

How do we think about networks under post-digital conditions? What does this imply for transmediale festival, research? End to End (E2E), aims to deal with the pervasiveness of networks and their limits. It refers to Robert Filliou's *The Eternal Network* (1983), pointing to the interconnectedness of everyday-life actions across an emerging global world at that time. This is a good reminder that network cultures exist beyond the technical reality of network culture as we now know it despite our primary identification of networks with social media and planetary computation. By drawing on the legacies of critical and autonomous network cultures, *transmediale 2020* aims to make the limits of Internet-based networks visible but also highlight alternatives. Is there a conceivable counter-power to networks? Which alternative technological models and cultural narratives are needed to construct the principles of end-to-end communication anew? How might the critique of networks extend to non-western contexts and reflect the limits in a global perspective? The once canonical model of centralized, decentralized and distributed networks is in need of differentiation and more detail today. This means broadening the discussion of networks to other ecologies that would include non-human elements such as animals, energy, clouds, climate, and so on. Moreover, despite this everlasting debate over networks and their potential to rethink eco-socio-technical structures, relatively little of this network thinking has permeated the artworld or research cultures. In this workshop we would like to explore this line of thinking and ask what it means to research networks, and moreover to think beyond the organizational logic of the academy to other forms of organizing knowledge production and distribution. What are the limits of research networks and what would an end-to-end principle of research look like? Might the workshop (if not festival) examine its form in light of this?



APRJA\_ archives

Starting: Mon Nov 11 23:19:27 CET 2019

Ending: Wed Dec 18 10:52:29 CET 2019

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Posting  
the first  
msg with "hello  
world" on  
10/10/2019 at  
08:44 from Winnie  
Soon

Hello world!

Re-  
search Networks -  
getting started on  
11/11/2019 at 23:19 from Geoff Cox

Welcome to the list. I'd like to intro-  
duce Maria, Sudipto, Tatiana, Cristina,  
Giseli, who will begin the discussion this  
week about Research Networks, with a focus on  
borders, frontier zones and feminist car-  
tography. Invited respondents  
are Kalen, Ozgun, Juan, who also  
take over next week. Everyone  
else, please feel free to join in at  
any time. Geoff

The Ends of  
the Network as  
Frontiers of Extrac-  
tion on 12/11/2019  
at 12:58 from  
Sudipto Basu

The Ends of the Network as Frontiers of Ex-  
traction

What do we mean by the ends of the network? In  
a world-order where networks have subsumed and

restructured nearly all spheres of existence, what has not already been connected to the network lies in wait as standing-reserve. The contemporary capitalist mode of production being profoundly networked and algorithmic - encompassing the planet with a digital layer - there is therefore a formal equivalence and significant overlap between the spheres of valorization and circulation of capital and the expanses of the network. As capital looks for new sources of value (when the rate of profit tends to fall), as it expands, it looks for new 'outsides' to subsume, i.e. for newer frontiers of extraction. In what follows, I therefore attempt a preliminary definition of the ends of the network as frontier zones.

Anna Tsing's work on global supply chains and resource extraction is key to my understanding of this field. Tsing claims that the bigness of Capital is built precisely on difference and social-cultural diversity instead of being impeded by it. She differs here with orthodox Marxist critiques which consider class the overriding criteria of analysis, and relegate other axes of oppression and identities based on race, gender, region etc. as secondary determinants. For Tsing, the abstract machine of global Capital renews itself and grows precisely by feeding on and making strategic use of friction (social friction, but also material friction) across its many scales of operation. Profit is maximized by weighing off a range of factors in real-time across contexts (where to procure materials from, where to get manufacturing done, where are labor and corporate laws most favorable, what exact setup of subcontracting to rely upon, which shipping route to take, etc.), their probabilities calculated and the most favorable arrangement chosen. A logistical supply chain is a weird spatiotemporal arrangement characterized by "contingency, experimentation, negotiation, and unstable commitments" (Tsing 2009, 151). A supply chain cuts through diverse regimes and lifeworlds, remakes territories as well as temporalities, capitalizes on social difference by establishing a field of equivalence (what we may also call a zone of operation)

across which things and people can be moved. I absent-mindedly click 'confirm order' on Amazon, asking for one-day delivery; hundreds of miles away things and people start moving in a remote warehouse, workers listlessly dig up one more package, tag it, send it along for dispatch, many sleepless souls drag this package along as part of various batches of goods divided up by territory and delivery speed, until it finally reaches me (most often sooner than I'd expected). This is perhaps today's update of the butterfly effect! The smallest perturbation on a screen sets a complex juggernaut in motion, whose contours can be barely intuited from progress on the 'track order' widget.

The relation of friction so crucial to the sustenance of capitalist production is the most acute in those realms of existence into which capitalism has just started to penetrate. These are resource frontiers in which, Tsing argues, there is utter chaos and a suspension of the law. The lawless, 'wild' frontier is only navigable by bands of resource miners drunk with frontier optimism, living an utter bare life even as compete with each other as mercenaries to make imaginary fortunes. They are the ones who accelerate the production of wilderness at the frontier, who decode and de-stratify previous social-natural ecologies, connect the abstract machine of Capital with its outsides by engaging in a labor of translation or conversion. While Tsing is concerned in *Friction* (2005) with natural resource frontiers such as the forests of Kalimantan (where logging is rampant), I think the salient features she outlines name a general frontier condition that is observable wherever the networks of capital encounter their ends. We may now specify a name for these ends: they are interfaces that open onto something else that is not-yet-networked, but key to its functioning.

What is an interface, then? It is a threshold of friction between regimes that are contiguous, yet not fully resolved and interoperable. Therefore, an interface is the surface where one code (usually of a higher order of com-

plexity) is translated into another (more computable, manageable). A surface as much of connection as of separation, which polices the boundaries between information and noise (between the useful and the excessive). The reduction of complexity (and contingency) is crucial given the problematic relation of cybernetic systems (networks) with their outsides: the environment has a fundamentally destabilizing effect, even as it is a source of value for the system's regeneration and self-perpetuation. As Alexander Galloway argues in *The Interface Effect* (2012), the interface is a dialectical, dynamic relation of opacity and transparency, of conscious mediation and naturalization. The moment a particular labor of translation is absorbed into the algorithm or network architecture, or the moment it is stabilized as an embodied habit, the interface dissolves and reappears elsewhere. For Galloway, the interface is therefore not so much a thing as an effect (a mode of mediation) of interpellating the outside into the cybernetic network.

In a short counter-history of the notion, Nishant Shah (2017) shows how the colloquial dominant identification of the interface with GUIs was contingent on a particular era of computing that needed to posit the user as its subject (one who consciously needed to intervene in computational processes by 'reading,' 'writing' or making decisions). Before the PC revolution, there was no one-on-one relation between the machine and the user defined by ease-of-use and affective intimacy. And now the transition to an Internet of Things (so called 'no-UI objects' that recede into an ambient networked environment, constantly gather data and perform computational tasks silently) has effaced that particular visual form of the interface, thereby redrawing the boundaries between 'embodied' and 'artificial' intelligence. Shah therefore proposes three ways of looking at the interface anew: (1.) especially as it relates to the dialectic of machinic intelligence in networked computational systems, to see the interface as a negotiation with the human body; where the network augments, reshapes and competes with the body to fulfill

certain operations (2.) to see the interface as located in feedback loops that are not necessarily visual or haptic, loops which modulate relations of ease-of-use and everyday habits that tend to obfuscate structures of power, control and discrimination (3.) to see the interface as a reconciliation of contradictions or opposites that meet within the probabilistic space of computers.

With Galloway and Shah, I am interested in the labor of translation and reconciliation that happens at the interface: a necessarily transindividual labor which traverses the full range from conscious to non-conscious actions, from highly skilled/specialized forms to habitual and generic behaviors. The interface is, then, coextensive with the reshaping of the General Intellect across the machine/human divide (one of the 'outsides' of the network is, then, the collective intelligence of the Social Factory). While this obviously points towards much Autonomist theory, I am interested in the question of what function is served by this labor of translation and reconciliation. One answer is provided by Wendy Chun in "Crisis, Crisis, Crisis, or Sovereignty and Networks" (2011), where she locates interface labor as the necessary component that props up the omnipotent 'sovereignty of code' when networks break down, undergoing a crisis of legitimization. In an algorithmic regime where all decision-making is subjected to the 'real time' of computational processes, code comes to have something of outsized power of the Divine Law or logos, structuring the present and trying to pre-empt the future. Yet when the positive feedback of noise pushes the system beyond the known and computable, makes the cybernetic network face up to real contingency, code-as-logos faces an 'emergency of undecidability.' This breakdown, more and more frequent in a society of proliferating viral risks, inaugurates the pervasive state of exception and crisis-temporality which structures our everyday existence today. Code-as-logos is called upon to close the gap between existing law and the 'extraordinary' decision via a living sovereign - the auctor (a figure from ancient

Greek law revived by Agamben) - committing 'a pure violence without logos', authorizing a new norm 'without any reference in reality.' Once the gap between law and decision has been sutured however, by a magical sleight of hand it is as if the code has rewritten and thereby constituted the new law by itself (the auctor, or sovereign coder, being nothing more than a mere subject-effect projected by the code).

Chun's analysis of the auctor-coder (the interface laborer) seems to correspond well with the figure of the resource miner in Tsing's work on extractivist frontiers. Both operate beyond the reach of law in the wilderness, living through turbulence and contingency to connect the existing system to what lies beyond its pre-existing logos, in the process extending its reach. And while both the resource miner and the interface laborer act as part of a band (a collective), they are so often driven by an individualized form of competition and risk-taking, perceiving their labor in a strange isolation from the totality in which they actively participate. Both of these figures perform the essential task of making the cybernetic capitalist network progressively open-source: connected to the space of the General from which all value and, in fact, all life arises. That this process paradoxically leads to further accumulation and narrow privatization of the commons attests that the algorithm in contemporary capitalism is the highest manifestation of the social division of labor (Pasquinelli 2019). Nonetheless, I want to reiterate that the interface labor of opening the system up to its outsides also entails a crucial reduction of complexity. This has resonances particularly in view of the troubled immunopolitical relation that cybernetic systems have with the environments they simulate and interact with, as they balance the need to maximize both their realm of applicability and the stable conditions of homeostasis. The environment/outside is the source of renewal of the system's degree of order (negentropy) but at the same time, "too much" of external noise might crash its fragile balance, short-circuit the algorithm (for more on the persisting problem of the outside in cy-

bernetic theory, see Hansen (2009) and Clarke (2009)). This is why I propose that interface labor involves conversion as much as separation. It is a matter of 'preparing' the outside into data of a manageable form, multiplying redundancy so as to create a General Intellect that is both excessive to the cybernetic machine yet subordinated to it (hylomorphism sneaked in through the back door); a question of stabilizing new habits and matters that are commensurate with the machine, don't make it collapse.

If the cybernetic fable works in some sense as a self-fulfilling prophecy - a pre-emption of the future whereby an operational telos rearranges the space of the General - my argument is, simply put, that there is a lot of interface labor, a lot of working with/in material and social friction, which ensures the fulfillment of this teleology. Contrary to the dreams of a fully automated life run by light, immaterial cloud infrastructures, it is the frontier-work of interface labor that ensures the network functions from end to end. In the final instance, there might even be a way of collapsing the two figures I have been positing as analogs: the resource miner in the work of Tsing, and the interface laborer in Galloway, Chun et al. If, as Jussi Parikka (2015) shows, our digital network infrastructures are subtended by the deep geological time of rare earth minerals, thoroughly imbricated in always intensifying cycles of 'primitive' extractivism, it might even be that the Earth is the final interface!

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APRJA  
Digest, Vol 2,  
Issue 1 on 14/11/2019  
at 21:23 from Wing Ki Lee

\_\_\_\_\_ "Supply Chains and the Human Condition." *Rethinking Marxism*, 21:2 (2009): pp. 148-176.

Dear Sudipto,

Thanks very much for the contribution. I don't have much to comment on as I don't have the expertise knowledge in your field. But I can see (and like the way) how friction mediates, that applies to interface. Speaking of interface, I also suggest Christian's and Soren's work *The Metainterface* (<https://mitpress.mit.edu/books/metainterface>).

Looking forward to other's work - would be great to create nodes of referencing, an eternal network by itself.

APRJA  
Digest,  
Vol 2, Issue 2  
on 14/11/2019 at  
14:03 from  
=?utf-8?B?U804cmVuIFBvbGQ=?=

Dear Sudipto,

Your text is an interesting and relevant com-

bination of perspectives on networks their ends and ends of networks. It combines the theory in good ways and raises good and relevant questions. As a comment, I think it would be worth discussing some concrete examples of e.g. interfaces to the end of networks in relation to the theory. Examples could be apps and platforms that include and build on a network but don't show it, e.g. streaming apps and platforms. Or networks that are more or less closed in on themselves, e.g. social media (Instagram would be an extreme example since you can't post a link), or devices/technologies that remove parts of the network (music streamers like Sonos, tv-boxes). I think Adrian Mackenzie has the point that wireless network routers and wirelessness also to some degree remove the full experience of the network (in Wirelessness). So maybe use examples or art that in different ways demonstrate the ends of networks.

Thanks for throwing in the reference, Wing. In our work on Clouds as a planetary interface, we also use Hu, Tung-Hui. 2015. A prehistory of the cloud. Cambridge, Massachusetts & London, England: The MIT Press. It might be relevant with its discussion of the real, concrete existing cloud and how it follows on from other territorializing technologies from trains to various cables to military installations. We also discuss apps and specific works that might be useful, though it's a question whether they address the kinds of extraction you're after - however YoHa's work, e.g.

Telephone Trottoire might be an example. And of course Molleindustria's Phone Story.

14/11/2019 at 14:52 from  
Geoff Cox

Anyway,  
great  
work!

Thanks for starting things off Sudipto. It's a really useful text not only with respect to the interface but also for reminding us of the overall topic of reimagining networks beyond the dominant models -

S?ren

something the transmediale call refers to in differentiating between centralised, decentralised and distributed network forms. Did you read Femke Snelting's recently published "Other Geometries" (<https://transmediale.de/content/other-geometries>)?

She argues to "bend our infrastructural desires in other directions", making further reference to the work of Anna Tsing and messy geometries that are inspired by mushrooms for instance. The conceptual challenge is to rethink normative geometries ? to resist ?sovereign infrastructures?. She is thinking of something as simple as a circle and how it is associated with collective forms (indeed referring to various workshops, including the study circle at transmediale last festival).

?Circles are mathematically defined as the set of all points in a plane that are at the same distance from a shared center; its boundary or circumference is formed by tracing the curve of a point that keeps moving at a constant radius from the middle. [...] Circles are omnipresent in practices and imaginaries of collectivity. [...] and yet] Their flatness provides little in the way of vocabulary for more complex relational notions that attempt to include space, matter and time, let alone interspecies mingling and other uneasy alliances. The obligation to always stay at the same distance from the center promises a situation of equality but does so by conflating it with similarity. Circles divide spaces into an interior and an exterior, a binary separation that is never easy to overcome. We urgently need other axes to move along."

Other geometries, in other words, is an attempt to escape normative configurations of collectivity but also of course other kinds of spatial logics which would include borders and frontiers, and other cartographies: to rethink the logics of centres and margins that allow us to re-

APRJA  
Digest, Vol 2,  
Issue 2 on  
14/11/2019 at 15:59  
from Juan Pablo  
Pacheco

think the shape of  
geo-politics.

Dear Sudipto,

Thanks for sharing your very interesting research and ideas. I particularly appreciate your description of the 'network' as a chain of extraction which in its singular expression refers us back to a totality, both as infrastructure and as ideology. Next week I will expand more on my recent speculative artistic research on the possible histories of the internet's infrastructure and its connection and dependence with other infrastructures of power and exchange, some human and other non-human.

Indeed digital intangibility is still a very powerful ideology, and the network materialism that your research points at refers us back inevitably to an ecological paradigm. There are several artists in Colombia who are working at the intersection of digital technologies and ancestral technologies, both redefining what we consider as technological nowadays and also opening up new spaces at those frontiers. Sadly there's not very good documentation, but the works of Leonel Viquez, Bárbara Santos and the Atractor collective are interesting in this regard.

I'm really interested in the way in which your research also reflects the emergence of new geopolitical dynamics within what Benjamin Bratton refers to as a new planetary-scale computational order (*The Stack: On Software and Sovereignty*, 2015). I think it's key to understand the ways in which extractivist and violent practices are sustaining the interfaces that citizens-users are faced with every day, and how the notion of nationhood is rapidly changing due to this new geopolitical status. The latest technological revolutions are reshaping political and aesthetic representation, posing new and complex ethical questions that need to be addressed from the perspectives of the Global South. The digital revolution is not the same in Europe and the United States than what it is in Latin America and Africa, regions historically defined by the violent extraction of resources that power the global economy.

The  
Ends of the  
Network as Fron-  
tiers of Extraction  
on 14/11/2019 at 18:20  
from Ozgun Eylul Iscen

Looking forward to con-  
tinuing this con-  
versation.

Best,

Dear Sudipto,

Juan  
Pablo  
Pacheco

I think you did a great  
start for us to engage with.  
I like your identification of  
the ends of network as frontier  
zones and your emphasis on both  
social and material frictions  
through which global capital and com-  
putational media operate. And I share your  
concern about the further accumulation and  
privatization of commons!

While I was reading the first page, I was  
thinking about Galloway's work on interface,  
which you cited on the second page. I think  
you engage with useful texts in generative  
ways.

First, about the interface: I often recall  
Tiziana Terranova's understanding of so-called  
immaterial processes as "links between materi-  
alities". I like the simplicity of this state-  
ment, while "links" or "materialities" could  
be interpreted at various scales (of opera-  
tion). What do network link together? With  
your emphasis on labor and logistics (and Au-  
tonomist theory), I think about Sandro Mez-  
zadra and Brett Neilson's "The Politics of  
Operations" here. They basically talk about  
extractive mechanisms of capital today, in-  
cluding from mining and agribusiness to new  
fronts of extraction such as data mining and  
bioengineering. Of course, these processes are  
not the same, but they are different opera-  
tions of the totality we all participate,  
which is predicated upon an unprecedented in-  
tensification of extractive dynamics and re-  
lated processes of dispossession. Here, it is  
important to see how such a mapping of extrac-  
tive mechanisms could take into account dif-  
ferent labor forces, patterns, or regions in a  
closer contact. This is why I am concerned

that the overemphasis on "interface" sometimes narrows the discussion because we end up looking at the processes, relations, or laborers that are only mediated by the interface. But what about the other ones which are not necessarily mediated through a platform, screen, or click? I raise this question generally (and in my work). Is there a relationship we can think of between an Uber driver in the US and a factory worker in China? I think Christian Fuchs might have a say about it? Also Anne Tsing can be brought back here.

Secondly, I really like your opening with Anna Tsing's emphasis on friction, which takes other axes of oppression and identities into account (which media theory sometimes, if not often, fails to address). I would like to hear more about how you carry it throughout your argumentation, or her interest in the Global South. I also think about Jonathan Beller's recent book "The Message is Murder" in which he interrogates how computational media are outgrowths of racial capitalism. This could be an interesting to complementary to Galloway's book; they both care about the interface but in different ways.

Third, I really like that you carry the conversation over how computational systems deal with the excess. As your texts highlights, we know that the excess (contingency, uncertainty, or error) is not necessarily emancipatory as the system/capital tries to accumulate on that, too. Here, Luciana Parisi's work "Contagious Architecture" might offer a more dynamic view of those systems beyond "the interface," more like assemblages that cut across material and discursive processes. Thanks to its overdone and vague utilizations, I don't want to return to the notion of "assemblage" right away (because it becomes an answer for everything then). At least, however, it can help us to engage with different scales (yes, Benjamin Bretton's Stacks might be useful here), but most importantly, different labor forces and dispossessed communities (beyond coders and users) all at once.

Finally, I also thought about Sean Cu-

bitt's Finite Media, while reading your text - especially since you ended with the Earth as the final interface.

I wrote so long because I share your concerns and references. I look forward to further conversations.

All the best, The Ends  
of the Network  
Ozgun Eylul as Frontiers of Ex-  
traction on 14/11/2019 at  
Iscen 23:01 from Maria Dada

Dear Sudipto and Ozgun,

Thanks for your contribution Sudipto and your response Ozgun. I thought I'd add an intervention somewhere between both the text and the comment.

I suppose maybe the notion of the interface is not always directly a labouring interface. So perhaps there can be a kind of cartography of different types of interfaces with different scales, not necessarily with a stack structure which I find a little too vertical. I appreciate that might be what you're trying to do Sudipto but the focus on labouring has to include other interfaces perhaps, the interface between the smartphone and the filtering algorithms, the servers, the data centres etc..

So I sort of agree with Ozgun but not to the extent that you need to move away from your methods, reference to frontiers of extraction as tier and extraction.

The Ends of the Network as Frontiers of Ex-  
traction on Maria  
15/11/2019 at 12:25 from  
Nicola Bozzi

Dear all,

I think Sudipto's theoretical account of networks is very useful and full of great stimuli, as shown by the great response from the other members of the group.

Personally, I especially relate to the combination of an infrastructural theoretical device (like the Stack, which a few of us already mentioned) with conceptual figures like the two mentioned throughout Sudipto's text -the resource miner and the interface labourer. I think using figures reintroduces difference and politics (not necessarily orthodox Marxist, as already pointed out in reference to Tsing) and gives more specificity to the interfaces we discuss. I believe that, regardless of the affordances of interfaces and the importance of criticising their architecture, it is still important to theorise what kind of subjects are created through their use.

If I may make a reference to my own research this early, I am particularly fascinated with the figure of the Digital Nomad, a formerly revolutionary figure in critical theory that is now associated with mostly Western tech-bros travelling to South East Asia, and how this figure relates to gig economy workers from developing countries, who may use the same platforms and yet do not have the same material access to mobility and financial benefits. This artwork by Liz Magic Laser is very interesting in presenting a diverse group of labourers who collaborate through some of the same interfaces and yet come from very different social contexts:

<https://lizmagiclaser.bertha.me/in-real-life/> Re.: The Ends of the Network as Frontiers of Extraction  
Best, Nicola on 16/11/2019 at 04:35  
from Sudipto Basu

Dear Wing, Prof. Cox, Prof. Pold, Juan, Ozgun, Maria and Nicola, Thank you all for the stimulating, appreciative responses. There's quite a bit I need to process! Some of the suggestions I'd considered, but could not cover for want of time (and word limit). I agree with most of what has been said here, such as the need to work with concrete examples, artworks, platforms etc. and do that in conjunction while paying attention to the complicated geopolitics and subjectivi-

ties in feedback with network infrastructures (a project already begun by the likes of Tsing, Mezzadra, Neilson, Rossiter, Tung-Hui Hu et al). I particularly appreciate the artwork suggestions since I was at a loss in this matter - lots to dig in now.

There's obviously a need to consider the various kinds of network architectures and forms involved beyond the networked-inside vs. outside binary that I have preliminarily chosen, something which will no doubt complicate and detail the sketchy picture offered. Nonetheless, I need to clarify something specifically about the key word I've chosen to define the ends of networks: interface.

I understand of course, as Maria and Prof. Pold points out, that the laboring interface is not the only one involved in maintaining the functioning of the network from end-to-end (there are various combinations involving hardware, software, humans, as well as the built and natural world at various scales of operation). I hinted as much in defining the interface generally as a surface of friction between two contiguous regimes, where translation is required for the purpose of operability. The interface in this view need not even be computational, at least in itself (even if at a higher level, it does feed into a computational regime). Therefore the proposition of the Earth as final interface, with respect to, say, the mining of lithium and coal. If, within computational networks, I have focused specifically on the laboring interface (i.e. where the work of translation is carried out by living labor), it is because all the other interfaces have provisionally stabilized or concretized the work of translation into the network architecture/technological infrastructure (unless there is a breakdown, when living labor is called upon to intervene). Hence the chosen focus on frontier-labor, on interfaces that open to the not-yet-networked: in other words, on the laboratory where the General Intellect is being reshaped. But I do agree that there needs to be a multiplication of the idea of living labor (including non-human living labor) and the various junctures and fron-

tiers that they have to work/intervene in, to get a better picture of what keeps the cybernetic machine running.

Another way of looking at this is through the idea of resolution: I'm interested in the living labor that closes the always dynamic gap between the highest available resolution to the cybernetic system - the hyperreal simulation - and the outside that is mapped. To put it in the somewhat allegorical terms used by Hito Steyerl in *How Not to Be Seen* and her larger corpus of writings (*The Wretched of the Screen*, for e.g.), I'm interested in the various 'proxy people' who live within and disappear into the space of the pixel, while at the same time laboring to map the pixel onto the surface of the Earth (the resolution target of HNTBS). In this context, I really like Terranova's idea of immaterial labor as "links between materialities" (thanks Ozgun, that's something I was not aware of). Need to work on this particular interface more.

APRJA  
Digest, Vol 2, Issue 8 on 16/11/2019 at 13:41  
from Clemens Apprich

Will get back when I have a thought again!

Dear Sudipto,

Warmly,  
Sudipto.

thanks a lot for your thought-provoking post, in particular when it comes to the imaginary of ?frictionless capitalism? (Bill Gates).

Just my (late coming) two cents: 1) I second Ozgun's comment on links/materialities and want to add that Wendy Chun, whom you already reference, also talks about the performativity of networks, that is the idea that a network has to be (constantly) activated in order to exist. As soon as a (material) node becomes inactive, the respective link discontinuous. Hence, the need to put the whole network in a state of crisis and, consequently, the nodes on alert (or in Chun's more recent parlance: habits + crisis = update). This sort of ?will to be activated? is, by the way, also

something Castells was concerned about (in particular in his early work on the Informational City). I think his idea of the 'binary logic' of the network (inclusion/exclusion or activation/deactivation) might be of interest to your work, even though I am aware that Castells is not so much en vogue anymore (something we can also discuss during the workshop). 2) I like Soren's idea to use specific examples from the commercial and/or artistic field to illustrate the ends of networks, and want to add (only as a suggestion) that also different historical genealogies might be informative in this context. I am thinking of radio networks as the ideal of 'wireless socialism' (Marconi) and their impact on early net cultures (Armin Medosch wrote a book, unfortunately in German, about this; here's an excerpt in English: <http://continentcontinent.cc/index.php/continent/article/view/308>). So the limits of the (capitalist) network might also be found in different imaginaries, which offer different 'interfaces' to the general intellect. Maybe this is leading away from your specific project, but also something we might want to discuss in Berlin.

Best! C.

Fwd:  
Re:  
APRJA  
Digest, Vol 2,  
Issue 8 on  
16/11/2019 at 13:20  
from Cristina Ribas

oooops. now to the list

Hi All

We will be interacting in the list as 3/1, considering our joint proposal to Radical Networks <http://midiatatica.desarquivo.org/>. We prepared an initial response to Sudipto's email but then the list got another life and speed and ours might seem a bit out of pace now. Anyhow, in the sequence, we will post our text too...

We made a brief comment to Sudipto's super interesting text and it seems that our text might be a good continuation to ideas devel-

oped by him, following one possible thread.

Before continuing, it seems important to us to situate ourselves. I'll speak for myself briefly and Tatiana and Giseli will present themselves too. I can say I was instigated by these two to foster more and more tactical archives and media since the beginning of the 2000, when they organised a festival which became a super important net point in the history of internet and media in Brasil. I work as an artist and researcher, and right now I have a post doctoral position in the same public university where I did my BA in art back in 2000s. I did my PhD in London in Arts, where I lived till Jan 2017. Now I'm back in Porto Alegre, where I helped organised the Forums and other autonomist stuff, and in my everyday I inevitably do a constant cartography of what is left from the institutional experiments rehearsed here, totally completed erased today with the rise of right wing and conservative power. In 2011 I created the open platform [Desarquivo.org](http://www.desarquivo.org/) <http://www.desarquivo.org/>, that gives access to documents, articles and images around the production of collective, critical, radical and public sphere oriented artistic and non artistic practices in Brazil. Me, Gi and Tati got together again nearly two years ago to start reorganising important tools/archives/histories and narratives, creating tools and searching for funding as well, that is where this contribution comes from.

\*

thank you very much for your text it is really a profound reading of the workings of humane, earthly - of the infrastructures that sustain enclosed cybernetic systems. Our research in a way also approaches these captured and invisible borders but at the same time point to scapings that we understand as inherent to subaltern bodies. As a reference we want to bring Maca Gomez-Barriz and her work *Extractive zones* that refuses a totalitarian logic of these zones refusing the logic of apocalyptic endings bringing temporal horizons (senses of space, time and genealogies), distinctive world views that are cyclical and character-

ize? a permanent insurrection (Silvia Rivera Cusicanqui). Also linking with Paulo Freire, ?the head thinks where the feet steps?, in the middle of planetary complexities we have to have conscience of the place, of the relations around us and think from the bioregion more than artificial geopolitical borders. At territories where a homogenization happens by conflicts of elimination of differences its not possible to talk about conformity. its more like a dance, a fight, where differences influence transform clash and go but above all, stay.

\*

We wanted to share with you all, in the meanwhile, the Parlamento de las Mujeres (Women's Parliament) happening now in La Paz, Bolivia, organized by many women, indigenous and feminist, we have been following in the last years. Women on the front line -

<https://twitter.com/MuyWaso>

Fwd:

Re: APRJA wish wishes that you  
Digest, Vol 2, Is- are all well  
sue 8 on 16/11/2019 at  
22:25 from Bi, Wenhao Cristina

Dear Sudipto and all,

Thank you for your contribution to open up the discussion on networks.

What attracted me most in the conversations are (a) the emphasis on the non-computation and materiality and (b) the perspective on frictions. The former has made me think about the political and cultural intentions and debates that are covered within "technologies" and their designs. For social media platforms, for example, it is the "requirement" for users to keep updating whatever content (by asking "what's new?") that leads to the dominance of exchange value over use value (in Dean's words). In the delivery case, it can be argued that the pursuit of speed/acceleration is generally unquestioned. And instead of tracing the value/ideology behind

such pursuit (e.g. capitalism), it is a question of designs and settings of interfaces - how is "fast" taken for granted? what kind of labour is datafied/documented/archived? what is missing by simplifying things and relations into nodes and edges? As for the latter, is it possible to borrow a bit more from physics? I am thinking about inertia or the conservation of energy - without force (or in our case, labour, perhaps?), things won't change. But just a rough idea.

By the way, the discussion may be able to fit a few topics listed in the association for cultural studies conference 2020 (<https://www.crossroadslisbon2020.org/topics>), proposal submission deadline 30 nov).

Best, Wenhao

Week 2:  
Research Net-  
works on 18/11/2019  
at 08:52 from Magdalena  
Regina Tyzlik-Carver

Dear All Greetings from a very grey and rainy Aarhus where I am based. It is good to commence the day with this post to the list and continue the conversation started last week on the subject of Research Networks. This week, Ozgun, Juan and Kalen continue the discussion introducing their research more specifically, although we already had a chance to get to know some of your thoughts on the subject after reading your responses to the previous group. Thank you for sharing those.

I am very much looking forward to this week and would like to invite Naja, Nicola and Rodrigo to respond to this week discussion. And of course everyone else too!

APRJA  
Digest, Vol  
2, Issue 11 on  
18/11/2019 at  
19:11 from Wing Ki  
Lee

Hi all,

Magda

Greeting from Hong Kong. Please find my contribution in the below. I also insert four images to go with the

text. I hope it will work.

Will be in China for a couple of days for work. I hope the VPN will work so that I can catch up with the response.

See you all in Berlin, Kalen/ Wing Ki LEE ?

Network Unavailable: Great Firewall, Interesting World, and Airdrop

The eternal network was conceived by Robert Filliou and George Brecht in 1968; a year of worldwide civil protest to contest social and political repression. The eternal network is a conceptual framework that connects a proto-globalised world. It guides us to think the interconnectedness of individual activities, be it social, political or artistic, in a network model. The performativity of the eternal network's visual model, collectivity of artistic activities through participation, and emphasis on a decentralised structure are still of relevance in today's artistic practice and thinking.

The background of the discussion of this paper is situated in 2019 New China, another year of political oppression and civil disobedience in a global scale. It is important to highlight the term 'New China' is a conceptual entity that in itself is not only a geographical or a territorial definition, in particular in the discussion of network culture. The term 'New China' is defined by an array of ideas such as nationhood, nationalism, economic protectionism and expansion, political ideology and hegemony, information and algorithmic-ideological control and etc. Also to think about the relationship of China, Hong Kong, Taiwan, the Sinophone, and their relationships with the rest of the world that is connected in a way or other, for example. The influence of New China's network culture practice is imperative to discuss the following case studies and to demonstrate how unavailable network, instead of the common-sensical 'network available', is a way to distinguish and understand the network culture in New China, and gradually extends to the concept and question of censor-

ship, cyber nationalism, and resistance.

In what ways shall we understand 'New China' and the unavailable network as such? First of all, the Great Firewall of China (GFW) offers a geographical, geopolitical, infrastructural, and informational tool to understand cyber protectionism in China. A gateway of network that was started in operation since 1998 and being considered as an 'alternative model' or a 'parallel universe' of the 'Internet', the GFW of China is a 'wall,' a 'shield,' a 'sword' and a 'war' in itself (in James Griffith's analogy).[1] Between the cyber network within China and the world, most web search engines, social media and networks, and information that one takes for granted are blocked without virtual private network (VPN) service. As an alternative model, behind the GFW of China, China has its own search engine (Baidu instead of Google) and social media and network (Weibo and Wechat instead of Facebook and WhatsApp), its own e-commerce mobile platform (Alipay), its own Uber (Didi) and many more. The parallel universe analogy is evident by how the China version of a network is created, operated and functioned likewise to an earlier model yet another worldly of fact, truth and ideology. An artistic practice by Chinese net artist MIAO Ying's Chinternetplus.com project (2016) reveals the counterfeit ideology of Internet culture in China and the China Channel project, a Firefox add-on, by developed by Aram Bartholl, Evan Roth and Tobias Leingruber (2008) offers an experience of GFW outside China.[2] The blocking of globally-recognised and transmitted information and services is a defense mechanism (think shield) and constructs a state machine and algorithm-ideological apparatus that allow censorship of information, image and idea. For example, search engines in China filter anti-government and anti-CCP information for the sake of proper governance and cyber protectionism and cyber nationalism. Such defense mechanism via censorship extends to social control, the prohibition of sensitive content and economic protectionism that addresses the political economy of network culture in China. One may argue the network culture of 'exclusion' and 'block-

ing? in New China ramifies layers of ?network unavailability? in the everyday life, as a network to disconnect the omnipresent ?Internet?. As a closed national network system itself and operated in parallel to the transnational ?Internet?, the GFW of China also demonstrates, be it distressing or deliberating, a decentralised and ?autonomous? network model, that works and counteracts. Also the GFW of China is not the only national network in the global context: for example, North Korea operates the Kwangmyong network, a national intranet, and Naenara (<http://naenara.com.kp>), the browser, to its citizen, and it can be accessed outside North Korea. Both the GFW of China and Kwangmyong network provides a rather extreme illustration of cyber nationalism. A network of political economy, economic protectionism, nationalism; a network that is not made available to all, but of national interest. Cyber nationalism does operate on a language level, for instances, it is not easily accessible to browse and search information and database from Japan, or Russia, if one does not know Japanese, or Russian. The GFW of China, Kwangmyong, the deep web, the dark web, all these microcosm outlines and questions the assumption, integration and interconnectedness of one widely available network. The utopic vision of interconnectedness of a network should be called into question, as the commonly known available network is only the tip of an iceberg.

Fei Jun's interactive installation ?Interesting World? (2019) at the China Pavilion, the 58th Venice Biennale exhibits the performativity of the network culture under the ideology of New China; and such performativity could only be achieved by an offline system. At the China Pavilion, a lens media projection of a presumably offline and ?faux? face-recognition technology of many ubiquitous image uncertainties is exhibited. As the exhibition text goes, the China Pavilion is rendered into a ?communication system?; through integrating ?artificial intelligence, new media and the traditional logic of Chinese art, intersect the parallel world, the virtual and reality? to evoke viewers to think.[3] The installation

brings visitor to a simulated image surveillance environment that is pervasive in contemporary China. It is assumed that, in the most reserved sense, more than 200 millions surveillance cameras have been installed in China and perform face recognition technology and mass surveillance to support the Social Credit system. The lens media projection is a snapshot of the image surveillance economy in New China.

Postulate Fei Jun's work as an image surveillance environment, it as such could be explained in two conceptual layers: through identification, and through experiencing the mechanism. A camera captures visitors who approach the lens media projection in real-time and the artificial intelligence programme identifies some prescribed identities of the visitors, in rather limited categories. I was identified as a 'dancing-master' because of my body movement, even though I am not good at dancing at all. Two other dancing masters were identified simultaneously. More identification through a set of colour-coding system: an old man, a tourist, a Floridian, a couple as 'kin,' a shoulder bag and an evening bag. The identification was of constant operation, mutation and ever-shifting. A moment afterwards more categories were identified: a guard, a Japanese, an instigator, a gal, a grandfather, a saunterer and a clutch bag. Questions arise. Is it a functional and activated face cognition system? Is it a live recording for image data mining? What was the database of the prescribed identity and categories? Are we, the visitors, being watched, data-mined, analysed and archived? (Is there a consent form available to sign and agree to participate?)[4] Or is it just an offline facade to demonstrate China's world power in imaging technology, artificial intelligence, and state's surveillance in a major world exposition? Unlike the state surveillance system in China or any other geopolitical configuration, visitors stand in front of and experience the two-side of image technology, the capturing, by a surveillance camera, and the analytics, through the visualization (such as colour-coding, and keyword and identity) on screen. The experi-

ence is produced by a choreographed and performative act of artificial intelligence to demonstrate China's place in today's world power relations; and at the back end of the work, perhaps, there is no database, no network, and network unavailable.

The final case studies that I would like to draw extend to the everyday life - the current Hong Kong's political situation and the flow of information. In the past five months, citizen and protestor have manoeuvred and communicated via peer-to-peer network to avoid surveillance from the authority and to reach those, for example senior citizen, who has a smartphone but may not use Internet browser. Internet meme of pro-democratic message and critique to the authority is sent through airdrop (via Bluetooth) that anyone can choose to accept (receive) in the public sphere, or decline. An alternative "propagandist network" is created. <http://www.lihkg.com/>, a web-based forum and a Hong Kong version of Reddit, becomes the platform of information dissemination amongst the protestors during the Anti-Extradition Bill Protest. However, for many occasions the platform was DDoS attacked that temporarily terminates communication amongst the protestors for a short period of time until the gateway and service are resuscitated. Livestream videos by photojournalist and citizenphotojournalist are also broadcasted via social media platform, such as Facebook, as reporting and witnessing the event. However, with a great amount of reactions by the viewers such as "like", "love" or "angry", the video would experience video lag because of information overloading. Viewer's reaction, just a click of a button, ultimately becomes the burden of bandwidth. The overloaded bandwidth situation is also not unusual at the protest site. With a mass amount of protestors constantly checking chats, threads, map, video-streamings and many other information the public wifi and the network per se are overloaded and not to be able to function. What we, Hong Kong protestors, experiences in the past five months are on the both edges of the Internet: that network bridges and connects, and network that could not be function

as the way we expect.

In the course of writing, the Hong Kong SAR's government is pushing forward the Emergency Regulations Ordinance (ERO) that may exercise regulation and control on the Internet, that includes to regulate or ban Telegram messaging app and lihkg.com the web-based forum. The Emergency Regulations Ordinance, if it will be exercised in the future, could be seen as the extension of or rerouting to the Great Firewall of China. The Ordinance itself is controversial and yet it hints the end of Freedom of Expression, Speech, and the flow of information. The Great Firewall, Interesting World, and Airdrop and many others suggest a New China's model of unavailable network that seems distant and yet happening. Dare I ask, would this model otherwise have the potential to influence post-globalised information structure? Will 'network unavailable', state authoritarianism and protectionism be an inevitable network future?

[1] James Griffith, *The Great Firewall of China: How to build and control an alternative version of the internet*, London: Zed Books, 2019.

[2] See <https://www.chinternetplus.com/>; For the China Channel, see <http://chinachannel.fff.at/>

[3] *May you Live in Interesting Times*, Biennale Arte 2019, Short Guide, p.128

[4] The question seems unnecessary here but Shu Lea Cheang, media artist who represents Taiwan in the Venice Biennale 2019, also takes on surveillance and technology at Palazzo delle Prigioni, a former Venetian prison. Before walking into the site-specific installation work, a privacy policy in accordance with the EU regulation with regard to the processing of personal data and on the free movement of such data was shown for visitor's information.

Week 2:  
Research  
Networks on

Wing Ki Lee

19/11/2019 at  
09:07 from tati

hi magda, all

we still havent send ours only a comment on the first text! by the way my name is tatiana wells from brazil, Rio Grande do Norte, or Tacira. i maintain an independent blog on postcolonial theories and practices <https://baobavoador.noblogs.org/> and a vegan food stall in the streets of pipa village <https://baobarangovegano.wordpress.com/> hoping to catch you all in germany, and see my beloved partners at digitophagies :)

The theme we bring is critical cartography, the creation of memory devices ? archives, maps, stories, videos and recycling networks as a feminist and communal pedagogy, making evident the fissures and dead ends with reparation ? rereading, reassesses ? and also a subaltern creative subjectivity.

Tacti-  
cal

Archives Car- i will send it at a  
tography: de-ar- separate email now  
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arts and internet pro- best! sawe!  
duction in Brazil from the tati  
last 20 years on 19/11/2019 at  
09:15 from tati

hi sending our text again as \*body  
geoff thank you so much for your com-  
ments, will answer shortly on a sepa-  
rate email

Tactical Archives Cartography: de-archiving  
part of the arts and internet production in  
Brazil from the last 20 years

Giseli Vasconcelos, Tatiana Wells and Cristina  
Ribas

Keywords: tactical media, archive, history,  
cartography, activism, feminism

From the year 2000 onwards an infinity of ini-  
tiatives produced in Brazil brought to prac-

tice the development of "tactical media", as described by Giseli Vasconcelos, Tatiana Wells and Ricardo Rosas (in the Midia Tatica Brasil Festival, 2003). The beginning of the invention of these media configures networks of production that are directly associated to several modes of artistic production and intervention in public spaces and public sphere. Inspired by marginal and hybrid perspectives that have sprung by counter-cultural associations (Rosas, 2002) alongside media culture of the 1990s that have influenced digital arts practices, in the years that followed, unseen connections were woven between the artistic production and digital culture. Years later this would also emerge in the realm of public policy, as well as developing proposals of social struggles in direct relation with vulnerable groups? such as groups with no access to media at all.

Some authors identify in that moment the inauguration and also a certain type of articulation between art and activism (curating the term "artivism" [1]) ? which is something we don't address ourselves. Looking at this production today, some developers, artists and researchers (Vasconcellos, Wells e Ribas, 2018) started to retake part of such history and have been developing in the form of a website (or "tactical archive") and processual and visual cartography, a narrative about the diversity of the internet's production, media, social networks (pre-boom of the networks), art, intervention and memory devices for the sharing of these productions. What these researchers/archivists are recovering refers to festivals such as the Brazilian Tactical Media Lab, projects such as Digitophagy, Submidialogies, platforms such as Estudio Livre (off line now) and Desarquivo.org, Free Knowledge Encounters, and other festivals of activist, arts and media production including immersions, performances and collective creation from libertarian inspiration.

As a contribution to the Transmediale event in Berlin, this presentation aims to investigate the possibility of looking at this history between the years 2000 and 2018 from the con-

cepts of critical cartography (having the cartography as an (anti)methodology); and archive/de-archive (thinking through the contemporary archive as the recombining and extendable archive, but also the archive as a database, organized and systematized, with its own processuality (Ribas, 2017)). When we look back at this history from today, and the narratives that were produced from them, we address today a gendered perspective, grabbing onto gender also in its tense points (female gender as the gender produced to be invisibilised and exploited). That is why it makes sense to us to affirm ourselves as women (and women who care) in this research and tactical archive procedure, calling together references such as Bellacasa (2017) to think through feminism as a technology of care, as well as repair. She sustains that the repair and maintenance of technical infrastructure are a practices of care, creation and reproduction of life. The concept of cartography is here associated to subjectivity studies, a critical analysis to colonial cartography that advocates, instead, for a co-production of territory and subjectivity. This makes possible the singularization of the "cartographers" (Rolnik, 2011), producing a trajectory to look at the specificities of the productions in relation to its social complexities. We propose, together with a sight to subjectivity studies, assuming that cartography can also produce equally a visuality ? such as the visual cartography we have been working on, and that is partial and not total ? of the stories we fostered ourselves, and which are disposed to be completed by others. Regarding the ?tactic?, we think that the ?tactical archive?, its meaning, design, or curatorship, looks into bringing about politics, counter-narratives and transversalities in its workings, of participation between other narratives and archives (Wells, 2005) understanding its possible role now, presenting a rich history that needs much scrutiny and detailing, to be able to reinvest in the present.

Looking from today, with the massive rise in the use of corporative social networks, and even the declaration by some of the death of

the original internet's project, we need to cross over the concepts of art, media, network, internet and archive and instigate a research that looks at the possible effects of a work that revisits this history of approximately 20 years. Also in a way to reinforce connections with new research, data bases (such as Archive.org and more), and initiatives (re)creating the internet. As Félix Guattari has envisaged, almost 30 years ago, there is a need to understand the effects of media in us, in our existential fluxes, generating what he calls the post-media era (Guattari, 1992). Or as it reminded us Apprich in his 2013 text [2] (...) "The practices of tactical media have not disappeared but have been incorporated to every day life (post-media)."

>From an era of media laboratories with recycled equipment collectively constructed by its own communities (such as metareciclagem), operating free software programs and open licenses as much as autonomous spores of social networks - to the actual state of artificial (un)intelligence where apps and mobiles operate on going captures feeding up capitalistic algorithms, the reflections urge: how can those narratives transform and interact with current experiences in the field of art and media?; what new network assemblages, of production, of sign, of agency have been produced and are still being produced?; what forms does the - previous - networks take to rethink institutional structures and have created new forms of cooperation and artistic action?; what happened when part of these productions has been incorporated institutionally?; which current research relate this production with contemporary art and how that helps looking at the aesthetics of this production?; which assemblages this practices institute and differ from in terms of forms and norms to corporate media and networks?

This presentation and problematization does not want to account for the whole of networks, groups, projects and artist collectives from the year 2000 to today in Brazil, but host some reflections around cartography (subjective, visual) and archive/de-archive, also

from the perspective of co-production and articulation between production of knowledge, knowledges, aesthetic production and media. Some authors situated at the studies of subjectivity such as Suely Rolnik (2006, 2011), and Manuela Zechner (2010), who has been writing from feminist perspective for example, are going to generate subsidies to investigate this history. Zechner (2010), attentive to how can we reconfigure critically reproductive labour and social reproduction, doesn't see a separation between forms of thinking networks and our own subjective cartographies. She wants to bring to light our modes of production: ? So, what can be said from the apparent disconnection between the forms of network that structure our work, relations and economies, and our necessities of supporting, nurturing and sustaining our lives? Besides and taking in the long list of complaints against the networks and its alienating dynamics ? and certain sensationalist affirmations about the networks that have been disseminated ? as our own day-to-day bases, the networks are also spaces of life and care.? In this sense, there is a strong bond between subjectivity production and the strategies created (such as what have been thought as ?tecnopolitics?) to reorganise us in our networks. We can see that in the new productive relations from the year 2000 onwards does not defend itself as a collectivization escaping capture, after all, collaboration and participation were also ?pimped? By cognitive capitalism (Rolnik, 2006); and reiterates the refusal of subsumption of new media immediately as ?art?, also nurtured by the sponsoring of large communication companies, which was uncritically produced in the major cultural institutional realm in Brasil, without engaging in the complex invention of new strategies resisting such captures. We want to, from a feminist perspective, look at the production of value that happens at the singularity of certain articulations, that occurs at the self inventivity and the negotiations that institute themselves. Reluctant to the constant over-codification of production and its own discourses is a necessity to maintain the vitality of the process (resistance/existence), constitutive

resistance and contingent, perspective that the cartography is going to contribute, as a tool, to analyse, research and agency.

More recently, looking at the many findings of this history, some feminist perspectives are being acclaimed, as pointed by Wells already in 2005, and that is going to request a different engaging: ? The new women struggle involves to challenge its forced systemic moulding, resisting the mediated reading of ourselves, of our bodies and desires, or through forms of crisis reaching the youngsters. A woman taking a microphone incites a whole crisis, and that demonstrates courage, principle of changes. It is as critical as much as the opening of exclusively feminine spaces that have a conceptual structure of mobilization, action and discussion, open and public, to the creation of cultural artefacts that can involve them in transformative processes, experimental, giving tips to other women in (vero)similarity.?

(De)Organized inevitably by subaltern ?digi-tophagys?, in ?epistemic disobedience? (Mignolo, 2013) the development of methodologies and tools that shifted power relations in digital technologies have been maintained, created and recreated by some of these processes. When associating cartography, archive and feminist perspective to share in this Transmediale we aim at fomenting a space where subjectivities in conflict can dive on the creation of their own existential territories and in which their production, modes, realities, affects, are seen in their processuality and vital relations. [3] From this we propose to think radical networks also as inevitably recycled networks, weaving archives and narratives as collective conjunctions, thought-with, as suggested by Isabelle Stengers and Donna Haraway, proposing that knowledge and science imbricate practices and bodies with each other, constructing a feeling of signs, cells, words, hardwares, descriptions and theories, cyborgs and cosmopolitics, ?objects, assemblages, and technological infrastructures and agents more or less visible (...) that unite and sustain life and gives continuity to its

diversity?.

[1] A explosão do a(r)tivismo, Juliana Monachesi, Jornal Folha de Sao Paulo, abril de 2003. Acesso em 19 de setembro de 2019 <https://www1.folha.uol.com.br/fsp/mais/fs0604200305.htm> [2] Clemens Apprich, 14 February 2013 Acesso em 19 de setembro de 2019 <http://www.metamute.org/editorial/lab/remaking-media-practices-%E2%80%93-tactical-media-to-post-media> [3] Zechner affirms ? The disintegration of social rights and public institutions in the times of accumulation by crisis and austerity makes urgent the construction of networks, and at the same time, of ?hacking? them with care. There is another form of thinking networks at the horizon, as the ways from which we produce our lives in relation one to another, in the context of the current deadlock??

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Hello all,

I have read both contributions and I found them extremely interesting. The notions that most caught my attention are the idea of radical networks as "recyled" (from the text shared by Tati) and the idea of users' emotional reactions "slowing down" the network (from Kalen's).

I wanted to quickly respond by suggesting a couple readings that might be interesting to think about. In terms of feminist cartography I have recently met a scholar who focuses on activist representations of femicide. Her name is Helena Suarez Val and she has written a very interesting paper about feminist digital mapping: [https://www.researchgate.net/publication/326097504\\_Vibrant\\_maps\\_Exploring\\_the\\_everberations\\_of\\_feminist\\_digital\\_mapping](https://www.researchgate.net/publication/326097504_Vibrant_maps_Exploring_the_everberations_of_feminist_digital_mapping) I also interviewed her, and our chat focuses on the politics of geo-location and aesthetics: <http://digicult.it/internet/tagging-aesthetics-5-feminist-politics-of-geolocation-interview-with-helena-suarez-val/>

Kalen's conceptualisation of New China through digital infrastructures made me think of this article about the "Red Stack": <https://hkrbook>

s.com/2018/04/17/into-the-red-stack/ Here De Seta reviews three books and puts them in dialogue with the notion of Black Stack, coined by Bratton and Red Stack, coined by Terranova. I am not an expert on the topic, but I think the notion of "red stack" may be useful.

Apologies for responding too quickly  
without waiting for all the

Week 2: contributions to come in,  
Research but I wanted to make  
Networks on sure I wouldn't  
19/11/2019 at 18:20 forget the links  
from Juan Pablo ;)  
Pacheco

Best,  
Nicola

Hi everyone,

My name is Juan Pablo Pacheco, I'm a researcher, artist, and writer originally from Bogotá (Colombia). I have undergraduate studies in film and cultural studies, and a Master in Fine Arts from the San Francisco Art Institute, focused on audiovisual and new media. I was a professor of videoart at the Javeriana University of Bogotá for two years, and I was also a project coordinator at Plataforma Bogotá <http://plataforma bogota.gov.co/>, an interactive lab for art, science and technology, and at Espacio Odeón <https://espacioodeon.com/>, a contemporary art space. During the last laboratories I conducted, we explored the intersections of ecology and art through technology, understanding the latter as the multiple ways in which we relate to each other and our surroundings, creating the foreground through which meaning is possible in the first place. I'm currently doing an MA in Media Arts Cultures <http://www.mediaartscultures.eu/mediaac/>, giving myself time to delve more deeply into the topics and ideas I consider relevant nowadays.

The concept of the territory is particularly interesting to me, as exposed by Deleuze and Guattari, as they explain territorialization and deterritorialization as intimately linked processes that happen through the possibilities of coding and decoding the interactions

with a given space (1987). Technology mediates these relations through a series of infrastructures and devices, circulating ideologies that in turn are constantly informing how we understand and relate to the particular territories we inhabit.

Over the last years, several authors have identified the emergence of new geopolitical relations in the age of computational logic, stressing on the need of understanding the operations of the network at various levels. In his book *The Stack*, Benjamin Bratton lays out the emergence of a global computational order defined by the interactions of complex systems located within a set of six distinguishable layers: Earth, Cloud, City, Address, Interface, User (2015). His book points towards the emergence of new sovereignties in the technoscientific era of the digital revolution, where the traditional geopolitical arrangement of the world is rapidly changing.

The emergence of this new order, which Manuel Castells identified as a networked society (1997) and which Christian Fuchs named global networked capitalism (2008), is defined by the way in which digital information, tech companies, and their infrastructure assume the form of pseudo-states along with some of their functions and privileges, in turn creating new types of territories and borders; what I call networked techno-territories. Even though it is possible to argue that the Earth is always already a networked territory, the emergence of the particular technological infrastructure of the internet and its feedback loop with global structures of power allows us to identify the emergence of new territorial, biopolitical, and ecological orders (Haraway, 1997; Latour, 2016).

The internet's network exists in simultaneity to a host of other networks--material and immaterial--in order to create the possibilities of deterritorialization and territorialization, as mutually constructive processes that inform the flows of bodies, information, and things across the Earth. I am particularly interested in how the internet, an infrastruc-

ture that emerges from colonial dynamics of trade and territorial control, connects while simultaneously encloses, discriminates, and rejects. The processes of participation and connection that characterize contemporary hopeful discourses on digital democracies, easily becomes a process of violent securitization and exclusion. Networked techno-territories are, therefore, not a new phenomenon; they have been the main mechanism through which colonial powers have exerted a tight grip on the flow of resources, people, and information.

In order to illustrate this I will refer mainly to some of my own speculative artistic Research, as well as to the work of Spanish artist Joana Moll and of South African artist Nathan Gates. Throughout my artistic research, I've lately focused on the ways in which the underwater cables that make up the internet, move our digital goods/information through very similar routes to the ones used by container ships, which move the vast majority of the global economy's products. Even though we are not able to touch our digital information beyond the screens that mediate our experience through light, pixels, and vectors, the cables, servers, and data centers that enable this information to reach us, compose a complex material infrastructure tied to global trading logistics (Craig 2012). The similarity between both infrastructures, reveals the profound connection between material and immaterial or electronic goods, both necessary to sustain relations of power through the constant control over the flow of bodies, organisms, minerals, and information. Many of these trading routes have an origin in slave trade routes during the European colonization of most of the Global South, which created transatlantic bonds that still define many of the global infrastructures of networked movement and control.

These routes were mainly charted and formalized during a pre-electrical era, where the light that enabled people to extend the day into the night, came from Kerosene lamps, usually fueled by whale oil. The whaling industry

was a sort of proto-electrical power grid for the fast-growing european colonial metropolis, and the hunting routes it was based upon were deeply connected to the migration routes of whales. The connection between submarine cables, global trading routes, and whale migration routes, generates a space for speculative critical imagination around the entanglements of different ecologies??digital, interspecies, capitalist, migration??in our times (Haraway, 2015). How do these eco-political dimensions generate, organize, and sustain the relationships that make up our world today? How can we better sustain life and death through these technoscientific relations?

Through my own artistic and experimental writing work <http://www.juanpablopacheco.com/>, I have explored these shifting concepts, in particular through the poetic, symbolical, and very material connections between water??as both an element and a state??and digital infrastructures. Through works such as "The Blue Dot" and "Liquid Democracy", I've explored the many layers that compose the infrastructures and promises of the digital revolution in relation to knowledge, politics, and the future, always with the backdrop of water as a space for signification. I'm currently showing my work "Nube\_Illustrated Encyclopedia of Digital Ecology" <http://www.internetmoongallery.com/archive/ArtificialNature/nube/nube.html> at the Internet Moon Gallery, through an exhibition curated by Juan Covelli called "Artificial Nature". The latest technological revolutions are reshaping political and aesthetic representation, posing new and complex ethical questions that need to be addressed at the frontiers of these networked techno-territories. How do these margins fit into the discourse of the digital interconnection of our techno-present? Can we use these systems profoundly complicit with unequal and unfair practices, in order to think of other possible presents?

The artwork of spanish artist Joana Moll <http://www.janavirgin.com/> appropriates and problematizes the circulation of information??in the form of images, video, data??through the

internet, especially focused on the connections between these flows and the material effects they generate. >From border surveillance to trade embargos and the ecological implications of the internet, Moll's work presents the internet as an infrastructure linked to other ecological, political, and social infrastructures, through which various relations of power circulate and shift. Even though many still believe that the internet is a series of desires floating from cloud through cloud through invisible airwaves, several artists and theorists insist on unveiling the materiality of the digital revolution, as it is deeply altering the processes of territorialization and deterritorialization of the contemporary world.

The artwork of south-african artist Nathan Gates <http://www.nathangates.co.za/> questions the apparent intangibility around which many of the ideologies around the internet's network revolve around, using the ambient information around the computer being used in order to alter the orientation, brightness, and order of the different elements of the interfaces visited through an internet browser. The apparent invisibility of the web is a carefully crafted strategy of alienation, which renders the possibility for emancipation from oppressive systems all the more unimaginable, while also covering up the colonial and extractivist practices that fuel the digital economy. The primary materials used to create new technological devices are extracted from countries in the Global South where the demands of the digital world are defining the (mis)use of resources, labor exploitation, and the ongoing pollution and depletion of indigenous ecosystems.

SIDE NOTE: Along with Nathan Gates, and with the support of the ArtBox Digital <https://artbox.digital/en/> association, we developed an interdisciplinary laboratory at Plataforma Bogotá, called "This Speed Has Weight", through which local artists, programmers, writers, and others, explored the material dimensions of the web under Nathan's guidance. These laboratories are crucial in order to bridge these

informational gaps, creating platforms for open participation and experimentation with science and technology through critical lenses.

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Haraway, Donna. *Modest\_Witness at Second\_Millennium.FemaleMan?\_Meets\_OncoMouse?*. Rout-

ledge: 1997.

Haraway, Donna. *Staying With the Trouble: Making Kin in the Chthulucene*. Duke University Press: 2016.

Deleuze, Gilles and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated by Brian Massumi. Minneapolis: University of Minnesota Press, 1987.

Castells, Manuel. *The Rise of the Network Society*. 2nd edition with new preface. Blackwell Publishing Ltd: 2010.

Moll, Joana. "Surveillance through Social Networks along the US-Mexico Border". Proceedings of the EVA London 2014 on Electronic Visualisation and the Arts, BCS, London, 2014, pp. 158-161, doi:10.14236/ewic/e-va2014.19. Accessed 23 Oct. 2019. Week 2: Research Networks on 19/11/2019 at 19:02 from Personal

Sorry for the typos; this week is a bit busy and I didn't have much time to re read this short summary of my research topics.

Looking forward to your re-

Week 2: Research Networks - Geopolitical Aesthetics of Computational Media on 20/11/2019 at 19:49 from Ozgun Eylul Iscen

Dear all,

Sorry for the delay! I am sending my text as attached. This text comes from a dissertation chapter that I am currently writing. This might explain why it is a bit messy (also because it is intensely compressed). I focused on the part that engages more closely with the previous week's discussion. I hope you enjoy reading it.

I look forward to hearing your thoughts on it.

Thank you,  
Ozgun Eylul Is-  
cen

APRJA  
Digest, Vol  
2, Issue 11 on  
20/11/2019 at 23:27  
from Winnie Soon

Thanks for your text Kalen, and you brought up some really interesting artworks to help understanding how ?network unavailable? or network restriction becomes different tactical forms of resistant through the technical and conceptual thinking of decentralisation.

It seems to me that you mark a very clear distinction about network unavailable and available, inside and outside as you brought along the China Channel project in particular and the particular situated Chinese context. But the relation between the projects and decentralised structure is not very clear here yet, and perhaps how might we go beyond the thinking of binary distinction of on and off. What I found interesting is the blurry line via getting on the VPN, which is supposed to act as a virtual point-to-point connection through the use of dedicated circuits over exiting networks to access other forms of data that is otherwise ?unavailable?. But even using VPN in China doesn?t really mean that everything is available per se with the complex entanglement of network infrastructure and temporality. It seems that VPN shifts the power from the state to the citizen but still within a very particular type of setup, constraints and accessibility. Such layering and intervention of network technology perhaps might help to problematizing such binary distinction by focusing on the temporality of infrastructural gaps and intervention.

There are also different ideas emerge through your 5-6 artworks/cases, but it seems that the focus on decentralisation is diluted with the heavy concepts like surveillance, identification, censorship, and bandwidth overload within such a short text. I am thinking perhaps focusing on one specific case might help or if you want to include different examples, you may need a specific focus/lens to tie those together in which each of the example is

supporting the main idea.

Wolfgang Ernst's perspective on time-criticality might help to unfold the politics of network un/available through gaps and interruptions:

Ernst, W. (2006). Dis/continuities: Does the Archive Become Metaphorical in Multi-Media Space? In W. H. K. Chun & T. Keenan (Eds.), *New media, old media : a history and theory reader*. New York ; London: Routledge.

Thanks Sudipto, and others, for a very interesting and insightful discussion.

Just to tap into the discussion at a late stage, I agree that you are on to something very essential in the capitalist mode of production that characterizes the platform, or cloud, or interface economy (however you want to put it). In Sren's and my work, we often refer to computer semiotics and the works of Frieder Nake who at one place asks what it takes to make an interface work? First one has to conceptually understand the problem and task (what searching, shopping, etc. is); then a program/build a machine that can do this indefinitely; and finally present it to a user in such a way that he/she thinks that the computer does it all by itself (or, as you put though Nishant Shah, "loops which modulate relations of ease-of-use and everyday habits that tend to obfuscate structures of power?"). Nake describes the user's work as an activation of the "frozen? mental? labour (much like Marx' "dead labour?"). Though, computer semiotics didn't often address the politics of this and tended to focus almost only on how to make the work of the computer comprehensive to the user, there is an element of Nake's thinking that fits your work well (not that you are in need of more definitions :-): The "frictionless? presentation of a user interface is designed

to hide frictions ? a giant phantasmagoria of globalization.

I agree with S?ren, that giving examples would make your argument stronger. ?The interface? works well, because it allows you to address how this phantasmagoria come about, something to be analyzed or played with (as in a number of art works).

Your discussion of ?borders? or ?zones? is of course there all along, but could perhaps be bright forward even more? ... this idea that to make the phantasmagoria of the interface (metainterface) work, the outside of the network has to be treated as a ?standing-reserve?; and your pointing to how the interface handles/harvests ?the outside? of the network (including not only all aspects of our lives, but also the environment) as a balance on a knife?s edge between order and (environmental)disaster. I think this is a highly relevant issue to bring forward.

So, nice work. Looking forward to hearing and talking more.

/Christian

Week 2:

Research

Networks - Geopo-

litical Aesthetics of

Computational Media on

21/11/2019 at 14:07 from Nicola

Bozzi

Dear all,

Apologies for writing a second email to the group, but I also wanted to respond to Ozgun and Juan's texts.

First of all, thank you both for some rich contributions, dense with ideas and also art links (I really appreciate those!).

I think the works discussed by Juan raise the important question of the visibility of infrastructure, not so much in terms of the interface but in terms of the material elements that power it (loved the Moll piece showing the trees needed to power Google, for exam-

ple).

I was also intrigued by Ozgun's discussion of Jameson's cognitive mapping and the critique of Galloway's reading of interfaces, and I agree in particular with the idea that digital aesthetics can enable but also prohibit political encounters.

Generally I think it is useful to move beyond the deterministic discussion of the interface as the main repository of ideology and into the figures that determine difference in real geographical space, which I believe underlie and co-determine global engagement with interfaces - be these figures material counterparts to the digital (introduced by the tree icon or the sea gif, in some of the works linked in Juan's email) or the socio-political figures mentioned last week (the gig economy workers, etc). <-- I hope this paragraph makes sense!

	I am happy to see these are re-
Week 2 - re-	curring themes in this
sponse on	discussion and
21/11/2019 at 14:36	look forward to
from Naja le Fevre	discussing them
Grundtmann	in person.

Dear Kalen,  
Juan Pablo, and  
Özgün (and everyone  
else!),

Best, Nicola

I really enjoyed reading your texts - below are my responses. Please let me know if you have questions or anything is unclear.

I look forward to meeting you all and to continue the discussion in Berlin.

All the best, Naja

----

Dear Kalen,

Thank you for your text! I really appreciate the juxtaposition of different network(ed) cultures.

I think that the opposition between the Unavailable Network and the Available Network is very helpful as an entry point for engaging with two very different networks from a global point of view.

I do however wonder if the unavailable-available dichotomy of the two networks might be challenged by the case study of Fei Jun's installation (and the Firefox add-on) for example - what happens when the Unavailable Network is performed within the framework of the Available Network?

Your text made me think of the work by Noble (2018) and Chun (2016; 2018), who both engage with the ways in which the algorithmic logic of the 'omnipresent' Internet reinforces discrimination and segregation (the work by Renée Ridgway might also be interesting in this context). I'm curious as to whether the relation between the Unavailable- and the Available Network might go beyond one of negation/exclusion and open up a discussion about the performativity of networks and the different ways (and degrees to which) networks exercise power through flows (and lack hereof) of information.

(I find it a bit difficult to follow where the notion of the decentralized network plays a role in your text, but that might very well be my lack of knowledge.)

Noble, Safiya Umoja. 2018. Algorithms of Oppression: How Search Engines Reinforce Racism. New York: New York University Press.

Chun, Wendy Hui Kyong. 2016. Updating to Remain the Same - Habitual New Media. Minneapolis: University of Minnesota Press.

Chun, Wendy Hui Kyong. 2018. Queering Homophily. In Pattern Discrimination. Minneapolis: University of Minnesota Press. ----

Dear Juan,

Thank you for your text. I find the relationship between digital- and pre-digital infra-

structures very interesting, especially in light of the immaterial-material opposition that often haunts this 'pair'.

I myself find Hayles (1999), Hayles' media-specific analysis, and Massumi's (2002) distinction between the digital and the virtual very useful when thinking through and with concepts of media.

I'd like to hear more about your notion of the 'networked techno-territories', how it intersects with the other thinkers that you mention, and how it informs a discussion of the digital altering of 'the processes of territorialization and deterritorialization of the contemporary world'.

Last but not least, I really like your piece 'The principle of all things water' - it made me think about Manovich's engagement with the wave-filter in photoshop (2013), which I think simplifies the connections between pre-digital and post-digital media by example of a digital instantiation of an otherwise analogue phenomenon.

Hayles, N. Katherine. (1999) How we Became Posthuman. Chicago: The University of Chicago Press.

Massumi, Brian. (2002) Parables for the Virtual. Movement, Affect, Sensation. Duke.

Manovich, Lev. (2013) ?Understanding metamedia? in Software Takes Command. New York: Bloomsbury Academic. ----

Dear Özgün,

Thank you for your text. It was a very interesting read and I found that it resonated with some of the things that I concern myself with in my project, specifically the relationship between the one-many, subject-collective, part-whole, experience-abstraction etc.

I often find myself boiling these relations down to a question of monism versus pluralism (and the different notions of difference and

similarity that the two employ), which I guess is also somewhat reflected in your use of Jameson (being a Marxist) and Chun (I am here thinking specifically about her critique of homophily within contemporary network science). I'd be curious to discuss this with you in Berlin.

I am not familiar with Mirzoeff's conception of visuality, but I think it could be very interesting to discuss it and how "the opposite of the right to look is not censorship" in the context of Kalen's project.

carto-  
graphic mo-  
ments on  
22/11/2019 at  
14:39 from Mag-  
dalena Regina Ty-  
zlik-Carver

Dear Kalen, Juan,  
Ozgul and others,

So exciting to read your contributions which gave me an impression of charting a space, a terrain that is being formed and mapped in your different examples. Another cartographic moment/practices which already featured in the previous week. Is a map a too obvious format to consider as a starting point/departing from for a publication at the transmediale?

Kalen, the 'unavailable network' is an interesting proposition not only because it captures the tendency that is much more global today (and in fact always has been) , and your example of Chinese context makes it very concrete, dare I say real, in that the totalising power and desire for control that can be executed through protocols as GFW or ERO which are at the core of such networks. Protocols as these, as we know, are not just a feature that can be attributed to the Chinese internet, but they function at different scales, more or less visible, in networks of all kind (Facebook's resistance to regulate political campaigning on their platform is a different and opposite example of such tendencies that have influenced networks in the West). What to me is of special interest in your contribution is the speculation on availability and access that 'unavailable network' flippantly points

to. Perhaps my reading of 'unavailable network' is overly dialectical but the examples from Hong Kong that you refer to, and also the ChinternetPlus seem like cases that could help in unpacking this. This speculative mode of reading your contribution is possibly also inspired by your reference to the eternal network by Filliou and Brecht, and the first image which you proposed that links it to the telepathic music artworks they developed. It also seems to link to the proposition or a call for 'other geometries' that Femke Snelting (via Geoff's email) introduce to our discussions here as well. I am curious to see if this is something that will feature more in your final contribution to the workshop/publication.

Juan, I read your reference to materiality of water as a metaphor for what you call 'networked techno-territories' and which you reference to 'new territorial, biopolitical and ecological orders' in the work of Haraway and Latour. This reference is still in passing and so it would be interesting to read how these concepts connect and how they frame your research specifically. But I do find your provocation to think of water as a principle for studying the territory very promising and would like to have more of an explanation how this concept links to the examples you give of your own work. Reading your text I remembered of a keynote by Francoise Verges from Transmediale in 2018, I think, whose work explored the relation between water and capitalism, infrastructures and migratory and trading routes. (I believe there must be a recording of it in transmediale archive). I am not overtly familiar with her work but I remember reading her article from early 2000s Writing on Water: Peripheries, Flows, Capital and Struggles in the Indian Ocean in where the water, specifically Indian ocean was considered a cultural and political space that helps to map organisation of power, identities, resistances, also those that existed before white colonisers entered the terrain. Perhaps this reference might be of interest to you.

Ozgul, Cognitive mapping as a problem of visu-

ality and aesthetics is an exciting direction and especially your question 'what political encounters digital aesthetic enables or prohibits today, that exceeds beyond the interface as well as the obvious /direct operations of capital accumulation? has a potential to frame this focus on the relation between visibility and cognitive mapping very well. This is an ambitious proposal and so framing it closely around the reading of the examples that you introduce towards the end would help in this. There is the difference and cognitive mapping should not be equalled with visibility and I am still wondering about the relation between cognitive mapping and counter-visibility that you introduce in your text, while at the same time problematizing it by bringing the issue of idealisation of the other/the subaltern. There is something very productive in your critique here and I wonder if this can be further expanded especially in relation to the 'disjunction between experience and abstraction'. Somehow 'capital hitting the ground' seems like a great figure to be made more concrete through the examples of art projects you suggest. I am especially interested in seeing how you see this works in the Bassem Saad's "Cared for by Chains and Loops".

I am very much looking forward to continuing our conversation here I encourage others to respond too. The three examples are all very distinct cartographic moments charting different territories while at the same time situated within networking infrastructures whose totalising effects are expanding. In the context of our workshop at Transmediale, I am thinking about what kind of format these might take for the publication and so find it really productive to think of these counter forces that are being

How net- mapped against the net-  
works really work. All best,  
work? on 22/11/2019 Magda  
at 14:41 from Christian  
Ulrik Andersen

Thank you Kalen for an informative text on New China. There is certainly a lot to discuss. While reading, I was

thinking of how the described situation relates to a longer history of social movements? use of network technologies, including e.g. Occupy or The Arab Spring (whether it would be worthwhile contextualizing the text in this history?). You seem to point out that something particular is being played at the moment in Hong Kong / New China. The current protests seem rather far from ?twitter revolutions?, the techno optimism and ideas of social media empowerment of that particular moment. Instead, you point to how networks exist in real life, caught between the execution of many different layers of power and control: the technologies themselves (VPN, firewalls, facial recognition, etc. - do they really work?), network imaginaries (globalization, eternal networks, de/centralized etc.), state surveillance, Nationalism, One State & Two Systems, the art market (the Venice Biennial and the Chinese Pavilion?s relation to New China), and possibly more. I think this is a really interesting way to think of the relation between networks and social movements in HK and in New China, but I also wonder (perhaps along similar lines as Winnie) how the text can establish a better connection and coherence in all this? Or, perhaps be more clear in its incentives and conclusions?

APRJA  
Digest,  
Vol 2, Issue  
11 on  
24/11/2019 at  
15:23 from Wing Ki  
Lee

Dear Winnie,

Thanks very much for the input and comment. I agree that the very binary distinction and thinking of ?available? and ?unavailable? network that I have made should be done (and unlearned). What is interesting is the temporality, the spatial-infrastructural, the gaps, and the intervention (as aesthetic/ artistic resistance). Will definitely look into Wolfgang Ernst?s text (seeing him the coming week for a media archaeology conference, exciting!)

APRJA                      Thanks again. Take care,

Digest, Vol  
2, Issue 19 on  
24/11/2019 at 15:29  
from Wing Ki Lee

Kalen Lee

Dear Magda,

Thanks so much for your comment. Really appreciate it. I assume my take on the China context is not situational, as you said. During writing, I have been thinking about Iran, the US, Russia, and many other places that how authoritarian state control network and plays a huge part in the network politics. Will be looking into Femke Snelting's text in transmediale and will give more thoughts about the contribution in the workshop.

Looking forward to meeting you and everybody in Berlin.

x  
Week 3 - Re-  
search Networks on  
25/11/2019 at 11:09 from Win-  
nie Soon

Dear all,

Greetings from Aarhus (continuously being grey but less rainy).

Thanks for the posting last week and we had some nice mail feedback loops. Let's continue this week with the discussion of research networks, addressing the questions 'How do we think about networks under post-digital conditions? What does this imply for research?'

This week we will have Naja, Nicola and Rodrigo continue the posting of their 2000 words (approx.), introducing their research and the subject relations. Besides, we also have Group 4: Maximillian, Rebecca and Wenhao to be invited as respondents. Same as previous weeks, anyone is welcome to jump in and respond.

Beyond  
the Tag  
Cloud: From Fig-  
ures to Figuration

Very much looking for-  
ward to your writ-  
ing/posts.

on 25/11/2019 at 16:56

from Nicola Bozzi

Best, Winnie

Hello all,

As requested, here's a brief intro, and my theory-heavy contribution below (also attached for easier reading). Please bear with the slightly overflowing word count (2078 words) ;)

My name is Nicola Bozzi and I am finishing a PhD at Salford, Manchester.

My thesis revolves around the concept of "tagging", which I flesh out and contextualise in relation to certain stereotypical figures or "cultural avatars" (the Gangsta, the Digital Nomad, and the Troll) rather than networks to be mapped.

The text below articulates a theoretical justification of my approach, which is relevant to the workshop as it interrogates the "network" as a figure of research inquiry, proposing an alternative aesthetic reading of social media based on the collective performance ("figuration") of identity.

If you want more info about the more practical implications of the text, I published a series of interviews with artists/theorists/activists who work with tagging/labelling online: <https://medium.com/schizocities/tagging-aesthetics-recap-fe1897ad4855>

Looking forward to your feedback, both online and in person!

Best, Nicola

Beyond the Tag Cloud: From Figures to Figuration

Tagging and folksonomies are forms of categorisation that can offer a promise of self-determination and political empowerment while remaining grounded in materially constraining

infrastructures. In my PhD I explore how the materiality of tagging can engender a cultural and political aesthetic in its own right, leading from a tactical engagement with the everyday constraints of categorisation towards a potentially choral 'art of the weak?' (De Certeau, 1984, 36), which in turn engenders avatars of political and ethical ideals. I articulate this argument in two movements: first, I set the premise for an aesthetic framing of social media by discussing Alexander Galloway's (2012) critique of information aesthetics and Olga Goriunova's notions of 'art platforms?' (2011) and 'digital subject?' (2019); then, I build on this premise by reconceptualising the practice of tagging in the context of 'relational aesthetics?' (Bourriaud, 2002) and the politics of spectatorship (Bishop, 2014), also outlining how tagging contributes to the engendering of cultural avatars. In other words, I move from figures to figuration.

>From a scholarly perspective, the traceability of tagging has inspired a great deal of varied research. In particular, in terms of visualisation, the availability of tag streams as RSS data has enabled a number of tools, which found most prominently expression in the image of the once ubiquitous 'tag cloud?' (Trant, 2008, 19) and the network map. However, information aesthetics has its limits. From a formal perspective, the ubiquitous enthusiasm surrounding information aesthetics a decade ago has been complicated by a variety of recent cultural and technical developments: the emergence of fake news, massive use of bots, AI, trolling, memetic warfare, and in general the ambivalence inherent to Internet content (Milner & Phillips, 2017); from a political one, the urgency that characterises the cultural debate of the past few years might also demand a different approach.

In this sense, Alexander Galloway (2012) makes an interesting critique of information visualisation. Galloway argues all maps of the Internet, all social graphs, all word clouds look the same, and the aesthetic repercussion of this is that 'no poetics is possible?' in

such a uniform space. Information aesthetics fails, then, because it is either unable to take alternative forms, or because it takes one over others ? a dilemma of unrepresentability, a lack of mediation that connects the augmentation of algorithmic efficiency with the decrease of symbolic efficiency. In other words, algorithmic interfaces prove that ?there are some things that are unrepresentable? (85-86). Galloway's statement is an explicit response to an essay by French philosopher Jacques Rancière, according to whom representability is only one aesthetic regime, produced by certain historical and social realities and bound by a specific ?distribution of the sensible?. According to Rancière, anti-representation arises with the advent of an "aesthetic revolution" that inaugurates a new regime labeled the "aesthetic" and marked by a breakdown between subjects and art, ushering in ?a general availability of all subjects for any artistic form whatsoever?.

According to Galloway, digital media ?require a different assessment of violence and representability?, and the problem is that ? beyond the engagement with individual instances of violent images ? we are yet to properly engage with the mode of production, and as a consequence cannot find adequate visualisations of the society of control (91). Here, as in the opening of his discussion of information visualisation, Galloway seems to be frustrated by the gap between the technology of image-making (with its collective, sprawling dimensions) and the poetic, emotional, political spark of representation. It is worth quoting his materialist claim at length:

?We must simply describe today's mode of production in its many divergent details: the diffusion of power into distributed networks, the increase in local autonomous decision making, the ongoing destruction of the social order at the hands of industry, the segmentation and rationalization of minute gestures within daily life, the innovations around unpaid micro labor, the monetization of affect and the 'social graph,' the entrainment of universal-

izing behaviors within protocological organization ? these are the things that are unrepresentable. [?] The point of unrepresentability is the point of power. And the point of power today is not in the image. The point of power today resides in networks, computers, algorithms, information, and data.? (Galloway, 2012, 92).

All of the unrepresentable elements listed above can be seen as, at least in part, contributing to the expression ? indeed, the performance ? of a digital identity on social media. In order to ?understand the performative nature of networks? (Chun, 2018) and define the aesthetics in the society of control (Galloway's point), it is then useful to consider the notions of ?art platform? and ?digital subject? outlined by Olga Goriunova (2011, 2019).

Goriunova does not address mainstream websites like Facebook or Twitter, but provides a relevant conceptual framework in her definition of ?art platform?: a network platform that produces art, here understood broadly as a process of creative living with networks. Art platforms are ?awkward mappings between technical, aesthetic and social forces that allow us to come closer to key issues in larger cultural formations, but also discover the exceptionalities of the particular? (2011, 2). Crucially, while it aims at the amplification of the aesthetic force of creative practices, an art platform engages with practices that do not necessarily self-conceptualise as art (7). Still, they participate in the production and amplification of new cultural currents and maybe even create new cultural figures and vectors of change (10).

Goriunova's aesthetic framing of social media is not only very useful in order to accept Galloway's challenge and renegotiate the terms of representability in the age of social media, but also a very good premise for a cultural critique of tagging. I discuss tagging itself as a techno-cultural gesture that does not only contribute to metrics and lists of

trending keywords, but also draws lines across users, concepts, ideas. The result is not a coherent representation, but elusive and contradictory stereotypical figures that materially embody social conflicts and, sometimes, exacerbate them. The next step to move beyond the visualisation of tagging as a modular element to be arranged in graphs, network maps, and tag clouds, is reinstating its imaginary (if not symbolic) efficiency by considering it in relation with relational aesthetics (Bourriaud, 2002).

In the context of an exhibition, works of 'relational art' create an 'arena of exchange' that proposes and represents certain 'models of sociability?', which must be judged on the basis of aesthetic criteria (Bourriaud, 2002, 6). Like Galloway (2012) does with network maps, Bourriaud is testing these models for symbolic value, assigning cultural criticism the task of assessing world views 'through aesthetic production, rather than exchange value. The practice of the everyday (De Certeau, 1984) is thus modelled and transformed through the aesthetic power of art, rather than the scientific methods that isolate facts to synthesise models of the social.

Since the age of social media makes the social as aesthetic and material as ever, Bourriaud's relational aesthetics is a perfect angle to examine cultural production on platforms like Facebook, Twitter, or Instagram. In particular, it is adaptable as a fit theory of tagging as well. In fact, Bourriaud presents relational aesthetics as a theory of form, and defines form as a 'lasting encounter' (7). Since tagging establishes a material link and a trackable connection between users or content, it is the perfect materialisation of such an encounter. As a techno-cultural gesture, tagging has the power to coalesce a wide range of formations 'which need not be intentionally conceptualised as art, as Goriunova (2011) already stated about art platforms ' into a relational aesthetics that materialises social values. For Bourriaud, material entanglement in the socio-economic infrastructure and narratives of empowerment interact. The

lines and dots traced by tagging are expressions of its productive ethos, converging with the controversial ideological baggage of classification systems; its repoliticisation is thus not a given, but it has to be achieved by critiquing it as a labelling practice. In order to repoliticise the relational aesthetics of tagging, then, some kind of figurations are needed to outline what models we are critiquing.

I shall now tie my argument together by referring to Goriunova's reading of the digital subject (2018). Apart from highlighting the distance between lived and datafied subjects, Goriunova highlights how the relationship between fact and fiction is complicated by social media, emphasising that digital subjects are always 'more or less than human' (Goriunova, 2019, 9) - a formulation that opens up to the possibilities of fiction. These possibilities are not to be taken lightly, and in supporting this Goriunova references the work of Amalia Ulman, considered by some to be the first Instagram artist and known for her prolonged performance as a typical influencer on the platform. In *Excellences & Perfections* (2014), the artist played a fictional character for a period of time, de facto participating in all the normal dynamics of social interactions required and encouraged by the platform. In her tale of personal development, delusion, and eventually redemption, Ulman inhabited a range of stereotypical female tropes: the next-door girl moving to the big city, the image-obsessed go-getter pursuing fame through artificially-enhanced appearance, the detoxed mother finding her way back to self-love. For Goriunova, Ulman's fake identity (whose success lied also in its controversial character) exposed the stereotypical dynamics of identity construction through a painstaking re-enactment (17). Since '[d]ata regimes do not distinguish between bodies and novels, nature and culture?', this type of participation taps into a key site of contestation: the question of how the real will be constructed (18).

Consistently with the aforementioned theories,

then, we can see social media as a plane of experience that, even though it is embedded within specific geographic, cultural, and socio-economic conditions, is also separate from our embodied life. It is not only tempting, then, but also advisable to approach it in aesthetic terms. If the aesthetic and the political overlap in the concern for the distribution and the sharing of ideas, abilities, and experiences (Bishop, 2014, 27), the infrastructure of social media as a collective, autonomous, ambiguous experience ? at once a part of, and at one remove from the social (Bishop, 2014) ? can then be judged not only as a political economy of sorts, but also as a sort of macro-assemblage of contradictory creative efforts ? provided the aesthetic judgement of such assemblage be not a generic acknowledgement of its socio-relational nature, but an actual critique of specific configurations that arise from it. In other words, an aesthetic critique of tagging practices shall not simply be grounded in the materiality and embeddedness of these practices ? to do that would be akin to the network mapping criticised by Galloway for being devoid of poetics ? but in some kind of ?formations? (to use Bourriaud's term) or ?constellations of references? (as Day put it) that these practices feed into. If these do not amount to finished facts, they may instead engender something that is unfinished, and for this very reason political ? in the sense that aesthetics are political for Ranciere. In the case of Ulman, the specific performance enacted by the artist is relevant insofar as it feeds back into the contradictory narratives of the female stereotypes she is channeling, and its aesthetic brilliance or political potential can only be criticised in reference to that imaginary. The artist's reliance on the ?Aspiring Instagram Influencer? as a cultural avatar of peer-pressured femininity and capitalistic self-branding is thus necessary for her intervention on that configuration.

Regardless of the value we attach to Ulman's work, her material engagement with collective stereotypes through social media is exemplary of a promising tactical approach to networked

identity. The distance between the lived self and its digitised projections might perhaps discourage a politics grounded in exemplary actions, which are always reabsorbed into the value metrics of networks; however, if these actions collectively converge into channeling a figure that is removed from the material entanglements of everyday life, conjuring up another type of image, this latter figure ? as it is experienced from the outside, even in its contradictory and stereotypical connotations ? could inspire political change in a more subtle and indirect way. In other words, perhaps these practices can be used to collectively engineer new and politically informed figurations that leverage their stereotypical quality as an inclusive, rather than reductive, technology.

Week 3 -  
posting on  
26/11/2019 at  
13:33 from Naja  
le Fevre Grundtmann

Dear all,

Thank you for taking the time to read and comment on my project (below). My name is Naja and I'm a PhD in the Department of Arts and Cultural Studies, University of Copenhagen. I have a background in Art History and Cultural Studies and my project is broadly speaking an attempt at seeing how a pluralistic/queer interpretation of Aby Warburg's Mnemosyne Atlas might inform a contemporary digital discourse. I am 10 months into my PhD at this point and what I present in my paper is an introduction to my project followed by the early outlines of what I hope will become a chapter of my thesis. While I realise that the topic of this paper might not explicitly address the question of research networks in a post-digital era, it is nonetheless an example of what a project that bridges otherwise separate fields might look like.

Looking forward to reading your comments.

All the best, Naja

Neural Networks and Aby Warburg's Iconology of

## the Interval: Between Images and Text

The case study of my project is the digitisation of Aby Warburg's *Mnemosyne Atlas* (1924-9). By problematising what I believe to be a simplified relation between repetition and replication in the transmission of Warburg's body of work into the digital era, I believe that a project attending to the uncertainties raised by this issue can provide the possibility of (1) exploring where the digitisation of Warburg's body of work grants the opportunity of seeing his *Mnemosyne Atlas* in a new light; (2) understanding the extent to which the engagement with his work has been, and continues to be, imbued with monistic assumptions regarding the entanglement of matter; (3) how this homogenisation of the disparate material of his *Atlas* informs (and is in turn informed by) the pattern formation permeating digitisation; and (4) in what way Warburg might prove instrumental in highlighting possible discrepancies between individual entities and larger collective patterns, whether within his *Mnemosyne Atlas* or among digital archives more broadly speaking.

The final (but unfinished) version of Warburg's *Mnemosyne Atlas* consisted of about a thousand images pinned upon 63 wooden panels. The *Mnemosyne Atlas* is the outcome of an extensive, if not careerlong, inquiry into the change and perseverance of an antique mode of expression, primarily within the context of Renaissance studies. While being far from a pre-algorithmic pattern detector, Warburg's *Mnemosyne Atlas* suggests that there are patterns to be detected in the ways in which some gestures and motifs are portrayed throughout history. Some scholars have accentuated this connection between the historical work of Warburg and our contemporary digital discourse by theorising the two in continuation of one another (Hristova, 2016; Impett and Moretti, 2017; Impett and Süssstrunk 2016; Warnke and Dieckmann, 2016). Wary of this tendency, my project draws on the contemporary movement of scholars who have positioned themselves critically against a neutral transition from analogue to digital archives. My concern is that

'the appropriation of Warburg's body of work within contemporary digital discourse risks forging a very specific interpretation of the modalities of the internal logic of the Mnemosyne Atlas, thereby simplifying the connections between Warburg's compilation of images and the analysis of great quantities of images made possible by digitisation itself' (forthcoming article). Rather than focusing on the similarities between Warburg's compilation of images and the continuous production of and distribution of image content online, I suggest that the migration of images on Warburg's panels is primarily propelled by a process of change. Following Chun's critique of homophily within contemporary network science (2018), I am in a forthcoming article arguing that 'the assemblage illustrates where individual parts can be brought together without affirming the interconnection of the whole.' As small systems of interconnection, I believe that the relations between the different images inform one another because of, not in spite of, their particular differences, thus troubling a homogenising intersection between the singular images and the totality of the panel.

In connection with this workshop, I'd like to introduce and work on an attempt at bridging Warburg's work with machine learning, specifically the classification of image content by the use of convolutional neural networks (CNN).[1] While I think that a seamless transmission of Warburg's body of work into the era of digitisation reinforces pattern discrimination, I believe that the prediction of image content by way of CNNs raises some of the same questions as those concerning Warburg in his own time, but also those asked by Warburg scholars to this very day. My working hypothesis is that CNNs reshapes the relationship between form and content, thereby posing anew the question of iconology, including that of the differences between images and text (Mitchell 1986). While mainly a visual argument, Warburg used the phrase 'Iconology of the Interval' in a preliminary introduction to his Mnemosyne project (Rampley 2001) to describe the process illuminated on the panels.

According to Warburg, the migration of images is prompted by 'the oscillation between a cosmology of images and one of signs' (Warburg 1926-9). The interval of Warburg's iconology thereby allows for consideration of the coexistence of seemingly conflicting representational regimes 'without positing an image-language opposition' (TWI).

In his book from 1986 art historian W.J.T. Mitchell traces the genealogy of iconology[2] and on the first page he asks: 'What is an image?' which then gives rise to the question: 'What is the difference between images and words?' This gap, or interval between image and text, is also the space constituting the hidden layers of a CNN. The architecture of a CNN can be understood in technical terms, but it is difficult to determine what features of an image are relevant to its classification (Offert 2018). Put differently, CNNs can be trained to predict semantic image content with astonishing accuracy, but we do not know exactly how the network constitutes this relation or what this relation consists of. While the categories of the classification layer are predetermined, the prediction of what images belong to each output class is founded on rules that cannot be extracted from the network as anything but numbers. Consequently, we cannot know how a CNN construes a relation between two different modes of representation, the image and the word, but we can, to some extent, visualise how it interprets this relation. Feature visualisation allows us to probe the hidden layers to gain insights into the prediction of image content taking place in the interval between the images of the input layer and the classification categories at the output layer. The feature visualisation[3] is an optimised image of the features that the trained CNN deems important in relation to a specific category (Olah et. al., 2017). As a visualisation of the features that would cause a CNN to classify an input image as a specific category, the feature visualisation is a representation of the information within an image a CNN is looking to detect when it I presented with an image of a chair (for example), before it arrives at the decision that this is likely

to contain a chair.[4] A feature visualisation might give us insights into what aspects of an image is important in the prediction of a given category (here a chair), but it is nonetheless not an image of what a CNN thinks a chair looks like. Instead, it is a visualisation of a CNNs interpretation of the relation between images and words. Therefore, there is no direct correlation between the feature visualisation and the features of the category it supposedly 'represents' insofar as the image is a visualisation approximated in human-legible terms, of that prediction-space between the input and the output layers. It is not a representation of the plurality of forms that a chair can take and it not a representation of the singularity of a chair as a general type. Instead it is a complicated representational structure of the interval of an iconology which resides somewhere between imagery and the word without allowing for an actual differentiation of the two.

Despite this, a lot of the current writings on the internal logic of CNNs are built on the hypothesis that the CNN discerns patterns and shapes at the lower levels, whereas it at the higher levels differentiates between semantic content (Elgammal et. al., 2017; Gatys et. al., 2015). This is nevertheless not necessarily true (Offert 2018). The distinction between form (lower-levels) and content (higher-levels) is at the basis of Style Transfer which enables separate manipulation of the style and the content of images (Gatys et.al., 2015), ultimately making it possible to apply the 'style' of one image on the content of another. This has resulted in a lot of experimentation with artworks, seemingly providing an answer to what it might have looked like if a specific artist had chosen another subject for their painting (Karayev et.al., 2014; Gatys et.al., 2015, 2017; Elgammal et. al., 2017; Sanakoyeu et. al., 2018). This notion of style is however incompatible with the ways in which scholars within the field of art history have defined the term traditionally. Art historians (and cultural theorists) who have concerned themselves explicitly with the concept of style, more often than not accentuate the

way the style of an artist or of a period cannot be separated from the subject matter and/or expression depicted/configured (Gombrich, 1968; Shapiro, 1892; Sontag, 2009 [1965]; Warburg etc.). Style transfers can be very convincing, but in some cases the semantic content is somehow transferred onto the content image, thereby suggesting that a sharp distinction between form and content applies to neither artworks nor machine vision.

Aside from enabling a simplified relation between the image of the input layer and the word of the output layer within a CNN, a form/content dichotomy also obscures the relationship between individual images. Experimentation with applying the 'texture' of some things (elephant, clocks, and bottles) within the shape of others (cat, car, bear), has led to the conclusion that CNNs are biased towards texture in the recognition of image content (Geirhos et. al., 2019). While this is not necessarily wrong, the understanding of an image as a material instantiation giving form to the content of the word, makes the local texture somewhat secondary to the global shape of an object. Features of classes of things that look alike are potentially aggregated within the same neurons, by virtue of their visual resemblance (especially at the lower-levels), while fully realised (second-to-last layer) feature visualisations of a specific output category might be visually very different (from each other, but also from the features that humans associate with a particular thing) even when semantically identical. The texture of a particular thing might not be a unique identifier, but neither is the contour, making it somewhat peculiar to expect a CNN to recognise a bear, when it is presented with a bear in the form (i.e. not the texture) of bottles. By challenging a formalistic approach to images, my hope is that art historical insights might enable a re-evaluation of the complex relational structure of CNNs, while allowing for engagement with the ambiguity within and among networks more broadly speaking.

[This version is without images, since I do not have the rights to distribute all of them]

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[1] This idea is influenced by and builds upon work on machine learning done by Fabian Offert.

[2] As an art historical practise, iconology has a long history, but I am here using the term in its broadest sense, namely as a ‘theory of images’ as distinct from a theory of painting (being one specific kind of images).

[3] I am using code written by Fabian Offert (available on GitHub: Zentralwerkstatt - ESU2019”). I have mainly experimented with images of whole middle-layers, but going forward I plan to look into feature visualisations of

individual neurons (nodes), because it might prove insightful in relation to the internal structure of the network.

[4] A feature visualisation is a re-interpretation of a technical interpretation of what this relationship between imagery and word looks like. In technical terms this relationship is multidimensional to an extent that it is not intelligible to human beings, so the visualisation itself involves a reduction from thousands of dimensions to two in order for the prediction

Tactical process to be visualised in Archives a Euclidean space (Of-Cartography: de-fert 2018).

archiving part of the arts and internet production in Brazil from the last 20 years on 26/11/2019 at 14:16 from Geoff Cox

Hi Tati, Giseli and Cristina I thought I would briefly respond to your text from last week ? a bit out of synch ? but others might also jump in. Immediately struck by the collective voice (3>1) - you refer to a subaltern creative subjectivity - and the question of how tactical media plays out in Brasil, as a kind of cartography that is transversal and intersectional: how this practice relates to organised networks, free software, etc. This again seems to relate to the Femke Snelling article that I mentioned before: the need to find new coordinates and imaginaries, new forms for collectivities that do not simply reproduce older rhetorical strategies, and are - following your text - sensitive to geopolitics and other entanglements. For you critical cartography seems to operate in this way - cartography as anti-methodology - the development of technical infrastructures as a practice of care (like the etymological roots of curating, not least). This is where the discussion comes back to subjectivity, as a co-production of subjectivity and territory at the same time. I'd like to see what this looks like (this is where you would direct us to the archives I

suppose). I wonder how much this builds on ideas of temporary autonomous zones, or rather given your historical approach, how much of these older (canon of) radical (network) thinking applies once it is subject to further critique, decolonised for instance? When it comes to archive, for instance, is it still an archive once it is deterritorialised, as de-archive or is it just a dump? And how to make sense of the possibilities of collective subjectivities in the present given the multiplicity of the negations taking place (de-archiving, de-territory, anti-method, de-organised, etc.). I am tempted to speculate on what the ?negation of negation? would be in this context. There are so many interesting ideas here to grapple with. Maybe even too many. Or perhaps that?s part of the point, so many that only a discipline like cartography can begin to make sense of the various coordinates, and the drawing of these is political in itself. Geoff

Week 3  
- posting  
on 26/11/2019  
at 14:59 from  
Geoff Cox

Dear Naja

Thanks for this and the focus on the Atlas is really appreciated.

But maybe the theme of the workshop could be addressed more explicitly by thinking of these images as ?distributed? or indeed ?networked?. I am somewhat bound to take this position given the research centre I am part of (the centre for the study of the networked image) and recent work that addresses these issues, not least through an analysis of ImageNet ? see Nicolas Malev??s article ?An Intro to Image Datasets? and his stream ?Exhibiting ImageNet? with their categories (Paglan is doing much the same with his ?From Apple to Anomaly?). Maybe these displays are more Atlas-like but draw on a wider visual culture rather than art history, drawing out the wider problems related to labelling and semantics and spectacle. I am also reminded of the shift with Mitchell?s work: from asking what an image is to what it wants. Here prediction

is made explicit (cf. "What Do Pictures 'Really' Want?"). Given the introduction of desire in this way it would also be interesting to hear more about a queer perspective.

Week 3  
- posting  
on 26/11/2019  
at 20:18 from Ozgun Eylul Iscen

Dear Naja, Geoff

Thank you for sharing your text. I really enjoyed your art historical perspective which brings an interesting twist into thinking about today's operational images in Harun Farocki's terms. I also follow upon Prof. Cox's extension over semantics and spectacle as dynamics of a larger visual culture.

I really like the following statement you make. I hope it is ok that I added some emphases here:

Therefore, there is no direct correlation between the feature visualisation and the features of the category it supposedly represents insofar as the image is a visualisation approximated in human-legible terms, of that prediction-space between the input and the output layers. It is not a representation of the plurality of forms that a chair can take and it not a representation of the singularity of a chair as a general type. Instead it is a complicated representational structure of the interval of an iconology which resides somewhere between imagery and the word without allowing for an actual differentiation of the two.

Your art historical perspective with a special focus on the archive of images (of Warburg but also larger histories that he tried to represent somehow) reminded me the politics of machine learning/data feeding systems as archival apparatuses that mediate the relationship between past and future while acting in present (like and beyond Wendy Chun). In terms of an archival process, what are the subject-object relations (e.g. who catego-

rizes/is categorized) that manifest in these image-based operations of Big Data? What are the limits of such an allegory, if we define machine learning algorithms as more-than-human-performative acts in (e.g. Luciana Parisi; Ezekiel Dixon-Roman among others)? The ultimate point of decision is rendered by a composite of code writers, administrators (such as customs officers at the border), a training dataset, coded abstractions, the experimental models of the mathematical and physical sciences (randomness, weighting, pooling), and the generative capacities of machine-learning classifiers of entities and events.

As Parisi puts, the mode of truth-telling underlying machine learning algorithms cannot be opposed to error or falsity. It is about their relationship to uncertainty. Machine learning algorithms pertain to the "ground truth," a mostly human-labeled set of training data from which the algorithms generate its model of the world. In other words, algorithms generate the parameters against which uncertainty will be adjudicated, such as targets of interest, values, weightings, thresholds. So, our relationship to the world and truth gets complicated. Even though the recent ImageNet-related artistic interventions are important in terms of exposing the underlying biased systems; the problem is not so much that predictive algorithms are blackboxed but more lies on the very impossibility of a clear-sighted, transparent account. Unfortunately, it is more complicated than the problem of what dataset includes/excludes or who named and categorized it. It is more about how it is instrumentalized in the face of doubt, error, and risk, which are all "calculated" not only through what is already known but also not/cannot be known. Not sure how clear I am here, but we may discuss this further.

Continuing with the allegory of archive and big data, I also want to bring up the works of Syrian Archive (who did a workshop with Adam Harvey at Transmediale last year) and Forensic Architecture's recent work as cases of the condition when the archive/evidence is missing. They adopt computer vision toolkit to

manage large video or image datasets; to detect objects of interest, classify scenes, extract text, filter graphic content, and create training databases for building custom recognition models. For Syrian Archive and Adam Harvey's work: <https://ahprojects.com/vframe/> or <https://18.re-publica.com/en/session/accelerating-human-rights-investigations-computer-vision>

Interestingly, there emerges a problem of not having enough data (e.g. images of weapons illegally used by militaries) to feed the machines. The task of training a computer vision classifier to identify a particular object usually requires thousands of images of that object. However, in Forensic Architecture's investigation, images of the munitions like the Triple-Chaser are relatively rare. To fill the gap, they constructed a digital model of the Triple-Chaser, and created a set of 'synthetic' images by placing the model against bold, patterned backgrounds, and within photorealistic digital environments. For more information: <https://forensic-architecture.org/programme/exhibitions/triple-chaser-at-the-whitney-biennial-2019>

Week 3

on

Best,

26/11/2019 at  
19:27 from tati

Ozgun Eylul Iscen

Hi all, we are making a collage response, willing to continue the dialogues with you all perhaps we missed the time to comment the work of others. We are really sorry, weeks are very very intense here down below the Equador.

Hi nicola responding to you, recycling was part of our technological vocabulary since 2002 'metareciclagem' (metarecycling group 2002) [1] that used to appropriate old machines with free software and produce media a work to note is mimoSA with its methodology <http://archive.turbulence.org/project/mimosa/> as such metarecycling followed digitophagy a practice for much organic tech times :)

hi juan pablo mignolo, although very present in the debates in anthropology, is more recent to the brazilian networks. some women have been reading other authors such as silvia cusanqui who has herself a critique of mignolo. makes sense for us to look at the production of women situated in latin america. however, we were mostly inspired by contracultural artists such as Cildo Meireles (his production in the late 60s and early 70s, to forge other worlds, today, however, his work turned other ways), tropicalia inventions, institutional critique, and more, and the will to work collectively summing up local resources. perhaps another way to look at it would be the gambiarra technology[1], which was well rethought in the beginning of 2000s. so to locate us as subalterns reappears necessary also to mark this perception - where we depart and how we relate to other coordinates that constantly perform as centre. we perceive ourselves already on contra-re-sub-delinking but not to locate a specific territory in order to justify and reinforce, but our common subjectivities and that is why perhaps contemporary brazilian artists and researchers are proposing space studies thinking, for example, with the earth by putting together xamans and the clinic as technologies that we can inhabit (look at the work of Fabiane Borges for example).

hi geoff I liked femke affective infrastructures we relate to the hallucinogenous aspect of it :) as the link with temporary autonomous zones we are very familiar with it since this has been our permanent condition for too long, a mode of being - fractured but alive.

most of all the re-sub-phagic condition makes us possible to see the inner working of technologies, to promote activism but also dances and healings, fast and forward in time, a curto-circuito that keeps us avoiding disappearances with repairs (as the works nicola and juan suggest too) and why not re-cycles. the form that it takes, as you ask, is as encounters and laboratories, or literally coming together, which are always peculiar. the archive as a website is not put to the side, it

is important for sure, but for us these two should work together. in a sense, this is the ecology we want to bring to practice. (our challenge now relates exactly to that, as we live in 3 different cities!) also, seems crucial to insist that care doesn't happen only if we mention its importance (an empty reiteration?). care needs to be inscribed/brought to practice in a collectivity as a form of relation, attention, accompaniment and we guess that is how we are bringing this together now in the de-archiving of this material/knowledge/strategies. the negation or the prefix that sometimes active a concept become a way to re-singularise the use of the concept (stressing it out perhaps?). archive is usually associated (and this is not wrong at all) with the major institutions of knowledge such as university and encyclopedias and, others. and me (cristina) in my masters studies (2008) kind of developed the idea of de-archiving as a way to literally move out of the archive, in order to activate, to mobilise, to approach, to get to know. maybe we refute and embrace when we insist in negation and prefix... and for us maybe using a few concepts also exposes the generation we 'belong' and how we talk and situate our practices, learning and exchanging. from your description, geoff, and also we realise that too, we see that a description of de-archiving actually becomes a description that also tell us about a cartographic process - to produce and too analyse, in a quite schizoanalytical sense...

best regards cristina, tati and giseli

[1] There's a compilation of texts here, edited by Felipe Fonseca <https://midiatatica.desarquivo.org/2006-2009/mutirao-da-gambiarra/> [2] for gambiarra we

Fw: Week 2:	suggest having a look
Research Networks	at a reference
- Geopolitical Aesthetics of Computational Media on	text by Ricardo Rosas from the mid of 2000 - the
27/11/2019 at	text is in english
16:34 from Ozgun Eylul Iscen	too here <a href="https://desarquivo.org/node/968">https://desarquivo.org/node/968</a>

Dear all,

Upon request, I am also passing around my text again embedded within the email. I think I sent it to a wrong email address at first. Sorry, if this is a duplication.

Best,

Ozgun Eylul Iscen

Geopolitical Aesthetics of Computational Media:

The Middle East and Beyond

Ozgun Eylul Iscen

In the aftermath of the uprisings that swept the Middle East and North Africa since late 2010, the emergent networked publics have become a promising site to develop theories of digital media and political transformation. Most of these works, however, have had little to say about the United States and other Western colonial power's legacy of occupation, ongoing violence, and strategic interests in the region.[1] This silence is puzzling, given the centrality of these same technologies to the ongoing wars in the region.

With shared concerns, my project historicizes computational media in the context of the Middle East by situating them as infrastructures of imperial and neoliberal practices, cutting across military and financial systems, which simultaneously operate through investments in wars, security, oil/energy, real estate, arts, high-tech industry within and beyond the region. Therefore, it is necessary to trace the historical and spatial continuities that are tied together under the extractive operations of transnational capital as well as computational media. With the aim of exploring the political encounters across the Global South/North divide, I reformulate Fredric Jameson's concept of cognitive mapping. While acknowledging some limitations of the term, I find Jameson's emphasis on the mediation between economic and cultural levels as well as

local and global scales through the lens of class politics.

For Jameson, cognitive mapping refers to an aesthetic that enables individuals to render their position in a capitalist world-system and its historicity intelligible. It is closely tied to the historical condition (of late capitalism) in which the truth of our social life as a whole in Lukacs terms, as a totality is increasingly irreconcilable with the possibilities of aesthetic expression or articulation available to us[2]. Jameson combines Kevin Lynch's empirical problems of city space with the Althusserian redefinition of ideology as "the representation of the subject's Imaginary relationship to his or her Real conditions of existence". Cognitive mapping refers to this capacity for "a situational representation on the part of the individual subject to that vaster and properly unrepresentable totality which is the ensemble of society's structures as a whole"[3]. The Althusserian emphasis allows Jameson to extend geopolitical issues into local, national, or transnational class realities. In this regard, cognitive mapping acts as a metaphor for political consciousness, and a model for how we might begin to articulate the relationship between the economic and cultural as well as the local and the global. Nonetheless, the method of cognitive mapping varies along the axes of class, race, gender and sexuality[4], which Jameson sets as an unresolved aesthetic problem rather than a prescriptive proposal[5].

What about today's networked media, characterized by the subsumption of culture (sociality, identity) by the economic via the means of digitization? Is the gap between experience and abstraction intensified with the machine-based and distributed cognition? As Wendy Chun refers to Jameson, network science actualizes the task of linking a local experience to global systems (e.g. each individual's action has implicit consequences for the outcomes of everyone). Unlike Jameson, however, it is "hardly socialist or empowering"[6]. Or is Benjamin Bratton's Stack[7] the new totality interweaving the continental, urban, and per-

ceptual scales? Bratton's emphasis on the verticality of planetary-scale computation as a new geopolitical architecture, distorting the modern political geographies, does not necessarily lead up to the dismantlement of global relations of production. Yet, his emphasis on the city level speaks back to Jameson's emphasis on urban scale where the contradictions of capital accumulation come to the foreground? where it "hits the ground" at the intersection of spatial, social, legal, and political formations in Sandro Mezzadra and Brett Neilson's terms[8].[9] I don't want to dismiss his politics that is mainly based on design architectures (and their accidental nature which complicates the notions of totality and political will), as Tiziana Terranova expands further with the Red Stack.

In "The Interface Effect,"[10] Alexander Galloway is committed to the task of updating Jameson's cognitive mapping by articulating contemporary media as principles of mediation rather than objects. Galloway gives us a dialectical understanding of interface as effect (rather than an object), which continuously produces its own status as social and technical. Following upon Chun, Galloway draws upon the allegory of software as ideology, as they both obfuscate and naturalize their own underlying operation. This is why cognitive mapping is ultimately an aesthetic problem; the problem of visibility (not visibility). Even though we share the question of how digital aesthetics both prohibit and facilitate political encounters (and the critique of identity politics), he fails to address the complexity of computational media as an apparatus of raciality[11] alongside and in conjunction with the dynamics of late capitalism.

This is where I turn to Jonathan Beller's "Message is the Murder,"[12] which argues that the world-media system is built on and out of the material and epistemological forms of racial capitalism, colonialism, imperialism, and permanent war. For Beller, what is called "convergence" indicates not only just media convergence but "rather a total informatic convergence in which financial, biometric, and

computational operations are increasingly unified?[13]. As a result, Beller diverges from content or platform fetishism that, as he argues, obscures the geopolitical implementation of these media formations inseparable from both political economy and coloniality. According to Beller, we must attend to the surround. In a dialogue with Mezzadra and Neilson's emphasis on the operations of capital, I would interpret "the surround" as the sites of extraction, exchange, and expenditure, the "Other of those of capital's obvious accumulation"[14]. Today, the story of information corresponds to the story of the financialization of the formerly extra-economic domains including culture, communication, and cognition; therefore, we need to carefully mark the transformation of labor, fixed capital, and accumulation strategies. The entangled relationship between finance and security systems, both of which operate through "the discursive, informatic, and screen-mediated production of social difference" in Beller's term. For instance, predictive algorithms provide both technical and ideological infrastructures for U.S. Global War on Terror and domestic war on drugs (e.g. mass incarceration/ militarization of police) and on poverty (subprime mortgages). Through this spatial-discursive continuity, counterinsurgency has become a new frontier for accumulation by dispossession in David Harvey terms (e.g. occupation, debt), in the face of its financial, ecological, or hegemonic limits.[15]

Here, I turn to Nicholas Mirzoeff's expansive conception of visibility[16] to rethink cognitive mapping within the framework of racial capitalism. Drawing upon Derrida and Ranciere, Mirzoeff highlights, visibility refer to a set of mechanisms that order and organize the world thereby naturalizing the underlying power structures. Interestingly, the opposite of the right to look is not censorship, but visibility Interestingly, the opposite of the right to look is not censorship, but visibility as the violent transformation of the relationship to history and real "fundamental to the operations of slavery, colonialism, and counterinsurgency. Similar to Chakravartty and Da

Silva, Mirzoeff highlights that visuality is a technique for reproduction of imaginaries through which the state-capital nexus justifies and maintains itself. In return, it is crucial to enact counter-visibility: the right to look, which is not merely seeing, but claiming autonomy, a political subjectivity or collectivity. In terms of Derrida's idea of 'invention of other', it requires the recognition of the other in order to have a place from which to claim a right and to determine what is right. Similar to Jameson's reliance on the so-called Third World for the possibility of Utopia, for Mirzoeff, the sites of extraction and exploitation are where the counter-visibility flourishes, especially in the Global South and its equivalents in Western metropolises ? where it hits the ground.

Nonetheless, I find this idealization of the subaltern problematic (which is also apparent in Jameson's work). There is not a stable subject for the task of cognitive mapping. First, the problem of disjunction between experience and abstraction is inflected by the unevenness of capitalism and its geographically differentiated partial resolutions.[17] Second, given the feminist and postcolonial critiques of the rational subject of modernity, the question of what 'cognition' entails here comes forth. Finally, this idealization does not fully acknowledge the frictions within the Global South (such as the growing competition among BRICS (Brazil, Russia, India, China, South Africa), and the Middle East itself (e.g. the dominance of the Arabian Gulf (e.g. GCC countries). For instance, how can we think together smart cities developing in the Gulf and toxic cities spreading in other parts of the region (e.g. Beirut)?

To this end, I write about art works as a theoretical inquiry (rather than claiming that artists are cognitive mappers). I am interested in artistic practice that connects the incidents of capital 'hitting the ground' (e.g. drone strike, or lost house) to the spatial, temporal, and discursive continuities through which global capital as well as media systems operate. For instance, when we look at

the totality of Forensic Architecture's[18] investigations around the incidents of drone strikes, environmental crimes, refugee crisis, and the cuts on public housing (e.g. the Grenfell Tower fire), which reflect the material, technical, and ideological mechanisms (as well as limits) of neoliberal governance operating at a global scale. I also write about the Lebanese artist Bassem Saad's interactive online work titled "Cared for by Chains and Loops" (2019)[19] which sheds light upon the uneven relations of labor and care that are materialized within the urban setting, while expanding from his immediate experience of the protracted waste crisis in Lebanon to the dialectics of environmental degradations and digital media - a link between a cellular scale and a transnational one. Saad's counter-narrative contests the mainstream futuristic projections for the Arabian Gulf, and more importantly, his work demonstrates how those two contexts, the one of Beirut and Dubai, are interdependent like two sides of a coin - a class formation in the Middle East.

Obviously, Jameson's cognitive mapping is not the only way or ultimate point of political act, which can take many forms, scales, and temporalities - that I care about. Yet, I am interested in the question of what political encounters digital aesthetics enables or prohibits today, that exceeds beyond the interface as well as the obvious/direct operations of capital accumulation. In the conclusion, I want to clarify that I do not collapse the changing urgency and spatial polarizations through which capital is accumulated. Rather, I highlight the necessity of thinking about the spatial, temporal, and discursive continuities are linked by the current operations of global capitalism and computational media - as they are actively constituted rather than merely being historical residuals. Their historicity proves that they are changeable.

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[1] Aouragh, Miriyam & Chakravartty, Paula. "Infrastructures of Empire: Towards a Critical Geopolitics of Media and Information Studies?". *Media, Culture & Society*, 2016, 38 (4), p.

[2] Fredric Jameson, "Class and Allegory in Contemporary Mass Culture: Dog Day Afternoon As a Political Film," *Signatures of the Visible* (New York: Routledge, 1992), 54.

[3] Fredric Jameson, *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991), 51.

[4] Toscano, Alberto. & Kinkle, Jeff. *Cartographies of the Absolute*. (UK: Zero Books, 2015).

[5] Jameson, Fredric. "Cognitive Mapping." In *Marxism and the Interpretation of Culture*, ed. Cary Nelson and Lawrence Grossberg, 347-60. (Champaign: University of Illinois Press, 1988).

[6] Chun, Wendy. "Queering Homophily?" in *Pattern Discrimination* (Minneapolis: The University of Minnesota/ Luneburg: menson Press, 2018), p.69.

[7] Bratton, Benjamin H. *The Stack: On Software and Sovereignty*. Cambridge/London: MIT Press.

[8] Mezzadra, Sandro & Brett Neilson, *The Politics of Operations: Excavating Contemporary Capitalism* (Durham: Duke University Press, 2019).

[9] I also add Henri Lefebvre's idea of the "production of space" here, which the spatial existence of social relations of production: "They project themselves into a space, becoming inscribed there, and in the process producing the space itself". See: Lefebvre, Henri. *The Production of Space*. (Malden: Blackwell, 1991 [1974]).

[10] Galloway, Alexander. *The Interface Effect*. (Cambridge: Pluto Press, 2012).

[11] Inspired by Denise Ferreira da Silva's "global idea of race," refers to "how the productive weapons of reason, the tools of sci-

ence and history, institute both man and his others as global-historical beings? (xix). As Paula Chakravartty and Denise Ferreira da Silva emphasize, the production of cultural difference, as the Other of the Europe/US has been always integral to capital in all the shapes it has taken.

[12] Beller, Jonathan. *The Message is Murder: Substrates of Computational Capital* (London: Pluto Press, 2018).

[13] *Ibid.*, 20.

[14] Scott, Emily Eliza. "Field Effects: In-visible-5's Illumination of Peripheral Geographies," *Art Journal* 69:4 (Winter 2010, 42-4).

[15] Harvey, David. *The New Imperialism*. Oxford: Oxford University Press, 2003. Also see: Wang, Jackie. *Carceral Capitalism*. (Cambridge, MA: MIT Press, 2018); Chakravartty, Paula & Ferreira da Silva, Denise. "Accumulation, Dispossession, and Debt: The Racial Logic of Global Capitalism," *American Quarterly*, 64, no. 3, 2012: 361-385.

[16] Mirzoeff, Nicholas. *The Right to Look*, (Durham, NC: Duke University Press, 2011).

[17] Smith, Neil. *Uneven Development: Nature, Capital and the Production of Space*, 3rd ed. (Athens: University of Georgia Press, 2008): 206.

[18] <https://forensic-architecture.org/>

[19] <http://www.bassemsaad.com/systemcare>

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From: Geoff Cox <gcox at cavi.au.dk>  
Sent: Wednesday, November 27, 2019 8:12 AM To: Ozgun Eylul Iscen <ozgun.eylul.iscen at duke.edu>  
Subject: Re: [aprja] Week 2: Research Networks - Geopolitical Aesthetics of Computational Media

Hi Ozgun

Would you mind pasting the text into an email and sending again - so the post is easier to read and comment upon, given the mailing list form, and it will also appear in the list archive.

As you can see I have asked, or will be asking, others to do this too.

Thanks, Geoff

From: APRJA <aprja-bounces at maillist.au.dk>  
on behalf of Ozgun Eylul Iscen <ozgun.eylul.iscen at duke.edu>  
Date: Wednesday, 20 November 2019 at 19:49 To:  
"aprja at maillist.au.dk" <aprja at maillist.au.dk>  
Subject: [aprja] Week 2: Research Networks - Geopolitical Aesthetics of Computational Media

Dear all,

Sorry for the delay! I am sending my text as attached. This text comes from a dissertation chapter that I am currently writing. This might explain why it is a bit messy (also because it is intensely compressed). I focused on the part that engages more closely with the previous week's discussion. I hope you enjoy reading it.

I look forward to hearing your thoughts on it.

Week 3  
- posting  
on 27/11/2019  
at 17:34 from  
Ozgun Eylul Iscen

Ozgun Eylul  
Isцен

Dear all,

I don't want to disrupt the flow of this thread, but I just want to add to my response to Naja that my colleague at Duke, Rebecca Uliasz (who did this workshop last year) had just presented an interesting paper on Kate Crawford and Trevor Paglan's "ImageNet Roulette" (2019) (and some other examples for machine-learning techniques for images) from a similar angle that I tried to articulate in my response. If anyone is further interested, let me know

so I can put you in touch with  
Beyond her.  
the Tag  
Cloud: From Figures to Figuration Best,  
on 27/11/2019 at 19:28 Ozgun Eylul  
from Winnie Soon Iscen

Hi Nicola,

Thanks for your text. I found it is quite interesting to see how you frame the ways of tagging as a techno-cultural gesture, unfolding tagging as not only about technological categorization and metrification, but also with the perspective of users, expression and identity that constitute the dynamics of living. Perhaps this is how the short essay leads to the cultural avatars (maybe a closer link is required between the switching from tagging to cultural avatars).

The critique of representation reminds me about the notion of abstraction in computation, in which there are different layers of abstraction and representation piled up from electric circuit and hardware to software and visible user interface. I recall the article by Fazi and Fuller on computational aesthetics where they discuss the conjoint condition of abstract and the concrete. What's more relevant of their article is how they see "computation not only abstracts from the world in order to model and represent it; through such abstractions, it also partakes in it". From this material perspective, I can see how it might link to relation aesthetics perhaps?

Since you mention about Galloway's diffusion of power and distributed network, as well as the aesthetics in the society of control, I wonder how this might be further articulated with your example and link to your final concept of figuration.

best, Winnie  
APRJA  
Digest, Vol 2,  
Issue 30 on 28/11/2019  
at 08:03 from

Hi Nicola,

I find your text quite rich in its way of negotiating both Galloway's technical formalism and Goriunova's insistence that something happens when people take on specific tags and representations. de Certeau is also a good reference for discussing this and the example of Ulman's performance works well. My question - out of interest (and I know you already have plenty in your text) - is how performances such as Ulman's become incorporated in the data logics information visualisation again, or whether these logics and visualisations are transformed in any important sense by this, or if it just delivers more data? As Pip Thornton has argued around the semantic/linguistic capitalism of Google, the problem is less that our semantics gets mapped, but that there seem to be a 'sub-prime'-like betting on language going on. In this sense the result is a devaluation of semantics and the nuances of language. (Thornton, Pip. (2018). "A Critique of Linguistic Capitalism: Provocation/Intervention." *GeoHumanities* 4 (2): 417-437 <https://www.tandfonline.com/doi/full/10.1080/2373566X.2018.1486724> ). Though Thornton makes a very convincing argument, I can't make up my mind whether I buy it all the way, or whether the language we still speak can remain untouched to some extent in its daily use by this Google capitalism - eg. along the ways that de Certeau suggests a tactical everyday use. Or perhaps the situation has changed with these forms of algorithmic governance? (I hope I make myself clear, in all haste on my way to other duties... ;-)

APRJA  
Digest,  
Vol 2, Issue  
30 on 28/11/2019  
at 12:11 from Nicola  
Bozzi

S?ren

Hi S?ren and Winnie,

Thank you for your generous feedback. I will try to respond to both below.

S?ren: My use of cultural avatars and performative figuration is deliberately a "jump" from data visualisation, based on the assumption that only part of the "soft power" and the nuanced appeal of these figures can be channeled through tagging and the materiality of networks. In the case of Ulman and other artists who work with social media, the tag is the material plug into a network and the metrics of visibility inherent to social media are only a tactical means to deliver such appeal/message/provocation. Thank you very much for the Thornton reference. The metaphor of "sub-prime"

and derivative power of tags is very significant and it is indeed opposed to the "semantic/linguistic" element of tagging (my take on the subject is inspired by Ed Finn's discussion of the semantics of Siri, which is not based on language structure and semantics but rather on which terms are statistically more used - a similar account is present in Halpin in his discussion of social semantics). Indeed I believe tagging as a gesture is more of a tactical, volatile affiliation with a network than an indexical/ontological, a sort of alliance with the "algorithmic governance" you mention. In other words, I see tagging as a convergence of the human with the technical in a co-dependent, rather than deterministic relationship. I hope this satisfies your curiosity, but I'd be happy to discuss further in Berlin!

Winnie: I'm glad the focus of my perspective came across, and thank you very much for the Fazi and Fuller reference. As for the discussion of Galloway, representation, and the shift from the materiality of networks to the "ethereal", quasi-mythological quality of the cultural avatars, in the extended version of my text I also factor in Bishop's critique of relational aesthetics and her focus on Ranci?re's idea of aesthetics as independent from the social. In Bishop and Ranci?re the aesthetic should be discussed as a sort of undetermined/ambiguous plane that is at one remove from lived life (as opposed to the messy embeddedness of Bourdieau's relational aesthetics), and for this reason I approach my

critique of social media as necessarily relying on external figurations that cannot possibly be embedded and visualised solely based on the material participation of users through tagging. It was hard to pack all of that within 2000 words, but in a longer text that would be the first thing that I add back in ;)

Thank you both for the great feedback, I'm downloading the articles you mentioned right now!

APRJA  
Digest, Vol  
2, Issue 30 on  
30/11/2019 at 15:28  
Best, Nicola  
from Bi, Wenhao

Dear Naja, Nicola and all,

Thank you for your texts and discussion. There are a few points I find quite interesting in the different angles of viewing networks.

Nicola's work on tagging, in my reading, focuses on the "digital subject" with performative feature within the linking and connection among users. And I hope there is a more detailed description on "digital subject" as a term in comparison with other ideas such as "users", "lines and dots" or "personas". I wonder, at the same time, if there is a (potential) purpose or intention in tagging, since it gestures an assemblage, or a sense of togetherness. Is it related to identities or belongingness? Or, put it differently, what is produced through tagging? There could be a dialogue with the "offline" networks Sudipto briefly mentioned in terms of interfaces and with Kalen's concern on (un)availability.

Naja's project on convolutional neural networks reveals the blurry boundaries between images and texts, and may be a good reference in studying the styles people use (e.g. memes). The dichotomy of form and content is also challenged. I wonder what

APRJA  
Digest, Vol 2,  
Issue 34 on 01/12/2019  
at 22:35 from Becky Holt  
kind of approach can be  
applied to link  
this kind of  
bio-net-

Hello everyone,

Thank you to all of this week's writers for sharing their work.

Nicola, as a researcher of online pornography, I was intrigued by your work on tagging! I kept coming back to your use of the word "materiality."

Particularly this sentence, "social media makes the social as aesthetic and material as ever?" It's a simple question on my part but I'm curious to know more about how you are using materiality in this context. I was particularly intrigued because I kept trying to track the concept of materiality as it bounces between the theory of symbolic efficiency (Lacan, Zizek, etc?) and Bourriard's theory of relational aesthetics.

\*The Interface Effect\* is a fascinating conclusion to Galloway's series on the "proctological." When I first read the chapter "Are Some Things Unrepresentable?" I was attempting to make sense of a corporate sponsored data visualization blog, so it was interesting to extend Galloway's argument to tagging. I was also curious if you were at all interested in how Jodi Dean employs symbolic efficiency? Instead of the interface, Dean uses the example of the blog. She writes, one of the hallmarks of reading blogs was the difficulty in determining whether a blog post (or a post on social media) is ironic or sincere at times. In the gap left by the loss of the master signifier enters, "the potential for unexpected meanings, provid[ing]its own affective intensity. Images and affects may flow into the gaps left by the declining symbolic" (Dean, 5). This is of course, a concept you introduce in your piece, but I find Dean's use of "affective intensity" offers an interesting compliment to Galloway's work. Particularly as it imagines, not just the failure of representation and therefore interpretation, but the intensities that accompany it—confusion, annoyance, anger. In regard to Bourriard, I kept

works to the digitalised ones - perhaps Stiegler?

Best,  
Wenhao

mulling over earlier examples of relational aesthetics in the 1990s and those of social media. Perhaps this isn't useful, but I kept comparing the material engagement of someone like Andrea Fraser in 'Little Frank and His Carp' (2001) to Amalia Ulman. Whereas you write, based on Goriunova's work, that Ulman's fake identity exposes the dynamics of identity reconstruction through an exact re-enactment, or the same logics she is critiquing, Fraser uses her body in public to satirize the institution of the museum. I think about both of their material engagements as somewhat separate strategies of approaching networked identity, but I would be curious to hear more from you about it.

Thank you all again and I look forward to continuing these conversations.

Best,

Rebecca

This weeks papers and oppo-  
nents on  
02/12/2019 at 08:08  
from  
=?utf-8?B?U804cmVuIFBvbGQ=?=

Dear all,

Good morning from Aarhus, where the sun is actually shining (!) on a cold Monday morning. This week we look forward to reading texts from group 4: Maximillian, Rebecca and Wenhao and ask group 5 (Linda, Iuliia and Tatjana) to respond. As previously everybody is welcome to join the discussion,

APRJA  
Digest, Vol 2, Issue 34 on 02/12/2019 at 13:59 from Nicola Bozzi

since subjects and interests will probably cross groups.

Dear Wenhao and Rebecca,

Looking forward to continuing the interesting discussions!  
S?ren

Thank you for the feedback! I will respond below very quickly so as not to spill over this week's debate.

Wenhao: yes, as you correctly point out the concept of tagging is definitely linked to offline communities as well, and in the main chapters of my dissertation I discuss this aspect more thoroughly.

Rebecca: I have come across Andrea Fraser's work before, but had not made the connection. Thanks, it is indeed very relevant! As for Dean I haven't explored her work on affective intensity, however I reference her text on "secondary viscosity" and her communist reading of the selfie.

Looking forward to discuss  
further in Berlin!

Best, Nicola

APRJA  
- some  
late re-  
sponses on com-  
plexity and materi-  
ality on 02/12/2019 at  
17:10 from Juan Pablo  
Pacheco

Hi everyone,

I'm jumping in since last week I barely had a chance to sit down in front of my computer. I'll send some brief responses to previous texts, and some additional thoughts.

\*Tati, Giseli and Cristina \*I found your contribution highly relevant to explore the possibilities of delinking from colonial matrixes (Mignolo), which has been an attempted gesture of so many Latin American initiatives since the creation of the colonial network of extraction (another example of a water-based system of control over the flow of bodies and information). I wanted to direct you to the work of an artist collective based in Bogot? called \*Laagencia\*. I specifically worked with them in developing this publication [http://estudiomachete.com/wp-content/uploads/2018/04/Intemperie\\_escueladegaraje.pdf](http://estudiomachete.com/wp-content/uploads/2018/04/Intemperie_escueladegaraje.pdf), for the 3rd version of the "Garage School" they've done for the past years, where we did a lot of affective cartographies of the spaces we walked through in Bogot?.

\*Nicola \*I find your discussion on the limits

of representation, in relation to Galloway, very engaging. It makes me think of representation as a political issue, as it was discussed by Marx in "The 18th of Brumaire". What is the relationship between the (im)possibility to represent, when we think about the circulation of images and bodies as political subjects? What are the limits of representation when citizens become users (in other words, for those outside of the dominant logic of the global network?).

\*Naja \*I found very interesting the discussion around what is \*fed \*to neural networks, placing an emphasis on the feeding itself, as a potent cannibalistic metaphor that allows us to think about the flow of resources through bodies (and recycling energy, visually and materially).

James Bridle points towards the information paradox in his last book "New Dark Age", where he uses several examples to demonstrate how more information doesn't clarify but rather obfuscate our ability to understand complex networks. I find it an interesting exercise to compare this tendency to Haraway's situated knowledges, since they both seem to stress on the importance of \*narrative \*in order to make sense of complexity, but have different takes on the outcome of narratives derived from complex data??or

This just complexity in general.  
weeks papers I see this referred in  
and opponents on several of our  
04/12/2019 at 18:39 texts <3  
from Bi, Wenhao

Dear all,

Greetings from England. I am Wenhao and I'm doing my phd at University of Warwick. My text is attached below. You may refer to the website (bilibili.com) and try a few videos to have a general sense of the case I am talking about.

Looking forward to the discussions!

Best, Wenhao

My research focuses on why and how young people in China act and react politically on social media platforms. It stemmed from both my observation of people's everyday usage of social media and a series of digital activism. The everyday usage, on the one hand, gestures a growing political awareness under the dominance of entertainment orientation and consumerism with examples of calling for online boycotts and asking for apologies from misbehaved celebrities or companies. On the other hand, playfulness can be seen from the bombarding memes in the flash-mob digital activism. My main concern is young people's political subjectivity and the formation of the political energy on social media platforms with a dual feature of playfulness and seriousness.

One of the cases I am interested in is the video sharing platform Bilibili, featured for its commentary subtitle function called danmu (literally bullet curtain). The design of danmu allows comments synced to any specific playback time, and the time differences between the video and the posted comments are erased. Hamano Satoshi created the term 'pseudo-synchronisation' to describe such functional specificity. In other words, a novel space for discussion is created among the comments. Since most of them are posted by human users rather than bots, how then should such digital and networked assemblage be understood?

Crowd theory which can trace back to Le Bon and Tarde is one of the major reference points. For Le Bon, a crowd is considered as 'a mental unity of people who . . . are subject to a collective mind' while individual crowd member would 'cease to be governed by his or her will' and yield his or her personal consciousness and control to instincts and impulses (Borch 2012, 40). Tarde, on the other hand, argued that crowds were subjected to the exact dynamics of imitation and suggestion as society was (Borch 2012, 48).

Two interesting features are shared at different stages and currents of the developments in crowd history. On the one hand, the physical manifestation of the collective has always been more or less as a symbol and precondition of broader analyses on crowds, masses and the society. For Le Bon and Tarde, despite their intention of revealing the crowd's psychological nature, they tended to associate crowds with physical co-presence. Following the mass media approach, the image of co-present crowds pushed forward the idea of the mass individual as a new type of social being. The crowd in the postmodern society had emancipated from the physical assembly and turned into a state of pseudo- or non-physical massification. An explanation inspired by biology and computer science which I will elaborate later, the swarm, shared a sense of (pseudo-) collectiveness of the bodies as well.

On the other hand, it is often hypothesized that a status of irrationality emerges with the dense assembling of bodies. According to Le Bon's perspective, even the elite could turn into an irrational hazard to society. (Borch 2012, 41) Rationality, the silent counterpart in this narrative, was set as an ultimate virtue people failed to achieve. Such structure of understanding the crowd can be placed in a specific European background, and interestingly, it implies that all currents of crowd theory have more or less followed a reflective and historicized method(ology). Both Le Bon and Tarde developed their understanding on crowds by looking back to a revolutionary past in France. The historical conditions were also reviewed in later works by the Frankfurt School, Hardt, Negri, and Dean, just to name a few. In other words, there is a strong link between the means crowds are studied in different eras and the shared interpretation of the societal relations. What then are the social and historical conditions under the name of social media? Does the rational-irrational dichotomy apply to these conditions?

The notion of swarm, a socio-technical perspective in media cultures, has offered another trajectory. Swarms were set as the ob-

ject to study in computer simulation due to their being rational individually within systems, both microscopic and macroscopic. Swarming was then placed in the area of tension between biology and computer science, and by regarding as interference phenomena, it was categorised as an operational media technology (Vehlken 2013). It is also noteworthy that swarms are placed between the binaries of life and death, with examples of headless animality of insect societies and lifelike death of zombies. There is a need for a new way of understanding materiality ?not based on a substance or a form, but as a temporal variation of affective assemblages? (Parikka 2008).

The introduction of swarm has opened up a distinction between collectivity and connectivity. According to Thacker (2004), for collectivity, it is the purpose that distinguishes it from a large number of units, and for connectivity, it is the pattern that distinguishes it from other random linking or relating. Two forms of assemblage, networks and swarms, emerge correspondingly and intertwine. While networks that facilitate connectivity have a potential to form a collectivity, swarms that facilitate collectivity have a potential to initiate a connectivity (Thacker 2004). In addition, collectivity can be traced back to its association with community and the discursive production of identity, but the operative level of the constitution is less often questioned (Wiedemann 2014). It was further explained that swarms, without being centralized, are able to have collective goals accomplished orderly (Lee 2017).

To sketch out the key aspects of the different notions on collectives discussed above, a sense of anxiety cannot be neglected ?irrational, unpredictable, leaderless and easy to be controlled. From a more nuanced perspective, crowd is more about physical co-presence, multitude highlights the possibility of autonomy and productivity, and swarm indicates a communicative and probably ?intelligent? connectivity.

I now turn to the Bilibili case to situate the

discussion on crowd, swarm and network more explicitly. While the design of danmu affords a trolling potential due to its anonymity, the synchronisation feature can be used for serious discussions to point out a specific frame in the video or a specific subtitle. Yet the capacity for commentary subtitles is finite and is set according to the length of the uploaded video. Older subtitles will be invisible to make room for the new ones after the capacity cap is reached. In short, commentary subtitles can be used both playfully and seriously, but do not last long even with a serious intention.

On the one hand, crowd theory is seemingly valid given the unpredictable and leaderless feature in the trolling potential. On the other hand, the seriousness in the danmu discussions gestures the perspectives of swarm and networks. However, the connections are short-lived, and the ?users? in such connections are unlikely to be traced. How then should such connection be described?

Borch, Christian. *The Politics of Crowds: An Alternative History of Sociology*. Cambridge: Cambridge UP, 2012.

Lee, Raymond L. M. "Do Online Crowds Really Exist? Proximity, Connectivity and Collectivity." *Distinktion: Journal of Social Theory* 18.1 (2017): 82-94.

Parikka, Jussi. "Politics of Swarms: Translations between Entomology and Biopolitics." *Parallax* 14.3 (2008): 112-24.

Thacker, Eugene. 2004. "Networks, swarms, multitudes (Part Two)." *CTheory*, Article a142b. [http://ctheory.net/ctheory\\_wp/networks-swarms-multitudes-part-two/](http://ctheory.net/ctheory_wp/networks-swarms-multitudes-part-two/)

Vehlken, Sebastian. "Zootechnologies: Swarming as a Cultural Technique." *Theory, Culture & Society* 30.6 (2013): 110-31.

Wiedemann, Carolin. "Between Swarm, Network, and Multitude:

Anonymous and the Infrastructures of the Common."  
Distinktion: Journal of Social Theory 15.3 (2014): 309-26.

This weeks papers and opponents on  
05/12/2019 at 11:33  
from Seitz, Tatjana

Hi Wenhao Hi all!

Greetings from a rather sunny Cologne today!

As with your project, Wenhao, I must say I find it extremely inspiring to read about so many international research & arts projects and am very grateful for references outside the well circulating anglophone framings of digital aesthetics, politics and cultures.

This said, I feel a bit at unease how little I know about non-english apps and web services.

Bilibili has been around in China for almost 10 years, having been found in early 2009 by the college graduate Xi Yi in only three days. This kind of founding myths are usually exploited to great extend to spread the Silicon Valley ideology. Is Bilibilli similarly culturally embedded? I'd be interested to hear more about its Genealogy, maybe with a particular focus on the Genealogy of the danmu function. I suppose you have it somewhere in your work. I should mention two things, I hope I'm not mistaking when I understand your PhD project to be in an early stage? My comments are a bit general, at best, but grounded in an honest interest. Secondly, my reading of your text is probably biased towards the medium from a software studies perspective on it - meaning that I wonder about how the medium Bilibili app and the function danmu in particular orchestrate, facilitates, afford, but also restrict certain modes of political engagement by design (of the software).

With regards to certain features of software-based platforms, their designed affordances and mutual dependencies of software & culture the notion of so-called "Grammars of Action" (Agre 1997) has become quite popular in recent

years. This might indeed be helpful to sort out your first question: "how then should such digital and networked assemblage be understood?" Another concept that might be relevant to take into account when dealing with political 'issues' on platforms is certainly Noortje Marres' work on 'material participation'. Given that you are located at CIM I assume you're probably quite familiar with that. In a similar vein European digital activism research has produced a lot of interesting research including ppl at the Kings College London, and the University of Amsterdam. Without knowing how you go about your work (e.g. research design, methodology) I have the particular question in mind, with which Marres has dealt at lengths: when we're looking at the social media participation, are we looking at the effects of the software on culture (the enactment on designed and perceived affordances so to say), or indeed culture itself? From a design perspective, Olia Lialina raises a similar question, when she points out that the appearance of computed affordances is not necessarily the same on the level of the interface as the GUI vs. the code vs. the code interfacing with other platforms. (Lialina 2019, also 2012). I'd furthermore would be interested in your take on platform vs. network vs. assemblage in terms of social media platforms. Is it platforms that extend themselves into networks (e.g. platformization of the web to frame it with Anne Helmond), networks that need the platform to be constantly in action, materializing themselves over again (discussion about Sudipto's work) and what are the elements in your assemblage? In his book 'Sad by Design' Geert Loving just recently updated his analysis of this relation in the chapter "Media Network Platform: Three Architectures". I also still very much like the article Distributed Aesthetics. Or, What a Network is Not? (2002). In this vein, I also like how Lev Manovich extends the discussion by including designed interaction of digital media by framing them as an carefully orchestrated aesthetic event: "Instead, the interaction is treated as an event - as opposed to "non-event", as in the previous "invisible interface" paradigm. Put differently, using personal in-

formation devices is now conceived as a carefully orchestrated experience, rather than only a means to an end.”

Unfortunately, I’m entirely unfamiliar with the political crowd theory, although it crossed my reading lists at points in time. But I’ve never engaged with it, I therefore, cannot comment on your main framing, I’m afraid.

I do think, however, its intriguing to include the notion of affect as you hint towards with Parikka: “not based on a substance or a form, but as a temporal variation of affective assemblages?”. I’d be interested to hear which direction you are intending to go with this? I find Cilia Lury’s (another CIM person) introduction in the book “Affective methodologies: developing cultural research strategies for the study of affect?” (Knudsen, Carsten 2015) a good place to start.

Let me return to the danmu function. I’m indeed stunned how it messes with very fundamental aspects of Web 2.0 including synchronicity, real-time mantas and the obsession with metrics and the making commensurable of online cultures. It puts the very distinction of media in situ and in motion in question. You’re probably familiar with Ben Grosser’s Facebook, Instagram and Twitter Demetricators: <https://bengrosser.com/projects/facebook-demetricator/>, an artistic critique of metrics (counts of likes, comments, timesteps etc) on social media platforms. David Gauthier had an installation, I think two years ago, at Transmediale where he messed with the temporality of cookies when a website is loading. He made them perceivable to human senses by slowing down the speed by a factor of 800 and translated into audio output (references to academic output below). Following the path of the ‘pseudo-synchronisation’ might be facilitating a bridging moment to Nicola’s “Beyond the Tag Cloud: From Figures to Figuration” work, as it raises the question of representation and by doing so shifts the parameters of addressability, accountability, participation, popularity etc. I also think there is something to say

with regards to questions raised by Sudipto's considerations of interfaces in "The Ends of the Network as Frontiers of Extraction" as I already mentioned. Winnie Soon has done brilliant work on the time-politics of platform interfaces e.g. the "Unerasable Image" project.

Apologies for this lengthily and wild ride, hope some of it makes sense! Looking forward to what others have to say!

\* Dieter, M., & Gauthier, D. (2019). On the Politics of Chrono-Design: Capture, Time and the Interface. *Theory, Culture and Society*, 36(2), 61-87. <https://doi.org/10.1177/0263276418819053> [details] <https://dare.uva.nl/personal/search?identifier=08b4106a-4ad3-4883-84eb-284a28364f5d> \* Gauthier, D. (2017). Loading... 800% Slower. In H. Pritchard, E. Snodgrass, & M. Tylik-Carver (Eds.), *Executing Practices* (pp. 115-123). (DATA browser; Vol. 06). Brooklyn, NY: Autonomedia. [details] <https://dare.uva.nl/personal/search?identifier=b14d238e-7201-4598-b79b-560abab72666> \* <https://bengrosser.com/projects/facebook-demetricator/> \* <https://www.palgrave.com/gp/book/9781137483188> \* Special Issue on Apps and Infrastructures: <http://computationalculture.net/> \* Geert Lovink, "Media Network Platform: Three Architectures" in: *Sad by Design, 2019* \* Olia Lialina, *Turning Complete User, 2012* <http://contemporary-home-computing.org/turing-complete-user/> \* Olia Lialina, *Once Again The Door-knob, 2018*: <http://contemporary-home-computing.org/affordance/> \* <http://siusoon.net/unerisable-images/> \* Zeynep Tufekci, *Twitter and Tear Gas, The Power and Fragility of Networked Protest* \* <http://seven.fibreculturejournal.org/fcj-040-theses-on-distributed-aesthetics-or-what-a-network-is-not/> \* Manovich, *Information as an Aesthetic Event, 2007*, <http://manovich.net/index.php/projects/information-as-an-aesthetic-event>

APRJA  
Digest, Vol  
3, Issue 6 on  
05/12/2019 at  
16:37 from Linda  
Kronman - KairUs

Tatjana Seitz

Hi Wenhao, Tatjana, and everyone else,

Greetings from (almost always) rainy Bergen.

I have been following the discussions that has been very inspiring especially the connections made across research topics. I find several parallels to my work on how machine vision is represented in digital art, however, I leave that for next week... Though I want to quickly thank Nicola for your links to the interviews and especially the one with Max Dovey is 100% relevant for me.

Wenhao:

As Tatjana I am afraid that I do not have a lot of knowledge to contribute to the swarm theory part. However discussing similarities and differences of networks, assemblages and swarms in Berlin might reveal interesting in-betweens to think about. Tatjana already offered several directions to expand your work. Whereas I am based at the Department of Linguistic, Literary and Aesthetic Studies at the University of Bergen in Norway and have the pleasure to work with several amazing Electronic Literature scholars I wonder if there could be connections to be made here as well. Watching a couple of Bilibilli videos made me think of collaborative writing practices ([http://www.narrabase.net/collaborative\\_writing.html](http://www.narrabase.net/collaborative_writing.html)). More specifically, you mentioning flash-mobs, reminded me of Netprovs (<http://robwit.net/?p=223>) that could possibly help you with aspects of synchronous and asynchronous writing. For example /Netprov: Elements of an Emerging Form/ by Mark C. Marino and Rob Wittig deals with some of these questions (<http://www.dichtung-digital.de/en/journal/aktuelle-nummer/?postID=577>). Netprovs are often playful ways to approach serious themes, however, the creators of Netprovs do emerges if not like leaders at least as initiators setting some kind of rules for the collaboration, so in this aspect it differs from the collaborative writing on Bilibilli. Even if I might not have been able to make

super relevant connections  
to your work now, I  
look forward to  
discuss and  
discover more  
in Berlin.

APRJA  
Digest, Vol 3,  
Issue 7 on  
06/12/2019 at 11:26  
from

Best Regards, Linda

=?utf-8?B?U804cmVuIFBvbGQ=?=

Hi Wenhao, Linda, Tatjana and everybody else.

Both Linda and Tatjana has given really good responses to your interesting text. I am as they also steeped in Anglo-american software culture and have little knowledge of China, however several others at the workshop have, so I believe we can have good discussions of this aspect. I share many of Linda and Tatjana's comments. I just want to point to the German perspectives on crowds/masses and technology, where I think especially the aesthetic-political perspective of Walter Benjamin (from e.g. the Work of Art essay) and Siegfried Kracauer (The Mass Ornament) might be relevant. At least it has to do with the technological, political and aesthetic conditions of seeing the masses and the masses seeing themselves - how this is 'designed' and used - in e.g. mass ornaments, cinema and weekly reviews.

This focus on the politics, aesthetics and technology of crowds/masses also touches on the contemporary affective turn and affective economy. Personally I share Beatrice Fazi's criticism on how Deleuze, Massumi & Hansen is used in the affective turn, as Fazi has pointed out, it tends to leave out the software and computation and focus more on the affective, and in this way, I find, strangely converges with cognitive and technological myths - even if it tries to do something else. However, the affective economy still haunts us and my current interests is in exploring whether this can be discussed through some of Johana Drucker's thinking in her small book, The General Theory of Social Relativity. I'm

not sure whether or how this has relevance for your study of Bilibili, are there specific differences between a 'Western' and 'Chinese' version of masses, crowds and their politics - including how it is handled through software? How do they relate to politics and software? Interesting work and I look forward to hearing more!

Benjamin, Walter. 1980. *Gesammelte Schriften*. Werkausgabe. Aufl. Frankfurt am Main: Suhrkamp. Benjamin, Walter. 2003. *The Work of Art in the Age of its Mechanical Reproduction*. In *Selected writings*, eds. Michael William Jennings, Marcus Bullock, Howard Eiland, and Gary Smith, 251-283. Cambridge, Mass. ; London: Belknap Press of Harvard University Press. Kracauer, Siegfried. 1977. *Das Ornament der Masse*. Suhrkamp Taschenbuch, vol. 371. Frankfurt am Main: Suhrkamp. Kracauer, Siegfried. 1995. *The Mass Ornament*. Trans. Thomas Y. Levin. Cambridge, Mass.: Harvard University Press. Fazi, M. B. (2019). *Digital Aesthetics: The Discrete and the Continuous*.

*Theory, Culture & Society*, 36(1), 3?26.

<https://doi.org/10.1177/0263276418770243>

APRJA 8770243 Drucker, Johanna. 2018. *The General Theory of Social Relativity*. Canada: The Elephants. Digest, Vol 3, Issue 8 on 06/12/2019 at 16:27 from Clemens Aprich

Hey Wenhao,

just throwing in another reference in relation to the ?leaderless feature? of crowds. In an essay called ?The Organisation of the Organisationless? Rodrigo Nunes takes up the concept of scale-free networks to argue that new social movements (his examples are mainly from the Latin American/Brazilian context) are actually leaderful (rather than leaderless): <https://www.metamute.org/sites/www.metamute.org/files/pml/Organisation-of-the-Organisationless.pdf>. What he means by this is the fact that the massive dissemination of digital media (i.e. networked) technologies "has enabled

a diffuse vanguardism in which initiatives can snowball exponentially and produce impacts far exceeding their original conditions? (p. 33). This might bring in another angle of analysis, not least because complex networks (the Internet as we know it; not to mention the Chinese network of networks) scale differently than what we usually expect from centralised/decentralised versus distributed forms of organisation.

If you are interested in the German perspective (mentioned by Soren), there is an edited volume called Social Media - New Masses (<https://www.press.uchicago.edu/ucp/books/book/distributed/S/bo25021853.html>), which seems to speak directly to some of your questions (and contains articles by Carolin and Sebastian - both of whom you reference). I have it as a PDF in case you are interested. And while we are on it: for those of you who arrive in Berlin the weekend before transmediale starts, I can recommend an exhibition about the Bauhaus and its discussion of the relation between art & technology: <https://berlinischegalerie.de/en/exhibition/original-bauhaus>. From the mass (well) of this year's Bauhaus-events this one - I believe - stands out, because it also deals with the complicated relationship between teachers (Meister) and students, in particular in a context where new aesthetic-political forms (original/copy) were not only discussed, but also created.

Best! C.

APRJA  
Digest, Vol  
3, Issue 9 on  
06/12/2019 at  
19:20 from Juan Pablo  
Pacheco

Hi Wenhao,

Beyond what everybody has pointed out in relation to organizational and political theory in relation to software and interface studies, I think the swarm also operates as a very interesting image that intersects with other networks and flows of non-human species and their forms of organization. There is a Colombian art/science/technology collective called

Atractor, who developed a research into wild bees and their very sophisticated patterns of organization. They created a piece called \*Swarm \*which took the form of a multimedia concert, with AR, sound design, and some interesting visuals, all derived from their deep study into bee colonies. There's an english pdf on issuu [https://issuu.com/juancortes69/docs/storyboard\\_atractor\\_2a39267ec6ef4e](https://issuu.com/juancortes69/docs/storyboard_atractor_2a39267ec6ef4e) on the whole project, and on their website <https://www.atractor.org/copia-de-enjambre-2> you can check some videos and registration of the concert. Even though I don't mean this reference to offer any clear explanation of the different creations of political subjectivities and collectivities in the West and in China, I do think it can be an interesting poetic starting point to go more deeply into some of the associations that this concept has (especially thinking about why are these behaviors called swarms at all, and what scientific/social discourses this term comes from).

APRJA  
Digest, Vol 3,  
Issue 5 on  
06/12/2019 at 20:37  
from Becky Holt

Looking forward to hearing more in Berlin!

Hello all,

My name is Becky Holt and I'm a Ph.D. candidate in the film and moving image department at Concordia University. For my dissertation, I am researching MindGeek?the company responsible for Pornhub and most other popular pornographic platforms. I locate MindGeek alongside other tech giants to understand the impact of online pornography on digital culture, new economies, and the Internet at large. I am also one of the coordinators and a member of the Global Emergent Media Lab here at Concordia University.

Thank you for taking the time to read my response and happy weekend!

Best, Becky

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\*Pornifying the Network\*

My dissertation begins with the early 2000s when three undergraduate students, all of whom attended Concordia University, met playing in a foosball circuit in Montreal, Canada (Wallace 2011). Over the bond of competitive foosball and attempts at live-streaming their matches, Matt Keezer, Stephane Manos, and Ouissam Youssef started the company Interhub, which would eventually come to be known as MindGeek. Over twelve years, the company centralized online pornography and monopolized the industry. In 2018, on Pornhub alone?MindGeek?s most popular and well-recognized website?the company reported the following: 1 million hours of video were uploaded over the course of the year, 92 million people visited the site daily, and 962 searches were performed every second (Pornhub Insights 2018). Jokes about the widespread consumption of online pornography fill popular media and social anxieties, yet, media scholarship has yet to seriously consider the impact of a practice embedded within the daily habits of Internet users across the world. I argue that online pornography is a cultural hub for the material and discursive conditions through which we utilize and navigate the web. I take the following response as an opportunity to experiment with pornifying the network. Using a selection of case studies that surround the topic of my dissertation, I attend to a building block of the internet that is consistently neglected in conceptualizations of networks. These are moments and examples that generate the opportunity to reroute the technological imaginary of networks through online pornography and challenge familiar narratives surrounding the emergence of the web.

\*BBS & Edging \*

Computerized Pornography emerged in the early 1980s with the popularization of bulletin board systems or BBS for short (Jenkins 2001, 41-43). Using BBS was a complicated and expen-

sive process, yet, boards dedicated to pornography began popping up almost as soon as the system emerged. Across various bulletin boards, early computer enthusiasts shared pornography in two formats: computer images drawn from lines of ASCII text (the American Standard Code of Information Exchange), and scanned pornographic photos uploaded as binary files (Kushner 2019, 44-45). BBS's were similar to message boards, so it was easy for users to embed the content and escape scrutiny, mainly because law enforcement had yet to catch up to computer hobbyists. The ability to easily hide images resulted in widespread and free pornographic content propagated by fans and nerds, largely without the knowledge or participation of the pornography industry proper.

In Anna Munster's *\*The Aesthetics of Networks\**, she argues, "What we have lost in the model of the network delivered to us via the image and theory of the graph is the experience of the edges, the experience of relation" (Munster 2013, 32). Or, as Wendy Chun writes, "the pulsing of energy and affect—the network experience—cannot be reduced to nodes and edges, for networks are *\*about\** edging: pulsations that frustrate neat separations and create sticky connections between the molecular and molar" (Chun 2017, 49). When we privilege images of the network as a static representation of interconnections, we lose track of the processual emergence of networks—links that are always in the process of forming relations and creating the edge of the system. Chun's use of the word "edging" is cheeky, but BBSs begin to demonstrate how early online pornography was founded upon edging—both in the erotic and technical sense. BBSs required money and patience: you needed a personal computer dedicated to BBS, software for BBS, an additional phone line, and software for reassembling binary files into images, which took *\*several\** minutes. Instead of picturing the network as a graph or image, it becomes possible to imagine the network through the experience of a computer hobbyist sitting in front of a computer screen and watching as a binary file slowly loads. As the software assembles the data, the

hobbyist doesn't know what to expect. They undoubtedly found themselves on the cusp of satisfaction?watching, waiting, and edging.

### \*Affiliate Marketing\*

In the early 2000s, a German programmer named Fabian Thylmann created a software package called Next-generation Affiliate Tracking Software or NATS (Wallace 2011). Affiliate marketing is a process wherein two companies or organizations with similar interests agree to share a consumer population by advertising one another's products to their respective customers (Patel 2018). NATS was created to expand and automate affiliate marketing: any-time a user on one website clicks on an advertisement for another website or business, NATS tracks those clicks and makes it possible for the website/person hosting the ad to receive a commission. NATS had a significant effect on online pornography and tube pornography websites in particular. For the first time, porn websites could automate their promotion of one another, tracking the impact of their advertisements and seeking out other potential affiliates. Not coincidentally, Thylmann went on to purchase MindGeek and become one of its most infamous and successful CEOs (Wallace 2011).

When you visit a MindGeek owned website, such as Pornhub, you are often presented with pop-up and pop-under advertisements for camming websites affiliated with Pornhub, companies with a similar amount of draw such as Chaterbate, or links to pornographic gaming websites. When you encounter a pop-up for a camming website, the advertisement appears to address you individually?suddenly, a performer is ?looking? directly at you and asking if you ?want to come and play.? In \*Updating to Remain the Same: Habitual New Media\*, Wendy Chun revisits the concept of the network and focuses on what she terms "networks as imagined" (Chun 2017, 26). Chun is clear this phrase is not meant to negate from the actual existence of networks. Instead, she is drawing from Benedict Anderson's theory that forms of media such as the newspaper or the novel create

events during which masses of individuals become communities through their connection to the same narrative. The 'I's suddenly become a 'we.' Chun revises Anderson's theory of 'imagined communities' to become the 'network as imagined.' However, she is not interested in the question of whether or not new media have destroyed the possibility for community building, instead, how networks, 'generate a YOU rather than a 'we'' (Chun 2017, 27). Chun writes, 'networks do not imagine a collective entity traveling together through time, but instead a series of individuals that (cor)respond in their own time to singular yet connected events' (Chun 2017, 27).

The event of the pornographic pop-up, tracked and monetized using NATS, is an example of what Chun is referring to with the phrase, 'networks as imagined.' When the camming model pops up on your computer screen, inviting \*you\* to join her, you agree to what feels like a direct invitation. Yet, when you click or say yes, NATS is instantaneously tracking your acceptance along with thousands of other people clicking at the same time, all of which were attracted to the idea or feeling that they are the one and only 'you' the performer is addressing. It is a 'series' or network of individuals interconnected through what is framed as an individuated and desire-filled experience for YOU.

#### \*The Insights Blog\*

The Insights blog <https://www.pornhub.com/insights/> is a statistical press vehicle for Pornhub. Each month the blog utilizes the vast data collected from Pornhub users to create engaging data visualizations about what and how people are watching pornography across the world. Each blog post consists of charts, graphs, maps, and infographics that relate data from user searches on pornhub.com to topics such as sex, gender, nationality, holidays, and current events. In an Insights post titled "Pornhub's 2016 Year in Review," the blog presents a series of seven maps portraying trends concerning categories of pornography and popular search terms. An image titled,

"The World's Most Viewed Categories," reimagines the world map as popular searches. Mexico, the United States, and Canada are filled in with a lipstick pink shade representing "lesbian." Russia, however, is filled in with a baby blue shade attached to the category "anal." China is a neon orange shade indicating its user's preference for "hentai."

In *\*Updating to Remain the Same\**, Wendy Chun writes, "[big data] perverts the aim of cognitive mapping, for correlating seemingly unrelated individual actions has revealed larger connections, but this mapping has not enabled individual subjects to understand and change the system; rather it has been used to preempt disruption and make users more predictable" (Chun 2017, 40). In the above post, the blog invites you to imagine entire countries and national identities through the lens of pornography. What was once the individual and sense-based experience of searching for the perfect porn becomes transformed into questions of territory and population. I am not interested in the truth of the visualization, but rather, borrowing from Gilles Deleuze, I am interested in its "regularity" (Deleuze 1986, 4). In Deleuze's analysis of Michel Foucault's concept of the "statement," he writes, "In effect, the statement is to be associated not with the transmission of particular elements presupposed by it but with the shape of the whole curve to which they are related" (Deleuze 1986, 4). Statements are banal and irregular; they do not have an inherent relationship with the object they organize, but recognizing a statement allows one to comprehend the rules that make any discourse possible. Hence, I am not interested in the validity of users watching lesbian porn, or the integrity of such data, I am intrigued by how the mapping of these search terms functions to uphold MindGeek's role in regulating its user's relationship to desire and pornography.

#### *\*Conclusion\**

As I mention in the brief introduction to this piece, I use the above case studies to play with bringing together the imagined network

and pornography. Not only because online pornography is perennially erased from accounts of the Internet but because I believe a "bad" object such as that of pornography is uniquely positioned to address discourses surrounding technology. I look forward to continuing to flesh out these examples and experimenting with pornifying the network.

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The Geek Kings from Iuliia Glush-

of Smut." \*The New Yorker Magazine\*,  
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neva

Hi everyone, It was exciting to get familiar with your ideas and to read the responses! Becky, my response is coming.

Wenhao, I think your project can make an amazing contribution to the debate about the politics of the networked platforms, especially because the case of Bilibili you bring up may serve as a perfect counterexample to most Western popular and corporate narratives about the transparency of access to content via platforms. While those narratives often emphasize the neutrality of platform, its independence from the content, and ?perfectness? of the interface, Bilibili seems to derive success from the opposite logic and mode of address (the unclear line between the platform and content, anonymity of users, etc.). In this regard, I am thinking of the comparison Jinying Li (2017) makes: platform as a ?window? (in the West) and platform as a ?curtain? in the context of the danmu practice (where, as you point out, ?danmu? literally means ?bullet curtain?). I am sure that this reference is not something new to you and you know much more about this playground than me, but it would be interesting to hear what you think about how Bilibili's indifference to the ideal of transparency relates to the ?political subjectivity? you focus on.

Speaking of the political. When I started reading your project description, I immediately remembered S.V. Srinivas' article ?Politics in the Age of YouTube?? (2017) on ?Telangana videos? in India. It is interesting that although you directly point to the fusion of politics and entertainment, you still seem to associate them with the opposite poles of ?seriousness? and ?playfulness? correspondingly. The reason why I've mentioned Srinivas is that he offers a very simple but elegant formula here. To him, ?both media consumption and political participation are, and have been for a while now, analogous to each other? (234-235). In many ways, this argument hints at the re-

formulation of what politics as such means. So, I would say that perhaps it would be productive to think of how the networked platforms and, in particular, Bilibili redefine the very notion of politics and political action. How do they allow to identify alternative political imaginaries and/or to uncover the meanings of politics that are erased from the dominant frameworks?

And my final thought (out of my selfish interests) relates to the transnational history of danmu. I understand that your focus is on China. At the same time, I find it fascinating that, more broadly, the danmu practice is a recognizable aspect of digital cultures in Asia. The fact that this practice mediates the network experiences across Asia refers to wider intercultural connectivity. It would be fantastic if you could speak a bit more about this phenomenon and how it shapes the formation of the political energy on media platforms in China.

Wenhao, I am sorry if my response is a bit messy. I just have so many questions! Thank you again for sharing!

Li, Jinying. "The Interface Affect of a Contact Zone: Danmaku on Video-Streaming Platforms," *Asiascape: Digital Asia*, no. 4, 2017, pp. 233-256.

Srinivas, S. V. "Politics in the Age of YouTube: Degraded Images and Small-Screen Revolutions." *Asian Video Cultures: In the Penumbra of the Global*, edited by Joshua Neves and Bhaskar Sarkar, 2017, pp. 217-239.

Dear Tatjana, Linda, Soren, Clemens, Juan, Iuliia and everyone else,

Best,  
Iuliia

Thank you very much for your generous feedbacks! A few points to respond quickly.

Bilibili was rarely noticed by the academia until around 2014, following Bilibili's marketing turn. Between 2009 and 2012, the platform was rather exclusive for the otaku-ACG circle. In other words, it was an escape from the mainstream culture, and the users could be claimed in a community. From 2012, however, new sections such as techs and fashion have broadened the target users, and the platform has transformed into a mainstream one. Some of the state-owned news agencies and the state organs have also created their accounts on the platform. This is where the discussion on political engagement on Bilibili is situated.

It might also be argued that the otaku-ACG origin of Bilibili reveals the Japanese cultural influence in Asia - There is also an affinity between Bilibili and Niconico, a Japanese website. At the same time, we might re-think how regional each platform is, regardless of the rhetoric of openness and accessibility. One reference is Marc Steinberg's *The Platform Economy: How Japan Transformed the Consumer Internet*, and particularly, the last chapter on Niconico.

The "technological" aspects such as designs and affordances are very important in analysing the political engagement, although I wasn't able to put them into a few paragraphs in the previous texts. As I have mentioned, there is a participatory gesture in the design of subtitles as instant feedbacks, yet the anonymity also implies a trolling potential. Some of the subtitles, for example, are merely copying and pasting, and can be viewed either as supportive as cheerleading or as disruptive inside jokes. Here is a connection among affects, cultures, technologies and probably politics.

One of the narratives on the Chinese internet is viewing it as a nascent civil society synchronising the development of Web 2.0 platforms. However, both internet service providers and users facilitate control through self-discipline and mutual supervision. Li Yonggang's *Our Firewall: Expression and Regu-*

lation of the Internet Age has offered a detailed explanation on the three major factors that obstruct people's internet participation, although the book was finished 10 years ago and sadly hasn't been translated to English yet. The paternalist governance pattern, firstly, tends to take decisions in favour of long-term political stability and economic prosperity rather than people's immediate acceptances and spontaneous choices. Secondly, the moral tension and anxiety of confronting enemies with sabotaging and antagonistic motivations is internalised in the supervisions over people. And thirdly, people's survivalist orientation connected to the authoritarian personality shapes the preference of faking feelings and opinions under social pressure. While the three factors are precisely based on the Chinese context, I would argue that at least the second point on moral tension and anxiety is shared globally, but with different degrees.

And yes, I'm still in an early stage of my project. I'll throw in some more details as the project moves on.

Best, Wenhao

APRJA  
Digest, Vol  
3, Issue 5 on  
07/12/2019 at 16:40  
from Juan Pablo Pacheco

Hey Becky,

I really enjoyed reading your text, and I'm looking forward to hearing more about the idea of \*edging\*, which I find really promising in the context of your research and what we have been discussing. I find it interesting specially in the sense that edging, as a sexual practice, focuses on controlling the climax of pleasure, a curve of pleasure that is constantly flirting with its fulfillment, yet it never happens. I wonder also how this related to increasing practices of remotely controlled sex toys in these platforms, especially in Chaturbate where live-broadcasting makes the experience more simultaneous. Toys like the OhmiBod are very interesting, as I think they are deeply changing the possibility

of affecting bodies at different edges of the network. There's also an increasing market of sexual toys for long-distance couples (like the Max and Nora from Lovesense), which are also very interesting in how they use the network to change the relationships between bodies. I know this last one if not pornography per se, but I wonder to what extent is all sex on the internet pornographic, as it is an image-driven experience. There's a young Colombian artist called Samanta Garcia? a <https://sammanta.wixsite.com/samantagarcia/body-code>, who has made one interesting piece around virtual live-cam pornographic platforms, and she has used this materials both in installations and live concerts. It also makes me think of early net artists who started experimenting with live-cams such as the JenniCam (Jennifer Ringley) or AnnaCam (Ana Voog) projects.

APRJA

Digest, Vol

3, Issue 13 on

07/12/2019 at 20:47

from Iuliia Glushneva

Looking forward to

hearing from

you!

Hey Becky,

Best,

I barely blinked, while I was reading your project description. That felt like reading a gripping thriller (which is a compliment)! Just like Juan, I was especially moved by your use of the concept of 'edging' that adds a new layer of complexity in terms of conceptualization of the network experience. You mostly discuss the web edging through the references to patience, slowness, and waiting, and I wonder whether you employ this notion as first and foremost a device to analyze the network temporality and its relation to erotic sensation or whether there are other sites of the network where edging becomes a crucial category for you to use. What is also extremely interesting to me is in what ways edging manifests itself after the era of BBSs and early online pornography. Has it become a relic due to technological advances and shifts in corporate culture? Has the sense of edging evolved over time?

Another thing I am super curious about is when and how the "offline" pornography industry, which was, as you point out, outside of the first experiments with online pornography, jumped in. It is a gigantic question. I am just trying to understand if the conditions of the arrival of this industry into the cyberspace say something important about the development of the porn networks more generally.

Speaking of multiple convergences: in your case study of affiliate marketing, your primary focus is on how porn websites promote each other. Are there any significant affiliations between these websites and non-pornographic websites? Are these affiliations always made upon a mutual agreement or can they be involuntary? I am asking because, for example, it is quite typical of the Russian-language internet to see that Pornhub can be advertised in completely unexpected places. You open an online interlinguistic vocabulary or webpage of some restaurant, and the ad pops up somewhere on the fringes. The online gossip magazines are major "PR agents" for pornographic websites, which, I assume, is not something exceptional. Do you find this kind of affiliations relevant for your project?

Becky, you emphasize that you are most interested in the interconnectedness built through the appeal to the YOUs. I think the focus on the hyperindividuated address must be something especially pertinent to the logic of online pornography and pornography as such. Yet, I am struck by how the foregrounding of WE is ubiquitous on Pornhub as well. They position themselves as "the number one free sex community on the net" and facilitate the creation of connections through fan clubs, comment systems, the feedback and suggestions feature, amateur program for those who want to participate in shootings, etc. Do you consider these practices as an element of the YOU logic?

Thank you. And again,  
this is a wonderful  
project!

Week 5  
on "Research  
Networks" on

09/12/2019 at 09:12

Best, from Christian Ulrik Andersen  
Iuliia

Greetings everyone, and welcome to this last round of posts and discussions on our maillist on "Research Networks" and hopefully also continuations of previous week's discussions. Thank you so far for sharing your thoughts over the past four weeks. This week, Linda Kronman, Iuliia Glushneva and Tatjana Seitz will commence the discussions with postings of their 2000 word (or, so) papers. I would like to invite Maria Dada, Tatiana Wells/Cristina Ribas/Giseli Vasconcellos, and Sudipto Basu to respond to this week's

posts, but encourage everyone to take part in the discussions.  
APRJA

Digest, Vol All the best, Christian  
3, Issue 14 on  
09/12/2019 at 10:34  
from Linda Kronman - KairUs

Hi Becky + All of you,

This is still a comment for last weeks round:

Becky: Thank you for your contribution and like other commentators I find the concept of "edging" and especially the slowness it implies very interesting. I wonder if this could be extended to a strategy of "slowing down"? I am thinking for example about Jennifer Garbys "idiotic encounters" a concept referencing Isabelle Stengers thoughts in "The Cosmopolitical Proposal" which is about creating a space for hesitation. How could "edging" play out as designed hesitation? Maybe I take this to far, however, I think there is a lot of potential in this concept.

Further your research reminded me of a project/festival/publications called Arse Electronica by a Vienna based collective called monocrom. I think the last event they had was in 2015 so I am not sure if this is a active project anymore, however, they published several anthologies themed around porn and technology and there might be something interest-

ing to discover in those: <http://www.monochrom.at/arse-elektronika/2014/bookings.html>

Gabrys Jennifer, Program Earth ? Environmental Sensing Technology and the Making of a Computational Planet. The University of Minnesota Press (2016)

Stengers Isabelle, ?The Cosmopolitical Proposal? in Making Things Public: Atmospheres of Democracy, ed. Bruno Latour, Peter Weibel (2005) How machines see on 10/12/2019 at 16:08 from Linda Kronman - Br, Linda KairUs

Hi Everyone,

My name is Linda Kronman and I am currently a PhD student working for the Machine Vision project at the University of Bergen in Norway. Below is my contribution, I also attached it as a PDF as a better readable version. However, to give you a bit of context I will mention a couple of things about what we are working on and? how it has shaped my research.

In the Machine Vision project I am collaborating with a team developing the Machine Vision Database (MV-Database) with Machine Vision Situations (MV-situations) to map and categorise references to and uses of MV in digital art, narratives and games in order to find patterns to help us analyse broader cultural understandings of machine vision in society. The MV-Database is an adaptation of the ELMCIP Electronic Literature Knowledge Base, that documents relationships between actors and objects. In the MV-Database we are creating links between the works through our interpretations and coding schema. We have been working through several iterations of the coding schema. Throughout the process of designing and building the database we have become increasingly aware of the multiple levels of interpretation taking place demonstrating an example of a digital humanities project where objectivity and representative are neither possible nor desirable as we understand knowl-

edge to be both situated and constructed.? The current version allows us to log what both human and non-human entities, fictional or not, are doing within the framed MV-situation. By describing both active and passive verbs, we focus on the distribution of agency which is one of the framing research questions of the overall Machine Vision in Everyday Life projects. In many ways our collaborative challenges to collect a representative set of works, to reduce our interpretive readings into labels, and deciding on what aspects of the work are valued have shaped my individual research and guided me into investigate how artist work with image datasets to train machine learning models.

The database is still a work in progress and we have a long list of works to log in, that said here is a link for those interested: <http://machine-vision.no/>

In addition to get comments to my contribution, I would really appreciate if you can suggest artworks that should be in this database. Some of the works I use have been mentioned on this list already, however, I am very aware that my list is very Eurocentric with a few works from Asia (mostly Korea where I used to live), hence, I would like to use this opportunity and network to expand the scope of works. And as I mentioned I already discovered new works through this list and ended up referencing Nicola's interview with Max Dovey because his work Hipster Bar fits very well in the framework I been thinking about.

BR, Linda

----- TEXT -----

/?Cameras are everywhere. these systems know a tremendous amount about me - but what do I know about them?/?Heather Dewey-Hagborg (Dewey-Hagborg, 2019)

/?I have a feeling that those of us who are still interested in visual literacy will need to spend some time learning and thinking about

how machines see images through unhuman eyes, and train ourselves to see like them?/Trevor Paglen (Bryan-Wilson, Cornell, & Kholeif, 2018, p. 40)

We know little about the ways machines see the world. Artists have realized the impact of the automated gaze in everyday lives, hence, exploring strategies questioning: how do machines see? Furthermore, what constitutes the reality of ?vision machines?? The experiences of preparing datasets for machine learning emerges as a possibility to start unravelling questions of how human values are hard-coded into a machine vision systems /umwelt/. /Selecting/, /collecting/, /categorizing/, /classifying/ and /cleaning /are activities related to compilation of training datasets all infused with politics.

An unhuman eye, a lens and a sensor comprise a camera. By 2020 there is estimated to be 45 billion cameras in the world (LDV Capital, 2017). Most of those cameras will be connected to networks communicating with other machines. Another type of networks, modelled to mimic biological brains, are in the core of how machines understand the world. Paul Virilio?s/vision machine/(Virilio, 1994)was influenced by Frank Rosenblatt?s Perceptron ?the first operative artificial neural network ? grandmother of all the matrices of machine learning? (Pasquinelli, 2019). Virilio anticipated /vision machines/to ?be capable not only of recognising the contours of shapes, but also of completely interpreting the visual field? (Virilio, 1994, p.59 ).

The revival of neural networks enabling machine learning and access to massive amounts of data provide the means for today?s /vision machines/, thus, we are ?delegating the analysis of objective reality to a machine? (ibid, p. 59). However, current research in AI ethics has brought to light that machine learning models are far from objective. Audits often expose how systems emphasise biases, historical prejudices and structural racism (Buo-lamwini & Gebru, 2018; Myers West, Whittaker, & Crawford, 2019).Nevertheless, if we would

suddenly lose our enhanced vision, we would realize how blind we are without the machine watching us, the world and beyond.

When Fluxus artist Robert Filliou coined the term Eternal Network he has been referenced to define it as "lasting interconnection of spiritual events, whether animal, vegetable, mineral or thought-energy"(in Welch, 1995, p. xix). Reading this quote together with N. Katherine Hayles' challenge to "overcome the(mis)perception that humans are the only important or relevant cognizer on the planet" (Hayles, 2017, p. 11), then, we must realize that the Eternal Network includes other cognizers than humans. In her book *Untought* Hayles re-thinks the concept of cognition, offering an extended definition of cognition which includes biological as well as technical cognizers: "Cognition is a process that interprets information within contexts that connect it with meaning/."(Hayles, 2017, p. 22). Hence, technical devices can be understood as cognizers in complex human-technical assemblages.

Hayles' cognition extends beyond consciousness to the nonconscious, drawing parallels between human and technical cognitive processes. In many ways the design of *vision machines* mimics human physics. Among other things artificial neural networks are inspired by, however not identical to, biological neural networks. Hence, it is not a surprise that human nonconscious cognition and technical cognition processes have some similarities: "Like human nonconscious cognition, technical cognition processes information faster than consciousness, discerns patterns and draws inferences and, for state-aware systems, processes inputs from subsystems that give information on the system's condition and functioning." (ibid, p. 11)

The networked eyes are not only watching they are also capturing an overwhelming number of images: more than human cognitive processes are able to manage. Moreover, machine vision is not only the enhancement of the human eye, but externalizations of the neuronal process-

ing capacity of the human brain. We can exemplify this with Adam Harvey's /VFRAME: Munition Detector (2017)/ a computer vision tool to detect illegal munition in vast amounts of uploaded videos. With the help of /VFRAME/ human rights researchers are searching for evidence in a 'sea of data' and as Hito Steyerl writes this is 'where pattern recognition comes into play'(Steyerl, 2019, p. 2). As Steyerl argues this is a fundamentally political operation. In this case the politics are framed by a collaboration with the Syrian Archive helping the human rights researchers to find visual evidence of war crimes and more specifically use of illegal munition. Enhancements of machine vision, historically propelled by warfare (Bousquet, 2018), centred on the bomb to find its target. However, in /VFRAME/ the setting is reversed when the targeted object is the bomb.

Users of /VFRAME: Munition Detector /become part of what Hayles calls a /nonconscious cognitive assemblage/ (Hayles, 2017)which include photo sensors, smart phones, Internet infrastructure, storage media, data centres, distribution platforms, machine learning algorithms as well as witnesses, citizen journalists, activists and those developing, maintaining and controlling access? to technical frameworks. Further cognitive processes take place when researchers find, validate and archive use of illegal munition with the objective to use it as an evidence tool for legally implementing justice and accountability ('About | Syrian Archive,' n.d.). Hayles prefers the term assemblage which can 'allow for contiguity in a fleshly sense' over network which she sees as 'conveying a sense of sparse, clean materiality' referring to Latour's Actor Network Theory as well as Deleuze and Guattari's usage of assemblage (Hayles, 2017, p. 118). The use of assemblage allows adding and dropping of components in a system that is in constant flux. In the /VFRAME /assemblage most of the internet infrastructure is still in place when the researcher is no longer part of it. Likewise access to internet or restrictive data moderation policies incite alternative practices resulting in new configurations of the system in

which /VFRAME/ operates. In this cognitive assemblage machine vision performs automated nonconscious cognitive processes, however, for it to operate human agency is crucial. Hayles suggest that we think of these systems as having /punctuated agency/ which is usually distributed unevenly in longer periods when human agency is needed and shorter intervals when the systems can be considered autonomous (ibid, p. 32). In the following I will zoom in and focus on those periods of human agency, which shape the ways machines see.

According to Hayles? we can never have embodied understanding of how another species sees or understands the world. Nevertheless, the umwelt of humans and other species overlap, referring to environment or surroundings through which every organism makes sense of the world, an idea Hayles adapts from Jakob von Uexküll's studies in biosemiotics, and adapts it to understand a computer's internal milieu (Hayles, 2019). Accepting the limits of never totally understanding how machines see, perhaps art can present methods of "how to see faithfully from another's point of view, even when the other is our own machine" (Haraway, 1988, p. 583). As artist Trevor Paglen, influenced by feminist theorist such as Donna Haraway, describes it: "We definitely don't simply see with the photoreceptors in our eyes? and continues by explaining how we learn to see the world around us by developing new metaphors and new vocabularies (Bryan-Wilson et al., 2018, p. 30). Likewise, we cannot see with photo sensors, however, this does not restrict from starting to develop a language enabling us to move towards an understanding of machine /umwelts/ and asking how they overlap with ours?"

Some answers may lay in why, how, and what machines are trained to see. Trevor Paglen and Kate Crawford looked at hundreds of image sets used to train artificial intelligence. This /archaeology of data sets/ as they call it exposed that "datasets shape the epistemic boundaries governing how AI systems operate, and thus are an essential part of understanding socially significant questions about AI?"

(Crawford & Paglen, 2019). As the /VFRAME/ example implied, training machine learning models require a considerable amount of human labour, this has been recognized by other artists as well. I have selected a few artworks to exemplify how s/electing/, /collecting/, /categorizing/, /classifying/ and /cleaning /are activities in which human values are embedded into the /umwelt/ of machine vision systems.

Memon Akten's work /Optimising for Beauty / (2017) to discuss how\*\*/selection/ of a training dataset and algorithm influences the /umwelt/ of a /vision machine. /I will explore how human and machine consciousness overlap in tendencies to mistakenly see an object or a pattern where there is none by analysing Emilio Vavarella/DIGITAL PAREIDOLIA: A Personal Index Of Facebook's Erroneous Portraits/ (2012) and Google's /Deep Dream Generator/ connecting it with Hito Steyerl's writings on apophenia. Pareidolia can be considered a subcategory of apophenia which is also defined as "the perception of random patterns within random data"(Steyerl, 2019, p. 14). Besides over-identification like facial recognition systems recognizing faces in everyday things, machine vision system also fails in detecting faces as Joy Buolamwini explains in /Gender Shades / (2018).

A machine's accuracy to recognizing things is related to the quantity of the dataset, which brings me to the politics of \*/collecting/\* training sets. Trevor Paglen's /In Behold These Glorious Times!/ (2017) and Adam Harvey's artwork /MegaPixel:Faces (2017)/ and his /MegaPixel/ research project together with Jules LaPlace reveal how training sets are collected be it in sterile lab environment, by crowd workers or scraped from the internet. These works problematize the practices of data collection and distribution.

As Foucault urges us to "question those divisions or groupings with which we have become so familiar" (Foucault, 1972, p. 22), /Adversarially Evolved Hallucination (2017)/ by Trevor Paglen does it in context of machine

learning. His imaginative taxonomies reveal how the *\*/categorization/\** shapes the machines understanding of the world. These hallucinations or dreams ?reveal how signal and noise are defined by preexisting categories and probability.?(Steyerl, 2019, p. 9) In */I-imageNetRoulette (2019)/* with Kate Crawford he takes it further by exposing the human related categories in one of the most used training sets for object recognition.

Creating categories and dividing objects into groups is one instance when human subjectivity is infused into the mythically objective AI. Another occasion which links human-machine cognitive processes is when objects are identified and assembled into created categories. Anna Ridler in */Mosaic Virus/ (2019)*, Hanna Davis? in */Emotional Landscapes/ (ongoing)*, Shinseungback Kimyonghun in */Animal Classifier / (2016)//* and Tom Dowey in */Hipster Bar (2015) /bring forth different aspects of *\*/classifying/\** objects and the labour of labelling and tagging. Cultural context can also confound search algorithms. For instance, identifying someone as a hipster requires rather advanced interpretation and varies depending on cultural context (Bozzi, n.d.). Labelling is often hidden labour as in Eva and Franco Mattes */Dark Content (2015) /depicting//moderators as ?people disguised as algorithms?, however, these cleaners are also training AI to replace them. */\*Cleaning\*//* is also a part of preparing a training data set as demonstrated in Memon Akten?s *//Dirty Data (2017)//* or Alexanders Reben?s *//Populace Guise// (2019)*. The abnormalities removed in this process define limits of a machine?s *//umwelt//.///***

Whit the possibility to extend on these examples it becomes clear that human agency shapes the */umvelt /of machine vision systems*. When both human and technical nonconscious cognitive processes ?interpret ambiguous or conflicting information to arrive at conclusions that are rarely if ever completely certain? (Hayles, 2017, p. 24) perhaps this framework can provide us a new approach to the ways machine vision profile and predicts. Hayles discusses how human nonconscious cognition pro-

cesses become ?a source for /intuition/, creativity, aesthetic preferences, and social interactions? (ibid, p. 52, my emphasis). The labour artists put into preparing training sets demonstrates how creative agency is distributed between machines and humans. When machine vision operates autonomously it is still restricted by its human designed /umwelt/. However, the nonconscious cognitive processes in a machine as in humans are not accessible by the conscious. Would it then be helpful to rather talk about /machine intuition /than predictions? When /machine intuition /is assisting decision making, we have to accept its imperfections and limits, hence, it should neither be placed higher than human intuition nor should it be ignored in its capability to draw inferences.

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Post-  
socialist  
Networks: In-  
formal Video  
Distribution and  
Screen Translation in  
Russia (1985-1998) on  
12/12/2019 at 06:19 from  
Iuliia Glushneva

Hello everyone, My name is Iuliia  
Glushneva and I am a Ph.D. student in  
the Department of Film and Moving  
Images at Concordia University (Montre-  
al). My current research deals with the  
role of linguistic translation in global media  
circulation, with a particular focus on the  
histories of translation's engagement  
with video technologies and translation prac-  
tices in postsocialist screen cultures.

I've attached my project description as pdf.  
Sorry for not sending it earlier. I will  
be very grateful if you find time  
to read the paper and I  
will appreciate any  
suggestions,  
reading recom-  
mendations,  
references to  
analogous phenomena,  
etc.

Best, Iuliia

How ma-  
chines see? on  
12/12/2019 at 15:53  
from Christian Ulrik  
Andersen

Dear Linda,  
thank you for  
your post. I am

looking forward to  
hearing more about your

Your post is very rich in ideas and thoughts.  
As I read it, you address the relation between  
human and computer in machine vision, a ques-  
tion that also extends discussions of former  
?visual regimes? belonging to other media  
technologies of vision. I was thinking that  
what you point at is that ?point of view? is  
not one thing, but in itself subject to a

point of view that changes over time and with media technologies. This genealogy of POV is also the subject of Mitra Azar's contribution to a former aprja-workshop that may be of interest to you (I believe he will also be in Berlin for our event) (see Mitra Azar "POV-Matter, cinematic POV and algorithmic POV between affects and umwelten" <https://aprja.net/article/view/115422> ). The text is rather enigmatic, but rich in ideas; including the idea to discuss the question of POV as a question of orientation (as kind of biological (or even pre-biotic) prototype POV).

I enjoyed reading your presentation of N. Katherine Hayles' recent text. It sounds really interesting and a must to read (your text is really full of contemporary references). It also made me wonder about the differences between human and computational cognition and sensemaking? Computation is a way of systematizing; a discrete and quantitative way of organizing the world that is geared towards capturing the world and new forms of acting and perceiving, as you also say (a critique of instrumentalization is of course nearby, and you also mention this in relation to "digital humanities?"). Whereas human sensemaking is different, non-discrete and continuous. Beatrice Fazi has written a really good paper (and book) on this from a philosophical stance "also pointing to the dangers in reading ideas of human affect into "digital sensation" just because it is a "neural network", or similar. She argues for other ways of qualifying the aesthetics of computation (see Fazi, M Beatrice (2019) "Digital aesthetics: the discrete and the continuous." Theory, Culture & Society, 36 (1). pp. 3-26.).

But of course, just because "virtuality" (smth that can only be felt) does not belong to computers and computation, and there is a difference between the discrete and the continuous, this does not mean that human perception and affect is not left untouched by the proliferation of other discrete and formal ways of sensing/sensemaking/POVs, and I agree with your position that the role of contemporary art is perhaps to make us see this, including

the political implications of what constitutes  
?visuality? today. You ask for artworks,  
but your text is already full of ex-  
amples. Kyle McDonald's works  
APRJA could provide further exam-  
Digest, Vol ples for you, maybe?  
3, Issue 17 on They a quite humor-  
12/12/2019 at 11:59 ous, too ([http://](http://www.kylemcdonald.net)  
from Iuliia Glushneva /www.kylemcdonald.net

Hello again, I apologize for )  
the multiple messages. Since  
some of you cannot upload my pdf,  
I've copied the text into this email  
(and just in case, I am sending the  
document as an attachment again). Thank  
you. Iuliia

\*Postsocialist Networks: Informal Video  
Distribution and Screen Translation in Russia  
(1985-1998)\*

\*The Neo-Babelian Networks and the Biopolitics  
of Translation\*

As an essential resource for the post-Fordist  
information economy and knowledge production,  
the network imaginary has produced a potent  
repertoire of narratives to guide our under-  
standing and experience of global communica-  
tion and exchange. In these narratives, the  
domain of global circulation is seen to be me-  
diated by the architecture of network and cap-  
ital, while the local replicates the network-  
ing logic of the global in order to be in-  
cluded and serves as a disorganized realm of  
labor (Castells 2010). The local as ?the space  
of places? and temporality of everyday life  
inevitably diverges from and poses a threat to  
the global network that functions through ?the  
space of flows,? High-speed transmission, and  
regulated flexibility. The network is inter-  
preted here as an ahistorical regime where  
?the rhythms, either biological or social, as-  
sociated with the notion of a life-cycle? fail  
(ibid. 476) and as an open-ended structure  
?able to expand without limits, integrating  
new nodes (?) as long as they share the same  
communication codes? (ibid. 501).

What is seemingly absent or, rather, bracketed

off in this classic account of the network and of the global as a network phenomenon is the immense cultural complexity and linguistic diversity underlying communication and networking on a global scale. This image of the fluid network that operates through universally shareable codes stands in direct relation to what Michal Cronin calls the *\*neo-Babelianism\** of the current information age and defines as *the desire for mutual, instantaneous intelligibility between human beings speaking, writing and reading different languages* (59). In defense of its own integrity in the face of the destabilizing presence of language differences, the network has developed several neo-Babelian scenarios. On the one hand, these are scenarios in which language diversity is rendered obsolete due to the use of the sole human language, usually English, or the use of the universal *neutral* digital language of computer networks. Both of them, in turn, are intertwined not only because English was the most preferable language on the internet but also because it was *built into the very computer code* (Goggin and McLelland 5). On the other hand, these are scenarios in which language diversity is internalized and governed by the network through a complex of distinctive strategies related to translation[1].

These strategies represent a variation of *\*the biopolitics of translation\**, to borrow Naoki Sakai and Jon Solomon's term (2009), that is of crucial importance to maintaining of the global network. They represent the discursive and material techniques deployed to organize and manage multilingual populations and information exchange by means of translation, where the latter refers not simply to a process of transfer but designates a productive site of life and *assumes a vital historical role in the constitution of the social* (Sakai and Solomon 135). In the neo-Babelian network paradigm, the dilemma of language diversity is engineered via a range of such interconnected tactics as the politics of translatability that favors easily adaptable and transferable knowledge and information, segmentation and regionalization of information flows, and concealment of the fact of transla-

tion.

Concealment of translation in the global network is manifested in the utopian rhetoric around machine translation that appears to operate through universal code compatible with genetic code (Apter 2001) and to enable momentary and unproblematic reproducibility. The emphasis on translation as an unproblematic, barely visible operation in itself is accompanied by concealing of the actual labor of translation and lived experience of those who translate. The labor itself, as mentioned above, is delegated to the 'space of places' and conceived as existing somehow outside the network. Meanwhile, the double concealment and marginalization are applied to the labor of translation that seems to be especially unsettling for the coherence and the network regulation of the inside/outside. While the network explicitly utilizes translation for the purpose of self-preserving, whether we talk, for instance, about the 'unintentional' labor of users whose linguistic data are accumulated by memory networks or the volunteer labor employed by media giants through the models of 'massively open translation' (O'Hagan 2016), the everyday translational activity is treated as peripheral in the knowledge production and distribution, translators are subject to the imperative of self-erasure in linguistic transfer, and translations have to be unobtrusive and unnoticeable.

\*But what happens to the network, my project asks, when these conditions are not fulfilled? What senses of translation opens up when the politics of concealment fails, and the noise and awkwardness of linguistic transfer break through to the network surface? How do we understand the cultural lives of communities that consume knowledge and experience the 'network' through haunting translations on an everyday basis?\*

\*Postsocialist Networks and Living in Translation\*

In attempting to answer the above questions, my project deals with the pre-internet histories of information and media circulation in

postsocialist Russia of the 1980s and 1990s. Those histories, as I aim to show, are not merely a precursor for the development of the local internet [2] practices. Instead, they illuminate the paths of the formation of the network thinking and ideas about connectivity in a broader cultural and material context. They help us understand the genealogies underlying the network imaginary, while looking beyond the narrative about the network's origins as a "story of engineers, bureaucrats, and hobbyists" (Bollmer 143) as well as beyond Western socioeconomic and technological realities.

At the center of my research is what we can call "postsocialist networks," where the notion "postsocialism" is used as a double temporal marker that denotes \*(1)\* the transformative period of democratization and/or market liberalization of (ex)-socialist societies, and in Russia usually stands for the period on the eve and after the fall of the Soviet Union in 1991; and \*(2)\* the persistence of socialist ideologies, memories, values, and everyday practices mediating the transformation and the present moment. The term is also used as a geographical marker that refers to former and current communist states. Explored through the lens of Russian history, "postsocialist networks", then, are the cultures of connectivity and systems of knowledge exchange that emerge through the conjunction of market liberalization and the Soviet socio-institutional legacies. At the same time, they are the routes and structures of circulation among Russia and other postsocialist societies.

One of the main challenges in investigating these systems of circulation and connections is to critically engage with the dominant academic and popular representations of (post)socialist networks as "failed" Or "improper." As a rule, these representations oscillate between two poles. The first one is to view (post)socialist networks as unsuccessful technological projects[3] and agendas that literally demonstrate how "not to network" (Peters 2016). And the second one is the ubiquitous tendency to use the notion "network" almost

exclusively in relation to the chaotic worlds of the (post)-Soviet black markets, secondary economies, \*samizdat\* [4] distribution called the "Internet-for-the-poor," piracy, and other informal practices that came to form a recognizable aspect of late socialist and post-socialist culture. The key question here is whether these (post)socialist phenomena usually presented as disorganized and based on personal relations can in general get referred to as networks. This question becomes more complicated as soon as we take into account the essential reflexivity of the network defined as "a set of institutions, knowledge practices, and artifacts thereof that internally generate the effects of their own reality by reflecting on themselves" (Riles 3). If the network has to reflect on its own existence in order to take place, can the post-socialist informal distribution activities, which seem to barely produce knowledge about themselves, be approached as a network? Or, what kind of network do we deal with in this case?

Perceived through the disorder of informality, illegality, and piracy, postsocialist networks accumulate everything which is to be eliminated in the network. Piracy is the core active danger for the network or "control society," whereas the passive one is noise (Deleuze 180). The noise permeates postsocialist networks through the abundance of translated knowledge, on the one hand, and the predominance of incomplete, absurd, erroneous, and therefore highly visible translations, on the other. Foreign, and especially Western, texts and media represented the most desirable objects circulating across the shadow networks in the late Soviet Union. Translated by amateurs or anonymous translators into the Russian language, those texts (literature, press, and song lyrics) were not always "real" but often proved to be "imaginary" interpretations having nothing to do with the originals. Meanwhile, in the 1980s and 1990s, due to the gradual easing of censorship, opening up of the borders, and systemic transformations, foreign media, texts, and goods flooded into all areas of Russian life. The arrival of for-

eign culture was accompanied by the unprecedented displacement of locally produced knowledge, and the outside turned into the inside. Translation, in turn, became a crucial condition that allowed for internalizing and meaningful engagement with that culture on a mass scale and that underlay the management of distribution for it. The everyday itself swirled in a vortex of translations that infiltrated the surfaces of urban landscapes in the form of outdoor ads and banners, graffiti, names of shops and restaurants, mispronounced and miswritten brands of commodities, etc. In this context, where translation happened to be an operational principle of connectivity, a key vehicle of information flows, and an essential aspect of everyday experience, the familiar network politics of concealment could unlikely start working. Another reason for that is that the desire to synchronize with the world, or rather with the West, put the task to translate fast and as much as possible at the center of cultural life. This resulted in a massive spread of translations whose machinery was hardly possible to hide. Carried out in haste, those erroneous and clumsy translations immediately pointed to the very fact of translation and to the always present "double-peak," best exemplified by the practice of voice-over translation of videotapes.

\* By looking at postsocialist histories of information and media circulation, my research explores how the meaning and functioning of the network changes under the conditions of visibility of translation and such informal activities as piracy. At the same time, it examines how the meanings and operation of translation and piracy themselves are reconfigured through postsocialist networks. My primary objects to analyze these issues are video distribution in Russia from 1985 to 1998 and voice-over as a dominant way of video translation. \*

\*Informal Video Distribution and Screen Translation in Russia (1985-1998)\*

As a consumer-level technology, video came to the Soviet Russia in the late 1970s and was almost exclusively represented by the VHS for-

mat until 1999 when DVD was introduced. From the beginning, the VHS culture became a domain of the foreign both at the level of equipment and at the level of distributed media products, which had a decisive role for its meteoric rise to popularity and prestige, on the one hand, and partially determined its semi-legal status, on the other. The local press described the advent of the new technology as an 'avalanche' that invaded the Soviet everyday, a 'landslide' that swept away the wall fencing off the 'unspoiled,' inexperienced Soviet viewer from foreign screen culture.[5] Woven into a wide range of unofficial distribution practices, video culture in Russia was established from the outset as a pirate culture from the perspective of international legal norms. By the mid-1990s, about 90% of all circulating videotapes were pirated, and approximately 80% of the two thousand official television stations in the country broadcasted films and shows from the pirate videotapes.[6]

While the local films and programmes were rarely distributed on VHS, the video screens were dominated by the Western cinema. Not only films but also videotapes with pre-recorded foreign pornography, religious sermons, educational programs, TV shows, self-help lectures and workout programs flooded video parlors, street bazaars and kiosks that mushroomed across Russia. All these videotapes were united by one feature which is \*voice-over translation\*, a technique of oral translation where the target language is recorded over the original source language, such that both language tracks can be heard. In contrast to most other national contexts where this method is typically only employed to localize documentaries, ads, and interviews, the voice-over translation has become a hallmark of the post-socialist Russian-language media culture and the dominant way to distribute films and videos across the post-Soviet space up to date.[7] In the VHS era, this translation represented a single-voice simultaneous interpreting (only one, usually male, voice was used to translate all original voices) that was full of errors and was performed in an asynchronous, monotonous manner (Figure 1).

While keeping in mind the notion of language as a historically contingent, productive ?social activity? that stands in mutually constitutive relation to labor (Williams 33), I focus on the following key aspects in my study of informal video distribution and voice-over translation:

\*1. \*\*Cross-Border Video Networks and Translation \*

I survey the cross-border channels and practices mediating the delivery of original videotapes with the pre-recorded foreign content to Russia. The organization and routes of these transnational networks allow to understand what kinds of media content and what languages dominated the local video market and why. At the same time, I look at the reverse cross-border circulation of the already translated videotapes from Russia in the direction of the former Soviet, first of all Central Asian, republics where Russian remained one of the dominant languages.

\*2. \*\*The Translating Bodies\*

Who were the VHS translators? What kind of labour conditions were created for them? How did they engage with video technology? These are essential questions my study addresses. I consider the translators? bodies as part of the broader cultural and technological networks, while foregrounding the movement of these bodies between the institutional and pirate terrains, a state of physical and intellectual tension built around them, and their embeddedness into video apparatus.

\*3. \*\*Local Video Infrastructures and Translation\*

Borrowing from Ravi Sundaram?s (2010) and Brian Larkin?s (2008, 2013) analyses of pirate media infrastructures, I define ?infrastructure? as ?physical forms,? ?built networks that facilitate the flow of goods, people, or ideas and allow for their exchange over space? (Larkin 2013, 328). To grasp the relationship between the local video infrastructures and

translation, my project takes a close look at the network of video salons and pirate bazaars distributing videotapes. My focus is on the representation of translation in these places and the use of them and translators' voices as a marketing tool and a source of profit.

#### \*4. \*\*Network Aesthetics of Video Translation\*

Finally, employing Patrick Jagoda's (2016) theory of network aesthetics, my research surveys the aesthetic forms and features of translated pirate videos as traces and effects of their network life, that is of the influence of border-crossing, translators' bodies, technology, and infrastructure. Meanwhile, translation continues to play the central role as pointing not simply to the reflection of circulation histories in aesthetics. Instead, translation here designates the specific network imaginary rooted in error, asynchrony, infidelity, and distortion of original taste hierarchies (see also Dwyer and Lobato 2016).

\*In addressing these aspects of the complex relationship between media distribution and translation, this project provides an account of the network where a 'perfectly shareable, univocal language that leaves nothing to be deciphered, translated, or imagined' does not pose an obstacle but 'becomes a potential nightmare' (Starosta 220) as an unnatural condition incompatible with the lived experience of the postsocialist subject.\*

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[1] The term "translation" is understood as "the process of encoding/decoding required to transfer informational content between different linguistico-cultural spheres" (Sakai and Solomon 133).

[2] The internet became a mass phenomenon in Russia only in the second half of the 2000s. In 2003, only 9 percent of the Russian population accessed to the internet (Gorham et al. 2).

[3] See also an essay film *After Scarcity* <http://dis.art/after-scarcity> (2018) by Bahar Noorizadeh.

[4] In the Soviet Union, "samizdat" is a system of dissemination of unofficial texts reproduced in a handwritten or typewritten form by enthusiasts.

[5] Alexander Morozov, "Anton Ivanovich Serditsya" [Anton Ivanovich is Angry]. "Moskovskij Komsomolets", May 15, 1988: 4.

[6] Gendlin, Vladimir. "Poymannyye piraty i stanovyatsya dilerami videokompaniy" ["Caught Pirates Are Becoming the Dealers of Video Companies"]. "Kommersant. Den'gi", no. 37, 2014, p. 24; and Volkov, I.S. "Piratstvo na regional'nom televidenii" ["Piracy On Regional Television"]. "Kinoproizvodstvo", no. 2, 1996, p.77.

[7] The voice-over remains a dominant way to translate pirated media on the Runet (the Russian-language internet) and represents the most common translation technique on Russian television. Linda's text on Machine Vision on 14/12/2019 at 06:16 from Sudipto Basu

Dear all,

Sorry for responding so late in the week. Have been too distracted to work given the terrible

things happening in India at the moment, where a citizenship bill has just been passed whose ramifications are deeply troubling (whose historical equivalents, by many accounts, are the Nuremburg Laws of 1935).

Anyway, I realized that I did not introduce myself while making the first posting in this series, so I'm belatedly offering one. I'm a first-year PhD researcher in cinema studies at JNU, New Delhi. Earlier this year I submitted an M.Phil thesis called "Images at the End of the World: Experimental Cinema and its Earth Imaginations" where I looked at how certain experimental filmmakers reconfigure the (post-)cinematic image in response to the precarity of living through planetary media-technological accelerations. In my PhD, I shall be trying to look at the intersections of cinema/new media, extractivism and labor, though I am yet to figure out the exact contours of my project. Goes without saying that the text I first sent is a step in that direction. Would be happy to discuss these in more detail whenever the opportunity arises.

Linda:

Thank you for your brilliant text. Really enjoyed reading it. Of course, the first name that comes into my mind when thinking about machine vision is Harun Farocki, whose whole oeuvre in some sense deals with the genealogy of the cybernetic operational image. Farocki too proposes the complementary relation between human intelligence/cognition and machine intelligence in the construction of machine vision, but for him this is clearly a biunivocal relationship where this human labor is constantly absorbed into the machine without being acknowledged. There is something of a parent-child relationship: one nervously trains and watches over the AI system to see how far it has learnt, at some point the AI "grows up" and escapes this parental gaze (a rather cruel version of this disciplinarian ethic is the subject of Steyerl's installation HellYeahWeFuckDie).

Because of this constant elision of labor in

AI/machine vision, Farocki insists on framing the hand as a corrective: the co-ordination of eye/hand is the very basic form of human intelligence, and the building block of the filmmaker's craft as well (see, for e.g., the self-reflexive essay films *The Expression of Hands* and *Section/Interface*). What strikes me as particularly pertinent in your text is the work of selecting, collecting, categorizing, classifying, cleaning fundamental to machine learning; all of which can be understood as variations of sorting and counting discrete things. For Farocki, this discreteness of the digital lies literally in the digit -- the finger/hand which makes a decision while interacting with the machine, categorizing something as this OR that. The hand, long seen in Marxist tradition as the symbol of labor, is the vanishing mediator in machine vision since its need is progressively minimized wherever machine learning makes substantial advances (triggering a process of proletarianization - loss of embodied skills - that Farocki sees occurring throughout the history of automation). However Farocki's project is geared to see in machine vision a necessary approximation of truth - as if machine vision were only about describing the pictured object as truthfully as possible. If one queers this perspective, as Steyerl does in thinking of pattern misrecognition or apophenia, what you call machine intuition becomes deconstructive or productive a la Rene Magritte, unconstrained by the limited utility imposed on it by human use.

This poses a couple of questions: (a.) Is there, or can there be, a machine vision that bypasses this intelligence of the digit/finger (off the top of my head, I can think of voice recognition as a bypass of the hand, though its accuracy is still not perfect)? (b.) Can we think of general/non-artistic uses of machine vision that exceed their dominant utilitarianism in projects of identification and classification? Steyerl does tend to propose something in that direction by calling for a proxy politics of the everyday.

How machines see on

14/12/2019 at  
09:41 from Ozgun  
Eylul Iscen

Will respond to  
Iuliia's paper  
soon.

Dear Linda,

With warm re-  
gards, Sudipto

Thank you for your text which engages with current debates and art works around machine vision in fruitful ways. I appreciate you bringing the human agency back through the recent work of Hayles, which you lay out very well. I just wanted to add few things:

About art works: I really like your analysis of the Syrian Archive and Adam Harvey's work as an example of non-conscious cognitive assemblages. Forensic Architecture's project Triple Chaser does something similar, too. I also like how you group the art works along the acts of categorizing, classifying, and cleaning, etc.. As you demonstrate, these art works tackle a different part of a larger issue of automated vision. I would like to hear more about how their practice differ in terms of their aesthetic and political implications. For instance, one produces evidence in order to invert the forensic gaze of militarized states, while the other exposes the underlying biases of everyday technologies. I do not seek any hierarchy between these practices; it is not a question of which is better. But this could help us to see the potentials and limits of certain (artistic) interventions.

For further conversation: I find your conclusion very engaging: talking about machine intuition rather than prediction. For this, I would recommend Louise Amoore's work, especially her recent article "Doubt and the Algorithm: On the Partial Accounts of Machine Learning" (2019). I agree with you that we have to accept imperfections of machine learning as part of the distributed cognition/agency. The question I struggle with is how. Machine learning algorithms operate with uncertainty (e.g. incomputable), not without it. Nonetheless, their outputs are taken and acted upon by the authority (border controls, drone

strikes) as truths. For me, this means that we also need to understand how those models/outputs and their applications are determined and justified by various regimes of power (from science to law). This is also where their racialized operations come forth, as they are operationalized within already racially discriminative social systems and relations (which is a deeper problem than a racist data set). In this sense, the variety of art works you examine offer a wider angle to address these questions in their totality.

Look forward to continuing with this conversation. Best,  
Ozgun

Week 5  
on "Research Networks" on  
15/12/2019 at 18:48  
from Seitz, Tatjana

Hi all,

First I shall apologise for my super delayed contribution to this wonderfully productive list. I also apologise to the commenting group for muddling up your schedules. I thankfully receive any comments, however, given my delay, do not expect so.

I think I'm the last one to introduce myself. My name is Tatjana Seitz, I've currently just moved to the third year of my PhD. I'm located at a Graduate School "Locating Media" at the University of Siegen in Germany. My creative capacities have remained on the level of windows paint which is why I heavily depend on interdisciplinary groups and events. I have included a short intro of my project and my field in the PDF attached. My PhD research is mostly composed of three pillars: 1. media studies (theory and digital methods), 2. information systems (software development) and 3. platform economics (multi-sided markets theory).

In my contribution, I have decided to use the opportunity to receive some input on a theoretical piece that I have been thinking about for a bit now but seem not to get the right angle on it. I have included a rough outline

of how I would go about it conceptually. How I intend to start framing the phenomenon. In order to make sure you're not entirely lost in my loose thoughts, I have included visualisations. I hope they will support the idea behind the outline. I've stripped the piece from references apart from those to Phil Agre bc. the piece centres around a concept for the representation of the world within artificial intelligence modelling that he worked on during his PhD and the supporting "theory of activity" which he was developing. In so doing, my idea was that it might help you to brainstorm more openly as I am interested in any trajectory reading this might go.

One of the visualisations is a bit bigger and might need a few seconds to load.

I would love to hear basically any thoughts on the outline (last 2 pages) - really. I do wonder whether it makes sense conceptually, theoretically, methodologically, logically. Questions are very welcome, critique even more!

Thank you  
for the com-  
ments to How

Machines See on  
16/12/2019 at 11:38 from  
Linda Kronman - KairUs

Many thanks to everyone  
for you time!

Tatjana  
Seitz

Thank you for all the feedback and I totally understand that the last days before holidays is busy time. So, I especially appreciate that many of you took time on the weekend to write your thoughts and reflect on my contribution.

Christian: Thank you for reminding me about Mitra Azar's work. I met him at Politics of Machines in Beirut and found his research very relevant. I know I have plenty of examples in the text, however, I am not settled for the examples yet. The call for more artworks is rather for the Machine Vision database.

Ozgun: Thank you for your feedback and I am

very happy that you see the potentials of extending this text towards the aesthetic and political differences of the artworks and further how they open the discussion towards a broader context of how such systems are applied in political and social frameworks. Objectivity and truth are also questions that I have been tackling. On one hand there are projects such as VFRAME or the work from Forensic Architecture that use machine vision for collecting evidence. On the other hand there are companies claiming that with the help of machine vision one can profile a person based on one image (e.g. www.faception.com), so I agree the politics of how machine vision is applied is crucial. In addition to this there is the discussion around DeepFakes and their influence on e.g. politics and how this plays a role in how we perceive truths. I think understanding the uncertainty of machine intuition could lead towards a focus on the processes of validation. VFRAME is a good example where machine vision is used to overcome human limits of processing data, however, a lot of research remains actually to validate those videos so that they can be considered as evidence in court. I am still far from having a clear position on this but I think it will be fruitful to discuss this further in Berlin.

Sudipto: I am familiar with some of Farocki's writing especially concerning the operative image and how these have been further theorized e.g. by Remi Marie and Ingrid Hoelzl. I appreciate how you bring the attention to the digit -- the finger/hand -- labor concepts of Farocki and I think this will be fruitful to combine with aspects of Hayles punctuated agency. Thank you also for very deep and great questions that I have to immerse with and hopefully develop further during the workshop.

I will be printing all your referenced articles for holiday reading and look forward to spin forward on these thoughts together with you next year.

How machines see? on  
16/12/2019 at  
10:40 from Seitz,

Happy Holidays!  
BR, Linda

Tatjana

Hi Linda,

Just wanted to follow up on a few remarks that I personally found quite intriguing and would love to hear more on.

Many thanks for resurfacing Hayles last book. The way you applied some of her concepts to machine vision and digital art, urges me to re-visit the book rather soon and compare your framing to some thoughts I used the book for when thinking about conscious/ unconscious moments in (web) interface design vs. interaction. To this end of the space where computational and human conscious tend to collapse into each other, I did enjoy your question and proposition at the end of your piece suggesting to shift the grounds upon which we make sense of machine vision and prediction. I do wonder whether your critique is an epistemological one, maybe even echoing Luciana Parisi in some way? Thinking here about her piece on "Reprogramming Decisionism" in e-Flux, October 2017 and some background text on the Chaitin's, 2006 "limits of reason" from where she expands her critique with the concept of the "incompressible". I'm not sure I can sufficiently paraphrase her work, so I just drop it here with reference :)

"Would it then be helpful to rather talk about machine intuition than predictions?"

I would like to pick up that line to advance something I was thinking about with regards to theorizing dynamic web interfaces, and wonder whether or not, you might see similarities here.

In my limited understanding both - intuition and prediction - are first of all back-ward looking concepts. That is they are based on former accumulated experience. Herbert Simon, who shaped the AI / Machine Learning modelling, suggests that "The situation has provided a cue; this cue has given the expert access to information stored in memory, and the information provides the answer. Intuition is

nothing more and nothing less than recognition." In another article he adds: "We usually use the word 'intuition' - sometimes also 'judgment' or even 'creativity' - to refer to this ability of experts to respond to situations in their domains of expertise almost instantaneously and relatively accurately." What differs however, is the process by which humans (at least) process those former experiences, recognise corresponding patterns upon which they proceed to further either react intuitively to a given situation or else attempt to make predictions upon which to take further action. The former, intuition, is heavily based on storytelling, a mental narrative process where one sketches out possible outcomes of a given situation in the mind. Probability is rather secondary in this process. The latter, prediction, on the other hand is grounded in the assumption to be able to derive a probability upon which action can be taken. From this point of departure the human mind is conceptualised in a argument construction that is grounded in Heuristics & Biases. Counterintuitively, as far as I understand it, human decision making based on heuristics and predictions is an unconscious process compared to intuition. Intuition apparently is stronger connected to doubt which reinforces a loop of reflection upon one's decision - forcing it into the consciousness. While the heuristics based prediction-reasoned decision making, apparently, is less often actively doubted bc. it often seems very obvious. Prominent examples from network theory that is based on this process is e.g. the Birthday Paradox (probably best known from Clay Shirkey's Here Comes Everybody).

Much the same as you I do not intend to suggest that either of both is "superior". However, it seems to me in computation the argument justifying that Machine Learning Systems are superior over the human decision making is mainly arguing on the level of prediction - where computation indeed can minimise the friction - but only in standardised laboratory conditions.

Given the programming of code and algorithms



depth. They really push me further to think about intuition more deeper and as I want to take this question further I really appreciate the perspective you brought into it.

Br, Linda

Week 5  
on "Research Networks" on 16/12/2019 at 14:52  
from Seitz, Tatjana

Hi all,

Just realised that there was a bit of a glitch after exporting the PDF from Scrivener yesterday, sorry about that.

Attaching a corrected version just in case. The viz is now in a second PDF for reasons of size (17 mb - It can't be further reduced I'm afraid). In case anyone is limited in terms of data...

Tatjana Seitz

<Transmediale PhD workshop\_Tatjana Seitz..pdf>

Situating PhD in the academic field: Building upon insights generated by digital methods development and new media theory, my PhD research contributes to the growing body of critical digital media and software studies, by providing an account of APIs as a medium in its own right. This change of perspective generates a distinctive set of research questions and asks specifically of the ways in which APIs with their distinctive features are partaking in the articulation, materialization and enactment of digital cultures. While my work engages with digital/inventive methods and questions with regards to APIs, the work is complementary to existing research areas in providing more clarification by means of a micro level study of APIs as a cultural phenomenon within the historical trajectories of internet technologies and critical thought.

Introduction to the General Topic Online platforms are gradually converging with our everyday cultural activity, increasingly mediating

political and economic values through digital technologies. One example is the proliferation of connected services that rest upon so called Application Programming Interfaces (APIs) - a specific piece of software that enables third-party developers, businesses and researchers alike to programmatically access a company's data servers. APIs are deeply interwoven with the rise of the so called social web and the networked society. APIs enable the smooth communication between services, apps and devices. These APIs, thus, constitute an essential part of the underlying infrastructure of platforms that can be seen as global connected society: they frame certain kinds of action, relationships and power relations. In new media studies APIs are conceptualized on the one hand as modular building blocks for developers to build services and applications on top of a platform that provides access to certain data and functionality (Helmond, Nieborg, and Van der Vlist 2019). On the other hand, they are also studied as services for data sharing that are widely integrated in social media and platform firms not only to enable services but to exchange user data with other websites, platforms and mobile apps (Bodle 2011; Gerlitz and Helmond 2013; Helmond 2015). Within information systems and management, meanwhile, scholars such as Ola Henfridsson, Ghazawneh (2013) and Yoo (2010) have focused on theoretical accounts of the contractual relationship between platform control through boundary resources, such as APIs, and external contribution from third-party development.

However, none of these works have addressed the central question of the specific aesthetics, economics and politics of APIs as a medium in their own right. Despite much excellent work and essential groundwork on themes such the politics of the programmable web and the role of APIs as important drivers of today's digital cultures, scholars examining digital cultures and their underlying infrastructure have not yet fully explored the importance APIs in creating and enacting certain forms of relation between machine-to-machine as well as human-machine interaction. This can be observed in the way APIs are commonly

framed in research as one coherent or stable module interfacing between the core (e.g. Facebook server) and the periphery (e.g. apps) (Baldwin and Woodard 2009). While in fact APIs are highly variable sets of literally thousands of possible conditions each of which sets free particular incentives to API consumers (e.g. third party developers) and other extensible boundary resources (social buttons, FB connect, programmatic advertising etc.).

Object of inquiry In order to be able to draw conceptual conclusions about APIs, I use Facebook's Graph API as my exemplary object of study. The Graph API reaches back to 2006 and echoes the rise of the dynamic social media web as a technological, cultural and economic phenomenon. As such it provides a rich exemplary case study. The first proposed definition for APIs was published in 2000 by Roy Fielding, 1 which he conceptualized already between 1993 and 1997. REST API = Representational State Transfer Application Programming Interface. (RESTful) APIs have been deployed in emerging online firms sparsely from 2002. When Apple opened the iPhone to external developers via the App Store in 2007, the number of APIs exploded. Succinctly stated today's tech giants that have emerged from the post dot-com crisis are distinctive in one particular respect from their competitors - namely their early adoption of API technologies: eBay 2000, Amazon 2002, Flickr 2004, Google Maps, Twitter and Facebook in 2006, and Apple in 2007.

Example Graph API I haven't yet finished writing up the material on my case study part. However, to illustrate what I mean by re-framing APIs, and in particular the Graph API in my case study, I would nevertheless like to include a few graphics to illustrate why I dismiss of the common description (and topological representation) of APIs as one coherent module interfacing between the core and the periphery (Henfridsson, Ghazawneh 2013; Yoo 2010) and intend to reframe the API as "highly variable sets of literally thousands of possible conditions.

Figure 1 common representation of APIs within app / services development Figure 2 common topological representation of APIs in system design I hope you get the hint of this reduction from these illustrations.

After my empirical study, which I repeated just recently in a second data sprint with four generous scholars [ Marcus Burkhardt, Anne Helmond, Fernando van der Vlist and Angeles Briones.], the below visualization is how I present the Graph API in my research. Disclaimer: The visualisations are not finished and I understand you can't really read/ understand what it shows without a more extensive explanation. In my attempt to demonstrate where I'm heading with the more theoretical account of the notion of a network within the history of web cultures more broadly, for the moment, my intention with this unreadable visualization is to complicate the mental model upon which we operate when thinking about protological agency. Notes on the viz: left: a version of Facebook's Graph API v2.7 from mid 2016, the blank / white vertical lines are several versions in between, right end: version Graph API v3.1 from mid 2018 (just after Cambridge Analytica scandal broke). The vertical "length" shows the amount of data points third party developers can get via the Graph API, which is called the GET method in technical terminology or READ in Facebook's terminology. What is missing is the so-called POST method (tech) or WRITE method (FB). Meaning the set of possible conditions should be not quite but closer to double the size.

Figure 3. see PDF - My representation of the Graph API.

Now that you have a bit more of a feeling for where I am going with my investigation into the presentation/representation/ construction (not sure about the terminology here) of the "Social Network" as Facebook calls its data infrastructure, it might be helpful to zoom in to see, let's say, how a Facebook "page" is represented / constituted within / by the Graph API.

Figure 3 Constitution / Representation of the object "Page". Data points are accessible to third-party developers/ researchers etc. (I am not taking the node "user" to free the conversation a bit from political load that comes with the term "user". To Facebook's logic it does not matter whether it's a page or a user or a button, the logics of representation are the same).

rough outline of draft idea:

REST=Representational State Transfer Protocol Architecture

For this part I'm interested in delving deeper into the four letters that define the rules and constraints of the operational logic of this particular kind of API. (There are other 'rules' for how to write code for an API. Facebook's Graph API follows the guidelines of REST this is why I mainly stick to this protocol. This part wants to engage with the "Representational State" of REST. Though, I am not sure yet whether "Representational" and "State" need to be decoupled. But since representation here refers to state, I've decided to go with both of them together. My leading concern of this part are the conditions under which the Social Graph is produced through the representation of 'what'? And what is 'that thing that is being transferred' between clients and why does the 'state of this thing that is being transferred' matter? I will argue that in the quest of making sense of what 'data' or 'elements' that are shared via the Graph API are representational of and the role of state transfer (a kind of protocol for putting in-motion of media in-situ) a fundamentally relational theory could be applied.

I will first provide a literature review of Roy Fielding's original explanation for this part of the architecture style. I will then sketch out how "Representational State" is conceptualised in business and developers literature. After unfolding the meaning and function it has technically speaking I will then continue with the example of the Graph API. An appropriate example will be chosen to problematise an uncritical reading of the techni-

cal condition and how it plays out when becoming central to digital economy as well as digital cultures - manifested in aesthetics and practises. From a methodological point of departure I will draw on Agre's ethno-methodologically influenced, computational outline towards a "Theory of Activity" (chapter on Phil Agre). I will connect the Artificial Intelligence arcade game "Pengi" to the question of "Representational States". I will use the example of this exploratory AI-program Pengi that Agre and his collaborator David Chapman programmed to illustrate: (a) the history of science of what Agre called a Critical Technical Practice (CTP) (b) lessons we can learn from Pengi for the methodological inquiry of the social web (as a Critical Technical Practice) (c) how the deictic representation (indexical-functional) as part of a broader Theory of Activity (resulting from a CRP) can provide an additional conceptual lenses for grasping with a socio-technical account of social media data sharing protocols, Such as APIs.

Tracing the modelling of the AI program through Agre's and Chapman's MIT memos and later publication (mailing list/ blog + academic work) explicates Agre's fundamental concern with the representation of activity in the world in computational systems. Pengi can in this regard then be understood as an ethnomethodologically informed computational methodology for the re-articulation of a "Theory of Activity" which he aimed for. Pengi is thus a "hybrid study". It's hybrid in the sense that through the most fiery study of one's own praxis that the praxis/activity/condition itself can be overcome/ changed. (see Lynch Studies of Work). What is more, Pengi's AI is build on the representation of the world and activity in computational environments. It is not based on the idea of rational plans by which the world and activity in the world is usually represented computationally. Pengi is a contribution to a new "participatory theory of representation". They call it "indexical-functional", or "deictic" representation (reference to Agre's PhD 'The dynamic structure of everyday life') as such, Pengi, is built to

challenge the dominant understanding of "representation" in computational systems. I believe by that the applicability of Agre's more prominent "Grammars of Action" (Agre 1997) can be extended to a study of representational states based on a fundamentally relational point of departure.

To that end, in re-reading Agre and his "Grammars of Action" as a study of computational that focuses of activity by foregrounding relationality, I will furthermore explore whether Pengi as a theory-practise-method and a "Theory of Activity" can be connected to more contemporary notions of affective theory and methodology. The goal is to revisit the politics of meaning making as well as decision making for the computational. In engaging with the early sketching out of a "Theory of Activity", furthermore, a trajectory shall be explored where critical feministic methodologies and data studies intersect. At this intersection of New/ Speculative Materialism, Affective Methodologies and early Theory of Activity, I will explore the ways in which Agre's earlier conceptual outlining of thought towards the computational socio-technical condition can be used to methodologically inquire such speculative/ critical rather theoretical concepts methodologically. To this end, I show how Agre's notion of indexical-functional (Deictic) representation, which is in itself a theoretical-methodological advancement of Garfinkel's Ethnomethodology and Suchman's Situated Action (with whom in the late 80s early 90s Agre was part of a small intellectual "moment") could be read in such a way as to a study computed networks thinking from the relation rather than the nodes, so to say. (each of the data points in the Graph API Viz. are 'place holders' for possible relations that are not yet realized. According to the realization of such possible relations the node "page" will be represented at any given time) The Deictic representation as methodologically explored through Pengi, can be applied to explore APIs in such a way as to explore software explicitly from a critical stance as formulated by representativeness of critical thought.

Pengi: Pengi Agre, Philip E. and David Chapman. 1987. "Pengi: An Implementation of a Theory of Activity." Pp. 268-272 in Proceedings of the Sixth National Conference on Artificial Intelligence - Volume 1, AAAI'87. AAAI Press. "a visual system based on psychophysically motivated ideas from Ullman's visual routines theory [53], a simple motor system, and a central system made entirely of combinational logic. The Pengo games Pengi plays move fast, so Pengi constantly uses the contingencies and opportunities of its environment to help it improvise ways to pursue its projects. Improvisation differs from planning-as programming in that each moment's action results, effectively, from a fresh reasoning-through of that moment's situation. Yet improvisation, like planning, involves ideas about what might happen in the future."

Indexical-functional representation (reference: explained in Agre Dynamic Structure of Everyday Life) "Whereas traditional representations posit a "semantic" correspondence between symbols in an agent's head and objectively individuated objects in the world, our theory describes a causal relationship between the agent and indexically and functionally individuated entities in the world. For example, one of the entities Pengi works with is the-bee-l-am-chasing. This entity is individuated indexically in that it is defined in terms of its relationship to the agent ("I")."

Week 5  
on "Research Networks"  
16/12/2019 at 15:57  
from Winnie Soon

Hi Tatjana,

Thanks for your text and your visualization. I am also reading Phil Agre but more on his framing on critical technical practice. Your object of inquiry I see as very much related to that area and of course, it is also a usual way of studying technical objects in the field of software studies.

Your visualization made me think of Ren?

Ridgway's work on Google personalization that she has done with the comparison of ranking results by using anonymous browser. (<http://www.ephemerajournal.org/contribution/against-personalisation-self>) Although both of you with the different subject matter, I do think that mapping out fields and stuff might give a different view of the complexity of infrastructure and relations. My question would be how does this format of visualization connects to the participatory theory of representation? In the area of visualization, there is also different forms you may try to experiment, such as dot (more hierarchical or layered drawing), neato (more spring model layouts) and sfdp (more multiscale) and twopi (more radial layouts after Graham Wills 97). You can see this open-source visualization tool that might be useful to help thinking the various form of representation (<https://graphviz.gitlab.io/about/>). I do see your work may be similar to social network analysis in media studies.

In terms of APIs, Eric Snodgrass and I have written something around the politics, aesthetics and the historical trajectories of such technical object, which I think may be relevant to your investigation. Attached a few links related to APIs and hope they are useful for your overall PhD research.

1. API practices and paradigms: Exploring the protocological parameters of APIs as key facilitators of sociotechnical forms of exchange: <https://firstmonday.org/ojs/index.php/fm/article/view/9553> 2. Overview of different articles related to APIs: <http://raetzsch.berlin/new-paper-weaving-seams-with-data-and-the-role-of-cityapis/> 3. Taina Bucher, 2013. "Objects of intense feeling: The case of the Twitter API," *Computational Culture*, number 3 (16 November), and at <http://computationalculture.net/objects-of-intense-feeling-the-case-of-the-twitter-api/>, accessed 1 May 2018.

best, Winnie

Week 5  
on "Research Networks" on  
17/12/2019 at 06:10

from Seitz, Tatjana

Hi Winnie,

Of course I'm familiar with your wonderful firstmonday paper. I do indeed need to finally incorporate it into the outline of the project, as it adds an important angle to it than the other 3 framings and situates nicely to my endeavor!

Many thanks also for the viz links and viz suggestions! Will definitely make use of those. I had a workshop with Vladan Joler from the ShareLab last Wednesday in Siegen where we also spoke about the API material and ways to visualise it / tell stories. I'd love to further discuss this with you in Berlin. Particularly given that you are also interested in Agre?s Critical Technical Practice. Maybe that's the way to go about with the Viz of the material. Thinking more Pengi (method-practice) than info viz & network (there are a few reasons I hesitate with the Network viz of the API infrastructure. One bold one is that I am trying not to replicate FB framing of it, and have a hope that a different visual language will open up spaces for critical inquiry in a different style than replicating the network structure. Another one is grounded in the operational logic of the GET methods and core edges - another topic I hope to pick up in more detail in Berlin!)

"My question would be how does this format of visualization connects to the participatory theory of representation? "

-> Thanks for framing this so clearly. Yes, I think this is very central and will help to make the material and the theory speak to each other much better!

Postso-  
cialist Net-  
works: Informal

ter! This is great,  
thanks!

Video Distribution and  
Screen Translation in Rus-  
sia (1985-1998) by Iuliia

Warmly Tat-  
jana

Glushneva on 17/12/2019 at 15:03  
from Sudipto Basu

Dear Iuliia,

Your text was a delightful read, particularly since these material signs of a desire to catch up with a purportedly global culture leapfrogging away -- a desire to belong to the network -- are very relatable to me. In India, of course, the central question of access was not so much language, English being a de facto second or third tongue for most educated people, as a delayed entry into the global market economy, which coincided with the decline of the Soviet Union. As you rightly argue, a potent clash of temporalities and imaginaries ensues whenever such a 'closed society' is suddenly opened up to global flows of information and culture. In this transition, various modes of translation come to occupy a central place and sundry fantastic objects of desire proliferate (counterfeits of global brands with slightly tweaked logos, 'fashionable' exotic markers of global aspiration such as hep names, and so on). One remarkable index of this temporal clash, you point out, is the breakneck speed at which translation is accomplished for the 'slower' insulated culture to 'catch up,' even compromising quality in this tradeoff. All kinds of illegitimate or illicit copies swarm the market, as if the desire to become global precedes the formal legalistic framework that can deliver the goods.

Of course, I like your focus on the labor of translation for its resonance with my text on the labor of interfacing (the dubbing artiste/translator joins what Nicola called in one of his postings the figures of labor of the network age). There is in fact a common stress in this series on the work of networking, or net-working as a verb/practice. I'm trying to think if we might read the dynamic of the post-socialist transition beginning from the originary 'closed world' logic of Cold War cybernetic culture noted by scholars like Paul Edwards (*The Closed World* book), Geoffrey Bowker (*How to Be Universal*) and more recently Anselm Franke and Diedrich Diederichsen (<https://www.e-flux.com/journal/45/60114/the-whole-earth-in-conversation-with-diedrich-diederich->

sen-and-anselm-franke/). Since, according to these scholars, the networked world is born out of a Cold War context of en/closures on multiple levels - where a strong logic of prescription and instant response-ability is built into the system - neo-Babelianism is necessarily built into the network (to sustain minimum friction). However, precisely because networks must expand, more and more localities and non-Anglophone cultures need to be integrated: the friction of translation has to be confronted and overcome. At this juncture of transition, the network itself demands an illegitimate, extra-legal activity of translation that can ease its proper entry into new territories. A demotic participatory turn takes over, with mass media no longer the sole domain of the state (the bottom-up participatory proto-"social media" model triumphing over the older top-down broadcast media - what Ravi Sundaram calls the collapse of the social and the medial).

Now I can't help to notice two things. First, remarkably, what you call the unconcealment of translation (its hypervisibility in errors, incompleteness, awkwardness, etc.) does not dim the Russian enthusiasm to be connected to global flows, does not inhibit networking. This challenges the long-held truism of infrastructure studies that systems only work when they recede into the background and become invisible. In the text you cite, Brian Larkin makes a similar point: there are various degrees of (in)visibility to infrastructures mobilized according to various political, aesthetic and affective regimes. More generally, we could say that the relation between visibility and friction of engagement/networking is more complicated than this normative background/foreground dynamic. In India, the first small-scale electrical and electronic consumer goods - as well as the cultural products that they brought in (foreign porn, kung fu films, Hollywood action cinema) - were largely pirated or smuggled in. If these had a chequered visibility in the grey market, playing hide-and-seek from the eyes of the law, in the familial home or the neighbourhood the presence of these goods was celebrated, hypervisible

(the new gadget as an object of wonder).

My sense is that in the post-SU context similarly, the enthusiasm of finally belonging to a global network far outweighed the faulty, hasty, and monotonous translations and therefore did not inhibit their use. However I'm interested in (a.) whether this industry of Russian voiceover translation was later formalized into a full-blown professional industry to streamline, aestheticize or professionalize the translation and delivery? My limited experience using a Russian torrent tracker is that the VO style today remains much the same as you describe, somewhat roughshod in terms of the audio mixing, though there are often multiplications of the number of dubbers (1VO, 2VO, 3VO tracks). (b.) does the blooming of the grey-market video industry change the nature of sovereign power in Russia? As Sundaram argues in his piece, the collapse of the social and medial domains due to pirate infrastructures essentially shifts Indian politics to an extremely populist register. We can see the long-term effects of this shift in today's India in the key role played by WhatsApp fake videos and disinformation in the decay of democratic institutions and the sharp shift towards fascist politics (even before WhatsApp, the role played by pirate video and television in the fascist/Hindu-nationalist Ram Janmabhoomi movement was extremely significant). I'm therefore curious how the object of your study ties in with the post-SU configuration of power in Russia and its erstwhile satellite states.

Perhaps we can discuss  
these in Berlin.

Warmly, Sudipto

Week 5  
on "Research  
Networks" on  
17/12/2019 at 15:45  
from Winnie Soon

Hi Tatjana,

Another nice article by Graham Harwood on "Teaching Critical Technical Practice" in Critical Makers Readers (recently published, free download: <https://networkcultures.org/blog/publication/the-critical-makers->

reader-unlearning-technology/) and there are some nice pointers to describe how software as a technical, cultural, and interpersonal object.

Re the relations of visualization: I agree that different forms or visual language will open up space for critical inquiry. What I like about graphviz is that the graph is primarily focused on (with edges, nodes and labels) how you set the relations and you have to define it quite clearly and logically (as it operates in the form of code but can be able to output various visual format). This process of typing, thinking and executing allow different forms of inquiry, especially with the discrepancy of what you write/think is not what it is produced exactly. When you talk about GET methods, I am also thinking about the format of Finite-State machine, the way of how we shift the diagram from visualization to showing the specific changing state of things, for example in your case might be the state of a profile page, the state of the source code, the state of fields as a way to think through conditions and transitions. In that sense, the question is not about what's API and what are the fields of API, but with a very particular focus on the object of study with actions (the change of state). Let's share more in Berlin.

APRJA  
Digest, Vol 3, Issue 26 on 18/12/2019 at 21:41 from Iuliia Glushneva

best, Winnie

Hi Sudipto, Thank you so much for taking the time to read and respond to my piece. You make some really good points that I feel I will certainly need to address in my further work.

By now I have some sketchy thoughts (sorry there are too many of them) regarding what you mention in your response as well as in your own essay submitted a few weeks ago.

The biggest dilemma to me is still the way how to approach the logic of the (capitalist) net-

work expansion both of us are dealing with. On the one hand, it seems that we take it for granted that the network, as you write, "must expand." This impulse to grow, in turn, allows for tolerating the "frictions" such as translation or socio-cultural diversity. Or, more importantly, these frictions are turned into a means of expansion. As, for example, Michael Cronin sarcastically notes in this regard, "Respecting cultural differences is primarily about getting everyone to use the same software" (\*Translation and Globalization \*87).

On the other hand, the assumption about the ever-expanding network generates a series of complex issues. Many of them have been already discussed by your respondents. My research, in turn, by looking at the post-Soviet experience of knowledge and media distribution, raises questions, such as what happens when the network expansion becomes "unplanned" or "unwanted," what exactly becomes extended, and how and why the extension can be held back. Taken from the global perspective, the post-Soviet Eurasia and its net cultures are very illustrative in this sense.

Piracy is, of course, one of the symptoms of such "unplanned" (and potentially beneficial) extension and this is what makes the experiences of such places as Russia and India are so similar. Meanwhile, translation complicates the scenario in some aspects (by the way, you say that translation is not such a huge question in the case of India but I am still wondering how the English-language knowledge circulates if, as far as I know, only about 10% of India speaks English, how other "external" languages are translated in India, and, in general, how translation works in such a multilingual community). Translation, which is neither good nor bad in itself, is a key aspect of networking in Russia and in the post-Soviet world (especially in Central Asia) where the Russian language, a former (imperial) lingua franca, is still alive and actively used. It allows to internalize both the non-local knowledge and technologies and at the same time turns the region into a gigantic ouroboros.

Speaking of the online culture, we have this huge .ru-zone (the Russian-language internet or Rунet) where translation, as both a linguistic and cultural operation, becomes ubiquitous (the news translated from BBC and distributed by local agencies, other media, e-commerce companies mimicking other retailers [e.g., Ozon as a clone of Amazon], etc.). I mean that the network culture here is being formed in relation to the global networks through translation and mimicry, while staying invisible and noisy to those networks as such. This separation is reflected not only in the fact that, let's say, for example, Amazon or Netflix are in no hurry to expand their reach to the region. I am also talking about how academia situates this region. A "void," "Asiatic badlands" or "a strange limbo of the poor North" are only a few metaphors used by Western scholars to describe the place of the post-Soviet world within the global system. There was this paradoxical division the First World and the Third World after 1989, now we have the Global North and the Global South, where the place of the post-Soviet countries is unclear, to say the least. At the same time, it has a direct relation to local translational cultures and their (marginalizing) influence. Russia, in particular, and its knowledge producers are highly dependent on translation, which makes them invisible or insignificant for non-local academia. On the one hand, this is due to a lack of translations. Lev Manovich's book \*The Language of New Media\*, for instance, was translated and published in Russia only last year. And everyone was like "wow, this is a new word in media studies." Or the very network discourse we are so investing in remains a terra incognita in Russia. On the other hand, there is an excess of translation in the sense that the entire academic machine works while translating, commenting on, and, let's be honest, plagiarizing the Western scholarship.

So, by looking at all these things I am still struggling with how to properly situate the network expansion. Meanwhile, this is exactly where the Cold War, the "closed world" logic, containment, and their legacy are super impor-

tant to me. It is interesting how, in the "Whole Earth" interview you recommended, the Cold War is referred to as the perfect expression of a cybernetic model operating through the dichotomy between system and environment. The dynamic of translation is an essential thing here, and the postsocialist culture of translation is linked to this dynamics in many ways. I am talking not only about the projects of machine translation both the US and the Soviet Union, "environments" for each other, were actively working on (that's funny how these projects were commonly tested on each other's languages, see Georgetown-IBM experiment). But I am also interested in how they were differently translating in the context of the Cold War. For instance, if you take some work on the history of the Soviet cybernetic culture, you will see that it starts with the description of how the Soviets tried to translate the Western works on cybernetics and artificial intelligence, kept the translations in secret, how they tended to mistranslate, and, therefore, responded in an asynchronous manner. This importance of translation and the role of translators in the very formation of cybernetic knowledge (and formation of the network thinking) in the Soviet Union is striking, while it never seems to be the case for the US. My other favorite story is about the IBM interpreting system at the Nuremberg Trials (a prologue for the Cold War competition) And I think this system is an interesting example of the network technology per se. The performance of simultaneous translation based on this system was widely adopted in the Soviet Union not only for international gatherings but on radio, television and film festivals. The voice-over translation of video I focus on was significantly influenced by the standards developed in Nuremberg. So, there are indeed multiple opportunities to explore the genealogies of postsocialist (video) culture in relation to the Cold War histories.

All these aspects return me to your questions about the role of the state and about the formal lives of translation. It is a very long conversation. I just want to say that the history of video translation as well as the his-

tory of informal distribution do not point to the ?triumphing over the older top-down? system. On the contrary, these histories and practices are phenomena essential for the formal system and ?official? worlds. The voice-over translation of video comes from the professional industry of simultaneous interpreting (many VHS translators were official simultaneous interpreters who served the Communist apparatchiks and worked at official events and on television). And today, yes, it is still the dominant practice to translate pirated media you can find on the Russian torrent tracker. At the same time, the same practice (in a bit more polished form) and even the same voices are used on official radio, television, streaming platforms, etc.

Sorry, I am getting carried away a bit and should stop here.

Looking forward to talking more in Berlin.

Also, Sudipto, we here, in Montreal universities, are very upset about what is happening in India and we are now preparing our solidarity statement with the protesting students experiencing police violence. It may be one small gesture but, I hope, an encouraging one.

Thanks again,

Iuliia

These ideas will be further developed for an upcoming issue of A Peer Reviewed Journal About... (APRJA) to be published in 2020.

[www.aprja.net](http://www.aprja.net)



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