the article is considered neutral. The software then adds up the total number of each type of article for each company and saves it in the database.

[0051] The software extracts from specialized websites (such as gurufocus.com) insider activity and manipulation scores (M-Score, O-Score) for each of the stocks. It then adds these to the stock database. The O-Score is the Ohlson O-score which is a multi-factor financial formula used for predicting bankruptcy. The calculation for Ohlson's O-Score is as follows:

T = - 1.32 - 0.407 ln (TA t) + 6.03 TL t TA t - 1.43 WC t TA t + 0.0757 CL t CA

t - 1.72 X - 2.37 NI t TA t - 1.83 FFO t TL t + 0.286 Y - 0.521 NI t - NI t - 1 NI t + NI t - 1 ##EQU00001##

where TA=total assets; TL=total liabilities; WC=working capital; CL=current liabilities; CA=current assets; X=1 if TL>TA, 0 otherwise; NI=net income; FFO=funds from operations; and Y=1 if a net loss for the last two years, 0 otherwise. The M-Score is a mathematical model that uses eight financial ratios to identify whether a company has managed or manipulated its earnings. The variables are constructed from the company's financial statements and create a score to describe the degree to which the earnings have been manipulated. The M score is based on a combination of the following eight different indices:

[0052] DSRI = Days' Sales in Receivables Index. This measures the ratio of days' sales in receivables versus prior year as an indicator of revenue inflation.

[0053] GMI = Gross Margin Index. This is measured as the ratio of gross margin versus prior year. A firm with poorer prospects is more likely to manipulate earnings.

[0054] AQI = Asset Quality Index. Asset quality is measured as the ratio of non-current assets other than plant, property and equipment to total assets, versus prior year.

[0055] SGI = Sales Growth Index. This measures the ratio of sales versus prior year. While sales growth is not itself a measure of manipulation, the evidence suggests that growth companies are likely to find themselves under pressure to manipulate in order to keep up appearances.

[0056] DEPI = Depreciation Index. This is measured as the ratio of the rate of depreciation versus prior year. A slower rate of depreciation may mean that the firm is revising useful asset life assumptions upwards, or adopting a new method that is income friendly.

[0057] SGAI = Sales, General and Administrative expenses Index. This measures the ratio of SGA expenses to the prior year. This is used on the assumpton that analysts would interpret a disproportionate increase in sales as a negative signal about firms future prospects

[0058] LVGI = Leverage Index. This measures the ratio of total debt to total assets versus prior year. It is intended to capture debt covenants incentives for earnings manipulation.

[0059] TATA--Total Accruals to Total Assets. This assesses the extent to which managers make discretionary accounting choices to alter earnings. Total accruals are calculated as the change in working capital accounts other than cash less depreciation. The eight variables are then weighted together according to the

following formula:

[0060] The software then calculates a ranking formula based on the acquired information and historical data. The coefficients are calculated through logistic regressions aiming to determine theoretical coefficients that maximize ranking accuracy for future short-selling operations.

[0061] The software then parses all companies' underwriting agreements submitted to the SEC and available online, and all broker notes regarding each company published by investment bank analysts. The program separates analysts into two separate groups: the group of analysts whose bank is named in SEC files (promoters) and the group of analysts whose bank is not named in SEC files (independent). If 80% or more of the broker notes published on the company are by promoters, then the correlation index is set to 1. If promoters' price objectives are more than 20% above independent's price objectives or if promoters' price objectives are more than 50% above the current stock price, the correlation index is set to 1. If none of these requirements are met, correlation index is set to 0. In this manner the correlation index is an indicator of the existence of a conflict of interest by the company's analysts.

[0062] In addition, the software calculates the correlation ratio between the fact of being categorized as a promoter and price objective: if the correlation ratio is positive and its p-value is lower than 0.05 it calculates it. The software calculates the statistical p-value of the chi-square test. The p-value can fluctuate between 0 and 1. As an example, if all of the investment banks paid by the company target a price of $20 per share and all independent brokers target a price of $10 per share, then the correlation ratio will be 1. The p-value can fluctuate depending on the distribution of target prices of the promoters and the independent bankers. Thus, the p-value enables the system to eliminate cases where a correlation appears positive but cannot be proven in reality. The correlation index and correlation ratio are added to the stock information database and saved.

[0063] When launched, the software checks that all the databases exist. If they do not exist, the software creates them. If the databases do exist, and if they are older than one month, the software updates the information (i.e. promoters/short-sellers' articles, stock data, board members' information) and recompiles the proximity index.

[0064] After updating the information, the software then seeks stocks whose valuation convention is vulnerable to narratives. In order to do so, it elaborates a short-list of stocks that abide by a cumulative list of criteria. Any number and type of criteria may be used. The criteria may be set at a predetermined level, may fluctuate between a set range, or be determined relative to each company. In the preferred embodiment the software utilized the following set of criteria: low overall valuation (<$2 bn); current stock price near to its one year high (current price>=0.9*OneYearHigh); current stock price significantly superior to its five year average (current price>=1.5*FiveYearAverage); moderate to high short-interest (between 10% and 25%); favorable sector (highly technical or risky sectors such as: Chinese companies; mining or extraction companies; biotechs; fintechs; other sectors to be added depending on market bubbles); negative operating cash flows; recent company (younger than 10 years); proximity index ranging between 0 and 3 (included); company quoted at least twice by promoters and/or short-seller journalists.

[0065] The software method offers a distinction between the calculation of the formula and the execution of the formula. Calculation and execution are both based on the same data and information as indicated above. The process of calculation compares the data with data from one or more previously successfully targeted companies. The process of execution, on the other hand, extrapolates the formula's results from data for a single company.

[0066] After determining which companies are vulnerable to narratives, the software calculates a rank score for each company utilizing a predefined formula. In other embodiments the formula may be predefined by the user. The software then displays the five companies with the highest rank score. The software may be altered to change the number of companies displayed to any number, such as more than five or less than five.

[0067] After determining the top five companies which are vulnerable to narratives which would cause the stock value to lower, the software then displays, for each stock, the list of promotional and/or short-selling articles related to the stock, promotional broker notes, board member relations to previously targeted companies, and the most worrying financial data regarding the target company.

[0068] Next, the user selects the company for targeting. The user may input the selected company into the software. Alternatively, the software itself may select a specific company for targeting.

[0069] The user then attempts to frame the target company. Finding a company that is overvalued, fraudulent, corrupt or mismanaged is not enough. The final selection criteria is determining if there is a newsworthy story to be told which would cause the value of each company's stock to lower. The ranked list of companies suggested by the software, together with the program's identification of the key narratives surrounding the company, is used as a basis for closer investigation. The user may undertake further research into evidence about how each company has been promoted, such as whether each has been strongly supported

by famous analysts or investment banks, or whether payments can be traced from each company to the respective analysts and investment banks. Alternatively, the software may automatically perform a scraping function on the internet to search for additional evidence or links of evidence.

[0070] The user utilizes the software to create a story about the selected company. The story consists of two main elements--that the target company is essentially worthless and the process by which the company became overvalued. First the user attempts to illustrate that the target company is essentially worthless in that it is little more than a vehicle for handing out money to corrupted board members. In order to build this part of the story, the user may need to consult experts within the sector the target company operates in (in order to assess the claims the target company is making about its product or service) and/or experts from the country of operation (in order to find out on-the-ground what the target company is up to). If the user senses that there is more serious corruption going on, then the user may utilize private investigators and forensic accountants. Second, the user needs to show how the target company became overvalued or how it fooled the market using stock promoters. It is always this second point which is more convincing, since one can never know for certain the correct valuation of a company. It is therefore advisable for the user to focus on this second point and find out about the company's stock promotion scheme. Alternatively, the software may create the story for the user by uploading a template story or utilizing a prior story and updating it based on current information. This story is utilized to effect a change in perceived value of the company.

[0071] Smaller companies are by default less newsworthy, and therefore require a "better story" in order to gain attention in mainstream media. However, this problem is partially overcome with more specialized online investment forums. With large companies and well-known brands, almost any story is newsworthy, but on the other hand it is much more difficult to affect the valuation of a large company. The user carefully considers the story to tell, according to the guidelines given above, and ensures that all information is truthful to the best of the user's knowledge.

[0072] The final step in preparations is for the user to identify key people who can effectively circulate the findings about the target company without the user being visible as the source. In the realm of magic, these individuals are often called "stooges." Depending on the type of company chosen, and the story the user has to offer, different distribution channels may be more or less suitable. If the story has a high degree of general interest, the user may approach journalists at mainstream financial media. In most cases, however, it is more practicable to

find writers on finance forums who frequently take `bearish` positions and have substantial followings. Whomever the user chooses to contact with the research, the user should make sure to keep all communication anonymous, so the origin of the story cannot be traced back to the user. In another embodiment, software includes a list of short-selling journalists. In this embodiment the software presents the user with a list of potential stooges. The user can then select the potential stooges from the list and the software automatically distributes the story to the stooges to maintain the anonymity of the user.

[0073] The user gives a writer/journalist an angle for a story and all the necessary facts. This is something valuable to most writers who have little time to do their own research. The user tells the writer to check the facts themselves and that the user does not want to be mentioned as a source. If the user does his/her research well and offers good stories, the writers or "stooges" will grow increasingly confident with the user's work over time. In other embodiments the software of the system automatically performs these steps.

[0074] Depending on the case the user has against the target company, the user may also want to involve a legal firm to make a class action lawsuit on behalf of the company's shareholders, also known as a derivative lawsuit. Such lawsuits will become instantly visible on the newsfeed of anyone following the company on online newsfeeds, and therefore makes for another powerful tool of communication.

[0075] Because the system and method are very similar to the methods utilized by magicians, the method can be further utilized in the context of a magic show on a stage in front of an audience.

[0076] There are several variations of how this trick can be played in the context of a stage show. The trick being performed in front of an audience will be described in its preferred embodiment although other variations may be utilized. In the standard embodiment, the magic show has two ticket options: one is simply a ticket to a magic show. The other is a ticket to participate in the "conspiracy magic" of the show. That is, for an additional specified amount of money to buy into the magic trick--a magic trick played out on the financial markets. Those who do not buy into the trick prior to the show can be given additional opportunities during the show.

[0077] During pre-show preparations the magician utilizes the software method for choosing a target company. The magician researches and prepares the story to tell about this company. The magician then places a certain amount of money in a short sale of the target company's stock. This is also the short position the magician lets audience members buy into. The positioning of the short sale should

take place prior to the premiere of the magic show.

[0078] Coinciding with the opening night of the show, the magician begins anonymously distributing the information gathered about the target company to a selected network of writers and stooges. The content of the stage show is flexible, but its purpose is to provide context for the short selling magic trick. It can include a variety of other tricks that reference the short selling magic trick, such as mind reading routines, news predictions, or other "money tricks". Reference can also be made through a dramaturgical structure of exposing--or pretending to expose--tricks within the show, or through storytelling and patter providing context to conspiracy magic and short selling methods. The show can also be used to persuade those who have not already bought into the short selling magic trick, through their choice of ticket, to do so.

[0079] Upon leaving the magic show, those audience members who have bought into the short selling magic trick each receive a certificate of investment with a promise to realize their financial magic within a given timeframe (usually within 6 months or 1 year). Their contact and bank details are collected by the magician at the time of the show. The audience members also receive a brochure detailing the case against the target company and full disclosure about the short sale, including the price at which the short position was taken on their behalf and a target price for realizing the short. This brochure can be seen in the tradition of the magician's souvenir book, which gives out tricks to bring home at the end of a show. In the case of the short selling magic trick, the fact that the method is revealed to the audience during the show does not diminish the magic effect. On the contrary, making the audience complicit in a short selling campaign--which they usually only partially understand--is a prerequisite for achieving the magic effect.

[0080] The trick is complete once the short sale has been successfully realized, and the audience members have received their share of the profit. There are several magic effects at play here, with possible variations depending on how the trick is introduced or performed. Among the effects generally considered magical effects, the three most applicable to the short selling magic trick are transformation (changing the appearance of the target company and thus its value in the marketplace), thought transmission (projecting our belief about the value of the target company onto others), and prediction (foreseeing the future loss in value of the target company).These magic effects are enhanced by the fact that stock prices are public and easily accessible, making the target company's predicted loss in value verifiable to anyone. When successful, the short selling magic trick offers the bedazzling experience of magic actually impacting the "real" world.

Detailed Description of the Inventive Method

[0081] Referring to FIG. 1, the system performing the inventive method is displayed. The system comprises one or more client side computers 100. The client side computer 100 is the computer interface utilized by the user to access and run the software system. The client side computer 100 may be any type of communicative computerized interface device, including but not limited to a desktop computer, tablet computer, laptop computer, smart phone, or any other computerized communicative device. The client side computer 100 is communicatively coupled to a server computer 200. In the preferred embodiment the inventive software method is stored and executed on the server computer 200. In other embodiments the inventive software method is stored and executed on the client side computer 100. The server computer 200 may be a single stand-alone server computer or a stack of multiple server computers communicatively coupled together. The server computer 200 is communicatively coupled to one or more resource servers 300. There may be any number of resource servers 300.

[0082] The resource servers 300 are third party computers and servers which store information, files, and data from which the server computer 200 can scrape and access data. As shown in FIG. 2 the resource servers can store company stock information 310, public actor profiles 320, and published articles 330. The server computer 200 searches the resource servers 300 for information related to information input by a user. As shown in FIG. 3, once the server computer 200 finds pertinent information stored on a resource server 300, the server computer 200 requests a copy of the information to be transferred to the server computer 200. The server computer 200 can then accept and store copies of relevant company stock information 310, public actor profiles 320, published articles 330, or any other relevant data and information related to information input by a user.

[0083] As shown by FIG. 4, once the server computer 200 receives the information, the server computer 200 stores the information in one or more databases. The databases can be preexisting prior to the server computer acquiring the information or can be created by the server computer after receiving the information. In the preferred embodiment, the server computer 200 creates and stores information in a company/stock database 210, a board members database 220, a public actors database 230, a formula modifications database 240, and an articles database 250. The company/stock database 210 receives and stores information related to the financial information for any company or stock. This can include yearly stock average, yearly high, yearly low, average trading volume, company capitalization, amount of public stock, amount of outstanding stock, financial performance of the company, corporate structure, corporate expenses, corporate

revenue, current company valuation, past company valuation, valuation projections, company cash flow, or any other company specific information or stock specific information. The board members database 220 receives and stores information about the board members for each company input by a user. The information may include but not be limited to current board members of a company, past board members of a company, work experience for each board member, known social contacts for each board member, known income or personal wealth for each board members, known companies for which a board member has served as a board member, known personal activities for each board member, known political affiliations for each board member, known public causes and charities supported by each board member, and any other relevant board member information. The public actors database 230 receives and stores information related to known promoters of a company, known short sellers of a company, known brokers of a company or stock, known financial advisers of a company, investment banks known to be affiliated to a company, or any other relevant information pertaining to public actors who have an influence on a stock value or attempt to have an influence on a stock value. The formula modifications database 240 receives and stores user preferences related to the ranking formula computed by the system. The articles database 250 receives and stores information related to public articles about a company, including but limited to financial performance articles, stock valuation articles, public relations articles, social media posts, or any other type of article related to a company input into the system by a user.

[0084] Referring to FIG. 5 through FIG. 12, the method of the invention is displayed. The method may be performed in any order, not necessarily in the order shown and described. No step described in the method is mandatory and the inventive method can be performed without the utilization of any single step. Furthermore, any step can be performed in any number of embodiments and equivalents without departing from the scope of the invention.

[0085] Referring to FIG. 5, the overall computerized method is displayed. The method starts when the system receives input information from a user 400. The system then scrapes online resource servers for online resources and information pertaining to publicly traded companies, public actors, published articles, and any other relevant information 402. The system then determines the proximity index of publicly traded companies to previously targeted companies 404. The system then identifies the positions of articles received 406. The system then determines if evidence indicative of insider trading or stock manipulation exists 408. The system then determines the correlation index and calculates the correlation ratio for articles related to an input company 410. The system then executes the company

ranking formula and ranks the top five companies which are in a position to build a short selling campaign against 412. The system then displays the top five target companies to the user with a list of articles, broker notes, board member relations, most worrying financial data about the company, and any other information or evidence which may be used to build a short selling campaign against a target company 414. The system may be modified to display less than five companies or more than five companies.

[0086] Referring to FIG. 6, the method of system receiving information from the user is illustrated. The system receives information from input from the user 500. Within this process, the system receives a list of previously targeted companies from the user 502. The system also receives a list of public actors from the user 504. The system can receive modifications to attributes and coefficients of the ranking formula executed by the system 506. The user may select any attribute of the company, public actor, or articles utilized in the ranking formula to be promoted over other attributes. For instance, and by no means limiting the system, the user can select to promote the attribute of the current value of a stock of a company as favored against the number of articles promoting a company. In other embodiments of the invention the method can be performed without user input, where the system automatically seeks information related to public companies, public actors, and articles and automatically presents to a user the best companies which may be targeted.

[0087] Referring to FIG. 7, the method of the system scraping resource servers for information is displayed. The system first scrapes online resource servers for information related to the input received from a user 600. The system searches and receives key financial statistics of the stock for each publicly traded company on a given exchange 602. The system searches and receives articles written or published by public actors 604. The system searches and receives information about board members of each publicly traded company on a given exchange 606.

[0088] Referring to FIG. 8, the method of the system searching and receiving articles is displayed. First, the system searches and receives articles written by public actors 700. In other embodiments the system looks for any articles or published information about a company, regardless of who wrote the article. Then the system determines if the article is written about the target company 702. The system determines whether the article contains the company name or company stock code 704. If it does not then the system disregards the article since it is not about the company 706. If it does contain the company name or company stock code then the system saves the article since it is about the company 708. The system then determines whether the stock promotes the company (is taking a

long position) or is degrading the company (is taking a short position) 710. First the system checks for clear statements of a position in the disclaimer section of the article 712. If the disclaimer of the article states its position then the system marks the article as long or short and groups the article with similar articles 716. If the article does not contain a disclaimer or the disclaimer does not state a position then the system determines whether the article contains specific keywords indicative of a long or short position 714. If the article does not contain specific keywords indicative of a position, the system marks the article as neutral 718. If the article does contain specific keywords indicative of a long or short position, the system then marks the article as long or short and groups the article with other similar articles 716.

[0089] Referring to FIG. 9, the method of obtaining information about board members is displayed. The system first searches for and receives information about the board members of each publicly traded company on a given exchange which is a potential target company 800. The system determines the proximity index for each potential target company compared to previously shorted companies 802. The system determines whether the current board members of a potential target company are also board members on a previously shorted company 804. The system determines whether current board members of a potential target company are socially connected to board members of a previously shorted company 806. The system then establishes a degree of separation between the current potential target company and a previously shorted company 808.

[0090] Referring to FIG. 10, the method of determining stock manipulation is displayed. The system determines whether there is evidence of insider trading or stock manipulation 900. The system scrapes evidence of insider trading and stock manipulation from online resources 902. The system then receives and analyzes SEC files for each target company and SEC files for bank analysts whose bank is named in the target company SEC files 904. The system divides the analysts into stock promoters or independent 906. The system determines if 80% or more of the broker notes are by promoters 908. The system separately determines if the promoters' price objective is more than 20% above the independents' price objective 910. The system separately determines whether the promoters' price objective more than 50% above the current stock price 912. If the system determines that any of these conditions exist then the system sets the correlation index to one 916. If the system determines that none of these conditions exist then the system sets the correlation index to zero 914.

[0091] Referring to FIG. 11 the method of utilizing the results of the computerized method is displayed. First the user selects a target company and uses the computer

output to create a story that the target company is overvalued 1000. The user then takes a short position in the selected target company 1002. The user builds a network of journalists and writers 1004. The user provides the created story and source evidence documents to the network of journalists and writers 1006. Optionally, the user may draft and file a derivative lawsuit against the selected target company 1008. The user then waits for the story to distribute among the public and the value of the stock to drop 1010. The user then realizes a profit in the short position 1012.

[0092] Referring to FIG. 12, the method of incorporating the computerized method into a magic show is illustrated. First the user runs the software and takes a short position in the company 1100. The user then offers tickets to the magic show for sale 1102. The user then offers enhanced tickets to audience members which allow the purchasers to receive a stake in the short position 1104. The user performs the magic show, describing the current status of the company and building up the perceived value of the company; once the audience perceives the high value of the company the user turns the perception of the company on its head by revealing the manufactured story 1106. The user gives a certificate of ownership to the audience members who purchased the enhanced ticket 1108. The user provides the audience with an identification of target price for the short position 1110. The user then realizes a profit in the short position and distributes money to audience members who purchased enhanced tickets 1112.

[0093] Referring to FIG. 13, a schematic of the magic show is illustrated. The magician 1200 stands on a stage 1202 or other area which is set apart. The magician 1200 performs the magic show for an audience 1204. The magician utilizes a plurality of certificates of ownership 1206 which the magician 1200 distributes to members of the audience 1204 who have purchased enhanced tickets. Optionally, the magician 1200 may use a display 1208 to assist in the presentation of the magic show to the audience 1204. The display 1208 may be a screen on which images may be projected, a multimedia presentation device, a television, a movie screen, a whiteboard, a paper presentation pad, or any other device for writing or displaying information.

[0094] What has been described above includes examples of the claimed subject matter. It is, of course, not possible to describe every conceivable combination of components or methodologies for purposes of describing the claimed subject matter, but one of ordinary skill in the art can recognize that many further combinations and permutations of such matter are possible. Accordingly, the claimed subject matter is intended to embrace all such alterations, modifications and variations that fall within the spirit and scope of the appended claims. Furthermore,

to the extent that the term "includes" is used in either the detailed description or the claims, such term is intended to be inclusive in a manner similar to the term "comprising" as "comprising" is interpreted when employed as a transitional word in a claim.

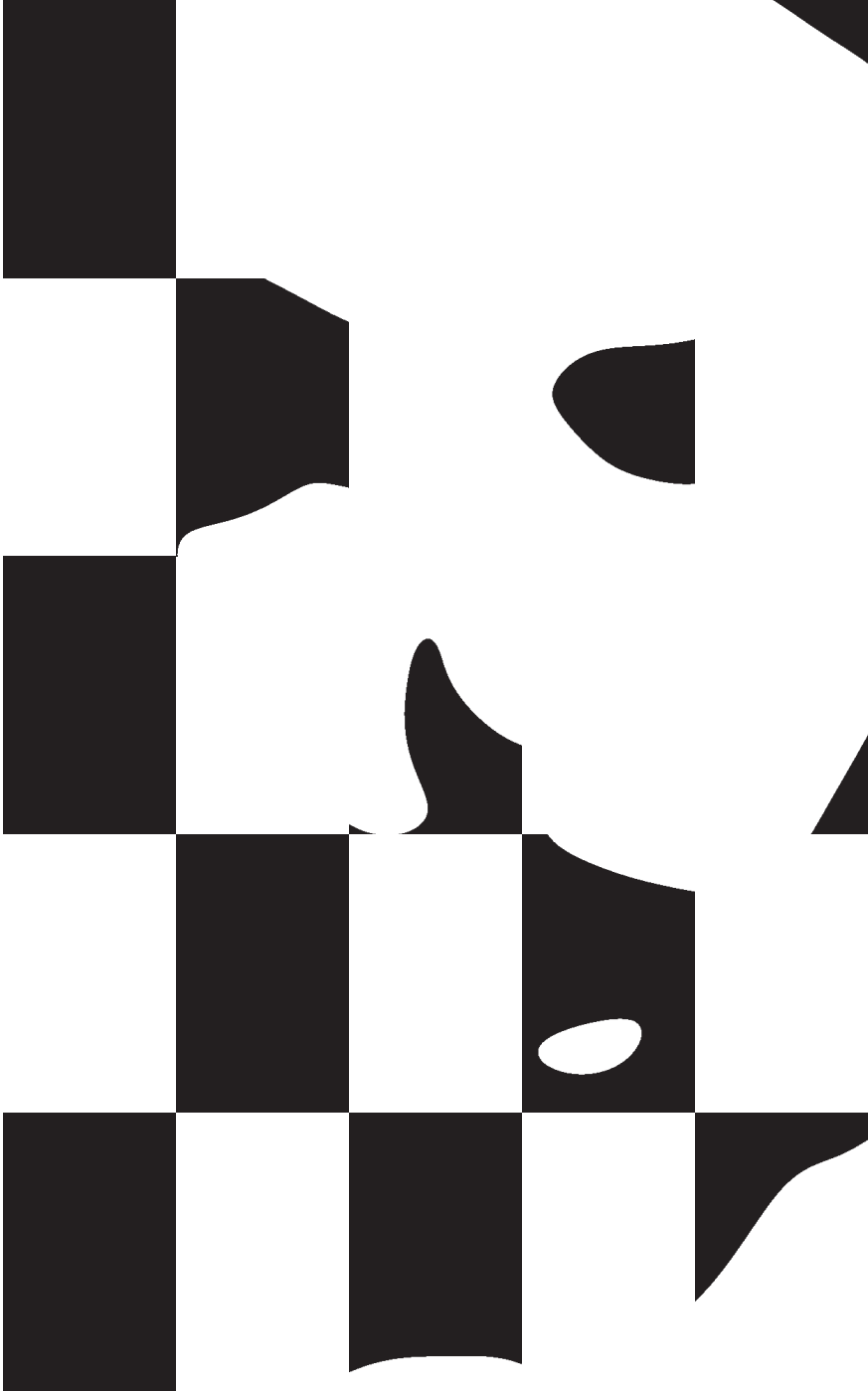
[0095] The foregoing method descriptions and the process flow diagrams are provided merely as illustrative examples and are not intended to require or imply that the steps of the various embodiments must be performed in the order presented. As will be appreciated by one of skill in the art the order of steps in the foregoing embodiments may be performed in any order. Words such as "thereafter," "then," "next," etc. are not intended to limit the order of the steps; these words are simply used to guide the reader through the description of the methods. Further, any reference to claim elements in the singular, for example, using the articles "a," "an" or "the" is not to be construed as limiting the element to the singular.

[0096] The various illustrative logical blocks, modules, circuits, and algorithm steps described in connection with the embodiments disclosed herein may be implemented as electronic hardware, computer software, or combinations of both. To clearly illustrate this interchangeability of hardware and software, various illustrative components, blocks, modules, circuits, and steps have been described above generally in terms of their functionality. Whether such functionality is implemented as hardware or software depends upon the particular application and design constraints imposed on the overall system. Skilled artisans may implement the described functionality in varying ways for each particular application, but such implementation decisions should not be interpreted as causing a departure from the scope of the present invention.

[0097] The hardware used to implement the various illustrative logics, logical blocks, modules, and circuits described in connection with the aspects disclosed herein may be implemented or performed with a general purpose processor, a digital signal processor (DSP), an application specific integrated circuit (ASIC), a field programmable gate array (FPGA) or other programmable logic device, discrete gate or transistor logic, discrete hardware components, or any combination thereof designed to perform the functions described herein. A general-purpose processor may be a microprocessor, but, in the alternative, the processor may be any conventional processor, controller, microcontroller, or state machine. A processor may also be implemented as a combination of computing devices, e.g., a combination of a DSP and a microprocessor, a plurality of microprocessors, one or more microprocessors in conjunction with a DSP core, or any other such configuration. Alternatively, some steps or methods may be performed by circuitry that is specific to a given function.

[0098] In one or more exemplary aspects, the functions described may be implemented in hardware, software, firmware, or any combination thereof. If implemented in software, the functions may be stored on or transmitted over as one or more instructions or code on a computer-readable medium. The steps of a method or algorithm disclosed herein may be embodied in a processor-executable software module, which may reside on a tangible, non-transitory computer-readable storage medium. Tangible, non-transitory computer-readable storage media may be any available media that may be accessed by a computer. By way of example, and not limitation, such non-transitory computer-readable media may comprise RAM, ROM, EEPROM, CD-ROM or other optical disk storage, magnetic disk storage or other magnetic storage devices, or any other medium that may be used to store desired program code in the form of instructions or data structures and that may be accessed by a computer. Disk and disc, as used herein, includes compact disc (CD), laser disc, optical disc, digital versatile disc (DVD), floppy disk, and blu-ray disc where disks usually reproduce data magnetically, while discs reproduce data optically with lasers. Combinations of the above should also be included within the scope of non-transitory computer-readable media. Additionally, the operations of a method or algorithm may reside as one or any combination or set of codes and/or instructions on a tangible, non-transitory machine readable medium and/or computer-readable medium, which may be incorporated into a computer program product.

[0099] The preceding description of the disclosed embodiments is provided to enable any person skilled in the art to make or use the present invention. Various modifications to these embodiments will be readily apparent to those skilled in the art, and the generic principles defined herein may be applied to other embodiments without departing from the spirit or scope of the invention. Thus, the present invention is not intended to be limited to the embodiments shown herein but is to be accorded the widest scope consistent with the following claims and the principles and novel features disclosed herein.



Tom McCarthy

The Last Chapter in the History of the World—or, Proxthesis

It's a pleasure to be here at this symposium.* The following remarks are drawn, in part, from an essay on David Lynch that I delivered in 2009 at Tate Modern and published in *Typewriters, Bombs, Jellyfish* (NYRB, 2017); and in part from research I conducted while writing my last novel, *Satin Island* (Knopf, 2015). If you've read either, or even both, of these, please excuse any duplications. To bowdlerize a phrase of Borges: it is every writer's curse to become their own worst proxy.

In 1973, while still a student at the American Film Foundation, David Lynch produced a short film named "The Amputee"—two films in fact, nearly but not quite identical. They feature a woman, missing both legs, reading a letter while a nurse dresses her stumps. But what is also just as interesting is the context in which Lynch made them: the American Film Foundation had decided to test two types of video stock, so (for the purposes of comparison) he shot the same sequence twice, once on each tape-variant—and did so with what he called 'a sadness' at the prospect of film, as a material medium being lost, or at least substituted by its proxy, VHS.

As his career started, so it would continue. Try to count the instances of amputation—missing arms, missing legs, missing eyes, and ears—in Lynch's oeuvre (or, indeed, of amputation taking place on screen: limbs being hacked off, blown off, carried off by dogs) and you'll lost count pretty soon. Yet for almost every loss, there's a replacement, either direct—a gear-stick for a leg—or else more roundabout. The severed ear that Geoffrey stumbles across near the start of *Blue Velvet*, for example, heralds the onset of a world of amplified, recorded, and transmitted sound of microphones, tape cassettes, and walkie-talkies. Lynch's films abound in instances like this—of natural or biological faculties being replaced by instruments—by callipers and crutches, wheelchairs, hearing aids, and ever-larger, ever-weirder apparatuses. By *Mulholland Drive,* the apparatus takes the form of an entire room,

* This talk was delivered within the framework of the symposium *The Proxy and Its Politics* hosted by the Research Center for Proxy Politics in June 2017 in Berlin.

from which the tiny, paralytic Mr. Roke speaks through an intercom. This endless outsourcing of the corporeal to the technological may well fall within the umbrella-category of the proxy, but just as much, and more immediately, it summons up the realm of the prosthetic.

For Freud, prosthesis is the essence of technology. "With all his tools", he writes in *Civilization and its Discontents*, "man improves his own organs, both motor and sensory, or clears away the barriers to their functioning." Ships, airplanes, telescopes, cameras, gramophones, and telephones—all these afford man the omnipotence and omniscience he attributes to his gods, thus making him "*eine Art Prothesengott*": a kind of god with artificial limbs, a prosthetic god. "When he puts on all his auxiliary organs he is truly magnificent", Freud writes; "but", he continues, "those organs have not grown on to him and they still give him much trouble at times". Man's technological appendages both enhance and diminish him. It's what Hal Foster, in his book *Prosthetic Gods*, calls "the double logic of the prosthesis": an addition that threatens, or marks, a subtraction.

It may seem paradoxical that Freud, framing prosthesis as the emblem of modernity, should turn to metaphysics, to theology, to gods. He's not the first, though. A full century earlier, in 1810, Heinrich von Kleist, in his story-cum-essay "On the Marionette Theatre", recounts a meeting, in a fairground, with a choreographer who, watching marionettes being manipulated, marvels at the way in which dance "could be entirely transferred to the realm of mechanical forces" and "controlled by a crank" so as to move in proportion to the turning movements "like the relation of numbers to their logarithms or asymptotes to the hyperbola". "Have you heard", the choreographer asks the narrator, "of the artificial legs designed by English craftsmen for those unfortunates who have lost their limbs?" The fairground marionettes, he continues, display a *heightened*, not a diminished, skill of movement, since they obey only the unadulterated laws of gravity—whereas humans, burdened with self-consciousness, can never attain that purity. "It [is] well-nigh impossible", he informs his companion, "for a man to aspire to the gracefulness of a marionette. Only a god, in this field of contest, could compete with matter". Yet he envisages an outer limit at which this conundrum might be solved, and man redeemed. "Just as two lines coming to a point of intersection after passing through the infinite, suddenly re-emerge on the other side; or the image in the concave mirror, vanishing into the infinite, suddenly stands in front of us, so will grace return when our consciousness has likewise journeyed through the infinite, and appear most pure in that human form which either has no consciousness at all or possesses infinite consciousness—that is, either in a marionette or in a god". The narrator, bemused, asks: "Thus, we would need to eat again from the tree of knowledge… in order to fall back into a state of innocence?"—to which the choreographer replies: "Indeed: that is the last chapter in the history of the world."

Kleist's parable is metaphysical, even cosmic—but it's inherently political as well. The presence of a puppet begs the question of the puppeteer: 'force' and 'control' raise the issue not just of mechanics, but of power. Perhaps this conjunction of theology and politics shouldn't surprise us—for hasn't deity always, back through the Old Testament to the Egyptian gods and earlier, been about authority, the law, and power over the human *polis*, over events that take place therein? For William Burroughs, 'God' is no more than the ultimate name *for* control at the highest, most oppressive level of its operation. If metaphysics, for Burroughs, is entirely a political question, then politics, in turn, is a technological one. The universe, he claims, with a nod to Wittgenstein, is prerecorded; yet "the only thing not pre-recorded are the pre-recordings

themselves". These "pre-recordings" he presents on occasion (in, for example, "The Electronic Revolution") as reel-to-reel tapes, and elsewhere (in, for example, "Nova Express") as corporate-style 'Board Books'. 'God', the malicious entity who has wrested possession of these master-cassettes, these master-documents, uses them to assert dominion over the whole universe from his headquarters, the 'Control Room' or 'Reality Studio'; and does so largely through the very technological media that he has co-opted, and through which he allows his sub-contractors—if you like, his proxies—such as Time Warner, Hollywood and IBM to pump out on a loop the same repressive, self-fulfilling script, thereby rendering humans no more than (as Burroughs puts it in *The Adding Machine*) 'ventriloquist dummies'. Sometimes, though, the dummies might revolt, and tug back at the logarithmic strings. This, for Burroughs, is the task of the artist, who figures in his imagination as a kind of ontological revolutionary, called upon to cut up and remix the pre-recordings, thereby fracturing their control lines; then to storm the Control Room itself, and, to panicked cries that "The director is on set… every man for himself!", bring the Reality Studio crashing down. This putative liberation Burroughs likens to a longed-for amputation: learning of a tribe whose small toes (quite unnecessary for stability) are genetically programmed to self-amputate in adolescence, he pictures God, too, withering and dropping off. "He atrophied and fell off me like horrible old gills", he has a putative 'survivor' of this miracle (or counter-miracle) confide to a journalist, "And I feel ever so much better".

Returning to Lynch's films: their multiple amputations and technological or mediatic substitutions also constitute both a theological disquisition and sustained exploration of control. *Eraserhead* begins with a vulcan-like demiurge plying his celestial smithy, and ends with Henry's head apotheosizing into stars, like Greek heroes turning into constellations, while an angel in his radiator sings of heaven. But the demiurge is clearly controlling Henry too: by yanking a lever, he makes thoughts gestate inside his brain. In *Wild at Heart*, similarly, Marianna watches Sailor and Lulu's progress in her glass ball like the goddess Athena gazing down on Odysseus's troubled journey home; and, as she does so, she spins, through

a system of phone calls through which spell-like phrases are relayed to her proxies (Santos or 'Saint', calliper-clad Grace Zabriskie, the Shamanic-sounding Mr. Reindeer and the 'dark angel' Bobby Peru), an extended web that, like a tele-fibre-theo-optic mesh, arches over and controls events within the space through which the lovers travel.

Perhaps the most fascinating Lynchean staging of control, of the Control Room, is the one I mentioned a few minutes ago: the strange hi-tech chamber at whose center sits the tiny, crippled Mr. Roke. A deputy waiting behind his shoulder, his speech deputed to the electrolarynx that transmits his voice out of the room, this man is clearly vastly powerful and important: his listeners sweat in terror as they receive his orders. These listeners are film producers: what's at stake in his pronouncements is the creation of a film—perhaps even *this* film. *Wild at Heart*, too, could be seen as a piece of meta-cinema, particularly in its multiple samplings of and allusions to *The Wizard of Oz*—not just a classic film but perhaps the most iconic cinematic fable of divinity and puppetry and cinema itself, at whose climax the god who controls everything and can make all things happen, turns out, at the end of the technicolor rainbow, to be no more than a feeble man cranking an elaborate image and voice-projector. Irony of ironies: the revolutionary fantasy of rumbling the Reality Studio that Burroughs would conscript the powers of surrealism and the counter-cultural avant-garde to formulate had already been consummately enacted by mainstream Hollywood in 1939! If Lynch homes in on *The Wizard of Oz*, it's because he's seduced by the same fantasy: of showing the Control Room, laying bare its operations and their network, causing this to stutter and short-circuit. This is the fantasy driving his final, most demanding movie *Inland Empire*, in which the organizational structures of cinema (once more, the narrative turns around the fraught production of a film) and, just as importantly, of post-cinematic media such as television and CCTV, provide the walls of the labyrinth of control along whose corridors the heroine Nicky feels her way—soft, mediatic walls across whose surface images, lines, situations, and identities morph into and out of one another. "There's a vast network", Freddie whispers to her, "an ocean of possibilities". Her task is to

navigate this network–like a gamer, to negotiate levels that regress and embed one another; or, like a hacker, to crack its source code, break the game's own system, bring it crashing down. Within Lynch's universe of prostheses, and bringing to a head the anxiety about film as a material culture expressed in *The Amputee*, *Inland Empire* perhaps, being shot, edited, and distributed digitally, represents cinema's own prosthesis: what has been amputated, cut, removed from this film is the film, replaced not, this time, by VHS but by virtual technology, the ones and zeros of computer code.

Who do we find at the heart of this network-culture labyrinth, manning its inner chamber–mechanical rabbits, moving robotically as they intone, to canned laughter, a prewritten script. In the Control Room, the automata: the marionettes operate us. This situation was rehearsed already in *Mulholland Drive*, in an extraordinary scene in which the heroines attend a cabaret that's all mechanics, with the singer miming to a pre-recorded tape. What's extraordinary about the scene is not that the artifice is unmasked (indeed, it's even announced by the compère at the show's outset), but rather the inversion that takes place: as the tape plays, Betty shakes, literally 'moved' by it; then, as the singer mouths along to the words *estoy llorando*, "I am crying", she and Rita cry! Technology is no longer an appendage to the human; rather, humans have become technology's prosthesis.

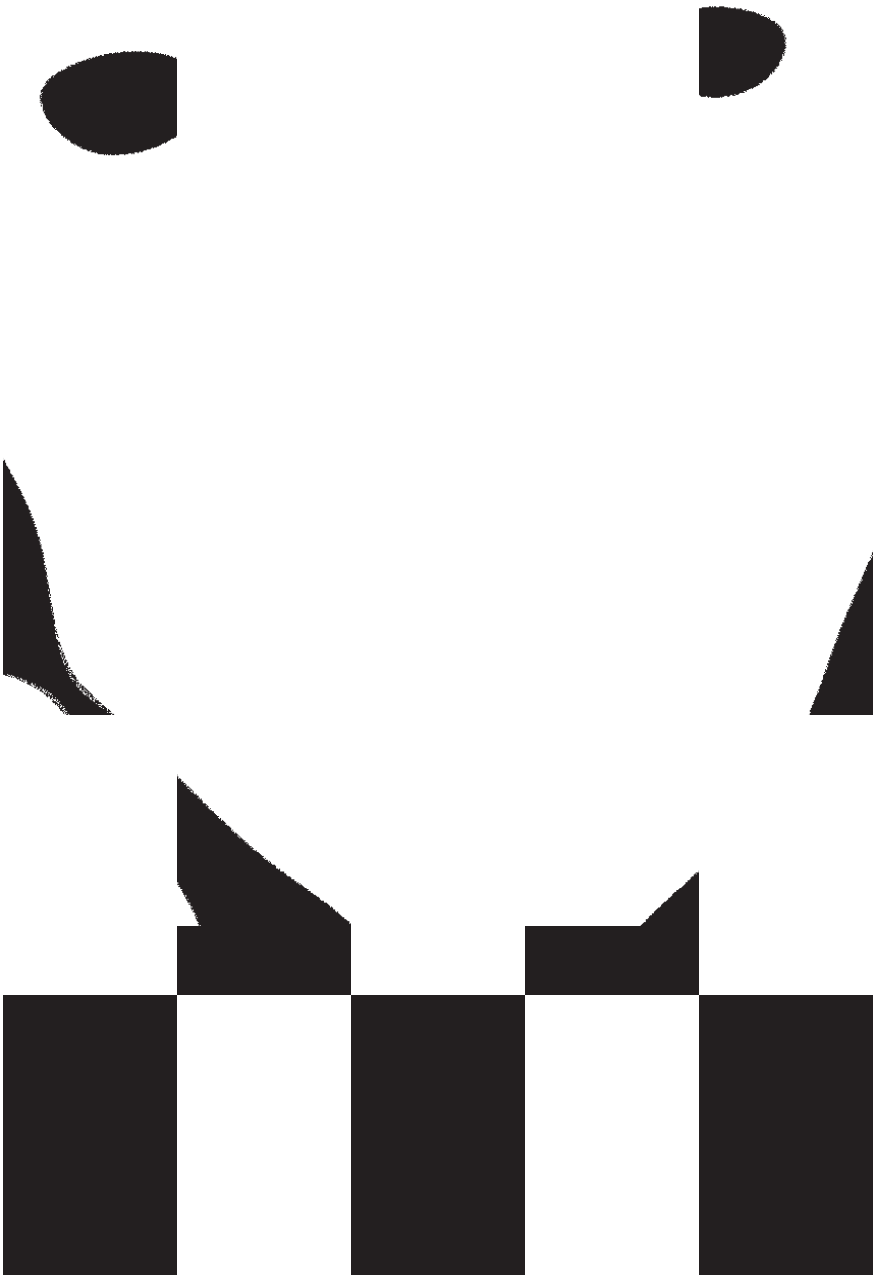
Recordings, pre-recordings, scripts. For the theorist Michel de Certeau (who, besides being a leftist sociologist, was also an ordained Jesuit priest), everything is scriptural. In his landmark work *The Practice of Everyday Life*, citing François Furet's claim that "modernization, modernity itself is writing", de Certeau calls revolution "a scriptural project at the level of an entire society seeking to *constitute itself* as a blank page with respect to the past, to write itself by itself". This is the book's only instance of Utopianism, however: for de Certeau, the 'scriptural enterprise' is overwhelmingly the enterprise of power, the logic and MO of capitalism, through which all peoples, spaces, and phenomena become "transformed into texts in conformity with the Western desire to read its products". "From birth to mourning after death", he claims, "law 'takes hold of' bodies in order to make them its text. Through all sorts of initiations (in rituals, at school etc), it transforms them into tables of the law, into living tableaux of rules and customs, into actors in the drama organized by a social order." Lurking behind these thoughts, barely disguised, is the giant writing machine of Kafka's "In the Penal Colony," inside whose harrows the regime's rulers, or their deputies, place prisoners so that the law may be scored on their bodies. Yet for de Certeau, as for Lynch, the hierarchy of operator-operated needs to be rethought. "Today", he writes, "by an inversion that indicates that a threshold in this development has been crossed, the scriptural system moves us forward on its own; it is becoming self-moving and technocratic; it transforms the subject that controlled it into operators of the writing machine that orders and uses them. A cybernetic society." To put it in Kleistean terms: the logarithm is no longer just the relay, asymptote or vector through which control passes; it's the agent–we're its proxies.

De Certeau wrote all this in 1980, some time before the digital era, whose logic it so brilliantly maps, announced itself. If bodies were law's text back then, how much more so in an age of bioinformatics, eye-scans, and facial recognition software? If capitalism read its products then, now omni-data notates and transcribes our every movement, purchase, and interaction, correlating these with one another and with everyone else's ones in order to perfect the algorithms that in turn drive us to move, purchase, and interact in ways consistent with the algorithm's pre-scripts. What strikes me most, as a novelist, about the reign of Google and the NSA, what (dare I say?) even exhilarates me, is the fact that writing is suddenly placed at the heart of the political: what is written, recorded, archived, and who gets to read it? Here, too, an inversion has occurred, a threshold has been crossed: it is no longer just the case that writing is political–rather, that politics has become a literary question, and a question to which there are no easy answers.

Half a century later, when the very techniques he helped pioneer have been co-opted or (to used Debord's term) 'recuperated' by the corporate media whose power they aimed to subvert, Burroughs's fervent conviction that a certain form of writing can liberate us from the Control Machine seems

misplaced, even naive. And aspiring to some kind of self-sufficient 'authenticity', individual 'self-mastery', or 'sovereignty' would be downright reactionary, at best a return to humanism, at worst a buy-in to a set of hard-right memes (the type beloved, by example, of the quasi-fascist groups who hijacked British politics exactly one year ago, barking about 'taking back control'). So let me make a vague, half thought-through proposition: that perhaps a sober, maybe even somber, early twenty-first century counter-scriptural practice should take the form of *network mapping*—at least strategically and provisionally, for now. We're not at the last chapter—more like in mid-book. As Freud understood, being more and less than human renders us uneasy, makes us restless—and this restlessness could perhaps be considered at the least an asymptote or chord or baseline of resistance. We're hovering in limbo, neither gods nor puppets, fallen both ways. To affirm that double-fallenness, to unpack the network of its implications, and to place this in the public and symbolic realm, even—especially—if it lies askew within this, is perhaps the artist's most important role, as vital now as ever.

In the light of this—once again, nebulous assertion—perhaps we might, to end, revisit what, as far as I can tell, is the shortest literary manifesto ever issued: that of James Joyce's Stephen Dedalus (named after the Greek father of prosthesis, whose appendages led to the fall of Icarus). Having, in *Ulysses*, tracked his way round Dublin, then lost his route in the ghost-haunted labyrinths of Nighttown, he raises his own mini-prosthesis, the cane or ashplant that he walks with even though he's got no limp, smashes a chandelier and shouts out two words: *Non Serviam!* It's a quote from Milton, from the fallen Satan in *Paradise Lost*: 'I will not serve'—or, in effect, 'I will not serve *you*, God.' Stephen, like Joyce, when a child served as an altar-boy, and planned to eventually 'take orders' (that is, to become ordained), before abandoning the priesthood for the pen. But perhaps, in 2017, we might hear a new cadence in his words, best rendered through a slightly modified translation: I will not be your server. Or, at least, I will not simply be your server. Like all proxies, I will at once be more, and less. Or, maybe like a ghost: I'll haunt, trouble the network, voicing both its excess and its lack.



Oleksiy Radynski

What's 'Cyber' in Cyber War?

Three Cases from the Ukrainian-Russian Conflict

(1)

On December 23, 2015, a number of power plants in Western Ukraine underwent a sophisticated cyber attack that resulted in a major power blackout in the region. This hack is reportedly the first known case of a power blackout caused by a cyber attack on physical infrastructure in history. Vast evidence suggests that these hackers, likely linked to the Russian military, perpetrated this attack although, as is often the case with cyber conflicts, it's seemingly impossible to confirm the connection.[1]

A little more than a month before the power plant hack, on November 20, 2015, the high-voltage power lines that supply Crimean peninsula with electricity from the territory of Ukraine were blown up. As a result, Crimea, which was annexed to Russia in March 2014, was blacked out completely, and a long-lasting power supply crisis started on the peninsula. Even though it is impossible to establish a cause-and-effect connection between the two events, they seem to be structurally symmetrical. Taken together, they seem to represent a shift in a war that is fought east of Europe—and beyond.

The explosion that destroyed power lines to Crimea was committed not by the Ukrainian army, but by a militant group comprised of the members of Ukrainian volunteer battalions and exiled Crimean Tatars, engaged in the blockade of the Crimean Peninsula. This is just one of many signs of the Ukrainian state loosing its grip on its monopoly on violence. Participants in the blockade claimed that they were merely enacting what the state itself should have done in relation to the government that occupied a part of its territory—for instance, stop supplying Russia's troops stationed in Crimea

1 Boulet, Gertjan. "Cyber Operations by Private Actors in the Ukraine-Russia Conflict: From Cyber War to Cyber Security". Asil.org. https://www.asil.org/insights/volume/19/issue/1/cyber-operations-private-actors-ukraine-russia-conflict-cyber-war-cyber. Accessed 30 January, 2016.

with electricity from mainland Ukraine. In effect, some representatives of Ukrainian government supported the blockade, but the power lines were eventually restored.

The blackout in Crimea and the power plant hack in West Ukraine are both episodes of warfare that take place in a gray, undefined zone of power and conflict, in legal limbo where the military cedes its assignments and capabilities to proxies—both online and offline. The warring parties outsource their fight into both of these realms simultaneously.

(2)

In September 2014, a blog post that referred to Ukrainian troops fighting the battle for Donetsk International Airport as 'cyborgs' became wildly popular both in the blogosphere and in the mainstream media. This blog post claimed to reproduce the conversation of pro-Russian fighters besieging Ukrainian troops in the airport buildings, who were stating that the Ukrainian army had deployed cyborgs, rather then humans, in this battle. Otherwise, they just wouldn't be able to remain inside the debris of a former airport and resist every attempt by the pro-Russian proxies to take it over.

The post, disseminated by the pro-government website Obozrevatel,[2] was actually a hoax meant to boost the declining morale of Ukrainian army and ordinary citizens. However, the term 'cyborg', in its new sense, was soon taken on by Ukrainian president Petro Poroshenko, and it soon became an almost unavoidable designation to anyone who participated in the defense of Donetsk Airport.

Despite their proud title, the so-called cyborgs of the Donetsk Airport were in reality very far from high-tech imaginary associated with contemporary warfare. The troops besieged in the airport reportedly only possessed small arms while being confronted with heavy artillery. They were called 'the cyborgs' precisely because they could survive in this battle despite their obvious lack of military technology.[3]

2 Sergeyev, Sergey. "The Cyborgs Defend the Donetsk Airport!" Obozrevatel.com. http://obozrevatel.com/blogs/60943-donetskij-aeroport-zaschischayut-kiborgi.htm. Accessed 30 January, 2016.

(3)

During the Russian invasion of Crimea and its covert intervention in East Ukraine, a number of proxy groups emerged online—as a supplement to innumerable proxy actors that were offline infiltrating the protest movement of East Ukraine. The most visible of these online groups was operating under the name 'Cyber-Berkut', whose name is derived from the title of Berkut, the Ukrainian riot police which gained notoriety during the Maidan uprising in Kyiv due to its extreme brutality. The emergence of 'Cyber-Berkut' collective was a way to pay tribute to this counter-revolutionary force. It was based on the image of a loyal and committed counter-insurgency police officer—who is operating in a grey zone between law and crime—half legal, half proxy.

During the Russian intervention in Ukraine, 'Cyber-Berkut' immediately became instrumental in soaring the anticipation of a full-scale cyber war against Ukraine. The first major cyber attack on Ukraine took place during its presidential election in late May 2014. The website of Central Election Commission was hacked and fake results of the elections were posted, claiming the election was won by a far-right candidate Dmytro Yarosh (who in reality gathered around 1% of the vote). The hack was fixed, but not before the images of fake election results made their way to the Russian television. However, nothing like a much-expected large-scale cyber conflict took place in the following months.[4]

Both Ukraine and Russia are famous for their thriving hacker communities, engaged into the circles of international cyber crime. In Ukraine, some of them made their way into state politics, like Dmitry Golubov, who was once considered

4 This is made explicitly clear by most of the contributors to this publication: Geers, Kenneth (Ed.), 2015. *Cyber War in Perspective: Russian Aggression against Ukraine*, Tallinn Publications NATO CCD COE

3 Nick Dyer-Witheford describes "the coexistence in contemporary capitalism of extraordinary high technologies and workers who live and die in brutal conditions often imagined to belong in some antediluvian past. This coexistence is also a connection. Mines and artificial technologies seem to belong to different worlds, but they are strongly linked." The story of the cyborgs of Donetsk airport could shade these observations. *Cyber-Proletariat: Global Labour in the Digital Vortex*, 2015. London: Pluto Press, p. 2.

a top cyber crime boss by U.S. law enforcement, but now serves as a Ukrainian MP and a leader of the Ukrainian Internet Party. This party is famous for nominating Darth Vader as its candidate in the presidential elections. In one of the party's most recent political hacks, a statue of Lenin in Odessa region was converted into a monument to Darth Vader, which also serves as a wi-fi hotspot.[5]

The lack of an all-out cyber war between Ukraine and Russia is symmetrical to the lack of an all-out civil war that was projected and envisioned east of Ukraine in the months leading to the Russian armed intervention in 2014. The scope of individuals, groups, and communities that were mobilized to participate in the Russian-backed uprising in spring 2014 was not significant enough to sustain a prolonged rebellion, which led to the covert military intervention to prevent a total collapse of pro-Russian movement. In a similar way, the vast numbers of those engaged in illegal cyber activity were reluctant to join either side of the conflict, thus diminishing the danger of its full-scale fallout into the cyberspace. An attempt to outsource cyber war to private proxy actors has, for now, largely failed—which cannot be said of the attempts to outsource the actual war to proxy actors in the offline realm.

5 Bakare, Lanre. "The force awakens (in Ukraine): Darth Vader statue replaces Lenin monument" http://www.theguardian.com/film/2015/oct/23/darth-vader-statue-erected-ukraine. Accessed 30 January, 2016.

Jonathan Jung

How I Became a Seaweed Monster

THERE IS NO GREEN IN THIS FLAG

Through an enormous glass front facing the geographical East, you can see Berlin's Regierungsviertel: the Bundesrat, the Bundestag, and the Kanzleramt, nicknamed 'washing machine'. Today is a cloudy day. A foggy day. Although, what I clearly can see are the glaring colors of wet German flags countering the grey scale. And these German flags are not those penetrating the four donjons of the nation's parliament–no, these are flags flown by people, by actual people, by people gathering on the square, adjacent to the station. There are other flags on sticks trying to poke holes in the air, but this three-colored German flag is what I most definitely remember. It resisted rain and gusts; the black became deep black and the yellow was soaked, slapping around like a wet dog's tail.

THERE IS NO GREEN IN THIS FLAG

And that flag has been disturbing us. We are afraid of it. Physically. It makes me feel weak and insecure; this time, I am the dog seeking shelter behind its owner's legs. Since I haven't myself experienced any physical encounter with this flag, which could have led to this kind of trauma, I have to keep guessing why I am standing in close proximity to police units, hiding like that dog; all the while, I secretly trail people with flags exiting the station to join the assembly, secured by police men who join the assembly. And why does it feel like with every flag being hissed on the outside, something on my inside falls apart? It is close to 4pm, and I am standing on the rooftop of HKW trying to be invisible.

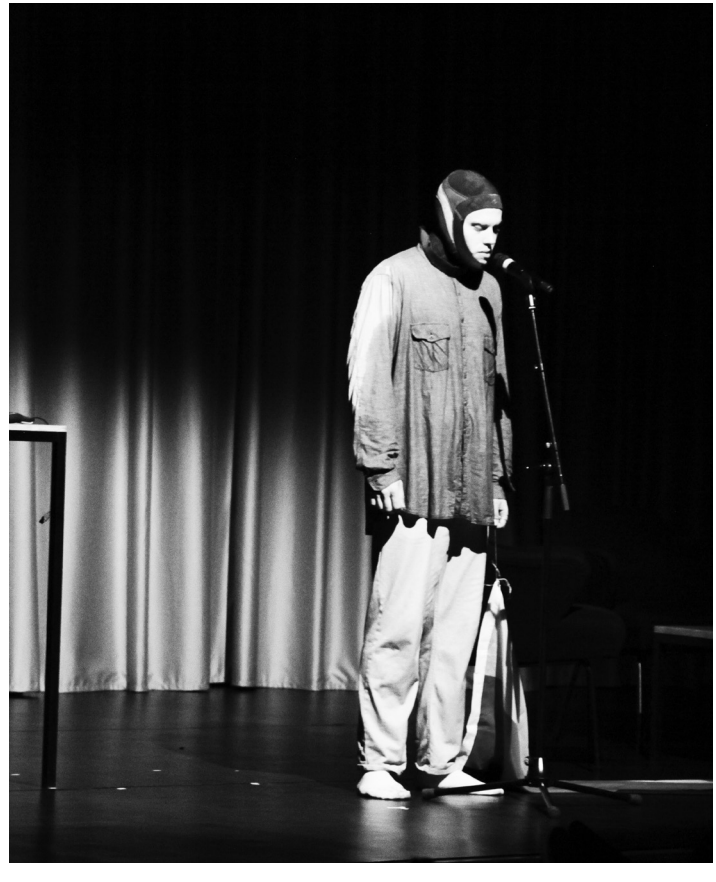
HKW. How can WE
HKW. High quality wining
HKW. Hey what the fuck is going on out there

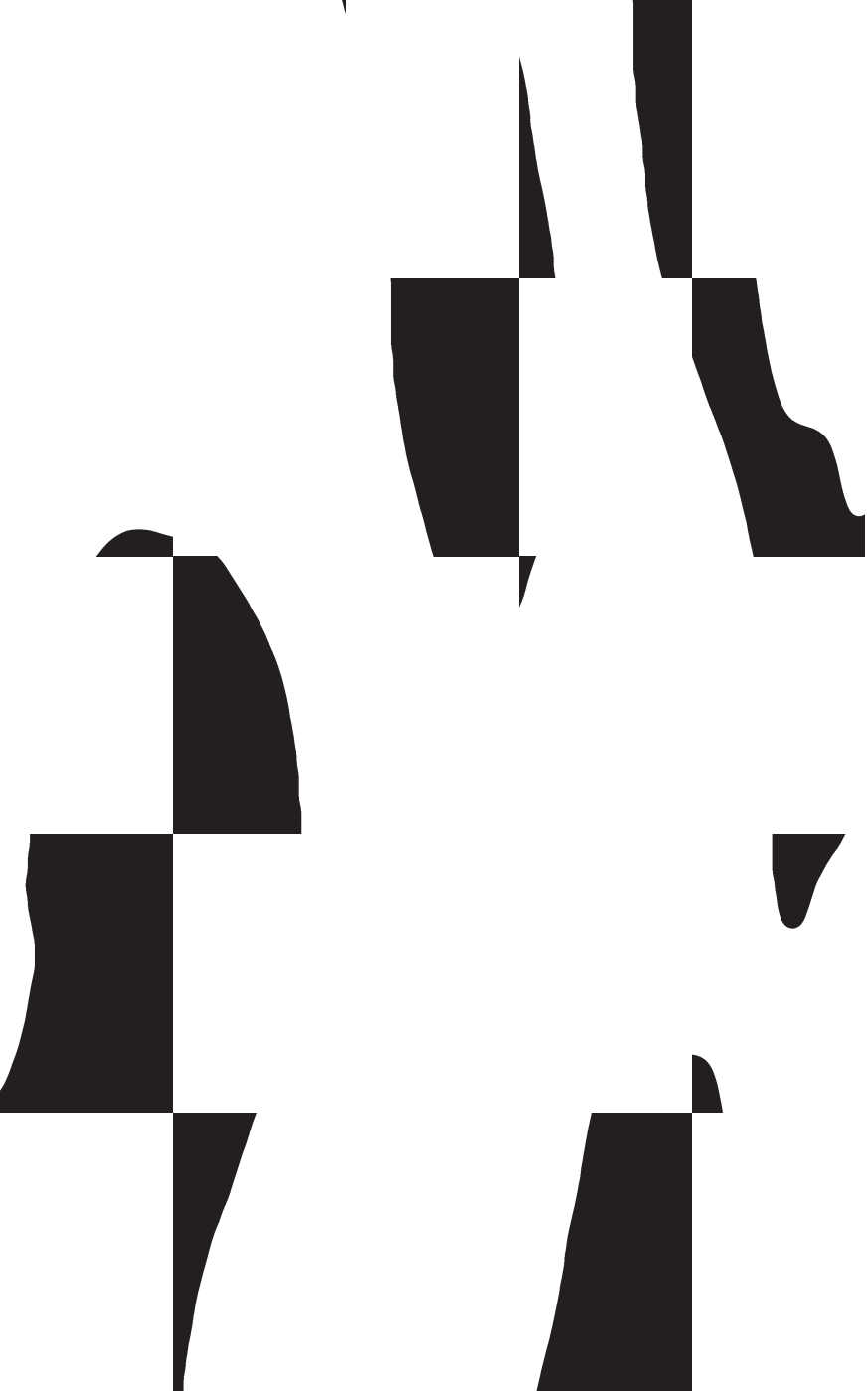
Shut the door behind me, I'll go for a swim
They say that they can't afford any risk
Because they have a home
And in it there is light,
I don't know exactly which one of us to trust
They wait for their dinner at home
The rain's waiting for me outside
Close the door behind me,
I'm leaving now
If you'll one day be bored with your beautiful life
You can find a place close to us
Everyone can have some rain
Look at the clock, at the picture on the wall
Look out the window at the street
You'll hear us laugh once again... [1]

I will leave you the black because it's nice.
I will leave you the red because that's how we look from the inside.
I take the gold away and bring it deep inside the river where it dissolves in salty acid water.

Flags lose their mystery and they become sticky as they gain weight through humidity and lull. Lull! Lull!

1 In memory of Виктор Робертович Цой (Wiktor Robertowitsch Zoi) and his Band Кино (Kino). Parts of this text are a reference to the song Закрой за мной дверь, я ухожу (Close the door behind me, I am leaving now), released in 1988.





Mikk Madisson

(Subject)hood Prank

"What is up guys, DennisCeeTv here! I'm here with the one and only OckTv and today we are going around east New York asking people if they wanna buy a gun. But not a real gun—water guns. See if we get killed!" says 25-year-old Dennis Chuyeskov, aka Dennis Cee, in front of a New York police department building.

To Dennis Cee's right, standing beside him, is Etayyim 'Et' Etayyim and on the left his brother, Mohammed 'Moe' Etayyim, intensely pointing his finger at the camera. Dennis Cee approaches five young black men sitting and standing in the shade around a green table and bench next to a running track. One of them is bouncing a basketball. Two water guns (one neon yellow, the other neon orange) bulge out of the back pockets of Dennis's black Bermudas.

"Uhm, excuse me, guys, uh yo, do you wanna buy a gun real quick?"

"What?" replies the black youth sitting in the middle while his friend beside him steadily continues to dribble his basketball.

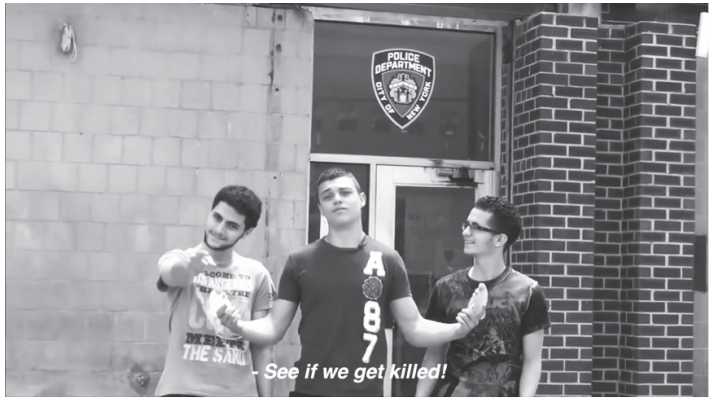
"A strap yo..." says Dennis, reaching back to fetch the yellow water gun, his fingers trembling.

"What?" repeats the one in the middle as he stands up. "A strap", "A WATER GUN! Let me show you!!!"

At this point Dennis is punched in the face, his head swerving towards the camera's eyes pinched shut; the skin of his face, forced to eject by the inertia of the fist hitting his left cheek, reaches a threshold of a few centimeters and slaps back against his skull. The same moment repeats in slow-mo.

"A WATER GUN, IT'S A WATER GUN!" screams Dennis desperately, retreating as he does.

'Hood Pranks' is a candid-camera based YouTube sensation in the US, during which young white men enter a predominantly black, low-income neighborhood to provoke people into violent behavior. This behavior is then captured on camera and published on YouTube. To initiate contact, they misleadingly ask if people want to buy a 'gun' when it is actually a water gun or a 'strap' that is actually a yoga strap.



This often ends with the provokers getting beaten up, or even held at gunpoint by the provoked, prompting the provokers to disclose that it had only been a prank. Nevertheless, 'Hood Pranks' has become a form of viral content with videos having a million views or more. Enabling targeted ads on the channel monetizes this content. The millions of views may also win the publishers of the videos YouTube sponsorships.

'Hood Pranks' can be seen as an example of the YouTube generation (Generation Y) profiting from colonialism, shackle slavery, the racialization of blacks and the profit from individuals with a false sense of their interiority fabricated by a planted subjecthood. They embody an extraction of historical value mimicking the predictive algorithms of advanced capitalism in a post-colonial world where colonization means the colonizing of the intangible or the inner. Through the altercations becoming viral content, the provoker as well as the provoked, participate in the discourse of the super-panopticon, where identities come into existence and are sustained without the awareness (outside the immediacy of consciousness) of the individuals themselves.[1]

1 "The process of subject formation in the discourse of databases operates very differently from the panopticon, one who was conscious of his or her own self-determination. The process of subject constitution was one of 'subjectification,' of producing individuals with a (false) sense of their own interiority. With the super- panopticon, on the contrary, subject constitution takes an opposing course of 'objectification,' of producing individuals with dispersed identities, identities of which the individuals might not even be aware. The scandal, perhaps, of the super-panopticon is its flagrant violation of the great principle modern individual, of its centered, 'subjectified' interiority." Poster, Mark, 1996. "Databases as discourse, or electronic interpellations". In: *Computers, Surveillance, and Privacy*. Ed. David Lyon and Elia Zureik. Minneapolis: University of Minnesota Press, p. 93.

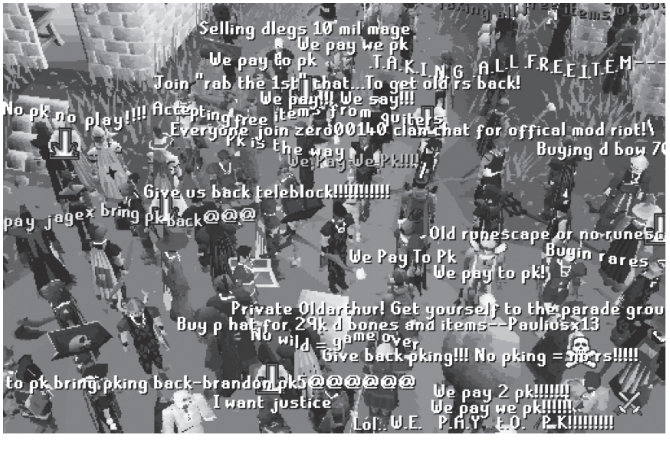
The provokers abuse symbolic behavior and language to initiate a process of interpellation: the language and behavior of the provokers order the provoked to assume their presupposed roles as racialized criminal subjects of a low-income neighborhood. Once you submit to provocation, you are no longer in control. Also, provocation itself requires knowledge about the person provoked.

Cybernetics is described as the steering or controlling of natural forces using information and communication through feedback. Its aim is explicit control over nature by creating homeostasis, or an equilibrium, i.e that a property of a system would remain close to a constant. It is about self-regulation, at which computers excel and humans don't. Cybernetic-ising a subject is an extension of modern western rational thought. A cybernetic organism is anything natural that has been mastered by culture. Pets are a good example, who, as Rosi Braidotti explains, qualify as cyborgs, since they are compounds of a nature-culture continuum.[2] In eastern philosophies, language has been used to verbally plant negative feedback loops into subjects as a way of governing the outputs of their inner-self. This exemplifies how subjects might be configured via language. Verbally executing a negative feedback loop (such as a mantra) on a subject is similar to programming software or code and installing it on a computer. That is, a piece of software or code once executed on a computer changes the function of the machine. The altered

2 "... we need to rethink dogs, cats, and other sofa-based companions today as cutting across species partitions not only affectively, but also organically, so to speak. As nature–cultural compounds, these animals qualify as cyborgs, that is to say as creatures of mixity or vectors of posthuman relationality." Braidotti, Rosi, 2013. *The Posthuman*. Cambridge: Polity Press, p. 73.

internal (intangible) properties would change the material properties of the object. The input utilized by 'Hood Pranks', in order to receive the desired output, is, of course, the 'gun'.

In her book *Programmed Visions: Software and Memory*, Wendy Hui Kyong Chun eloquently points out how the monetizing of the internal or the intangible historically coincides with the patenting of software and code, which until the early nineties was legally considered a mathematical truth or a law of nature[3]. While referring to Margaret Jane Radin, she asserts that programmability and the information age compromised the notion of intellectual property, which was based on a series of Enlightenment ideas: of autonomous subjects and heteronomous objects; of intellect being internal—i.e. that information could not be removed from the self—and property, external.[4] The Information Age had broken down the distinction between the tangible and intangible (the controversies surrounding the patentability of DNA are a manifestation of this process). The initial dreams of eugenics



3 "Programmability is thus not only crucial to understanding the operation of language but also to how language comes more and more to stand in for—becomes the essence or generator of—what is visible."
Chun, Wendy Hui Kyong, 2011. *Programmed Visions: Software and Memory*. Cambridge: MIT Press, p. 113.

4 Ibid., pp. 5,6.

were quickly materializing. In her analysis, informatics, and genetics are two complementary strands of a double helix: "breedability became the proof of programmability",[5] as DNA is a piece of code that drives protein expression. Interestingly, these two strands—informatics and genetics—and their dreams are currently entangling in the Synthetic Biology research (with genome editing tools such as CRISPR*) that succeeded in engineering biological systems, by programming (instructing) cells.[6]

When I was in middle school we used to play an online role-playing game called Runescape. An important part of the game was mining for precious metal ores, which were then used for creating weapons and armor. Such items could also be traded with other players, and this usually happened at a place called Varrock Square. But mining was time-consuming, as each hit with the mattock was equal to a click with the mouse. Therefore, some players developed software called Auto-Miners that would have the character of the player mine automatically by virtually simulating mouse clicks. Auto-Miners were freely shared at Varrock Square—players would shout out web links to pages where they could be downloaded. This situation was exploited by scammers: they created low-level characters downloaded and installed and the key logger would be covertly installed as well. The player would sometimes get an error notification saying that the Auto-Miner couldn't be installed. By using the keylogger, the scammer would receive a player's (activity) log via email with the user account passwords for the game. Using these passwords, the scammer would log into the scammed user account and empty the character's inventory of valuable items by dropping them somewhere in the game and picking them up with his own character. This happened at a time when, at least in Estonia, logging into someone else's private online account was yet to be considered identity theft.

A log is an external manifestation of the history of a subject's internal states. It contains personal data, which a scammer can profit from. Similarly, databases (e.g. Google,

5 Ibid., p. 126.

6 For a good example see: https://www.youtube.com /watch?v=2pp17E4E-O8

YouTube) commercially make use of the online traces their users leave behind. Personal data enables an algorithm to profile a person for targeted advertising. 'Hood Pranksters' follow the same logic of discourse when trying to sell a 'gun' to the black people in the videos.

The 'gun' offered for sale is like the Auto-Miner marketed on Varrock Square. They are both utilized to hijack the target's character in a way that benefits the provoker or 'key logger' or the actual weapon in this situation—the false sense of interiority that has been weaponized against oneself. The words 'gun' or 'strap' are user account passwords that have been given by the colonists to the colonized subjects to protect the internal states and the historical inventory of their planted subjecthood. Not only is the word 'gun' a password, it is also the command. It is code at its most intrinsic, as it does what it says: it opens the front door of a system so that it's internal states can be manipulated, a system that the colonist already well and truly knows. Franz Fanon writes on the paradox of 'knowing':

> The colonist and the colonized are old acquaintances. And consequently, colonist is right when he says he 'knows' them. It is the colonist who fabricated and continues to fabricate the colonized subject. The colonist derives his validity, i.e., his wealth, from the colonial system.[7]

Race is an interface of the colonial system. It is an interactive interface that provides mastery over the racialized subject. It creates users that can use direct manipulation in order to control the system. From a cybernetic perspective, its operational logic is similar to a phenomenon called hysteresis, which is:

> the time-based dependence of a system's output on present and past inputs. The dependence arises because the history affects the value of an internal state. To predict its future outputs, either its internal state or its history must be known.[8]

7 Fanon, Frantz, 1963. *The Wretched of the Earth*. New York: Grove Press.

8 https://en.wikipedia.org/wiki/Hysteresis

The provoked black kids in the video are involuntarily used as extras in an act of extracting someone's historical value. One might even go so far as to say that they are being treated like items in an antique shop that can be resold, not for their material properties, but for the intangible properties that are connected with history. History allows these intangible properties to be used for producing material effects. In the case of 'Hood Pranks', historical value is extracted via provocation of violent behavior: the extras are put to work in order to produce viral images of violence for a scarce attention economy.

In an interview on HOT97, DennisCeeTv stated that out of the hundreds of pranking scenes they film, only a few are worth publishing online, since in most cases the involuntary extras have failed to comply with their provocations[9]. Only, the few examples where the situation explodes make it online, in hopes of being able to produce millions of views. They produce these videos because racist biases are a relevant topic and filter attention. A demand exists for such imagery, and they provide the supply. The seemingly brave plunge into the hood to get beaten up enables them to monetize on the punches and kicks by converting them into millions of clicks. They produce users for their channel in order to be eligible for commercial sponsorships in the same way YouTube as an interface and database is interpellating them as users. 'Hood Pranksters' are trying to get commercial sponsorships for their channel. Such sponsorships require displaying predictive targeted ads to the users of their channel based on their online activity logs. Their behavior is aligned with the prediction algorithms.

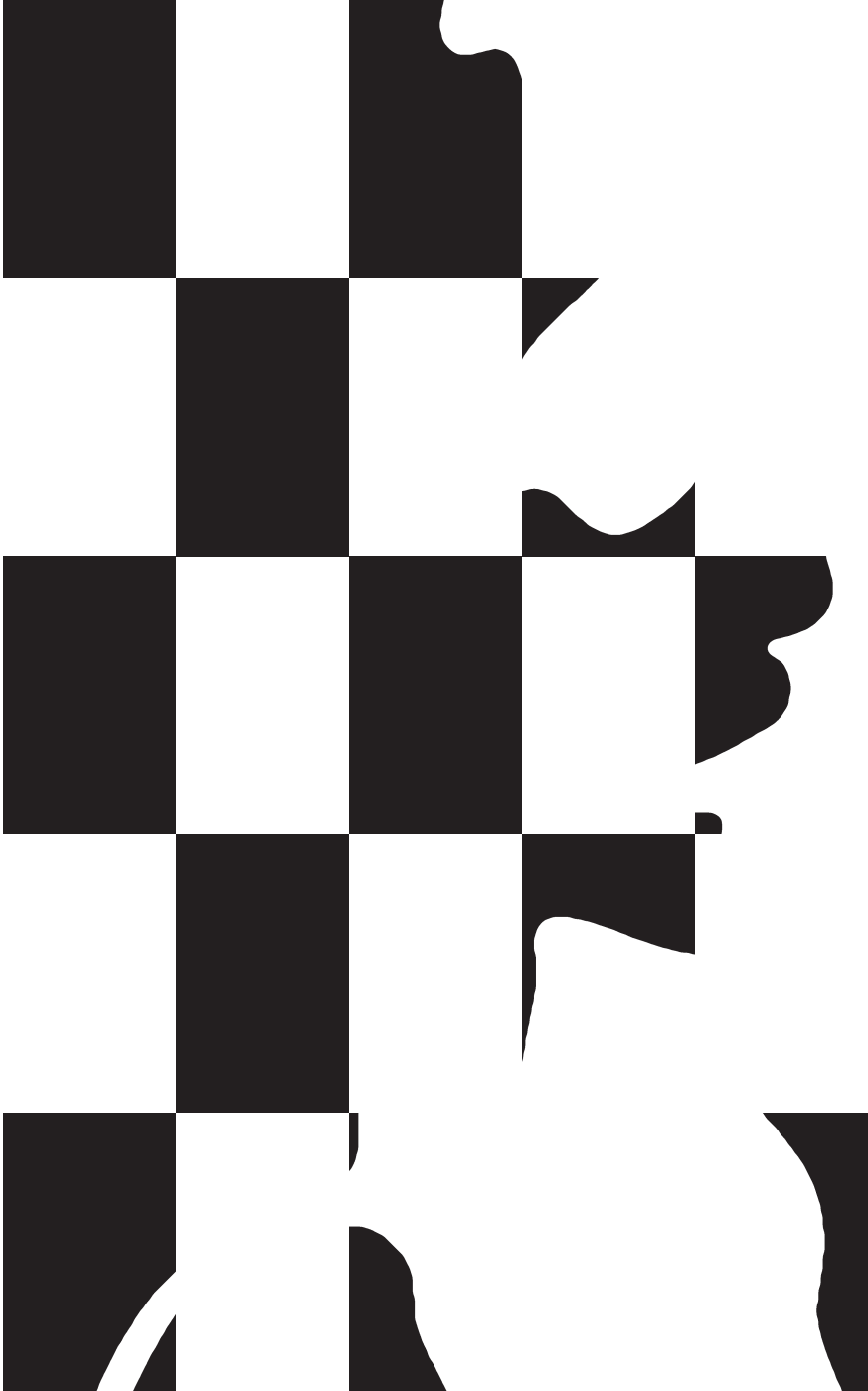
'Hood Pranks' target the black kids with their 'guns' because a prevalent prejudice associates high rates of criminal activity with predominantly black, low-income neighborhoods and assumes that there is a demand for racialized criminal subjecthood; the pranksters themselves (while presuming to be autonomous subjects empowered by an interface) are unaware of their own use as proxies for the database discourse of YouTube that, in turn, interpellates them as entrepreneurs. They are the pets, the bots, the cyborgs, the

9 https://www.youtube.com/watch?v=E9EC3BrXmc4 Ibid., p. 67.

zombies, the low-level characters used by Runescape scammers—the proxies of advanced capitalism running wild. They are the nature-culture amalgams in a world where the conflation of nature and culture is a natural state of neo-liberalism.

"You are not, however, aware of software's constant constriction and interpellation (also known as its 'user-friendliness') unless you find yourself frustrated with its defaults (which are remarkably referred to as your preferences*)".[10]

*Read: A gun.



10 Ibid., p. 67.

Miloš Trakilović

A Shot in the Arm

On November 19, 1971 Chris Burden stood against the wall of a Californian art space, intentionally offering himself as a target to be shot. As part of his, by now, iconic performance piece titled *Shoot*, Burden's friend stood at about 5 meters distance aiming a 22 rifle at his left arm. One bullet was fired. Initially, that bullet was only meant to nick Burden's arm; Instead, it pierced right through it, just missing the bone and causing a blood-spattering wound.

Now, let us agree to play fair from the start and acknowledge the fact that bullets easily give way to canons. One can straightforwardly argue that what Burden did here was a mere macho act of overweening ambition serving to cement his career. It was namely this extremely radical but simple undertaking that would catapult Burden from a recently graduated sculptor into serious art stardom. But my point isn't about Chris here; it is about the burden that galvanized such an action. Regardless, whether judged by the scope of 'the canon', or seen through the crosshair of a gun, the reason why I believe it is worth picking up on, why I feel this action is exemplary, is because in many ways it was still a gamble, a game with somewhat of an unknown outcome. Although at that very moment Burden had thought of himself as a sculpture, this wasn't yet another lame artwork, this was serious. The stakes were high.

Shoot seemed more like a scene from a movie, but instead it was real.

To be real is to be in sync and one with life, to supersede representation. This is a struggle traditionally associated with art at the wake of the historical avant-garde at the turn of the 20th century. By revoking artistic autonomy inscribed in the separation of art from life, the avant-gardes heralded a revolutionary potential that was to eliminate the institutional role of artistic autonomy and reclaim its status within life. In their belief, art had to be freed of its role as mere representation and find a more democratic form for it to be commonly practiced by all.

In the very spirit of the avant-garde, nothing seemed more effective in minimizing the gap between art and life than the very nature of performance or body art: its quintessential art form. This was supposed to be autonomy to the bone, now in the artist's own hands, unique and unrepeatable. The body is seen as the last threshold in attempting to break from representation. It hinges on bare life and definite demise, on vigorous victory and full frontal failure.

The human body is a complex system, and so is the economy it creates—the technology it connects to and the world it inhabits. In this world, representation remains something virtually ineludible. As long as representation has to do with our physical senses, our ability to perceive, experience, see, create, inform, and be part of this world, it will stay inexorably linked to our existence—it is that which forms and shapes our reality and gives a body to politics.

One could consider these objectives to be at the heart of Burden's action. *Shoot* can be read as a direct attack on the rules and regulations of representation, a desperate attempt to break from reality.

One might still wonder why such a seemingly absurd act of deliberate subjection to the pull of a trigger would even be considered art at all?

Burden claimed his piece never aimed at putting the body in full jeopardy by actually piercing through the flesh, but seeing as it did, it exposed both the vulnerability and extraordinary resilience of the human physique. Rather than the frame of art revealing the body, in this moment, it was the bullet

penetrating the body that revealed the frame of art, demonstrating that much like an affect in motion, art has the ability to trigger movement as a vital response.

But my aim here, however, is not to prolong torture with the dreadful task of having to tell art from non-art, so let's just make a jump-start and simply agree that it's art. The other more intriguing question would be: according to what measures was it real?

A 'real' is an original, not a fake or a copy. As humans, we learn to interpret and relate to our surrounding through representation. Representation is what promises a form to substance, and form today is information embodied largely through images. As we know, images do not only resemble reality—they are active agents that shape our very understanding of it, but if reality is largely understood and processed through vision, then digitization has made it impossible to differentiate between original and fake. With the proliferation of communication technologies, indistinguishable copies are made effortlessly in a blink of an eye, not even the push of a button. The chase for high definition and resolution makes it also increasingly difficult for our eyes to trust what is real. Tiziana Terranova described the digital turnover as a shift from representation to information.[1] This is not to say that forms of representation have disappeared; at the end of the day, images have become more mobile and ubiquitous than ever. Rather, their locus shifted from a macro-state of representation to the numerical and molecular aspects carried in their informational flows, making them computable, profitable, and imperceptible. Such algorithmic shifts have profound consequences in our effort to actually keep a grip on reality, as they create irrefutable structural imbalances between what used to count as the physical world and now its digital counterpart. As we continuously feed into algorithms through clicks, tracks, traces, and likes, they become more powerful in actively reshaping what we understand as representation. This world of code is largely cancelled from our direct material environment, and as it comes to be more

1 Terranova, Tiziana, 2004. *Network Culture – Politics for the Information Age*. London: Pluto Press, p. 35.

centralized and opaque, it becomes persistently challenging to navigate and make sense of our surroundings. We are left in the dark with unhinged forms of representation that become evermore unaccountable, intractable, nonsensical, distracting, dubious, dangerous, ugly, and invisible.

Be it a political kind of representation, a cultural representation, or a work of art, the struggle of representation to effectively represent, reflect, inspire, and uphold reality is very much felt today. We find ourselves in states of constant digital distractions under permanent pressures to perform a reality of everyday life that is characterized by economic disproportions, asymmetrical conflicts, raging inequalities, fascism on the rise, bigots as leaders, bastards as presidents, and bullshit as contemporary art. To cut to the chase: there is a deep and ongoing crisis manifesting in our reality, and we cannot seem to rely on representation to carry us out of it. How to move from representation into live action?[2]

To animate is to move. Today markets move freely, while bodies remain grounded. In metabolic terms, the lack of movement is a fatal condition and is therefore a vital sign of life. Nowadays, circulation and mobility are either a trend or privilege enjoyed mostly by white bodies, images, and free market economies. Increasingly, the perplexing logics of financial markets augment reality and govern movement taking over a great deal of previous political processes. Giving oneself deliberately away as a target is no longer absurd but has become normal. The state of proliferating digital technologies sees the body as a clear target and static bodies make for easy targets. Bodies are seized by the ubiquity of screens while the processual drive of our digital economy, fueled by automation, accumulates profits through cognitive processes rather than through the force of physical labor. Centralized economies are, thus, dependent on our fixed position for vision, which inevitably results in us being captured by the movement of our images, rather than the other way around. We have all, to a certain extent, become players in an algorithmically governed attention economy where the demand for performance is pertinent, yet somehow struggles to fully

2 Thank you Helena Hunter for this beautiful formulation.

animate the body. From the perspective of big data, it might very well be irrelevant whether one is even dead or alive as long as one keeps on trending. In this respect, it seems licit to question if capitalism today even needs the animated, living, and laboring body as such.

Real life is said to be nothing like a game. We are taught life is no game because, well you know, #YOLO. A game is seen as enjoyment and is therefore distinct from work, which is usually carried out for remuneration. Today however, such distinctions between everyday life, work, and play are becoming increasingly equivocal. The transfer of productivity from human labor to machines and code subsumes the body to pervasive processes of datafication, giving rise to a new economy of capture in which self-optimization and performance are of principal value. The radical aspirations of pioneering performance artist are therefore no longer avant-garde—they have rather become absorbed and appropriated as the norm. The media theorist Alexander Galloway goes as far to say we are now in a period of "ludic capitalism", a game economy, whose online interfaces extract value from our labor of play.[3]

The phenomenon of the quantified self and the gamification of life through software, apps and dashboards seem to support such a claim. In today's digital economy, perception is organized by the ubiquity of the game interface and screens where value is extracted through user-ship and various protocols of play. Reality itself is becoming more and more like a scene from a video game, only we don't understand what we are actually fighting here. We seem to be completely clueless where to aim or how to even prepare for a potential combat. Life might be informed by games, but the burden of reality still somehow feels painfully real.

On the other hand, reality is always many and never just one. Perhaps there's been no one as susceptible to this throughout history as the artist, so let us return to our example for some clues.

Although Burden's action took place 45 years ago, there is something disturbing but timelessly compelling behind the

3 Galloway, Alexander R., 2012. *The Interface Effect.* Cambridge: Polity, pp. 28-9.

simplicity of such a wicked action. Burden's performance was a materialization of widespread forms of violence mediated by TV, but it contained many elements of a conventional shooter game as well. Most commonly, the purpose of shooter games is to *shoot* opponents and proceed through missions without the player character being killed or dying. Burden's performance reversed such logics by intentionally redirecting the target onto himself. What *Shoot* did was to challenge the very understanding of the body as the ultimate real. Instead, it targeted the body as something replaceable, repeatable, duplicable—as a kind of stand in. In doing so, it imbued the real with a dimension of play through a gamble with mortality. Maybe it never managed to break from it, but it did manage to confuse reality by confronting it with its own violence. Perhaps, what it ultimately demonstrated is that in times of need, even the most unreasonable acts of play can be a useful tool of deception and transgression.

In today's world characterized by the logics of capture and play, this is a thought worth holding onto.

The growing codification of life has brought about vast variations of vision today, but what we see is not always what we get. The informational flows that constitute today's data-driven society are forming all kinds of new complex and opaque informational landscapes that prefer movement beyond just the interface or what we get to see on screen. The media theorist Espen Aarseth calls these types of underlying digital topologies 'cybertexts'. He says to navigate these texts requires a mode of engagement that is far more complex than the sender-receiver model. As he continues to highlight:

> the cybertext reader is a player, a gambler, the cybertext is a game-world or world-game; it is possible to explore, get lost, and discover secret paths in these texts, not metaphorically but through the topical structure of their textual machinery.[4]

One would assume that through such forms of engagement,

4 Mitchell, Robert and Thurtle, Phillip, 2004. *Embodying Information: Data Made Flesh.* New York: Routledge. p. 10.

we could reach an entire reconfiguration of our understanding of time and space, throwing ballistics into a serious curve.

A game-world of 'life on respawn', not a second life.

For all we know, ours could be a world in which revolvers are rendered as nothing but spray-painted bananas while shotguns get stripped to the fierceness of a 50 cent water gun from your local thrift store. A world-game in which economies tower as they collapse while money vanquishes as confetti in thin air. A world with no weighty Blockchains and only one dark Cloud, but one where hierarchies horizontalize to the pizzazz of Gloria Estefan as the blissful beats of the Conga form myriads of human-chains on cloud nine. Revert all targets! Turn the beat around! The rhythm is gonna get ya!

I'll admit, this sounds exaggerated and far from reach, but it really spurs one's imagination to run wild. Instead, what we have is PokémonGo and Face Swap. Bullets still kill, bodies that are in jeopardy are forced to stay put while others are threatened with deportation, markets enjoy unbridled movement and space and time haven't moved much beyond FaceTime.

The type of game that we are playing today is neither entirely virtual nor material. It's not so much of a swap as a strange superimposition of virtuality onto a materiality that is still heavily laced with traces of the human. Just notice how stampedes of players animated by their screens move in search for the rarest of collectible pocket monsters, only to find themselves in complete deadlock when arriving at the abounding minefields of Bosnia, the radioactive landscapes of Fukushima or Germany's many Holocaust memorials.[5] The only action that we seem to be getting here routes us back to the dreary and horrids of our own past.

5 Gibbs, Samuel. "Pokémon Go players urged not to venture into Fukushima disaster zone". theguardian.com. https://www.theguardian.com/technology/2016/jul/26/pokemon-go-players-fukushima-disaster-zone-nuclear Accessed 1 October, 2016, France-Presse, Agnes., "Pokémon Go players in Bosnia warned to steer clear of landmines". https://www.theguardian.com/technology/2016/jul/20/pokemon-go-players-in-bosnia-warned-to-steer-clear-of-landmines. Accessed 1 October, 2016.

The real virtual of today however, is money and markets. Invisible, inconspicuous, insidious yet real like climate change—the financial markets are your AI. They play; we participate. They govern; we perform. They pose demands; we strike all the deals. In such nauseating states of permanent performance, how to play things differently?

The gamification of life is not only evident on screen, but reaches into various aspects of life. Consider for example the way economies are replaced by monopolies. Look at how democracies today are being reduced to a game of strategic chess play, how incompetent leaders bluff their way to the top. We are living in societies and economies defined by a global competitive drive for victory and profit where reason, logics, and playing by the rules hardly apply. Nothing alludes more to this reality than some of the most unparalleled and unreal global politics we are witnessing today, one simply wishes to disappear from the face of this planet. How to resist such a reality? Is there a way to counterstrike? Or is there no option but to play along?

In 1977, before even striking a record deal, Laurie Anderson released her very first single *It's Not The Bullet That Kills You—It's The Hole* dedicated to Chris Burden, suggesting that it is never the external force that is the peril but our capacity to absorb its impact.

Well over a century later we might conclude that the leap of art into life, as anticipated by the avant-garde, has in many ways become more than apparent. The increasing gamification of life is only one such example. What is perhaps most striking of all is the overt lack of a supposedly accompanying revolutionary jolt. Instead, what has bounced back into life could rather be summed up as misery on autorepeat. Somewhere between 'respawn' and 'permadeath',[6] what we have reached could best be described as a state of stasis, both in terms of a literal standstill, and in Agamben's terms, as a political paradigm of inexhaustible planetary war and futureless future. The world is moving faster than we can keep up with,

6 Respawn is a gaming term used to describe the action of a computer player or human player repeatedly coming back to life after being killed. Permadeath is the permanent and irrevocable death of a player or character.

yet we seem to have accelerated into an irretrievable inertia.

Be it left, right, stasis, or crisis, there is nowhere else to move. However one looks at the situation we are in and any move towards the future is going to be a gamble. Much like *Shoot* was a gamble with mortality indexed on real life and real death, we will have to gamble our way out from notions of real indexed on dubious forms of representation, false fictions, wrecked systems, refractory politics, ripped territories, and exhausted forms of life.

We might already be targeted by our systems, paralyzed by our technologies, blinded by our representations, let down by leaders or even wounded by opponents, but how to combat the idea that there is no alternative?

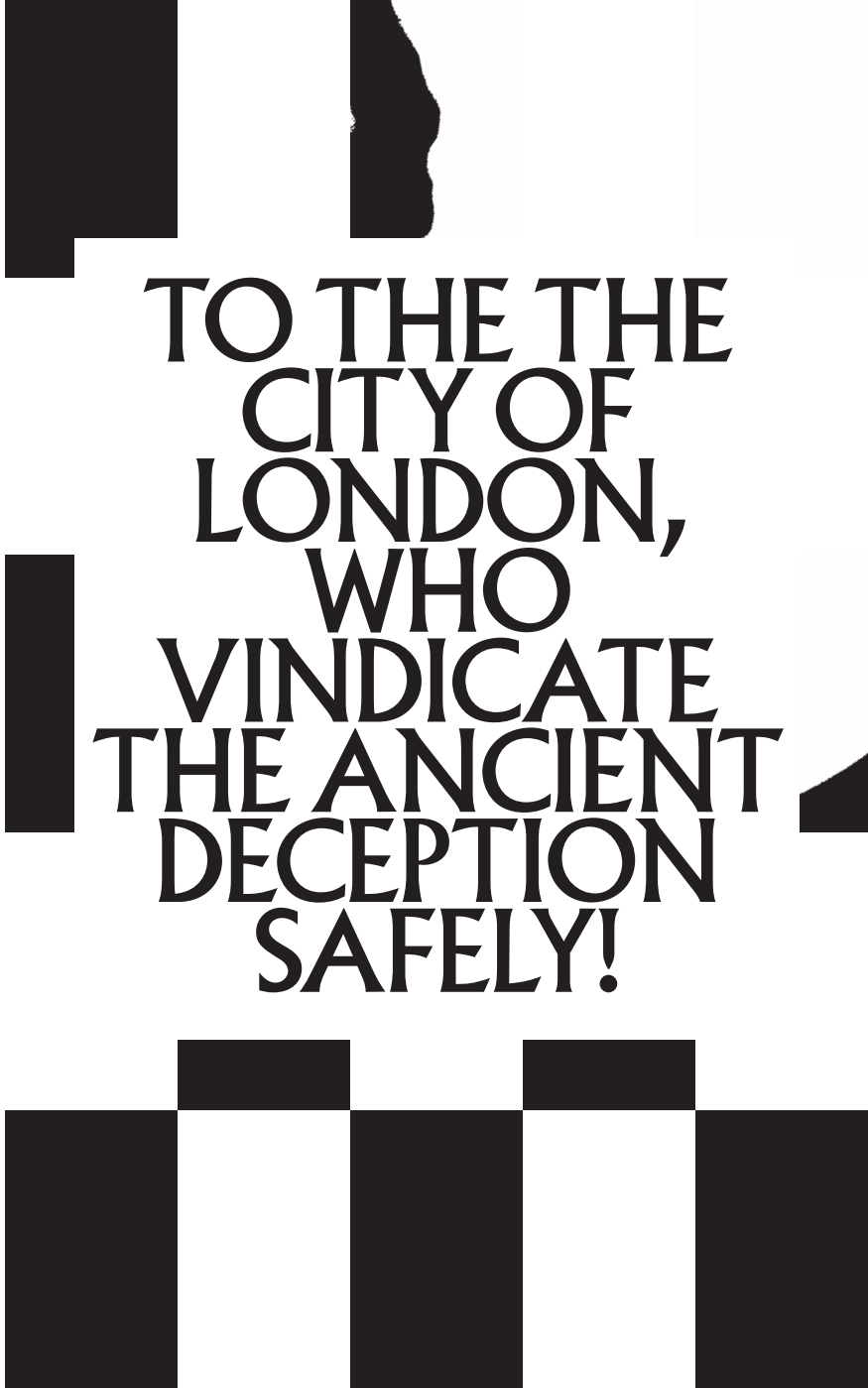
One game comes to mind that certain mammals, some fish and humankind in particular have always been exceptional at. If everything else fails—close your eyes and play dead!

It's likely the oldest game ever to have existed, but in all its banality, it could now be more relevant than ever before. How exactly?

There is a small, but decisively real difference between being a zombie and playing dead, and it has to do with agency. It is that same small difference between work and a twerk, a whistle and a blow, a hack and a rip, a strike and a pose, a *shoot* and a share, between survival and staying alive. Pick it out and let yourself be guided by it. Activate it, and play it through.

If you cannot move, float. Destroy, don't destruct. Leak, don't bleed. Encrypt, don't exclaim. Confuse, don't debate. Play dead, but don't be dead inside. Practice this, stop before it turns fatal, and let us play freely. Let us play madly, foolishly, passionately, dangerously, convincingly—differently.

There is however one requirement: in a world of misleading, permeating, and flawed forms of representation, we cannot rely on vision to inform us what is real. If we want to play differently today, we will have to do so with our eyes closed.


TO THE THE
CITY OF
LONDON,
WHO
VINDICATE
THE ANCIENT
DECEPTION
SAFELY!

Archeology of Proxy Politics

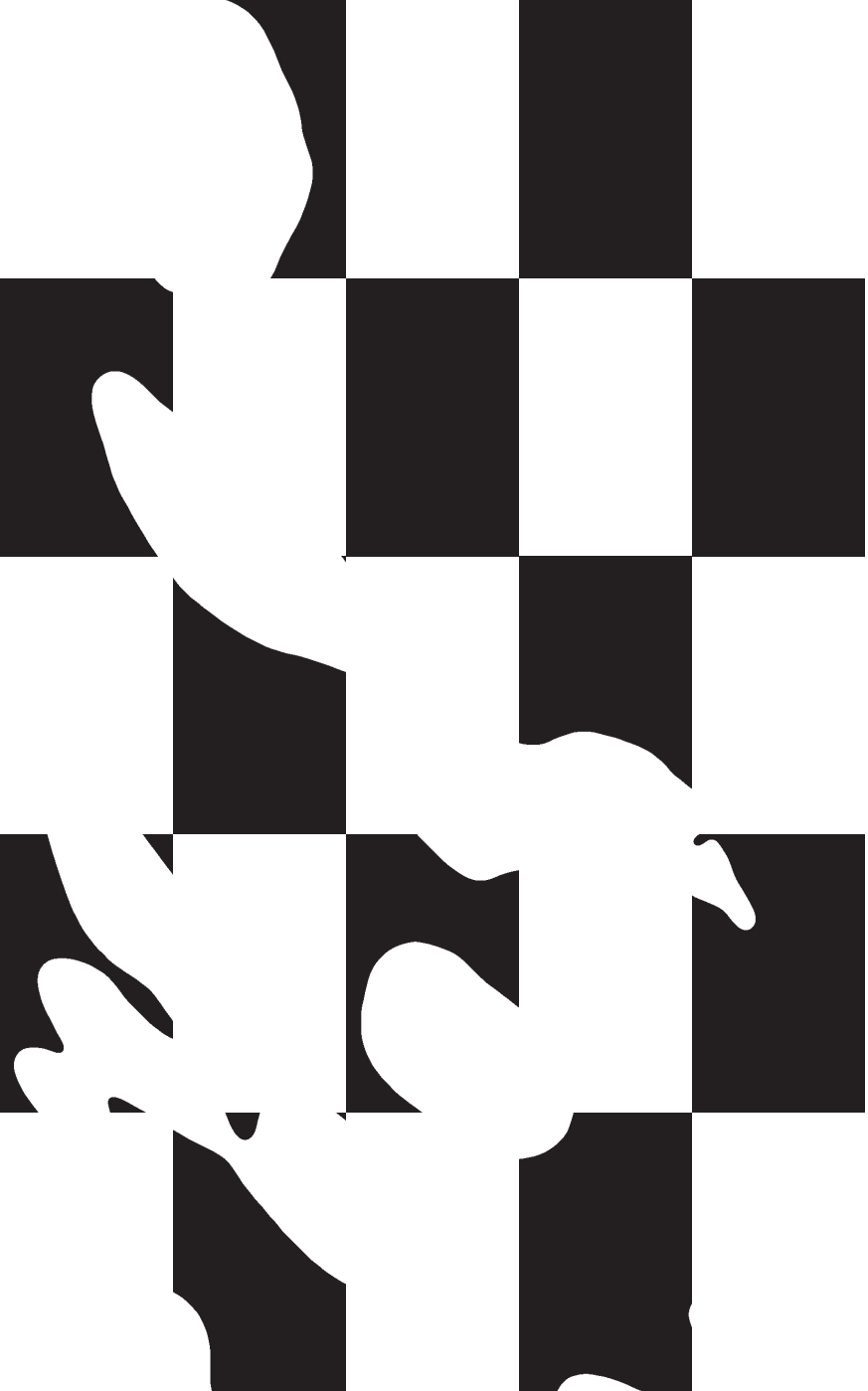
As told through the lens of The City of London Corporation

In 2016 the Research Center for Proxy Politics participated in *Hailweed*, an exhibition curated by the artists collective Auto Italia South East in London. For the installation, the Research Center for Proxy Politics collaborated with artist Maximilian Schmoetzer. Other participants of the show were Aimar Arriola, the Syria Mobile Film Festival, the artist Suzanne Treister, and Auto Italia. The texts in this section were featured on an autonomous Wifi mesh network installed within the exhibition space. Beamed by six routers and dressed in drag to allude to the City of London's representatives and their feudal dress code, the network was accessible within the exhibition space and its close vicinity. The network featured a bot, programmed by the artist and computer scientist, thricedotted, emulating the rhetoric of the City's many virtual emissaries.

RCPP's contribution to the show unravels the history of the City of London Corporation by detailing its development through the lens of its contemporary manifestation while keeping the filter of 'proxy politics' as the key conceptual framework. The history of the City is as complex and convoluted as its structure. The Corporation is the oldest local authority in the United Kingdom, and has an unusually wide range of responsibilities, its origins can be traced back to at least 1067, when the City of London Corporation is first mentioned in a royal charter. Nowadays, the Corporation exemplifies a unique form of governance: an amalgam of absolutist obscurity, medieval custom, and twenty-first century, high-speed, financial prowess. Chimerical sovereignties and void authorities are emblematic of a post-representational, post-democratic political age. Politics are increasingly populated by proxies and spread across an archipelago dotted by trade zones and demarcated by informal jurisdictions. The City of London Corporation embodies many of these phenomena.

Though the exhibition utilizes narrative strategies of history, RCPP's installation consisted of six spectral bells mediated as holograms, each representing the different churches in

the City of London. Hidden in plain sight and donned in medieval garb, the City was symbolically re-erected in Auto Italia's exhibition space. Contemporary communication infrastructure—wifi signals and subterranean cables—were here juxtaposed with their medieval counterpart, underscoring John Durham Peters' observation that "nowadays, the protocols of wielding global power are increasingly subterranean, but for centuries bells have been the main means of telling and tolling time, and thus, of excreting power." RCPP's installation invites the viewer to 'see' and 'hear' the ever-pervasive, hidden, geography, to which the following texts expand upon.



Research Center for Proxy Politics
Boaz Levin and Vera Tollmann

The City and Its Double

On the City of London Corporation and the Origins of Contemporary Governance

On 23 June 2016, Britain will vote on whether to stay or leave the European Union. Many professionals have voiced concern for the possible depreciation of the pound sterling and for the probability that international banks will leave London, yet, without knowing where they will base their financial trade instead. Others warn that 'the City' will never be the same again (will it ever be?) and foresee only further liberalization of the market once freed from the constraints of EU regulations. Either way, both speculations seem more concerned with the well being of big business than that of human welfare. These questions for the City of London Corporation loom large; although it may be said that the interests of 'the City' are constantly debated and negotiated, they still remain within one conceivable framework—London. But what is this mysterious entity? A vestige of a long-gone imperial past? A symbolic relic preserved through custom? Or a bleeding edge world-city contrived for the global financial elite? As we shall see, there is more to the City than meets the eye.

The old sages used to say of Jerusalem that it is plural, doubled: a city *above*—divine, boundless, eternal almost—and a city *below*—earthly, profane and bound by matter, bricks, and mortar. London too is doubled, displaced, present, and absent at the same time. It has multiple maps.

Seriously, take New Bond Street, which runs perpendicular to Oxford Street; traverse it from north to south. On your right, number 98 stands as a three-storied town house: white, simple, unassuming, and currently home to luxury fashion brand Philipp Plein.[1] Now, open your map of the other London—the one that hovers *above* and beyond—you will see that from this town house you are in fact in Barbados. This particular

1 Consider the sweatshops and textile companies where fashion brands like this produce the clothes in Indonesia or Italy, Turkey, or Romania, adding an extra layer to the city map.

property was purchased in 2010 for £4,960,000 by New Bond Properties Ltd—a company registered in an independent nation state within the British commonwealth.[2]

Let's continue our journey: walk down New Bond Street, to your left, number 72, another three-story high building, built in stone this time; it is the home of luxury brand Sarah Pacini. In London, *below* this is a solid structure, draped by vine, rooted in the ground, and *above* it is all liquidity, an asset temporarily stowed at 44 Esplanade St Helier on the Island of Jersey by GHS Limited. Across the street are the auction houses, Christie's and Bonhams, but these buildings too are only partially present—their spirit and lifeblood lies elsewhere, stashed in the British Virgin Islands or the Isle of Man.

Profits are nomadic; expenses tend to be sedentary. Corporations transfer profits by setting the price for goods and services sold between controlled (or related) legal entities within a single enterprise. In this way, funds are funneled to offshore subsidiaries in low-to-no tax jurisdictions[3]—an arrangement known until recently as a 'Double Irish' [4], often combined with a 'Dutch sandwich'[5]—while tax-deductible

2 Private Eye created an easily searchable online map of properties in England and Wales owned by offshore companies, see http://www.private-eye.co.uk/registry Accessed 5 June, 2016.

3 Nicholas Shaxson defines offshore: "I am talking about the artificial movement or use of money across borders, and about the jurisdictions, commonly known as tax havens, that host and facilitate this activity. Once the money has escaped offshore, it is reclassified in an accountant's ledger and it assumes a different identity– and that means, very often, that the forces of law and order will never find it." Shaxson, Nicholas, 2011. *Treasure Islands: Tax Havens and the Men who Stole the World*. London: Bodley Head.

4 The 'Double Irish' principle uses two Irish companies. According to Irish tax law, corporations in Ireland are taxed only if they have their headquarters in Ireland. Double Irish is a term used to describe how an initial Irish company is established as the owner of license rights for intellectual property with a company headquarters in a tax haven (like the Cayman Islands or Bermuda). The second company is founded as a subsidiary company based in Ireland, which makes license payments to the first company and simultaneously acquires all enterprise profits earned from the use of those licenses.

expenses are conveniently conserved onshore. The corporations that use these principles are household names, from the Nero coffee chain to Facebook, Google, or Amazon. London *above*, as we can already see, is not a city on an island, but rather, a sprawling archipelago—a web in constant flux. Its territory must outwit what laws and regulations might come into place. It is boundless and divine to a superficial, symbolic extent: imagine a pair of anonymous hands fondling a shimmering GoldVish 'Le Million' cell phone answering to a push notification prompting 'sell'[6]; cross-dissolve to a pair of young legs trying on Philipp Plein's 'shining' sneakers covered with a silly amount of either golden riveting or colorful crystals. Over the past century, capitalism's material culture has become equal to a merciless religion, but where the believers are now entitled to own the sacred objects.

How did the City and its organizational form come to prefigure contemporary modes of governance? The history of the City is as complex and convoluted as its structure. Some would say this archipelago is a thousand years old, founded by the Romans and called Londinium. Its foundations can be traced back to at least 1067 when the City of London Corporation is first mentioned in a royal charter; with the 1690 Act of Parliament, there was a confirmation of all "the privileges of the Corporation of London" through the declaration by the mayor that the commonalty and citizens of the city of London should "remain, continue, and be, and prescribe to be a body corporate and politick, in re, facto et nomine."[7]

You could also trace its ascent as the financial capital of

5 Ireland does not levy a withholding tax on certain receipts from European Union member States. Revenues from sales of the products shipped by a second Irish company (the second in the double Irish) are first booked by a shell company in the Netherlands, taking advantage of generous Dutch tax laws. The remaining profits are transferred directly to Cayman Islands or Bermuda. This part of the scheme is referred to as the 'Dutch sandwich'. 'Double Irish arrangement', Wikipedia, https://en.wikipedia.org/wiki/Double_Irish_arrangement. Accessed 5 June 2016.

6 A Swiss cell phone that comes in a limited edition of three and sells for one million dollars each.

7 Hughson, David, 1816. *Privileges of London*. London. p. 92.

the twenty-first century to its commanding role within the British Empire, and its web of Crown dependencies, including Jersey, Guernsey, the Isle of Man, and the British Overseas Territories.[8]

The Corporation is the oldest local authority in the United Kingdom and has an unusually wide range of responsibilities, but it lacks a charter of incorporation or any specific date of establishment. It is believed to have "evolved organically from earlier bodies."[9] It is a sui generis mode of governance, *above*, before, and beyond law and state—a hybrid of medieval custom, absolutist obscurity, and twenty-first century technological prowess. The British parliament has little authority over the Corporation; to the contrary, an official lobbyist, dubbed the 'remembrancer', is appointed by the Corporation and permanently stationed in both the House of Commons and the House of Lords to ensure the elected representatives will never compromise the Corporation's interests, i.e., the interests of the financial class. His name is Paul Double. The City also has a unique form of 'democratic rule', whereby city businesses, which far outnumber its human residents, can register and vote. To become an elected representative within the Corporation, you must first be a 'freeman of the City of London'. To become a freeman, you have to be approved by the 'aldermen', and for 'aldermen' to approve you, you need to belong to one of the City's livery companies, guilds such as the 'worshipful company of costermongers', 'fletchers', and 'horners'. Though mainly, to be eligible for any one of these positions, one has to have quite a lot of cash.

Home to an immense concentration of international wealth, the City has become synonymous with an opaque, globally connected financial elite, nested within a feudal boys club whose members travel in a golden coaches and wear red robes with fur collars at ceremonies.

Last but not least, a more recent chapter in the City of

8 These include the Cayman Islands, British Virgin Islands and Bermuda—along with Gibraltar, Turks and Caicos Islands, Anguilla and Montserrat.

9 See: the "Corporation of London", The National Archives, http://discovery.nationalarchives.gov.uk/details/rd/8ab66840-a61d-4448-ad7b-a5460f15febb#0. Accessed 5 June 2016.

London Corporation's elusive history began in the 1950s, when, from the ashes of the British Empire and facing the uncertain fate of the pound, there emerged an unlikely savior in the form of the Eurodollar and its corollary: the Euromarket. Euromarkets (also known as 'Xenomarkets') are markets in which banks deal in a currency other than their own. During the 1950s, their development enabled the Eurodollar to become the de facto international currency. Since these markets do not affect the sovereign, internal money supply, their regulation tends to be lax and their interest rates high, resulting in a liberal, and thus, potentially toxic loan market. This market and its "subsequent spin-offs would [...] ultimately play a central role in forcing through the liberalization of the world economy, whether the world's citizens liked it or not".[10] The USSR, perhaps unwittingly, was in the vanguard of this increasing financialization. At the brink of the Cold War, the Soviet Union was weary of leaving its dollars in the U.S., for fear that it might be confiscated if the conflict between the countries was to escalate. As a precaution, they decided to transfer these funds offshore to the City of London, where, in 1957, they deposited several hundred thousands dollars in the local branch of the Moscow Narodny Bank. The Bank of England looked the other way. The money quickly piled up. It wasn't long before Wall Street joined the party. By 1959, two hundred million dollars were deposited in the freshly instituted Euromarket, and by 1960, it had reached a billion.

A decade later the world was awash in offshore foreign currency markets with nodes established everywhere from the Caribbeans to Luxembourg. Gradually, onshore came to resemble offshore, with governments pushed towards further deregulation by the looming threat of capital drainage. The state had to now compete with special economic zones sprouting across the globe, with the authority of central banks increasingly limited by the power of Xenomarkets. Capital had new leverage over local policy. Journalist Nicholas Shaxson specifies why London became so attractive for foreign money: secrecy, 'domicile' rule, no legal jurisdiction, and the right for corporations to vote—votes which

10 Shaxson, *Treasure Islands*.

outnumbered the people living in the City of London fourfold. These proxy politics have fuelled the global economy, where the Delaware Freeport, nation states, anonymous trusts, shell companies, and Mossack Fonseca, among others, are treated as equal entities with these acts of depoliticizing and cover-up resulting in "netscapes that are partly unlinked from geography and national jurisdiction".[11]

In 1986, the 'Big Bang' spearheaded by Margaret Thatcher was in fact only chiming with the changes brought about by the institutions of the Euromarkets. Stock trading moved from noisy phone calls to silent electronic screens and humming servers. The Internet, with its ostensible 'placelessness'—annihilating, as Marx might have put it, space by time—is the perfect medium for such a regime. Places are deemed 'virtual', and thus a registered office in the Caymans can be as real as one in the midst of the City, or conversely, as unreal as a domain name registered under .ky, the island's top-level domain address.

Literally, since the 1980s, the City *above* and the City *below* has been networked from the skies: via a system of satellites connected to down stations. Uplink, downlink. That is where the two levels intersect and communicate invisibly. When the mid-nineteenth century pioneering photographer Félix Nadar made his first photographic experiments, he pictured his home town of Paris from *above*—aboard his self-built balloon *Le Géant*—and from *below*—in the damp catacombs stacked with skulls and bones. What made Nadar think that a city can be best grasped when shot from two extreme locations, leaving the ordinary street level and public space 'sandwiched' in its middle?

In 1992, the City's security infrastructure was built into the public space following an IRA bomb attack, with a continuously improved and cached system. 'Reclaim the Streets' activists have named this structure the 'Ring of steel', a barely visible set of rigid barriers dressed as flower beds or bollards, which silently disappear into the asphalt so that just

11 Steyerl, Hito (December 2014). "Proxy Politics: Signal and Noise", in: *e-flux* journal 60, http://www.eflux.com/journal/proxy-politics. Accessed 5 June 2016.

their metal heads peek out. So well blended into the formalized urban landscape, pedestrians need a trained eye to be able to see the ring's discrete steel and concrete parts. Once again, medieval and modern intermingle, since the ring runs parallel to the ancient London Wall and edges the very same territory. A territory that was re-territorialized on the Virgin Islands and later on Pacific atolls.

There are literally remains of the London Wall integrated in the basement of the Merrill Lynch Bank building in King Edward Street: sandstone bricks covered with crumbly grey mortar set in the midst of the perfectly smooth wooden wall and glass balustrade of the modern architecture; the leftovers of the medieval wall appear caged like a wild animal in the compound of a zoo, even though the bank's business is built on jurisdictions dating back to the times these walls were built. Like the wall, a relic now incorporated into the bowels of the bank, sovereign rule too seems to have been relinquished to the men of the City; any external overview of its financial institutions is severely limited. Unlike any other financial center in the world, the City of London Corporation relies on a method of 'self-regulation'. [12]

Any state can call any other state a tax haven, as long as this state demands lower taxes. So what is it that makes these tax havens so appealing? Is it because these places guarantee bank secrecy and varying degrees of financial camouflage? Since isn't risky business all about staying invisible, unnoticed, and thus unaccountable?

Let's return to the streets and buildings, where the deterritorialized system materializes and re-territorializes. Ugland House in South Church Street on Cayman Islands is a building that recently made the news as a landmark and grotesque manifestation of this shadow economy[13]: 20,000 firms call it home, using its name and address as their own.

12 Rider, Alexander K. Barry (1978). "Self-Regulation: The British Approach to Policing Conduct in the Securities Business, with Particular Reference to the Role of the City Panel on Take-Overs and Mergers in the Regulation of Insider Trading", *Journal of International Law* vol.1, no.4 : http://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1017&context=jil. Accessed 5 June 2016.

13 Buckley, Jemma (22 January 2016). "The Building in Tax Haven that 20,000

The Cayman Islands, just like the City it is modeled after, and linked to, has more registered companies than inhabitants. One can imagine much of the profit made on New Bond Street in London is funneled into Ugland House, linked by an invisible, untraceable, umbilical cord, or an undersea cable. The connection surfaces sporadically—a leak here, a lawsuit there. But this is just the tip of the iceberg, a symbolic step into transparency, a flashlight in the dark. Mostly, they just hide behind their tinted window shades or move houses to continue on with the same dealings: opaque business. Returning us back to invisibility and the ambiguous naming for this archipelago—City of London Corporation—which in itself sounds so generic as if it would barely exist.

To come back to our initial question: what can this tale of the City of London teach us about the world we live in? As political theorist Maurice Glasman puts it, the City is "an ancient and very small intimate relational institution, which doesn't fit into anybody's preconceived paradigm of modernity [...] a medieval commune representing capital. It just does not compute.".[14] Indeed, the City of London Corporation, with its arcane customs and silly costumes, is not the first thing one would imagine as the vanguard of twenty-first century global capitalism.

The City "manages to be at once vastly powerful and barely visible. It fits into no modern analytical framework."[15]

But what if modern analytical frameworks aren't adept for understanding our current political and economic regime? Perhaps the secret to the City's success lies in having anticipated the prevalent mode of governance? With the increasing merger between public and private interests and a dehumanizing political framework, the Corporation, writes political theorist Sheldon Wolin, "is now a vital element of domestic, foreign, and military policies [...]. It is not only that the state and the corporation have become partners; in the process, each has begun to mimic functions historically identified with

firms Call Home: Cayman Islands Has More Companies Registered There Than Inhabitants", *Daily Mail*.

14 Glasman, Maurice in: Shaxson, *Treasure Islands*.

15 Ibid.

the other".[16] In more than one sense, we now live in a world designed by the City and its ilk, which have created a world in which democratic rule is reduced to mere semblance—another empty shell. Should one still call this form capitalism?[17] As Wolin writes again, our "contemporary economy of powerful multinational corporations resembles nothing so much as the warring city-states of sixteenth-century Italy".[18] Are we therefore in the midst of the advent of a feudal-industrial regime, stimulated by accelerated commerce and an exasperated state? According to art writer Joshua Simon, our households are now "resembling those of serfs. The fact that we live under the regime of a neo-feudal debt economy of credit cards and mortgages, along with our domestic practices, renders our daily lives all the more similar to those of medieval sharecroppers".[19]

The City of London Corporation is symptomatic of the rise of the city-state[20] and waning state sovereignties[21], the merger or sublation of Homo politicus with Homo economicus[22]. It also fosters the concomitant proliferation of notions of corporate personhood and other non-human political subjects. Could we, therefore, call it economicus humanus?

Competing velocities make this object of analysis elusive. Every attempt to end this text with a full stop triggers another aspect, unfolds another layer, and introduces another story. To speak in pictures, when staring at the City, it appears like

16 Wolin, Sheldon S., 2004. *Politics and Vision: Continuity and Innovation in Western Political Thought.* Princeton: Princeton University Press.

17 See Squibb, Stephen (April 2014). "Genres of Capitalism, Part II", in *e-flux* journal 54, http://www.eflux.com/journal/genres-of-capitalism-part-ii. Accessed 5 June 2016.

18 Wolin, *Politics and Vision*, p. 365.

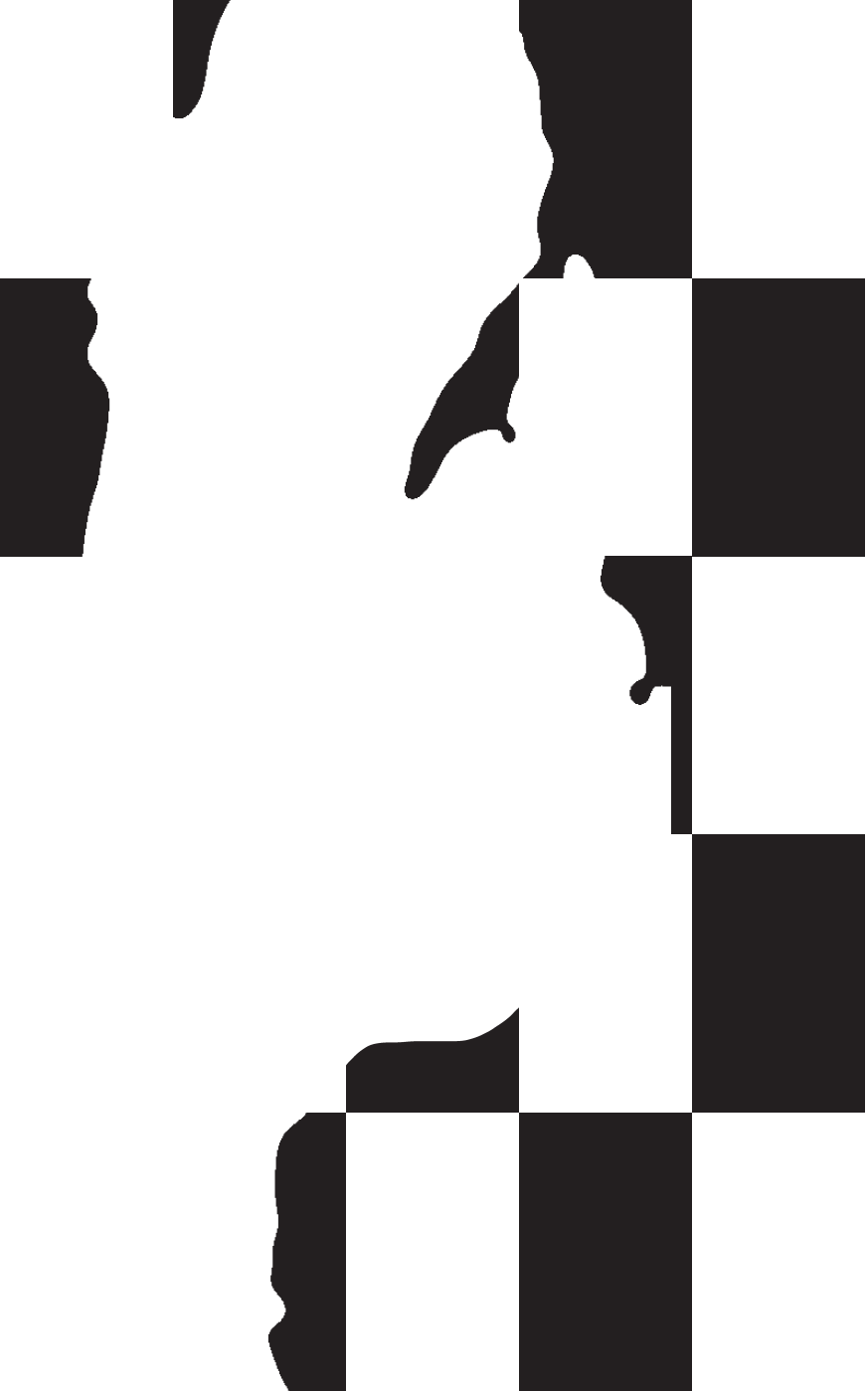
19 Simon, Joshua (March 2011) "Neo-Materialism, Part Two: The Unreadymade", in *e-flux j*ournal 23, http://www.e-flux.com/journal/neo-materialism-part-two-the-unreadymade. Accessed 5 June 2016.

20 Wolin, *Politics and Vision.*

21 Brown, Wendy, 2015. *Undoing the Demos: Neoliberalism's Stealth Revolution.* New York: Zone Books

22 Wolin, p. 589. See Brown.

a fractal image in 5D, progressively revealing new details—juridical, infrastructural, historical—and endlessly recurring patterns. Is Archipelago-capitalism a twenty-first century spin-off of the feudal age or something entirely different? Whatever it may be, the genesis of the City of London Corporation invites us to reconsider our recent history: perhaps it was 1957—the day Euromarkets were born—rather than 1989 that signaled the impending collapse of a bipolar world split between two superpowers? It wasn't the end of history, instead it was a stealthy Big Bang that spawned a lengthy process of expansion and dislocation, perforating states with 'zones', and secrecy jurisdictions, and overwhelming the world with cheap credit and new debt. We've been afloat ever since, drifting in an offshore world. Will these islands survive once the ice caps melt?



Brian Holmes

You & Me and the TCC

Finance and Urban Form

I live in the former Humboldt Park, once a sleepy Latino neighborhood on the edges of Chicago. Now they call it Logan Square, and assets are springing up everywhere. The shiny new houses are clad in glass and metal and polished wood, as though their value had to be written directly on their faces. Each dwelling seems to double as a bank account and a bet on the future. But for some people it's clearly the reverse: banking and betting are the primary experiences. So the question arises: what's it like to live in a bank account? Or more acutely: what's it like to live in someone else's bet on the future?

The planned transformation of this old Chicago neighborhood has been driven by the rehabilitation of an elevated train line into a fancy pedestrian jogging trail, the perfect clone of New York's High Line. Stroll around up there; you can almost see the prices rising. Downtown in the Loop, the financial sector with its global derivatives casino is a more serious clone of Wall Street and the City of London. The remains of the decaying underground line, built in the Roosevelt era, means that even from the old neighborhood you can reach the glittering towers pretty easily. Some people spend their days on the upper floors, biting their nails, making million-dollar bets with algorithms and high-speed computers. Just servicing their needs means you can afford the typical ten-dollar beer in the bars of the new Logan Square.

Culture thrives on trade, they say. Maybe, depending on whose culture it is. That relationship gets complicated, between you and me and the TCC.

The Transnational Capitalist Class is a sociological concept forged by Leslie Sklair, now an emeritus at the LSE. In his analysis, the governing stratum of globalized capitalism is composed of four key groups:

1. Those who own and/or and control the major transnational corporations and their local affiliates (corporate fraction);
2. Globalizing politicians and bureaucrats (state fraction);

3. Globalizing professionals (technical fraction);
4. Merchants and media (consumerist fraction).

The power of the TCC derives from a flight beyond national boundaries, toward networked circuits of exchange that escape the tax collectors of the former welfare states, while facilitating the management of physical assets located almost anywhere. A classic image of the new global class (and a reminder of its chilling proximity to the circuits of narco-capital) is the millionaire's prize par excellence, the gleaming white yacht, fifty to a hundred feet, with smoked black windows and private security guards—a ubiquitous feature of offshore Caribbean tax havens. Sleek, stateless, and sexual—like a predatory shark—the yacht under its flag of convenience is the proxy of personal power in a globalized era. Behind it, the status of dual citizenship granted by fiscal residence on a 'treasure island' is what allows the Transnational Capitalist Class to be present in, but not a member of, any specifically bounded territory. The TCC version of proxy politics comes increasingly close to home. They may not personally own the fanciest places in your decaying old neighborhood, but they do own the derivatives of your loans—and the banks that deal in them.

In his book *Treasure Islands*, the journalist Nicholas Shaxson describes how a vast archipelago of tax-free zones was formed in the post-WWII era by historical British elites seeking new financial powers to replace the military claims of a vanishing Empire. Once established, these offshore operating centers posed such a significant challenge to US capital that their key features had to be internalized through the massive deregulation of both finance and industry. So-called 'neoliberalism' was born, the vampire ghost of the old nineteenth century free-trade regime. It was embodied by the new undead, the TCC. In a few short decades, after the collapse of the Bretton-Woods treaty in 1971, the Transational Capitalst Class achieved a total makeover of the world economy. Today, everywhere is offshore. Which means that not just the British Virgin Islands and the United States, but virtually every country and region offers prime conditions for capital accumulation. The result is the formation of global

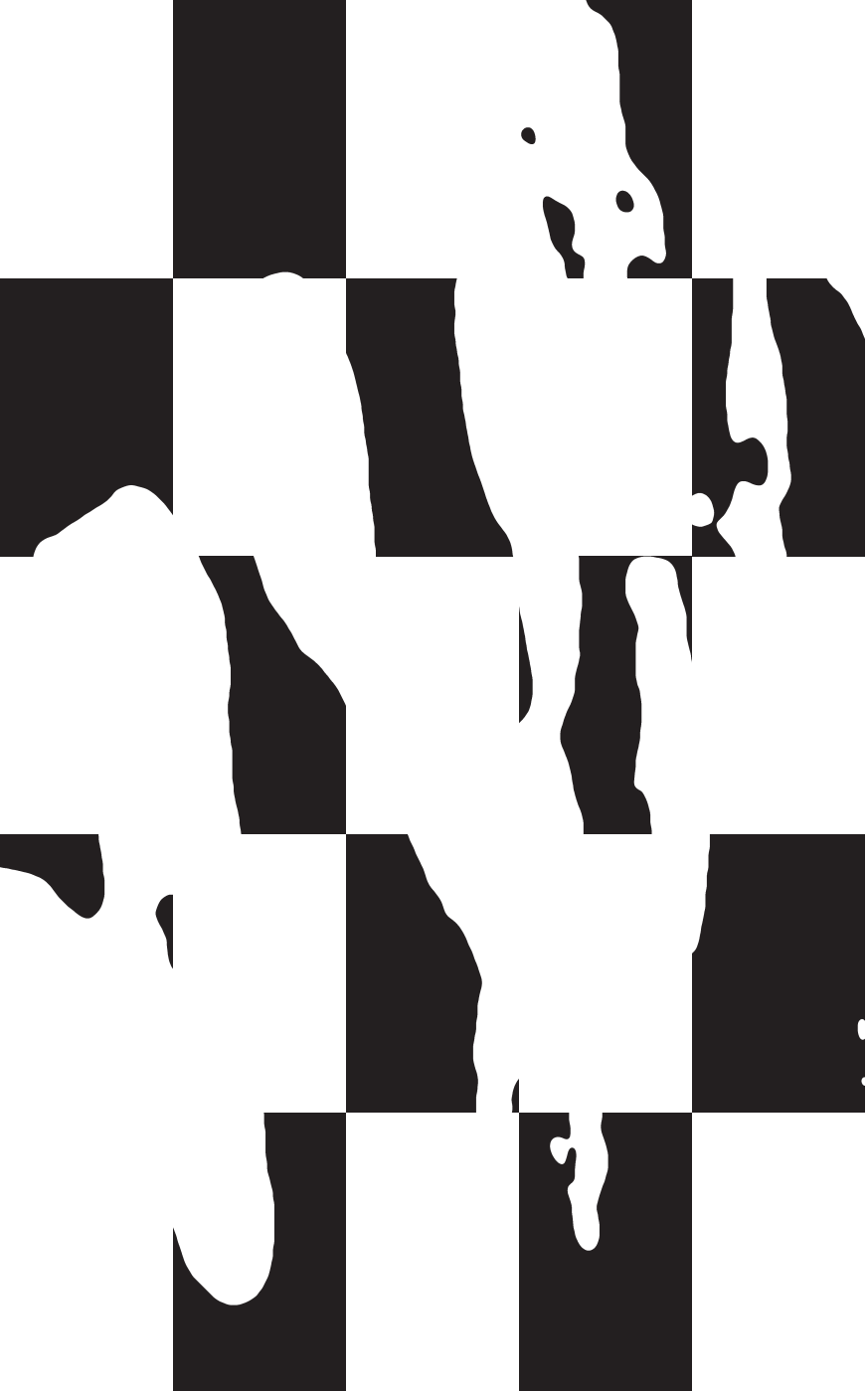
oligarchies. Since 2008 it has become crystal clear: we are no longer the citizens of democracies. Instead, we are the servants (direct or indirect, willing or unwilling) of oligarchs who control tremendous human resources and technological power via finance and other knowledge-intensive means.

The new oligarchs have captured decisive influence over the former national states, to the point of mobilizing the police, secret service, and military forces in their own defense. Their reign, though it appears under quite different guises depending on where you are, is extremely sophisticated and unitary. What's more, it commands equally broad allegiance. The 'neoliberal undead'—to quote Marc James Léger—have been able to use the 2008 crisis to shift capital toward the newly developing regions, and in this way; they have turbocharged an already accelerated world economy. Instead of human-oriented development, we are witnessing a hyper-competitive rush toward infinite accumulation, currently supported by the printing of state-backed money on unprecedented scales. Narcoviolence, local ganglands, fundamentalism, and brutal fascism all flourish around the edges of this juggernaut, but they cannot stop its weirdly abstract expansion. The proxy profits of runaway growth—endless new ports, mines, oil wells, power plants, high-speed trains and freeways—buys the TCC the only award they can seem to conceive: the miracle of capital-as-power. The endgame is the looming prospect of mass extinction, due to capitalogenic climate change.

Interestingly, Sklair has devoted some of his most insightful articles to the iconic architecture of the TCC. His focus is on the way that individual architectural talent symbolizes raw class power, while simultaneously promoting high-end consumption as the cultural-economic touchstone of a largely imaginary global status. In London, the obvious example is Norman Foster's Swiss Re building: at once a signifier of the ultimate capitalist backstop against risk and disaster (the reinsurance sector) and a cheeky phallic icon to be consumed with populist glee ('the Gherkin'). "Buildings, spaces, and architects are iconic to the extent that they symbolize the variegated fruits of the cultureideology of consumerism," writes Sklair. In a fascinating digression on the 'Grands

Projets' of 1990s Paris, he shows how a particular technical innovation in window glazing, patented by one of the key global engineering firms, could subsequently bleed into the boutiques and commercial spaces surrounding I.M. Pei's iconic Louvre Pyramid. This kind of aesthetic transference distills starchitect gloss for casual consumption—and even (I would add) for the kind of quick-n'-dirty intellectual frisson that helps supply the precarious 'creative classes' with fresh ideas to sell to their oligarchical betters.

Since the 1980s, the whole question of global elite culture has been how to absorb, subordinate, and neutralize any lingering remnant of the 1960s revolts, or indeed, any new cultural or political challenge of whatever nature or origin. Thus, an elaborate machinery exists to draw in anyone who displays the slightest degree of autonomy. The keyword is 'Perform Or Else'—the title of an unforgettable Nineties-era book by Jon McKenzie. The discipline of the old hierarchical societies is replaced by an aspirant desire to connect with the distant sources of money and power. For that you have to put on some kind of show. This is the secret of the mirror architecture that has proliferated since the 1980s. City centers become financialized theaters, narcissistic labyrinths where everyone hopes for a voyeur. The performers paint their value directly on their faces. Your witty remark might land you a job, a publishing opportunity, or a night in a fancy room. Your own image, captured by a name photographer, might become a minor asset in a designer foyer. But the profit, plus interest, always ends up somewhere like the Caymans. Look around: it's not just Humboldt Park, nor even its impossibly distant model, the City of London. The signs of this new regime are everywhere. Every wanna-be global city wears them proudly like emblems. We are definitely living in someone else's bet. Whether you call the bettors the transnational capitalist class, or the neoliberal undead, it doesn't matter. The real question is: what do you and me have left to wager?



Doreen Mende

The Rack, the Worker, and the Submarine

The geolocation data of http://secretive-cobweb.surge.sh—the digital working platform attached to RCPP's installation for the exhibition *Hailweed* at Auto Italia in London—is in California. One of the addresses of the website's server, detected by https://www.iplocation.net, is 8411 Market St, San Francisco, CA 94103, USA that is listed together with the Internet Service Provider (ISP) called Digital Ocean Inc. According to Wikipedia, the corporation has its headquarters in New York and "possesses data centers worldwide." The corporation offers "a Community resource, which provides developer-to-developer forums and tutorials on open source and sysadmin [system administrator] topics", plus an "education program that aims to bring free developer tools to students." I will come back to the 'digital ocean' in a moment, not as a company's brand that offers cloud computing, but rather as a name, which hints at the profound shift that has taken place in the politics of in/visibility in times when algorithms perform the circulation of data. First, however, we need to ask what is circulating, and what do algorithms circulate in the form of data: tools for students, direct trade for digital natives, knowledge from developer to developer encoded into numbers, or capital that, as we know, includes its social and cultural versions? What exactly circulates here—this question seems to be at the economic-political core of our investigation. How can we think of the entity called 'data' in an era, when "globalization takes place only in capital and data? Everything esle is damage control. Information command has ruined knowing and reading" as Gayatri Spivak begins her book *Aesthetic Education in the Era of Globalization*.[1]

Data cannot be separated from capital because data hides that which has been digitized to the degree of perfection = absolute abstraction. Data is a 'substance' that travels on the high-speed of light. Data-formats expire with each

1 Spivak, Gayatri, 2012. *An Aesthetic Education in the Era of Globalization.* Cambridge: Harvard University Press. p. 1.

update of computer software, so that they are constantly written differently. It is subject to the danger of a moment that may destroy history within micro-seconds, as the Head of Solutions of the Safe Host Data Center in Geneva explained to us during our visit at the corporation's colocation center SH1 in Geneva, Chemin du Pré-Fleuri 20. Colocation has been unfamiliar to me until reading the term on the brochures of Safe Host. At first, I thought, 'colocation' was a typo. The auto-correction of my word- program always turns 'colocation' into 'collocation', which situates the term in an entirely different field of linguistics (and one which merits further investigation). In French (the first language in Geneva), 'colocation' means 'shared house'. The translation comes closer to the economic condition of the data-center where slots and lots are rented out to corporate companies as if they were tenants of a multi-storied dwelling. Soon, however, the rent-rates of the circa 10.000 tenants of Safe Host might not be calculated by square meters anymore, but entirely by the rate of energy consumption that the cooling system for the racks, the trunk-thick bundles of electricity cables for power supply and special fiberglass cables for the data roaming constantly needs. The Data Center in the industrial district of Geneva operates from a privatized ground under the national law of Switzerland, which also allows the erection of an extra-territorial and extra-political zone similar to the twisted juridical conditions of a Freeport. Here, 'colocation' means to accommodate data under the conditions of SafeSuite, SafeRack, SafeMove, SafeClean, and Inside Eyes—all registered trademarks of the Safe Host Data Center that promotes itself through the condition of 'political stability'. If a foreign government wants to make business with the Center, it will need to go through diplomatic channels orchestrated by the Swiss Embassy. Before negotiating with the Center, a 'politically exposed person' (PEP), for example Edward Snowden, will need to pass the test for 'political stability'—and he will fail because, "data is more dangerous than money" as we learned during the generous Data Center tour.

The thing with the Data Center is that it does not host data in the analog sense as we imagine applies to the storage of image-prints, books, seminar-notes, diary entries, or bank

statements. The Data Center's main operation is 'instant archiving', the permanent processing of data units, that creates a 'reference copy' or 'original copy' or 'backup copy' or, in other words a copy in time. Re-generating data is the permanent condition of 'instant archiving'. Only a long blackout can sabotage the traceability of the copying process. Data is not stored, instead, data permanently flows in and out the rack, which is the material location of the server that only enables the permanent copying in time, overwriting, distributing, and circulating of the data. The rack enables the de-centralizing process of archiving as long as the rack has power and electricity; the energy consumption of the SH1-building on Chemin du Pré-Fleuri 20 could power the 18.000 inhabitants of the neighboring Nyon; in case of emergency, six back-up diesel generators will take over automatically in a matter of seconds (with an Uninterruptible Power Supply buffer). The geolocation data for http://www.safehost.com lists various addresses. Three of them create a remarkable triangle: unsurprisingly, one is the SH1 Data Center location in Geneva; furthermore Seestrasse 43 in Eich points in maps.google to the shore of the Sempachersee near Zug (which appears to be a major data geolocation in Switzerland, but invisible from the outside); and another geolocation points to Avenue Louis Aubert 6, Geneva's expensive city center where a building of Cité Universitaire De Genève is located.

Perhaps the most urgent economic-political question is not only what data exactly is, but also, what actually change its forms and materializations as it travels? It might become obsolete in the moment of a system-update; but it is still important to question where data exactly takes place, and what kind of spatiality is produced by its travel? This does not call for a new localism. Instead, it calls for a spatiality, both of vertical and horizontal assemblages that is more like a composite of many layers: electricity, water, as well as de-/codification, de-/cryptification, distance and proximity, labor conditions, and the law. That means that a locality is not simply a locality anymore, but perhaps the rack's de- centralizing integral force turns a locality into an entity of many tentacles with no detectable head anymore, but, rather, one in which each tentacle can potentially develop a head to operate the

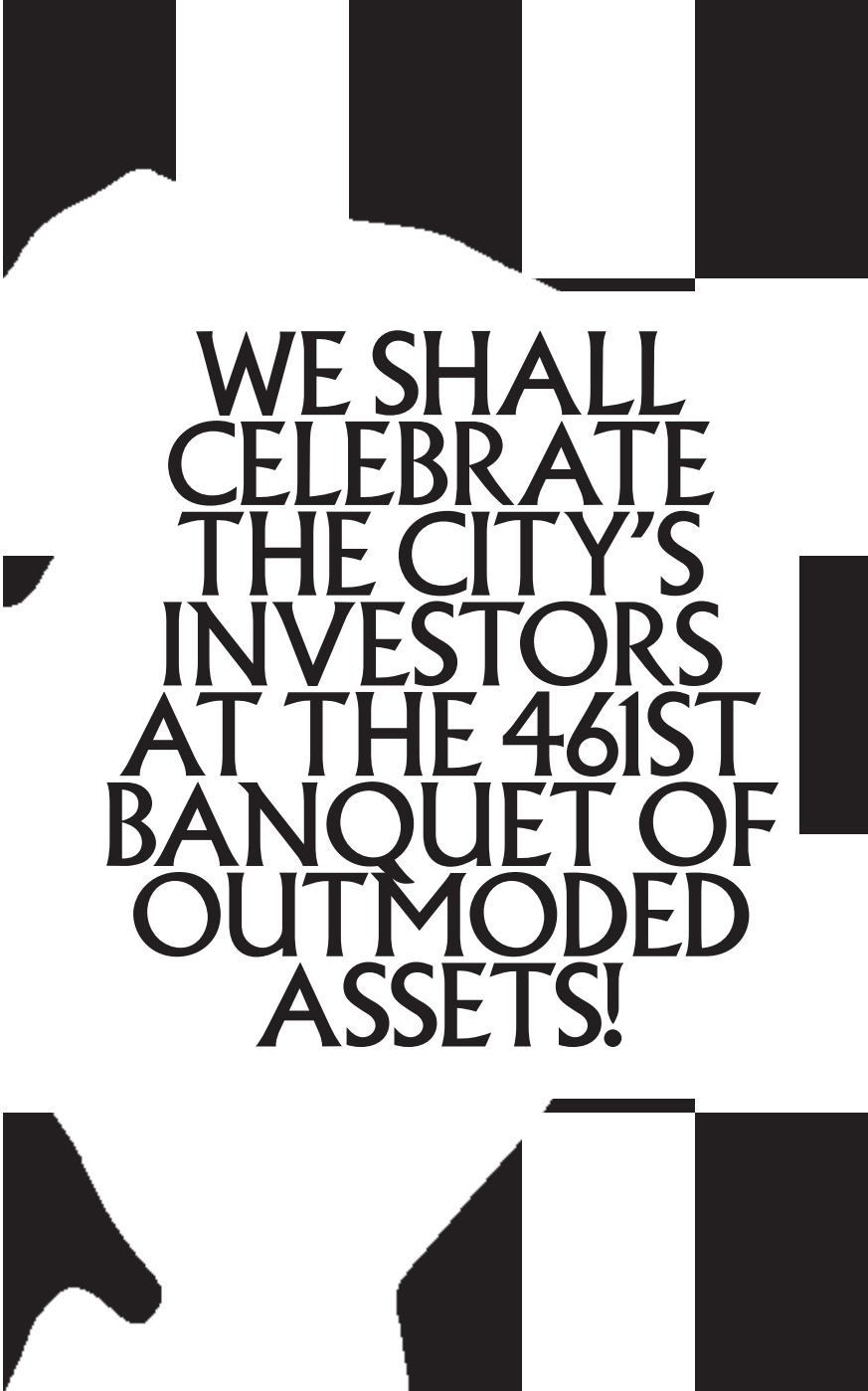
business.

In consequence, a composite of many layers creates a floating subject who navigates without a map across layers as we can see in Harun Farocki's second part of *Parallel* (2012-14), when the skater leaves the demo area of a computer game and falls into an invisible hole in the woods, falling off the calculated ground into a dark matter where he floats and floats and floats. The floating subject also appears in the dreaming of Hito Steyerl in her essay "Duty-Free Art" when she meets the astronaut Peter Osborne, with whom she observes the phenomenon of contemporary art becoming a proxy (server) where time and space is smashed into a "freak particle accelerator", reclaiming space in the floating form of 3D diagrams.[2] We are only now beginning to understand what the implosion of locality means politically, if we can agree that locality has served as the only possible ground for politics being strictly confined by time and space in militant struggles of the 20th century. Data processing operates on de-centralising conditions—the copy in time needs to travel in order to meet the many versions of 'safes' that are orchestrated by data centers—in which the rack as the stable and secure entity operates the actual locality towards a permanently virtual force; the rack's de-localising operations demand we re-think where the political in the 21st century takes place. The emergence of politics is not defined by the actual presence of the body at one single locality anymore, but by the human/non-human mechanisms that operate the connectivity of the shore of Sempachersee somewhere in the Swiss countryside with the submarine space of the Atlantic Ocean. 'Digital Ocean', the name of the ISP, carries the signifying weight to point us to the profound shift in global transport infrastructures: if transport on global scale in the 20th century took the form of container ships, moving slowly on the ocean "through which 90% of the world's cargo now passes" (Allan Sekula and Noel Burch), then an increasing amount of global commerce in the 21st century takes place in the form of data via high speed, massive cables of special fiber glass material, undetectable to the human eye, which

2 Steyerl, Hito (March 2015). "Duty-Free Art", *e-flux* journal 63.

linger underneath the subterraneous layer of the ocean's ground, sticking out somewhere at the Atlantic's shore like remnants of industrial modernity. Where are the workers? Nicole Starosielski proposes in *The Undersea Network* that the worker has not disappeared but only that he sits in front of the screen, off-shored, with a teapot in his right hand and a phone in his left hand.[3] Most of the time, he seems to walk with his phone around the Center. His task is to oversee the infrastructures, which look like enormously piled cable-bundles on the ceiling, as if they were the actual tenants of the colocation. His phone permanently receives messages from an alarm-warning software system that sends a message in case of change. 28°C already is slightly too warm. The data-worker operates in a permanent state of alarm, re-generated in real time several times per minute. Here, the implosion of locality means an abstract set of tasks and the invisibility of both the work place and the object of labor.

3 Starosielski, Nicole, 2015. *The Undersea Network*. London: Duke University Press.


WE SHALL
CELEBRATE
THE CITY'S
INVESTORS
AT THE 461ST
BANQUET OF
OUTMODED
ASSETS!

Robert Rapoport

Double in Fugue

A Parable for Noise

> The role of the Remembrancer is to keep matters in Remembrance. The Office was set up to act as the corporate memory...
> – *City of London website*

> Noise makes financial markets possible, but also makes them imperfect.
> – *Fischer Black, "Noise," Journal of Finance 41/3, 1986*

Paul Double, Remembrancer of the City of London since 2003, stands alone in Paternoster Square wiping his touchscreen phone with the Turin Shroud.[1] The last thing he can remember, they were in the middle of explaining Turquoise's Dark Book.[2] Emerging Eastern European markets need more liquidity, the quants explain, and *Turquoise* can go there, darkly.[3] In the last decade, Double has sat in on more and more of these ad hoc poetry recitals, in which language attempts to catch up with automation. It falls to Paul to make sure MP's don't stick their fingers in the pie. He takes notes and nods. This is when the fugue kicks in. The quant says something about how a dark book 'fights' noise. Double responds by tracing, again and again, a map he understands: Between Guildhall (The Administrative Seat of the City of

1 Since 2004 Paternoster Square has been home to the London Stock Exchange and subsidiary Turquoise Trading since 2010.

2 Turquoise is an electronic equity trading platform owned primarily by the London Stock Exchange in partnership with a number of investment banks. It facilitates at the rate of 124 microseconds. Its 'dark book' is an order book of trades done anonymously. The average size of dark book trades is 25 times higher than normal trades. See: http://www.lseg.com/markets-products-and-services/our-markets/turquoise/turquoise-video-resources/ceo-robert-barnes-talks-liberum-about-mifid-ii

3 Turquoise plans to extend dark pool to Czech, Poland, Hungary, Reuters, 13 May, 2016, http://www.reuters.com/article/europe-markets-darkpools-idUSL3N18950E. Accessed 3 June 2016.

London) and Paternoster Square (Home of the London Stock Exchange).

Paul Double, Remembrancer of the City of London since 2003, is a barrister. His power comes from precedent, supported by a legal team of six.[4]

But unlike every other Remembrancer in the centuries before, Paul Double has to embody a paradox. The quants just tell him he is a relic, much like the shroud that he now holds—another debate that reduces to pattern recognition and then, as a distant second, faith.

And so the Remembrancer increasingly has to self-lobotomize—call it a fugue, always again: Double down Milk Street to Cheapside on a well-worn circuit from Guildhall to Paternoster Square. Double has begun to see, with the help of the quants that in this emergent space, there is no 'corporate memory'. They explain to him that his walks through the City should be more 'noisy' in the eyes of the Guildhall Press Office. The Remembrancer has to be both a totem and caricature for the bots that he increasingly represents.[5] Any more details about what he does have been blessedly removed from Google by what he can only assume are the lads in the Press Office. Who knows? Origins are increasingly apocryphal, right? His mindfulness teacher told him that, or was it Roman Abramovich? Whatever. He increasingly feels that remembrance is best done by divination.

Paul Double, Remembrancer of the City of London since 2003, has developed dissociative amnesia, taking him on yet another 'random walk' to Paternoster, still moping his brow with the Turin Shroud. For a moment he wonders if a plain

4 https://www.cityoflondon.gov.uk/about-the-city/how-we-make-decisions/Pages/key-officers.aspx

5 For a general description of the 'socialization' of automated information on the LSE see: Pardo-Guerra, Juan Pablo, 2010. "Creating flows of interpersonal bits: the automation of the London Stock Exchange, c. 1955–90", *Economy and Society*, 39:1, pp. 84-109, "Thus, the prices on SEAQ were not deemed informative until the reliability of the system became stabilized among market participants vis-à-vis other possible market configurations such as the floor."

old rag might be better suited to cleaning his face, but in this case "the onus is on the doubters to prove otherwise."[6]

Back at Guildhall, Paul finds two quantitative analysts trying to leave him behind in this powerpoint. They explain it to him this way: "Double, you're a Freudian slip made flesh: part Saint (as in author of Romans) and part secret agent (as in double 'O') simply sprung from the City's Id. All dark, long before us. Your task is to explain to these MP's why we need to collocate a data center in Westminster's basement.

If they ask what Turquoise is, just tell them to follow us on Twitter."[7]

Paul wrings the Shroud of sweat and asks them if they can jimmy one of those servers to do resurrection? The quant responds: "That is outside our powers Pauli. But, if you want us to remember you when you're gone, we can whip up an index fund pegged to that mindfulness app you are always on..." LOL

Paul Double, once again in fugue, walking down Milk Street, waving the Shroud as a banner—a one-man parade toward the Father. Finally, he is going to meet his Constituency: the City made flesh. The corporate body in earnest—on whose faces the fates of the market can be read indexically, as off of the Shroud.

Paul arrives at Paternoster to find it empty, again. He looks down to his screen, polished by the Shroud and asks: "What is the most renewable resource of them all?"

Double wipes his brow.

6 Wilcox, Robert K., 2010. *The Truth About the Shroud of Turin: Solving the Mystery*. Washington, DC: Regnery.

7 Despite facilitating over one trillion euros in trades last year, Turquoise still only has 98 Twitter followers as of 2 June 2016. See @tradeturquoise

Kodwo Eshun
Kodwo Eshun is Lecturer in Contemporary Art Theory at Goldsmiths, University of London. Visiting Professor at Haute École d'Art et Design, Genève and co-founder of The Otolith Group. He is the author of *Dan Graham: Rock My Religion*, 2012; *More Brilliant than the Sun*: Adventures in Sonic Fiction, 1998. He is the co-editor of *The Fisher Function*, 2017 and *Post Punk Then and Now*, 2016, "The Militant Image: A Ciné-Geography", in *Third Text* Vol 25 Issue 1, 2011, *Harun Farocki Against What? Against Whom*, 2010 and *The Ghosts of Songs: The Film Art of the Black Audio Film Collective 1982–1998*, 2007.

Goldin+Senneby
Goldin+Senneby define themselves as a "collaborative framework exploring juridical, financial and spatial constructs." The elusiveness of this description is somewhat apt. Since 2004, when Simon Goldin and Jakob Senneby started working as a duo, they have speculated around the layerings of contemporary economics, analyzing, and employing different dimensions of financial markets. Their collaborative strategies have shaped a withdrawn approach wherein the artists are akin to puppeteers: their production mostly comprises choreographing the labour of others.

Brian Holmes
Brian Holmes is a writer, researcher, and artist-cartographer. Over the last twenty years, his essays on art and political economy have been distributed, translated, and read around the world. Holmes is a founding member of the group Deep Time Chicago: Cultural Change in the Anthropocene. Holmes' current projects include *Living Rivers*, which is part of an exhibition project on industrialized agriculture in the Americas entitled *The Earth Will Not Abide* at Gallery 400 at the University of Illinois in Chicago.

Nick Houde
Nick Houde lives in Berlin where he works as a researcher for the Technosphere Project and the Anthropocene Curriculum

at the HKW. He is currently finishing a PhD at the European Graduate School with a dissertation entitled *An Archipelago* that addresses methods for thinking that are adequate to 21st century distributions of spatial, geopolitical, and technological landscapes. In addition to more research based work, he also performs music under the moniker Soft Steps.

Jonathan Jung
Jonathan Jung is currently a postgraduate student at University of the Arts in Berlin as a member of the Lensbased class. His previous studies include a dual subject B.A. in Political Science and Art Pedagogy at the University of Bremen.

Laura Katzauer
Laura Katzauer is an artist and current student at the University of the Arts Berlin. She previously studied Philosophy and Sociology at Ludwig Maximilian University of Munich and Fine Art at Goldsmiths, University of London. Working with text, performance, video, and installation, Katzauer investigates potential technologies, imaginative logics and alternative acquisitions of knowledge, thinking within fantastic and science fiction frameworks. Being involved in community work and constructing fictional worlds of possibilities, she tries to explore how we, especially as a collective, could reprogram our systems and re-code our memories by actively intervening in the landscapes that we are implicated in.

Mikk Madisson
Mikk Madisson is an Estonian artist living and working in Berlin. He holds a BA in Fine Arts from the Estonian Academy of Arts and is a graduate of New Media from University of the Arts Berlin. His recent practice is concerned with the intertwined histories of genetics and informatics, namely by mapping out the way their legacies manifest in the digital economy and platform capitalism. In 2014, Madisson and Rainar Aasrand co-founded the SKATKA collective, an artistic initiative concerned with investigating the technological implications of configuring a national subjecthood, based on the example of Estonia in the age of e-governance and e-residencies.

Tom McCarthy
Tom McCarthy is a writer and artist, whose written work has been translated into more than twenty languages. The New York Review of Books recently published a collection of his essays, written over many years, *Typewriters, Bombs, Jellyfish*. His previous books include *Remainder*, *C*, *Satin Island*, and *Tintin and the Secret of Literature.* He is the founder and general secretary of the International Necronautical Society (INS), a semi-fictitious avant-garde network. In 2013, he was awarded the inaugural Windham-Campbell Prize for Fiction by Yale University.

Doreen Mende
Doreen Mende is a curator and theorist. Mende realized numerous collaborative research-exhibitions and publications such as *Double Bound Economies* and *KP Brehmer Real Capital Production*. She authored texts in the field of art on archival metabolism, solidarity, geopolitics, and the question of knowledge; she is currently the Head and Professor (HES) of the CCC Research Program Master and PhD-Forum at HEAD Geneva. She is on the board of directors with Tom Holert and Volker Pantenburg at the Harun Farocki Institut in Berlin.

Sondra Perry
Sondra Perry's videos and performances foreground the tools of digital production as a way to critically reflect on new technologies of representation and to remobilize their potential. Perry has had multiple solo exhibitions, for instance at the Kitchen, NYC, for her work "Resident Evil". Her works have been exhibited at MoMA PS1 in New York and MOCA in Los Angeles. Perry was recently awarded the Gwendolyn Knight and Jacob Lawrence Prize for a solo show at the Seattle Art Museum.

Oleksiy Radynski
Oleksiy Radynski is a documentary filmmaker and writer based in Kyiv. His films have been screened at international film festivals such as Oberhausen, Dok Leipzig, Guanajuato, Odessa, Docudays UA Kyiv. Radynski has given talks and

presentations at various venues including Berlinale Forum Expanded, Museum of Modern Art in New York, Institute for Contemporary Arts in London, University of the Arts in Berlin, Garage Museum in Moscow, and Shtab in Bishkek. His texts have been published in e-flux journal, Open Democracy, Political Critique, colta.ru, Ukrainska Pravda and other media. He is a participant of Visual Culture Research Center, an initiative for art, knowledge and politics that was founded in Kyiv in 2008.

Robert Rapoport
Robert Rapoport focuses on developing new methodologies for studying moving image workflows that incorporate automation, especially neural networks. He recently completed a PhD (DPhil) at the University of Oxford funded by the Ruskin Scholarship. His dissertation was titled: *The Iterative Frame: Algorithmic Video Editing, Participant Observation and the Black Box*. He has since been a fellow at the Digital Cultures Research Lab, Leuphana University of Lüneburg. His most recent paper: *A Primer for Augmented Reality–A Short History of the Chroma-key as a Performative Space*, (presented at Hunter College, New York) develops a historical framework for thinking about the poetics of performance in augmented space.

Research Center for Proxy Politics
Research Center for Proxy Politics (RCPP), founded by Vera Tollmann and Boaz Levin, aims to explore and reflect upon the nature of medial networks and their actors, that is, machines and things as well as humans. Selected writing by the center: "A single swing of the shovel", Former West: Art and the Contemporary After 1989, ed. Maria Hlavajova, Simon Sheikh, MIT Press (2017); "The Body of the Web", for Skulptur Projekte Münster 2017 in frieze d/e (2016); "Plunge Into Proxy Politics", in Springerin Issue 3 (2015); RCPP has conducted numerous lectures and workshops including: Image Trajectories, HGB Leipzig (2016); 33C3 Chaos Computer Congress (Hamburg 2015); and "Landscape Media" (workshop), The School of Kyiv (Kyiv Biennial 2015); "The City and Its Double" (installation), *Hailweed* (Auto Italia South East, London, 2016). In 2017, RCPP collaborated with Rike Frank/exhibition studies at KHiO, Oslo Academy of Fine Arts, and Doreen Mende/Research-Based Master Programme CCC at HEAD–Genève.

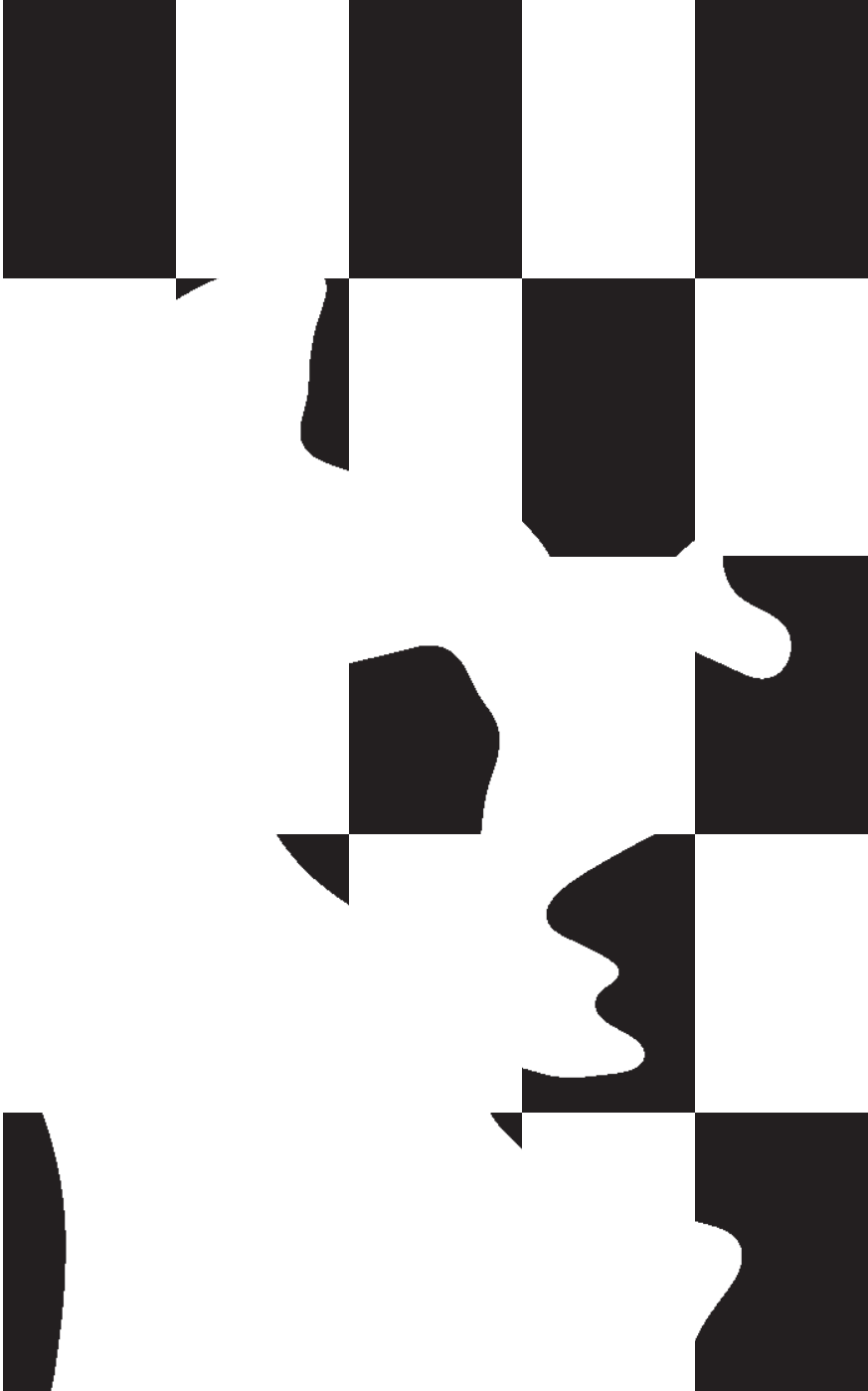
Hito Steyerl
Hito Steyerl is a filmmaker, visual artist, and author based in Berlin. Steyerl's films, essays, and lectures have uniquely articulated the contemporary status of images and of image politics. Steyerl is professor of New Media Art as well as co-founder of the Research Center for Proxy Politics at the University of the Arts in Berlin. She participated in numerous international exhibitions including Skulptur Projekte Münster (2017), 9th Berlin Biennale (2016), the German Pavilion at the 56th Venice Biennale (2015), and documenta 12 (2007).

thricedotted
thricedotted is a PhD student in computer science with a focus on natural language processing by day. By night and other times of the day, a language hacker who likes to automatically cut and paste words together with algorithms and share those things with the Internet. thricedotted is known for making many Twitter bots. "The two questions that I ask myself when I'm making a bot are what resources and corpora should I use, and how can I manipulate this in interesting ways to come up with tweets that are more signal than noise. And I aim to get a lot of signal in my bots." thricedotted's pronouns are they/them. They are based in Seattle.

Miloš Trakilović
Miloš Trakilović is an artist based in Berlin. His work attempts to articulate increasing processes of digitization on-screen, off-screen, and in between. Central to his interest remains the question of the body: its social, political, ideological, and above all, technological dimensions and restrictions. His practice is underlined by a strong research element and is most often situated within digital media taking on forms of video, performance, texts, and lectures.

Many thanks to all contributors: Kodwo Eshun, Goldin+ Senneby, Brian Holmes, Nick Houde, Jonathan Jung, Laura Katzauer, Mikk Madisson, Tom McCarthy, Doreen Mende, Sondra Perry, Oleksiy Radynski, Robert Rapoport, Hito Steyerl, Miloš Trakilović.

Special thanks to Wendy Hui Kyong Chun for her thought-provoking presentation of her recent research, to Bruno Siegrist for performing his urgent piece “On Standardisation – or how to be sure us humans win the final battle against nature”, to Alexandra Heimes for a close reading of Tom McCarthy’s novel Satin Island”, and to leo, Mizu Sugai, Paul Niedermayer and Niels Munk Plum for presenting their amazing Zine “HATE ON ME” at the RCPP conference, *The Proxy and Its Politics*, which took place on June 24, 2017 at Haus der Kulturen der Welt, Berlin.



Hito Steyerl

fig. 1: demo of computer vision showing Facebook's nudity recognition system
fig. 2: From the documents revealed by Edward Snowden in 2014: Extracts from a GCHQ's internal *GCWiki*, Accessed in 2012, describe some of the privacy implications of the agency's Optic Nerve tool: see the *Guardian* article "Optic Nerve: millions of Yahoo webcam images intercepted by GCHQ", February 28, 2014.

Brian Holmes

fig. 1-4: Brian Holmes & Alejandro Meitin: *Living Rivers/Ríos Vivos* (2017), screenshots from http://ecotopia.today/livingrivers/map.html

Sondra Perry

fig. 1-36: In rotation for projection and monitor #1 (2017), video stills
Laura Katzauer: fig. 1: Laura Katzauer, *DivNationX (*2017), video still

Doreen Mende (Entries towards…)

fig. 1-4: Photos: "Parallel II" © Harun Farocki 2014

Tom McCarthy

fig. 1: David Lynch, *Mulholland Drive* (2001), film still

Oleksiy Randynski

fig. 1: Insignia of Berkut police forces (left) and Cyber-Berkut hacker group (right)
fig. 2: Dmitry Golubov, head of Internet Party of Ukraine, taking the photo op with his party's candidate in Ukraine's presidential election, 2014

Jonathan Jung

fig. 1: Jonathan Jung, *How I Became a Seaweed Monster*, performance, 2017, *The Proxy and Its Politics*, Haus der Kulturen der Welt, June 24, 2017. Photo: CAN doc, Berlin

Miloš Trakilović

fig. 1: reenactment of Chris Burden's performance "Shoot" in Second Life.

Doreen Mende (The Rack, the Worker…)

fig. 1-4: Photos: "Parallel II" © Harun Farocki 2014