A Peer-Reviewed Journal About

#BWPWAP

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Contents

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EDITORIAL

#BWPWAP

Christian Ulrik Andersen, Tatiana Bazzichelli, Armin Beverungen, Geoff Cox, Kristoffer Gansing

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In referring to the cancellation of Pluto's planetary status in 2006, *#BWPWAP* (Back When Pluto Was a Planet) – the 2013 edition of the transmediale festival – interrogates techno-cultural processes of displacement and invention, and asks for artistic and speculative responses to new cultural imaginaries. In light of this, the conference and workshop *Researching #BWPWAP* took place in November 2012 in Lüneburg, Germany, organised jointly by Leuphana University of Lüneburg, Aarhus University and the reSource transmedial culture/transmediale. The call for participation focused on Ph.D. researchers and other participants to speculate on BWPWAP as a pretext for presenting their research and even to further reflect on its circulation as a meme.

This newspaper presents some outcomes of this process, and like the conference and workshop, can be interpreted in the context of a research culture that has been significantly destabilized by network culture and digital media. If the planet Pluto didn't exactly fall prey to an epistemological break or a scientific revolution, but rather to a mundane administrative procedure – a redefinition of what constitutes a planet – then what does this say about contemporary research culture? Certainly, much research culture has shared Pluto's fate: conferences reduced to networking events to foster cultural capital, and scholarly communications reduced to impact factors measured by grant givers. In other words, research is not just about measuring the performativity of a single researcher (the peer-reviewed journal system), but also the processes of questioning, investigating, speculating, and sharing between peers in a broader sense.

#BWPWAP captures a time and space when art and digital culture was researched outside formal academia. Festivals like transmediale around the world have for decades been engaged with research practices and have functioned as a crucial focus for the sharing of ideas between practitioners, critics or theoreticians. In addition, network culture contributes to and transforms research culture, forcing it out of its closet and, if not into the solar system, then at least beyond the walls of the academy, thereby threatening some of its conservative precepts. Many universities are embracing practice-oriented Ph.D. projects (framing research as practice), and an increasing number of practitioners are using universities as contexts for their practice (framing practice as research) – but is this enough? With this pretext, the newspaper asks what kinds of technological and artistic practices might produce radical effects for an institutionalized research culture? How can we save research from itself?

Accordingly, the scope of the newspaper extends far beyond the festival and academy, and into a speculative research environment that engages with a wider constellation of ideas and readers; beginning with a glossary of terms and organised around key newspaper-like subheadings: debate, economy, technology, living and education. That it takes the form of a newspaper, and includes short articles, helps to serve our main purpose: to register the confusions and conflicts between knowledge production, research, and self-organisation. If research is necessarily part of a matrix of power and knowledge, then we aim to expose this by its awkward and casual setting. If research remains a powerful force in shaping our understanding of the world and the institutions through which we operate, then we wish this to extend this to include non-traditional methods, to open speculations, actions, interventions – and to expand the range of possibilities into the far reaches of outer space.

Aarhus/Leuphana, January 2013

Magda Tyżlik-Carver

SOLAR SYSTEM AS IT REALLY IS AND CURATING AS/IN COMMON/S

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Preamble

'We have to describe the solar system as it really is and not as we would like it to be' ('Pluto Loses Status as a Planet').These words by Iwan Williams, the chairman of a panel which demoted Pluto to a status of a 'dwarf planet' in 2006, invoke so well, though most likely unintentionally, the particular kind of space that I regularly attend as a curator and researcher. As a practitioner at work, curating and researching, I find myself often at the disjuncture so neatly defined by this statement: between the apparent real and the imaginary, between what is and what I hope for. In my practice, this space of separation is between what curating is, how it is defined and practised, and what I would like it to be. I find that it is through the practice that I am able to articulate my desires, through doing it. There it is. This fluency is less present in the writing about it, however. And there I so often mask the fact that I fail, when I pretend that what I would like it to be really is.

Perhaps one reason for this is the subject of my research which proposes to understand curating in/as common/s. If the common, as Hardt and Negri say (256), is discovered and produced through joyful encounters, then perhaps writing about *curating in/as common/s* should be also done with others. And so, even as I am writing it now in the solitude of my study, with books and papers scattered around me, with multiple browser windows open, with multiple versions of this paper that I started and never finished, I will attempt to practice the joyful encounter now: an event of encountering texts, words, and people, their ideas and theories, and software and hardware too, though that reminds me that not all is full of joy.

Introduction: curating and commons

In this proposition of *curating in/as common/s* I am interested in a particular relation between curating and commons. I claim that there is a link between curating and 'commoning', that is the activity and process that produces the commons (Linebaugh, *The Magna Carta Manifesto*; Linebaugh, 'Some Principles of the Commons'; An Architektur), and that this link is based in practice. It lays in the fact that the two employ forms of organisation, a particular kind of arrangement of social and aesthetic relations, space, time, forms of behaviour, customs, and ways in which these are governed and controlled, in other words the way in which they are held in common. When we say that something is curated the understanding is that we are dealing with a collection assembled and displayed according to a curatorial vision and under curator's direction. Regardless if we are dealing with an übercurator with total control over exhibition, or if the curator's role is instrumental in delivering the museum's mission, or if indeed collaborative forms of curating or co-curating are engaged in process of curatorial production, a curator can be considered an apparatus of power, a *dispositif* in a Foucauldian sense.

A different form of organisation is invoked, however, when we refer to commons which are understood as a self-organised community shaping, managing and utilising resources through 'community control' (Shiva). As well as resources and community, the important element of the commons is the practice of commoning, those practices that constitute how shared resources are 'held' in common, what customs and laws make up the practice of making commons. In other words 'commoning' is about '(re)production

of commons' about caring for the community and its resources, and about organising (De Angelis 1; Holdren and Shukaitis 3).

In my proposition to think and to practice curating in/as common/s I want to experiment with a different form of power distribution in curating, one that is based on commons as an organising principle and where forms of governmentality and social reproduction are developed and take place in common with others.

The decision of researching curating and commons together reflects the need to critically consider the function of the so called audience/public/users in the contemporary art context, and its changing role as a relational element within its wider aesthetics and audience politics. Responding critically to ever present and notorious forms of participation in art as well as inescapable life online, in my research and practice I am experimenting with forms of constructing and organising curatorial events paying attention to the kind of participation instigated by them. The projects and events which I have so far devised even though discursive are performative and temporary in their nature. For that reason in the proposition in curating in/as common(s) I am not aiming at establishing a model for setting up commons in a digital domain. Creative Commons, Wikipedia, Peer-2-Peer Foundation or F/OSS are some of the examples of already existing models which constantly experiment with forms of community building and organising resources around it. Indeed my interest is in contributing a model or a method or a practice that can assist in forms of (re)production of commons in and through curatorial practice.

The question here is not just: what is (re)production of commons in curating, but also why should we consider it now? In order to answer this I focus on the word (re) production. There are number of references which have to be taken into consideration here as they help define tensions that exist in the domain of creative and cultural production today. They often rest around the issue of work and every-day practices, and fuzzy distinctions between work and life, play and labour. For this paper I will concentrate on two of those references.

The first one relates to what often is considered women's work. In the book published in 1972, Mariarosa Dalla Costa and Selma James recognised how essential women's reproductive work is to reproduction of capitalist society and how it produces surplus value for capitalism. Since then the concept of social factory has been further extended to define the changing conditions of labour in post-Fordism (Lazzarato; Hardt and Negri, *Empire*; Terranova; Virno). Today, affective, immaterial, cognitive labour defines all forms of social and creative production regardless if it takes place at home, in the factory, at school, on the online social platforms such as facebook or in the gallery. We the users, participants, workers, audience, collaborators no longer leave the social factory. Yet increasingly the value of the mass participation is naturalised and its significance recognised only in the data mined and sold. This understanding of how social production contributes to production of value and how it is based on forms of exploitation of socialites and subjectivities is an elementary fact in this research and second wave feminism still contributes an apt analysis to this.

The second reference relates to the technical conditions of digital reproduction, the very core of it: namely the automation of certain elements, of certain practices. The default ability and readiness of digital content to be instantly copied, mixed, mashed, forked, shared and redistributed is an opportunity, a potential for a hack to take place. It is at the same time salvation from individualisation, and provocation in the situation of constant search for creativity as a source

of entrepreneurial realisation required in neoliberalism.

Framing curating and commons through the conditions briefly defined above focuses my attention on the practices which occur and how they might link. Thus I aim in this text to do two things: to sketch the background to my curatorial projects by mapping approaches which situate curating in relation to forms of participation in and engagement with networked technologies for creative and cultural production on Internet; to analyse my own project *common practice* in relation to such concepts as governance and governmentality.

Curating: practice and discourse

Curating is an evolving practice and one which is no longer associated exclusively with the institutional setting. Particularly since the 60s when the role of a curator has developed from that of a person responsible for a collection in a museum to an independent curator operating from the outside of the institution to produce exhibitions for galleries; to a curator as a blogger and filter feeder supported by a proliferation of online technologies (Schleiner). These multiple forms of curatorial practice which can be recognised today exist at the same time with many different characterisation of the figure of the curator: an 'übercurator' (Bickers) represented by such figures in contemporary art as Hans Ulrich Orbist, or Nicolas Bourriaud; the concept of artist-curators and curators-artists recognises the process as moving freely between the demarcation line that would traditionally distinguish curatorial and artistic practices from each other. Finally in the recent years there have been an increasing interest in the potential of curatorial practice to dissolve 'the dependencies inside and outside the art world' or 'at least for shifting them and making them more dynamic' (Von Bismarck 101). Such a statement represents attention to the political potential of curatorial practice and to the fact that curating these days is not just about caring for collections and organising and managing exhibitions. The advancement of debates around the concept of the curatorial demonstrates the interest and the urge of some of the agents operating within the artworld to take into account the current economic, social and political changes under neoliberal and post-fordist conditions. The curatorial in this context is defined as 'embodied criticality' and 'act of smuggling' (Rogoff 1), 'a qualitative term' which operates 'in parallel with Chantall Mouffe's notion of "political"' (Lind 64–65), or a discursive practice (O'Neil) to mention only a few. Paul O'Neil defines such interests as 'the curatorial turn' arguing that predominant form of curating today is that of production of discourse. O'Neil concentrates on the critique of this trajectory in curating which is preoccupied with ones' own practice, and where exhibition is considered to be a 'contemporary form of rhetoric' and 'subjective political tool' (16). Engagement in forms of discourse production requires situating the traditional objects of curatorial practice such as exhibitions, festivals, events, in the wider context which relates art world and its institutions to globalised (art) markets as well as social, cultural and political relations. An edited collection of texts by O'Neil *Curating Subjects* is an example of a critical engagement in production of this discourse (O'Neill et al.).

The recognition of this extended environment where cultural and creative production takes place and where the inside and outside dependencies are indeed very vigorous, are articulated through such concepts as 'immaterial curating' (Krysa), 'software

curating' (Krysa, *Curating Immateriality*; Krysa, 'Software Curating'), and 'art platforms' (Goriunova). These contributions to curatorial practice and study are firmly situated within the *milieu* where art, technology, networks, labour systems characteristic to post-fordist forms of production, everyday practices and forms of creative production on Internet are always interlinked and present. In fact, following Hardt and Negri's claim that there is no outside (*Empire* 190), these practices are all part of the same system, they don't exist outside of something, and cannot be separated and divided into autonomous elements. As institutions and systems seem to be interlinked and networked we are reminded of and sometimes even experience or participate in forms and activities that attempt to detach themselves from the status quo, from how it is. Goriunova gives examples of specific networked forms which are basis for self-organised creativity. When discussing art platforms, she says that:

The strength of art platforms lies in the way they deal with immanent creative cultural forces that are at once insubsumable in their entirety and diversity to any single principle or institution and that are a foundational power in arts, economies, and politics, domains where more often than not, they may be beheaded. (10)

The online art platform is for Goriunova an alternative system of 'organisation and circulation' and 'a resource to constantly reposition art to reflexively disrupt institutional, representational, and social powers' (8). According to this view art and creative practices are not only situated in a broader context but also this position gives a particular self-awareness and immanency to the practice which can operate directly on different institutions and various fields.

If art platforms motivate and amplify the dynamics that exist in the (art) world, immaterial and software curating (Krysa, 'Software Curating') also operate in recognition of practices and relations which ordinarily are still considered external to the art world. Immaterial curating directly references characteristic features of labour in post-Fordism, and like immaterial labour it describes a process which uses information-technologies and takes place within socio-technological networks. As immaterial labour was introduced as a critique of labour conditions in late capitalism (Lazzarato), immaterial curating should be recognised also as a critique of prevailing concepts around curating which omit the conditions, technological, social and institutional, in which curating takes place today. Immaterial curating, thus, sets up conditions for the concept of software curating. Krysa with the term software curating defines a specific way in which curating can be understood. She recognises software as a form and practice of artistic expression and how 'concept of programmability and the algorithm' are 'the organising principle of artwork (in a functional and/or technical sense)'. There are two parallels that are drawn here: Krysa links curating and programming through the concept of programmability which characterises software/artwork and is the core of practice of programming/curating; her argument in fact is that software is at the same time a tool for curating (organising, archiving, displaying), and can 'demonstrate *curating in itself*.' (Krysa, 'Experiments in Social Software Curating')

The examples put forward by Krysa and Goriunova concern technological and social changes when discussing aesthetic and creative forms of production. In that sense they directly situate themselves 'outside' (if we can still use this word) of what is traditionally thought to constitute the art world. Or to be more precise, they reposition the context in which curating and in fact any creative

and artistic activity takes place: the world at large. The two propositions are established together with projects such as runme.org ('Runme.org – Say It with Software Art!') as an example of art platform and softwareKURATOR as a curatorial software for collecting, storing, organising and viewing source code, as well as referencing other examples of creative activities which assemble together technologies, software, hardware, networks, people and institutions (Krysa, 'Experiments in Social Software Curating'; Krysa, *Curating Immateriality*; Goriunova, *Art Platforms*; Goriunova, 'Swarm Forms'; Goriunova and Shulgin). What the two propositions share is the recognition how technologies and practices associated with them directly influence and act upon recognised fields such as the art world and defined practices such as curating, and how they respond and influence back social, cultural, economic, political and technological structures.

My research and practice of curating falls within the discourse that Krysa and Goriunova contribute to, which recognises curating and creative practice as taking place in the wider domain. Partly this discourse sits within what O'Neil defines as 'the curatorial turn'. Where it differs, I would argue, is in the fact that Goriunova and Krysa's contributions include forms of culture that take place and are produced outside (sic!), somewhere on the Internet, as elements which also shape and co-produce this discourse. They break with the assumption still prevailing within the art world and curatorial discourse, that power to influence works only one way. The fact that Goriunova doesn't talk about art platforms explicitly in the context of curating helps to situate her discussion in relation to broader art rather than curating as a practice which one might argue is about reaffirming existing power relations through forms of display and reception. By considering art platform to act 'as a catalyst in the development of an exceptionally vivid cultural or artistic current' and to be 'a deviation from the main thoroughfares of digital cultures' (*Art Platforms* 2) she introduces more progressive way to think of creative and aesthetic practices as potentiality.

Krysa's concern is similar though explicitly articulated through the question of 'how power relations, control and agency in particular are expressed in new curatorial forms that involve technological open systems' ('Software Curating' 10). I would argue, as suggested earlier, that Krysa and Goriunova participate in production of discourse which goes beyond its self-referential form on the subject of curating as critiqued by O'Neil. The production of discourse and contribution to it, in the case of the two examples, is realised through practice rather than limited to it. And that's where my curatorial and research project is situated.

Common practice: speculative intervention and experimental practice

Above I outlined the context of my research as located within an expanded curatorial field where the curatorial takes into account not just political and economic changes but also through practice directly reflects on the influence of technology on contemporary life and vice versa. The focus of this chapter is on the organisational features of the project *common practice*. *Common practice* is a speculative intervention and experimental practice of curating in the expanded field where the figure of a curator and practice of curating act together with the concept of the common/s and practice of commoning to consider forms of knowledge production and distribution.

It is worth starting with the question: what is a curator needed for in the context of commons? Indeed it can be argued that commons does not require a curator, as the care of the commons is shared and distributed across the community and practiced through customs and laws that govern the use of commons. If the figure of a curator is about forms of control and organisation that follow hierarchical distribution of knowledge/power, it is even more incompatible with the idea of commons. What kind of relation can be drawn if we consider a curator in parallel with doctors, judges, priests, etc. which Foucault described as figures 'through whom power passed and who are important in the fields of power relations' (247). And a curator is an important link in the set of power relations between art institution, its public, artists and artefacts. Is the curatorial intervention in the commons one which is geared towards executing forms of domination? Or could it be usefully applied to change the direction of power/knowledge flow? Could commons then be basis of rationality that governs the practices devised and facilitated by and through curator as the apparatus of power/knowledge?

My curatorial project *common practice* was devised as an experiment into, what I term curating in/as common/s. It was about initiating and exploring techniques/technologies/practices where the self of a curator is unimportant and where the curatorial event is a situation that alters the traditional power relations in a way that expands the possibilities for action by following the organisational logic of the commons.

When I talk about power I very much follow Foucauldian understanding in which it is defined as a set of power relations which constantly change and are contingent to the conditions in which they operate and which 'constitute their own organization' (Foucault 1998, p.92), and the distinction he makes between power and domination. In this reading of the project I am especially interested in applying Foucault idea of governmentality, as the acceptance of how we are governed which is on the one hand concerned with the practices and techniques of governance (social and political control) and on the other of self-control/self-governance. Thomas Lemke recognises Foucault's work as characterised by two 'seemingly disparate projects': a genealogy of the state and genealogy of the subject which Foucault discusses in series of lectures, articles, interviews and in his project on the history of sexuality. But Lemke also recognises still missing and unknown subject of Foucault scholarship as that of 'the problematics of government as the greater context of his work' (Lemke 50). This analysis is useful as it points to the connection between the self and the state which Lemke defines as 'the problem of government'. My research engages with that issue but within the context of the art institution and art world, namely with the question: what forms of governmentality are exercised within curatorial project such as *common practice*, and how? If we think of a curator as a figure, an apparatus through which art institution's power as domination is exercised, can this device be used to introduce different forms of power and governmentality, than the usual distribution that channels power from top to bottom? It is within this context that *common practice* intervenes by on the one hand situating itself as curatorial project within an art institution, and on the other through the use of social and free software technologies and texts to generate more intimate forms of engagement, driven by the motivation to involve the 'self', of others and mine, in the project. Following from that the question could be formed in the following way: what forms of government (a curator) are practised here?

Common practice was a project commissioned by Arnolfini in Bristol in 2010. It

followed directly from experiments on which I collaborated earlier with Department of Reading under the name of *playing practice* and turning *language into objects*. The core for all the projects was the use of a particular reading method which activates number of technologies: wiki, Skype-based text-chat and Department of Reading Internet system, in the context of an online reading session. I came across Department of Reading some years before and participated in the early reading sessions. I was fascinated by how it supports a very discursive reading practice. My particular interest was in how the method required a direct manipulation of the technologies by participants, and in the fact that such involvement generated knowledge and affects which were localised and particular to each session. It was exactly this process and practice that I was interested in scrutinising by framing it within a curatorial context, and exploring what kind of potential it might have when employed for curating: can it reverse the flow of power knowledge, can the knowledge/power be truly created from a bottom up, rather than establishing knowledge/power of institution, curator or individual.

Common practice was proposed as reading group meetings which invited participants to engage with selected texts through the use of the DoR method. Two themes framed the sessions: meetings in June were dedicated to language and meetings in September evolved around the theme of code. During the language sessions we worked with the code poems by an Australian artist and networker mez breeze. In the 90s she developed 'mezangelle' language which is a hybrid of spoken English and code, which she used to write her codeworks. Mezangelle is based on so called portmanteau or hybrid words which create multiple layers of meanings in one word. For code sessions we worked with fragments from George Perec's *Life. A users manual*, *Hard Code Theatre*, Scene II by the Unknown, and Deleuze and Guattari's *Towards a Minor Literature*.

The relation between code and language and their 'mechanics' were the focus of the sessions. Their importance was also in terms of their accessibility (language vs code) and commonality of practice (speaking/writing vs programming). Curatorial intervention in *common practice* was distributed through the network of people, literary texts, hardware, software, DoR methodology and realised in the practice that constituted the event. My description which accompanies the project defines it as a practice that 'embodies the curiosity to experience ways in which human and machine skills and abilities perform together'. How they are executed through language and code was another concern which was being tested through the practice. Both sessions engaged in the semiotics and semantics of language and code, as well as materiality and temporality of the session defined by the practice which is embodied and embedded. It is embodied because it requires participants to be physically present during the session for 3 hours, sitting in front of the computer screen, generously contributing their time, skills and intellectual abilities, interacting with others and with machines and texts during the session, it is also taking place in the art gallery. And it is embedded because the participant/human is one of the elements of the session together with software, hardware, texts, etc. It is also embedded more generally as a practice in line with other forms of working and organising creative activities online. Resources are produced, new and changed texts are generated, discussion is taking place in skype-chat, knowledge and experiences generated during the session are captured by its users. The value is in the forms of interaction with the texts, with the software and hardware and with each other. Recognising value produced during the actual event, as it happens

(as its happening), opens a possibility of understanding the event as a location for co-production of knowledge, and 'a materialist temporal and spatial site of co-production of the subject' (Braidotti 199).

Such an understanding of curating as common practice rather than common discourse is the core of this discussion. Curating as direct engagement and active participation in production and reproduction of culture and life, the common practice as an event in which a formation of a temporary collective subjectivity takes place. A particular moment of collective composition which is political while at the same time outside of politics.

Conclusion

By considering curating as organisational method which facilitates forms of co-production, we can situate the curator within a broader socio-technological context and establish links with commons and commoning as forms of organising. Whether contextualising, managing and organising exhibitions, or developing curatorial projects which engage technology and draw on human (audience, artists) participation my interest is in micro-techniques and practices on a micro-level which constitute curatorial projects, and their location and mobility within the context of art world and art institutions. Rethinking curating in/as common/s introduces an understanding of the practice as that of care which is at the same time shared as well as being individually practiced. The missing link, the problematics of government in this project, is articulated in this question about practice: how the care of the self can be held in common?

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Yara Guasque

CIRCULARITY AND ANTHROPOPHAGIC CONSUMPTION AS A METAPHOR: THE BODY AS CURRENCY?

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I begin this paper by using two real cases of anthropophagy, one in the European continent (Germany) in 2001, and the other in South America (Brazil) in 2012, to rethink forms of subjectivity versus circulation of information; technologies and the State's machinery setup; and constitution of "nationalisms". I will not focus on investigating them as acts of violence against individuals; rather, I will use them as a social metaphor, with their economic implications. An alibi to elucidate cultural differences concerning the State's incorporations into subjectivity, its technological and legal setup, and the body included in the circularity of capital as currency.

Anthropophagy is considered a collective ritualistic practice of America's tribal societies, whereas cannibalism, which does not have the same symbolic collective dimension, is the habit of eating human flesh. There would be, beyond the circularity of the practice, an anthropophagic sociability, in which neither the killer, nor the victim are in radical opposites (Carvalho).

Even if the artificiality of the argumentation proposed here can create exaggerations and surreal distortions, dialoging with these extremes reveals certain aspects of our current times that otherwise would remain invisible. Thus, I consider this bias as a mythical-poetic chance of re-updating anthropophagy as a self-cannibalism of the State. To the State, the body is, above all, labor energy, and in all its excess of rage, pleasure or violence, loss of capital; therefore, to think of the body as capital inscription, currency, current value legitimated by the reach of its circularity and social inclusion is not new. Nor is the possibility of thinking the body as this host of nationalisms, these flags, modeling of subjectivities, as this limit of borders.

Just the exercise of including it in the circularity of capital, no matter if it is informational or not, raises current issues, such as the commercialization of the body or its parts and sub-products, like genetic material, organs, semen and blood. It opens space for us to ask whether the body could be donated or sold, repatriated and exhibited like an object of curiosities. Ultimately, these notes follow different pre-fixation systems of valuation of the living being whose reach goes much beyond the initial object of the argumentation.

Another perspective that is also relevant is, of course, to use these two cases as political and cultural metaphors to reverse the regression scenario in which the Americans of the new continent were framed in the 16th century by de Bry's illustrations. A scenario utilized as demonstration of inverse parameters of social development, involution and evolution, in which the development of the tribal primitive society would only accentuate barbarism, unlike the project of civilization of the old continent, which would bring improvements in terms of a more humane society. This reversal aims to make the old continent face the thought of a new savage, like a society that recognizes itself in the self-cannibalizing process.

The anthropophagic tradition

Anthropophagy and its several repercussions in the Brazilian context – as proposed by Oswald de Andrade, in his mythical-ritualistic use to characterize the Brazilian modernism of "Semana de 22", and more recently, by Zé Celso – is a term that is clearly used as a political and cultural metaphor.

When the Brazilian people decolonizes itself from the European and American influence, it becomes what it already is: naturally anthropophagous. It eats everything. It mixes

everything. Is the anthropophagy of when the work was launched the same of today's? Why? Well, Anthropophagy is a return to the Primitive, but Technicized, Cyber. We desire the freedom of decolonizing our body from the *head* view, and learn again how to smell like dogs, see like eagles, think with our entire body, feet, sex, stomachs, everything has intelligence, animated by the anima of Civilization playing its role in another way with Nature. It's no use trying to kill the Nature within us, it's no use wanting that Nature is not also within our Civilization. The Advent of the "*Green Economy*", of the eternal return, disturbance, to what is natural, beyond good and evil. Nature is Cruel and Generous, but it can't be imprisoned in this Evangelical robotization of the human species. This is the extinction of the human species (Celso).[1]

The anthropophagic movement in Brazil utilized a case of cannibalism that had been widely disseminated in Europe in the 16th century to argue that the construction of the Brazilian culture was based on the assimilation of other cultures. The German Hans Staden survived threats of cannibalism from Indians in the coast of São Paulo because he cried when he was about to be devoured. As he proved to be weak, and for this reason he was disqualified to be assimilated, the Indians preferred not to eat him. The history of the practice of anthropophagy among the Brazilian Indians was widely disseminated in Europe through de Bry's xylographs, as a case of savagery, cultural regression – showing through the illustrations the dismemberment of the body, the separation of viscera and the hierarchical distribution of the parts to be eaten to young boys, adult men, women, and elderly women.

The difficulty in founding a Brazilian culture had already been launched in the anthropophagic poetics of Oswald de Andrade, in 1928. He discussed the confrontation between the cultures of the New and Old Worlds. *The Cannibal Manifesto*, according to Ana Maria Belluzzo (Belluzzo), was launched as an esthetic-cultural resistance strategy. In fact, the vanguard artists of 1928 were well aware of that, but it is important to emphasize that formulating, with anthropophagy, a culture of resistance means assuming the strategy of savage thought, the barbarian considered as a being in regression. The perpetuated idea of barbarism is par excellence the refusal of the Eurocentric civilization. Moreover, cannibalism is associated with a state of orality, with regression, perversion and savagery, as shown by the fantasies of the Europeans about the natives from South America. (Guasque, "A cidade como um medium em McLuhan e Flusser").

In the international sphere, many artists, directly or indirectly, work with anthropophagy or with self-cannibalism as an artistic metaphor. Among many others, we can cite *Google Will Eat Itself*, GWEI, of Ubermorgen, *Carnivore*, of the Radical Software Group, and *Macumba Antropofágica*, of Zé Celso. Many neologisms were created to update the concept of anthropophagy in view of technology, as an invention of its own culture by the appropriation of the foreign culture: technophagy (Giselle Beiguelmann), digital anthropophagy (Vanessa Ramos-Velasquez), telephagy – the fantasy of the technologically colonized as an esthetics of regression in view of the new information technologies (Yara Guasque, 2005).

My expectation – using Lazzarato's argument that "Expression ceases to be an ideological evaluation and becomes an incitement, an invitation to share a certain way of dressing, of having a body, of eating, of communicating, of living, of moving, of having gender, of speaking and so on" (Lazzarato 100-101) – is to be able to show, in these cases, how techno-informational circulation is implicit and how these bodies mirror the respective juridical States, with

their discourses indexed in flesh. Considering these two cases as voracious expressions of contemporary subjectivity, invitations to share an unusual way of experiencing the body, we find in them some reflection of the nation-state in its primitive and advanced form of self-cannibalism.

Considering the indistinctness between biological being and social being, when administrative and legislative inscriptions are rooted in the body, shaping subjectivities as Foucault argued, would primitive technologies and the technological progress of the State's machinery in its social organization be reflected on forms of anthropophagy, showing different stages of the incorporation of the State?

From the social contract to the ways of making some petty cash to purify the soul, comparing the case of anthropophagy and self-cannibalism that occurred in Germany in 2001, involving Armin Meiwes and Bernd Jürgen Brandes, and the most recent case in Brazil that was published by the press, which occurred in the State of Pernambuco (Northeastern Brazil) in 2012, first I approach unusual forms of experiencing the body and the State's inscription in the ways of dying (in fact, I believe we could already see them announced in life in the depleted survival conditions). Although they are not Dyonisian celebrations, and they are not characterized as a type of political activism, these insane cases of barbarianism already show us how one country's forms of social organization are present in subjectivity, and bring revealing aspects that range from the incorporation of the State's jurisprudence to the informal economy of quick, irregular jobs.

When I openly revealed my intention of investigation during an art and technology symposium organized by the University of Brasília, I was unexpectedly reprimanded. I considered that the estrangement derived from different conceptions of "artistic" and "poetic", and as a warning sign, as I would be entering into a territory to which I have not been qualified with analytical tools. I accepted this challenge, even though a vertiginous one, as a chance to short-circuit these universes of politics, esthetics and economy, using just the example of the pneumatophores as a procedure and not as a methodology. The university in its methodology avoids "dead-end streets", reflections that are not very objective, "loose" argumentations. The university, with its hierarchies and reproduction mechanisms, does not create deviations that are necessary for criticism, although it characterizes, according to Lazzarato, the place par excellence of knowledge production and surplus value in the informational capitalism (Lazzarato 124). It does not construct questions (unlike the example of the Indians of the Mexican Chiapas that Lazzarato points to), does not put knowledge at stake, does not open itself to the outside, "questioning, transversally, the set of power relations" (Lazzarato 129). Thus, it wastes the chance of branching and oxygenating thought, in an analogous way to the spurs of the pneumatophores in the mangrove, which branch horizontally just below the surface of the sand, releasing vertical spurs that are exposed in the air to absorb the oxygen, perform the gas exchange between the tree and the environment, and help to solidify a new soil.

To Haraway, the combination between universities and industry – in the close collaboration offered by recent university research to industrial laboratories – prevents the exercise of sharp criticism. "Will the universities that depend on these huge partnerships (industry versus university) still be home to critics of the same economic system? It is not purity that is the loss, but criticism, itself a mixed-up hybrid activity, part intellect and part emotion, part detachment and part involvement" (Haraway apud. Myerson 55).

The body as a nation

The metaphor of the body as currency implies circulation, within a system of valuation and pre-fixation of equivalences. The body viewed as a working tool is integrated into the capital system. Thus, the approach to the body as a nation, which we might associate with a territory to be protected and delimited, can be summarized as this aspect of currency in circulation, which incorporates an entire social investment and state apparatus. Exploring the idea of the body as a nation, or the representative of a nation, facilitates the recognition of these investments through education, health care and other social mechanisms. Their goal is to increase these bodies' production and working capacity, which starts to be through the pre-fixation of variables of valuation systems, an index of capital and of "nation". These mechanisms of modeling and, simultaneously, of training and control, are the ones that will define subjectivities and the valuation of these bodies and of life. Although it has not been a clearly assumed proposition in the tradition of anthropophagic thought, the body, when it shows that it is incapable for work, would not incorporate the progressive and technological apparatus, thus resisting to the State's violence.

But how can one update anthropophagy as the esthetics of regression with the new information technologies? We believe that this cannot be done by the foreigner being devoured by the barbarian of the anthropophagic poetics. It is in the laziness and in the obtuse and introverted nature of the character Macunaíma, of Mario de Andrade, who refuses to incorporate the rhythm of progress and the meaning of work, that we found a possible answer. After all, technical progress, as well put by Levi-Strauss (Levi-Strauss), depends on the exploitation of man by man. And the shrewdness of Macunaíma is his pretense of being non-functional. (Guasque, "A cidade como um medium em McLuhan e Flusser").

It is difficult to determine if it was language, or education for production means, that shaped us – to Mcluhan, language shapes socially as much as does production: "linguistic media shape social development, as much as does the means of production" (McLuhan, Understanding Media 49). Education targeted at production was one of the instruments to create this nation-state, and it was subsequently improved by the print media. To some authors, this is quite an elitist view, as it focuses on written language to the detriment of others, like audio-visual language, for radio and television are also shaping instruments. To Ernst Gellner (apud. Schlesinger), the nation-state would have been a result of industrialization and of the complex division of labor, which needs people with homogenized education.

In recent years, the Internet, which comprehends all the previous languages and represents a high investment, has put into practice its communication barriers that have become more complex, and which play the same role of the previous media regarding the formation of nationalisms, including some and excluding others. The Internet no longer is a social space understood as territoriality, fixed or not – arenas, places, as the beginning of the Internet had made us believe -, but a social system that also modifies us. "Physiologically, man in the normal use of technology (or his variously extended body) is perpetually modified by it and in turn finds ever new ways of modifying his technology" (McLuhan, *Understanding Media* 49).

As a social system, the Internet integrates itself even more easily into other systems like the legal, the political, and the financial ones due to the facility of data communication among them. "National space is constructed within a definite social space.

In the present context of a world system of nation-states the relevant confines for the reproduction of national identity are territorial and juridico-political givens" (Schlesinger 173).

The demarcation of a nation used to be related to primitive typologies such as language, body and blood with their genetic characteristics, and currency. According to Schlesinger, regarding specifically the European community, with its diverse memories, languages and consanguinities, if one wants to speak about a collectivity or something that shelters the notion of nationalism of this mosaic created in 1992, one needs to wonder first: "Unity of what kind, for whom and on what terms?" (Schlesinger 188). As consanguinity no longer defines a nation, how would the State, with the mobility of the contemporary scenario and the alleged "openness" of the frontiers, shape subjectivities through technology? Even though there is no clear limit anymore, nor clearly delimited frontiers – but "marked gaps, communicative barriers" (MacKenzie, W. J. M. apud. Schlesinger 156) —, nationalism has been replaced by other frontiers and clashes that are no less intimidating.

As the body implies circularity, how can we distinguish the social and collective body from the individual one? Would there be a correlation between these two bodies and the body without organs that is culturally indoctrinated and the visceral body? Would dismemberment, in the case of anthropophagy and self-cannibalism, be an attempt to reconstruct a new social body, with affinities a la Hans Bellmer? A different stage of agglutination and social interaction that would not happen through the previous idea of nation of the social body?

The cases – the fecundation of the machine world

In another paper, I approached the concept of social machine proposed by Deleuze and Guattari, and Mcluhan's seminal reflections in *Understanding Media, the Extension of Man*, to think about new forms of urbanity created by the gravitational attraction of intersubjectivities (Guasque, *The City as a Medium in McLuhan and Flusser*). I dealt with the indistinctness between machine and organic being that is implicit in the concept of social machine to reflect on the symbiotic relationship State versus organic being – as a double bias that is formed, on the one hand, by the State's machinery setup, and on the other hand, by the technological extensions of the body -, and how it affects subjectivity. In the present paper, I want to question how the fecundation of the being and of the machine and their integrated systems (political, financial and legal) result in self-cannibalism, and whether self-cannibalism derives from the stage of the body as currency, and whether it reflects the extensions of the State in the constitution of the subjectivity of this technologized body/nation.

The extensions that are considered here as being capable of introjecting this nation-state, more than the territorial one, are the technological and conceptual extensions, such as the legal norms. If previously we could talk about the Internet as a social space with emphasis on a type of territoriality other than the geographic one, now we talk about a social system. The result of this is that there is no disparity between body and nation-state, because when the body is incorporated by the system, and precisely because it is a two-way process at the end, it introjects this very system. Exactly as Mcluhan had already shown us: "Man

becomes, as it were, the sex organs of the machine world, as the bee of the plant world, enabling it to fecundate and to evolve ever new forms" (McLuhan, *Understanding Media* 46).

It is necessary to say that the cases reported here were not practiced by immigrants, by "non-documented individuals" of the contemporary scenario of violence, despite the internal migratory movement of the Brazilian Northeast region.

Considering them as collective cases, could we understand them today as pre-industrial and post-industrial anthropophagy cases? Several components fit into these cases of anthropophagy and self-cannibalism, from those that are simpler to identify to the ones that are more complex: enticement; concealment of facts and of corpse; calculation and planning; consensual docility in the erotic-masochistic game; records of barbarism from the new and old continents in the massive media; utilization of means of communication, either the Internet or randomly distributed flyers; audiovisual record intended to be subsequently used; norms of cultures, from pre-industrial up to those that are more technologically advanced; legal systems; information systems; formal and informal economy systems; labor division norms and survival strategies; formal and informal education; and even regional, worker and international cuisine.

In the first case, which occurred in the European continent, and which was truly anthropophagy and self-cannibalism, what scares us is the "regressive orality state" that is so characteristic of Theodor de Bry's illustrations (16th century), which showed to the Europeans the American continent as if it were in a stage of regression and barbarism. In this case, we have individuals with higher education, identified by name and profession, capable of arguing for their own defense, included in the high-connectivity digital world, who use this connectivity to reach death successfully, who had chosen in detail, and with written consent, the form of death and of dismemberment of body parts, and who used, in all the preparatory stages, multimedia documentation, registering, by means of an inventory, the preparation of dishes with body parts according to the international cuisine, perhaps to use this material as publicity. Would such an inventory be more than a staging of violence – would it be self-exhibitionism highly tuned with the capitalist media, created with the purpose of subjectively affecting the audience, directly or indirectly?

In the recent case of the city of Garanhuns, State of Pernambuco (Northeastern Brazil), the pagan anthropophagy scene from the period when America was discovered is not repeated, as the ritual now happens in the name of God with the old world's culture truly assimilated. Jorge Negromonte, with the help of two women, enticed girls coming from small towns, attracted by the offer of work as housemaids. The victims, "people to be purified", were chosen by the trio through the analysis of the numbers of Brazil's General Registry identification document (R.G.), issued by the Public Security Department (SSP). In a process that is similar to a lottery, the document's numbers should coincide with 666 or with an approximate number, resulting from the combination of all the numbers of other documents. The trio viewed the anthropophagic act as a "mission", after some time of conviviality, and the remains of the bodies became pastry, a quick and irregular job, sold and put into circulation, like currency. In this second case, we have individuals without formal university education searching for a means to survive, excluded, in many senses, from an information system, viewed as mad or ignorant, whose names the massive media quickly forgets, although they broadcast their faces widely on television.

In the case of Pernambuco, the offer of jobs already signaled a strategy that discards framing the action as being the result of an impulsive act, despite the irrationality. The author even registered in a notary's office the book in which he confesses his first crime. Although he had bought a video camera, he did not use audio-visual documentation – in the German case, because it is much more in tune with the international capitalist media, it was widely used in the means of communication.

In spite of the communicative and symbolic dimension, which is imposed against a social norm of religious nature, these cases are repulsive acts, mainly due to the banality with which the bodies are viewed. And as religious transgression, an act against the civilization project.

Although these cases show cruelty and brutality, they cannot be framed as compulsive violence. Even though none of the forms of violence that are legally practiced by the State can be framed as cannibalism – which is clearly a cultural aberration, a decline in the civilized civil conduct –, nothing is farther from impulsionality and nothing that the contemporary State has not already exercised in an abstract form.

Among so many details, it is noteworthy, in the comparison of these two cases, the employment scheme, the culture, and the reach of the legal system. But we also cannot talk about coercive technique or use of a tool as a conscious political resource, which would be understood as a political act like in cases of terrorism.

The body as currency

Currency implies quotation, a system of valuation and equivalences, and circulation. The quick, irregular job, just like the bargain, needs a physical clash, face-to-face synchronous communication, which is impossible in the circulation of digital money. Enticement by the Internet, in turn, shows this distancing and the peculiar abstraction of the circulation of digital money.

Even focusing only on the circulation system of which money is part, distributing, exchanging, selling and donating are not equivalent to each other. Only exchanging and selling delimit a valuation system of equivalences. The recent debate about the monetization of genetic material brings again to the surface the issue of the body as currency. Traditionally, blood cannot be traded; it is donated. But the costs of blood banks, which are places that host and distribute blood and other sub-products, charge fees with peculiarities according to the jurisdiction of each country. In these examples, like in the case of blood donation or sale, we can analyze the legal borders.

The body, already used to its extensions like clothes, housing and the city, enabled by previous technologies, when it is inserted, in recent years, in the nervous system of digital technologies, it is translated into an information system (McLuhan, *Os meios de comunicação como extensões do homem* 77). Work, money and the body itself integrate the system of circulation of information and of programmed knowledge. Work is no longer physical work; rather, it is programmed knowledge, and production is computerized knowledge production. According to Mcluhan, as work is replaced by sheer movement and circulation of information, money, as a store of work, gradually merges with the informational forms of credit and credit card (McLuhan, *Os meios de comunicação como extensões do homem* 161).

Automation, which is electronic, does not represent physical work so much as programmed knowledge. As work is replaced by the sheer movement of information, money as

a store of work merges with the informational forms of credit and credit card. From coin to paper currency, and from currency to credit card there is a steady progression toward commercial exchange as the movement of information itself (McLuhan, *Understanding Media* 137).

Like the body, money is also translated into an information system. The possibility of broadcasting electronic information made the current money system become obsolete. Money as a vast social metaphor builds relations of valuation and equivalences of products and works. The developed societies started to deal with computerized money, which depends on more complex and abstract organisms, like financial institutions that operate in quotation and the stock market. The underdeveloped nations still have the exchange relationship, in which a product can be negotiated for another one, giving place, as it usually happens, to bargain, which needs a face-to-face clash.

Recoding the social memory of the new savage?

Mcluhan predicted that we would return to a tribal relationship with the space's contraction, now interconnected by the speed of information circulation that makes it emerge simultaneously in distant points. From nomads to sedentary individuals and from sedentariness we return to being nomads, now globally connected via computers, which has deeply affected production. But he did not predict the self-cannibalism of the financial and legal systems of advanced societies, and he also did not focus on the point of view of the thought of a new savage.

After three thousand years of specialist explosion and of increasing specialism and alienation in the technological extensions of our bodies, our world has become compressional by dramatic reversal. As electrically contracted, the globe is no more than a village. Electric speed in bringing all social and political functions together in a sudden implosion has heightened human awareness of responsibility to an intense degree (McLuhan, *Understanding Media* 5).

With globalization, we would expect a system of equivalence between currencies and work investment. The exhaustion of the pre-capitalist system would inevitably force its own reinvention, according to Terranova: "However, in Marxist terms once the formal subsumption of pre-capitalist pockets is exhausted, we enter the age of 'real subsumption' – a qualitatively new phase in the evolution of capital, whereby the latter must reinvent itself in order to survive" (30). Nevertheless, to this author, productivity cannot be measured in equitable terms by working hours, nor by the abstract value of correspondences as intended by the economy, because historical subjectivities, differences in needs, and desires have weights on this valuation.

This productivity cannot be measured either through the working hour or through the abstraction of exchanged value:

> *'the quantity of [working] time can be the same… but in the same unit of measure we find lived historical subjectivities which are totally different'. (Terranova 30).*

Would we be too bold if we thought about anthropophagy and self-cannibalism as the reinvention of a social currency?

Notes

[1] All the quotations, except those written originally in English, were translated into English for the purposes of this paper.

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QUERY PUBLIC(S) IN THE NEXT SOCIETY: »ARTISTIC TECHNOLOGY RESEARCH« AS [DISPOSITIF] AND SYNERGETIC DISCIPLINE FOR THE AGENCY OF RESEARCH AND DEVELOPMENT IN NEXT (MEDIA) CULTURES

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Critical Media Arts do not only reflect on new technologies and how they transform society, they also offer a crucial laboratory for the development of new techniques and forms of presenting, structuring and conveying knowledge.

New Media Arts in the 21st century work with distributed publics and identities, as the new media artists present their artistic processes "coded"[1] in the fragmentations of global networks. Terms such as "post-internet art" (Marisa Olson), "really new media art" and "internet aware art" (Guthrie Lonergan) describe a contemporary artistic and creative practice with a world view and concept of reality that emerged from virtual space permeating real life, creating a fusion of both and leading to something new: the hyperlocal world as we know it today (cf. Pang). Inke Arns writes about a "post-medial condition"[2] that can be succinctly described with the idea "code is law" (Lessig, *Code is Law*). "Medialities, dispositives and performances accompanying and elaborating medial processes" (translated from Mersch) are essential to describe, reflect and visualize a contemporary practice in *New Media Arts* – should it be needed to keep this categorization or name alive.

Actual project-structures as well as the artistic output in non-product-based arts[3] are hard to tackle, since their work is often very swift and ephemeral, not even touching the art- discourse and art markets at all.[4] *Critical New Media Arts* as "artistic research and development" (cf. Borgdorff) between artistic, medial and techno-scientific discourses is research-based and practice-led. They do not produce *final products* but *process artefacts*. Creating taxonomies and systemically defining said cultures seems almost impossible.[5] The *Next Cultures* can be seen as form building elements in regard to the systems theory of Luhmann, borders emerge through self-referred operations which connect with each other (will of cooperation, same codex, same language, same aims, etc.) and are in this sense highly identity establishing. Focussing on the difference that emerges even within such systems, constantly producing new components, structuring such phenomena is relevant only to a limited extent, because the findings might only be common places. It is more interesting to focus on the subsystems, which are persistently altering—despite, or because of their possibility to vanish (or transform) quickly.

Critical (new) media practices that can be described as "art with media" as well as "art that reflects on media" (Reck) are rapidly changing and adapting to the fast evolving media landscape. In times of real-time media and a constantly revving media-usage, scientific descriptions of actual phenomena are only relevant in historic contexts,[6] observing only effects of acceleration, since their immanent speed of circulation is too slow, when compared to the actual speed of discourse and practice in next societies and cultures. While the speed of media usage and consumption rises, concepts such as "art" and "science" (Wissenschaften) change "their essential nature" in terms of "movement and circulation" (Virilio). Looking at the discussions on "When is research artistic?" and the wrongness of that attempt, since "art without research is lacking an essential foundation, as this is the case for science" (see Klein), I am using the term »Artistic Technology« as [dispositif],[7] that can transcend between arts and sciences (Wissenschaften) without touching obvious minefields such as questions whether artists are allowed to do research at all. I am postulating the next artistic science to be not only trans-disciplinary, but another discipline at all that is artistic and scientific at the same time.[8]

»Artistic Technology Research« observes possible transformations from artistic, technological, playful and "critical engineering"[9] backgrounds to intertwine them using methods (and developing methodologies) that systematically combine research methods from artistic and scientific realms, creating a field of proto-research: "research about/for/ through arts, arts about/for/through research" (Dombois, "0-1-1-2-3-5-8-."). In a two-year timeframe, research is taking place mainly at the University of Applied Arts (Vienna), together with cooperations with the University of Utrecht, various Hacklabs and artist groups among a vast number of researchers and individuals. The project includes a practical approach to problem-solving, so the understanding of »Artistic Technology« is closely related to the greek term of *techne*[10] and (cf. Raunig)[11] which includes the *Critical Arts* as well as critique as the "culture of the modern society".[12]

The project is composed of "practices, actions and interactions" (Borgdorff) that will involve diverse audiences and is intended to measure and discuss contemporary (artistic) media practices as well as offering "connections" to social and cultural sciences. Based on "action research" and extending it to include "documentation as method" (and as corrective[13]), the project is designed to connect to open research and open discourses. The entire process will work following an inter- disciplinary approach of knowledge-building and at the same time facilitate popular awareness of applied critical research.

Curating networked discourse

The core aims of the project »Artistic Technology Research« are to stress the critical discourse in (and about) new media, technology, society and its intersections to art/creativity/ design. The term »Artistic Technology Research« is seen as a vehicle for creating new actions, interactions and interventions that demonstrate critical views, visualizing and re- structuring our *Lebenswelt*. [14] Critical discourse will be accompanied by *tools*, *formats* and *publications* that will be developed throughout the project. This includes the aims of structuring, visualizing and conveying existing discourses and systems, and opening them up to new audiences.

Documentation as Method

Documentation is seen as internal (self-observing) corrective (in terms of action research) as well as subject to research on aesthetic/qualitative parameters of experimental documentation. Starting with the medium "Online Video", the process is designed to include "protocol based media" as well as classical forms of representation and publication.

Narrations for the query public

In the age of the "query public" we have to radically rethink the concept of the public (cf. Seemann).[15] A change of reception/ perception of audiences can be observed: through multiple, diverse channels of

consumption and participation, the creation of attention and user-engagement is crucial to any contemporary discourse or research.

The first world is on a path from the "knowledge society" (Bell) passing through the "network society" (Castells, *Band 1; Band 2; Band 3*) to a possible "next society" as outlined by Dirk Baecker. This opinion-led society[16] values information as main resource, though in an "alliance of news, advertising and entertainment" (Baecker). The "truth" of information is not important anymore, what counts is to get told good stories[17] – as can be seen by the evolution of wikipedia as knowledge resource: mankind can write its history in a collective retrospective (cf. Lovink and Tkacz). Cass Sunstein warns of "Information Cocoons" and "Echo Chamber" effects (Sunstein), "networked knowledge" (as outlined by Weinberger) need precise narratives and new concepts of conveying research results. Addressing the methods of the media and information of the next society, the project aims to develop new narratives and forms of publication, that are fed by *documentation as method, networked data-driven science* as well as conducting and implementing contemporary art and media practices, that are produced in the wider network, such as by cooperation partners (festivals, researchers, labs, projects, scientists, artists and practitioners). Experiments regarding *narratives for the query public* will include the dissemination of contents in artistic as well as scientific formats.

Laboratory for process artefacts

Through *empowering cultural artefacts*[18] (cf. Schäfer; Lessig, *Free Culture*) and through enabling technologies it becomes possible to integrate technological ideas into artistic practice without having to think about feasibility in the first place. Artistic practices in this context changed over the last years while still not every cultural artefact necessarily becomes an artistic artefact. The artistic process is describable with the application of *artistic knowledge*: through *transformation-intelligence*[19] and *contextualising intelligence*[20] cultural artefacts are moved in the system of art. In this sense, *artistic knowledge (or: artistic intelligence)* is the basis for creating *artistic capital.* [21] Following the success- stories of "Lab Culture" (see also Frost), the projects sets up a space for active work on critical theory and critical engineering. The Lab is an integral part of the project, that will be carried out at the University of Applied Arts.[22]

Cultural accomplishments of individuals or differently organized forms of human beings in context with an ever- changing (transforming) environment bring manifold products and processes to surface: cultural artifacts, "distributed agencies", "framed interactivity" (Rammert), collective ideas. The project's concern is neither popular culture nor technological inventions, but to focus on incidents based on a*synergetic potential* (cf. Fuller), "creative emergencies"[23] which can be brought up by inter-/trans-/meta- disciplinary and open cultures of production. We need to understand the correlations between culture, technology, codes, art and media to systemically comprehend what next cultures do today to contextualize and state their ideas and concepts. For instance at the progress of an idea, which has different manifestations according to its location in the system of art, in the system of science, or in the system of economy. Critical research is the basis for "experimental systems" that can only be successful if they are offered enough "epistemic things enough room to evolve" (Rheinberger). Recently successful

"experimental systems" can be described with phenomena such as "critical engineering" and "post-industrial design", just to name a few. The current discourse of "research in the arts" makes art universities prototypical localities, where new forms of research practice and knowledge- production can take place. Said spaces are rare today, in this sense artistic research works as an experimental system for the freedom of sciences and arts – and is to be given space to evolve.

»Artistic Technology Research« aims to work on a discursive and practical level both as a motor for innovation and as a tool with which it is possible to assess the social and artistic/scientific significance of new forms of expression and dissemination. It is important not only to integrate »Artistic Technologies« into an existing theoretical academic discourse, but also to make the results of these studies and the subsequent critical works accessible to the public, extending to the realms of phenomena such as "networked cultures", "bastard cultures" and "coded cultures".

Notes

[1] Cf. Tarasiewicz, 2011.

[2] Arns further writes: "Media arts dispose themselves of the conceptual exoneration through the novelty of the media and meets the challenge of being artistic. They have (finally)grown up." (translated from Arns).

[3] Such as outlined in Conceptual Art, cf. M.Bochner, S.LeWitt, just to apprehend the statement from an art- historical perspective. While conceptual art was developed and positioned in an arts-context, observing discourses and actual places where "conceptual" and "post-conceptual" arts manifest today are as diverse and fragmented as the current media (and symbolic) landscape.

[4] Lovink (2003, 2008) describes this as a "crisis of new media arts", but I cannot share his pessimistic view, since this output can not be positioned into traditional/classical markets without transformation. As he is more a theoretician than a practitioner, his observations are biased.

[5] Obviously it doesn't make sense to observe such heterogenous systems as if they were static and homogeneous, since they are in a constant process of re- structuring and re-formatting, always in resonance to each other.

[6] Since "historic" is a relative term that also changes its meaning with the acceleration (and compression) of written and spoken language and codes, I am referring to the difference of "real-time" to the publication delays of old media. Example: Twitter compared to academic journals.

[7] Cf. Bussolini, 2010 for the problematics of translating the term appareil/apparato and dispositif/ dispositivo which “produce a false identity in English”. This use of the term relates to “Dispositiv” (German) as used by Giorgio Agamben and Gilles Deleuze.

[8] Adressing Rheinberger, this actually means being virtuoso at both scientific and artistic research.

[9] Cf. the “Critical Engineering Manifesto” by J. Oliver, G. Savičić and D. Vasiliev, http://criticalengineering.org

[10] Cf. Heidegger, 1953; and Plato’s understanding of techné as knowledge. Techné resembles epistéme in the implication of knowledge of principles, although techné differs in that its intent is making or doing, as opposed to “disinterested understanding.” (see Plato in “Gorgias”, 399 b.c.)

[11] “[…] the term *art* is closely related to the greek term *techne*, therefore in his lecture Foucault states criticism not only as *art* and *virtue*, but also as technique. This is not Foucault’s quirk, in fact it is a tradition going back to the original uses of the term critique. In Platon’s *Politikos*, the term at first appears as the combination *kritiké techne*, which means the art, the crafts of distinguishing (translated as »ars iudicandi« in Latin). The label critique as *technique* and as *art* can be observed in the course of the centuries and of the different European languages.” (translated from Raunig, 2004)

[12] “critique” as the culture of the modern society, starting with book printing. ATR includes parameters of “networked critique”.

[13] Cf. Borgdorff, 2011: “research findings give immediate cause for changes and improvements”.

[14] In my understanding, Media Arts should illustrate Lebenswelten (lifeworlds), which improve current social situations and critically reflect upon the current hypermedial reality. But Media Art is only able to do so, if it is critically self- reflexive and if it is in stronger regard to the forms of critique of the past. It can only meet economic requirements of the creative industries when it is reduced to a form and object discourse, so it has to be outlined as more than an “economic force”.

[15] “The query public is the positive flip side of ‘loss of control’. It is that piece of autonomy, the recipient of information gains, which was lost by the sender of that information through the ‘loss of control’. (translated from Seemann, 2010).

[16] Cf. Franck, 1998 “the economy of attention”, “microcontent” (Nielsen, 1998) as well as the still increasing popularity of Twitter, Facebook and other current social media.

[17] ‘If you claim something to be true and enough people agree with you, it becomes true.’ Steven Colbert on the word “Wikiality” http://j.mp/ODaVd – “Wikipedia – bringing democracy to knowledge”.

[18] Examples of *empowering cultural artefacts* and enabling technologies are “Open Hardware” projects such as the Arduino Microcontroller and other “physical computing toolkits”, but also the free (open source) operating system Linux can be seen as such. Schäfer sees this as “bastard culture,” Lessig “free culture”. Extending these uses, critical theory can also be a cultural artefact.

[19] *artistic transformation-intelligence* describes the basic knowledge of new media artists about the system of “arts” as well as

the underlying functionalities and operations of cultural and technological artefacts.

[20] *artistic contextualising intelligence* describes the flexibility of new media artists to position their output (processes, artefacts, discourses, etc.) in other contexts and public(s) e.g. digital public, open discourse, mass media, art audience, selling, etc.

[21] I use the term *artistic capital* as extension to "cultural capital" (Bourdieu 1982; 1983). In the 21st century *artistic knowledge* is not only describable through embodied, objectified and institutionalised types of cultural capital. Through cultural evolutions "Free Cultures" (Lessig, 2005), "Bastard Cultures" (Schäfer, 2011) and "Coded Cultures" (5uper.net, 2004) among many other depictions appeared.

[22] "processes of exploration, discovery and innovation matter more than any result these processes ever produce" (The Laboratory at Harvard, 2012).

[23] The *Coded Cultures* Festival 2009 that was co-curated and co-organized by Matthias Tarasiewicz had the subtitle "exploring creative emergenc(i)es". http://codedcultures.net

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CROWDFUNDING OR FUNDING THE CROWDS: A NEW MODEL FOR THE DISTRIBUTION OF WEALTH?

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Not so very long ago the social 'welfare states' of Europe provided health care for everyone and a sizeable amount of money for culture, which was generated from tax revenue. Many artists and cultural practitioners had the opportunity to apply for grants, supplemented by patronage, sponsorship, selling their work, or even having jobs. The contemporary discourse in the cultural sector has now shifted and takes its cues from neoliberal policies of development, adopting an 'everything for the market' attitude. This has led to Europe's assimilation of a U.S. inspired laissez-faire approach to culture, and subsequently transformed cultural practices into the burgeoning imagination of the 'creative industries'. Creative industry is marked by a particular condition of state withdrawal of financial support for culture while emergent forms of online, networked platforms increasingly facilitate private donations. For example, electronic money transfers using digital technologies have enabled microfinance networks that restructure the funding support and patronage earlier available to cultural practitioners. These have ensured an even quicker transfer of the private wealth of citizens to individuals within the cultural sector, such as with the phenomenon of 'crowdfunding'.

Instead of governmental support, increasingly more and more art workers and cultural organisations are being forced to engage with crowdfunding as a legitimate means to finance artistic practice by drawing on their networks, primarily their friends, family, neighbours and colleagues. With crowdfunding it now appears as if the network will not only provide attention, feedback, and reputation but also create a means of monetary support for many of these projects, as a surrogate for former governmental or public monies. While this reliance on distributed networks is celebrated, there is very little attention paid to the balance of trade-offs and returns in this model. The excessive reliance on colleagues or 'friends' entails other dynamics in these tit-for-tat exchanges, which need to be unpacked: affect, exploitation, and indebtedness. Relationships with people become even more entangled and, unlike money, which is anonymous, brokering agency for artistic projects results in a negotiation of social relations. Will crowdfunding en masse lead to a new model for the distribution of wealth as is claimed or is it a commodification of one's very own social relations?

What is Crowdfunding?

> *"Crowdfunding describes the collective effort of individuals who network and pool their resources, usually via the internet, to support efforts initiated by other people or organizations. Crowdfunding is used in a wide variety of activities, including disaster relief, citizen journalism, musicians fans, political campaigns, startup company funding, movie, or free software development and scientific research." [1]*

There are different types of crowdfunding. With donation-based models, funders donate to causes they want to support without the expectation of compensation (i.e. philanthropic or sponsorship based incentive). Equity-based crowdfunding is a model in which funders receive compensation in the form of equity in the fundraiser's project or revenue from profit-share arrangements. Lending-based crowdfunding is where funders receive fixed periodic income and expect repayment of the original, principle investment. The focus within the cultural sector is reward-based crowdfunding where a non-financial reward, or 'perks', usually a

limited edition print, or a cultural artefact, is manufactured in exchange for contributions.

Crowdfunding craze

Every country seems to have at least one national crowdfunding platform, at the moment of writing there are over 700 sites worldwide. In Denmark it is Booomerang[2], in the Netherlands VoordeKunst[3] is more specific to cultural and art related activities. Indiegogo[4] is a worldwide platform where you can raise money for anything, including for-profit ventures, creative ideas or personal needs: facilitating clean water in rural parts of the world, partnering with microfinancing institutions or helping artists without insurance who need surgery. USA Projects[5] is only open to artists, is a non-profit and offers limited 'matching funds' for every applicant. In the US the most visible platform is Kickstarter[6], which is also the world's largest (and for-profit) funding platform for creative projects. Indiegogo has the option of 'flexible funding' where you can keep the money you raise, whether or not you meet the goal, whilst Kickstarter and Voordekunst have an 'all or nothing policy'. The Spanish site Goteo.org[7], in contrast, only supports projects with social, cultural, scientific, educational, technological, or ecological objectives that generate new opportunities for the improvement of society and the enrichment of community goods and resources.[8]

What all of these platforms share is their use of digital technologies that unite global networks, connecting projects with people and even monetary support in order to realize them. Instead of a few patrons donating large sums of money, micropatronage facilitates many patrons contributing small amounts through the internet. Much like the buying of catalogue clothes or Amazon books, etc. online reward-based crowdfunding delivers the goods in the mail. As with other online purchases there is a service charge for the transaction, either Amazon Payments in the case of Kickstarter, or Pay Pal and banking services for other platforms. Just like other retailers, the crowdfunding platforms harvest a percentage – VoordeKunst and Kickstarter take 5% (the latter being profitable according to its founders).

In the past few years, there has been an increase in the demand for monetary remuneration of artistic projects via crowdfunding initiatives. Artists are pressured to ask their colleagues to support their artistic endeavours (financially and not just with a 'like'). It is routine now, as a cultural practitioner in the US, to receive during the course of a week 2 or 3 emails or updates on various social media platforms asking for financial donations to support individual projects. The average crowdfunding campaigns are between the $1000 and $10000[9] and 'rewards' or 'perks' are offered in return, the type dependant on the amount of the donation. Assuming one would support 8 projects a month at €50 per each project, one would pay out €400 a month. If one were to pay out €4800 a year for two years one would spend €9600 on others' projects. Let's say one wants to put a project on Kickstarter and one is asking €9600 from all contacts, colleagues, neighbours, friends and family. Could one trust those who one supported to contribute in return? Would all (192 people) also pay €50 for one's own project? Are these social networks strong enough and contacts close enough so that they would each, so to speak, pay each other back? Statistics show that of the money that is contributed to a crowdfunding campaigns, 75% comes from an already known network and only 25% from random or unknown contributors.[10] In this reciprocal relationship would one be able to divide up not only

personal time but also personal wealth in order to produce one's own works as well as supporting others' artistic projects?

Crowdfunding: Why not?

The networks of support that one calls our communities are ostensibly garnered to consume whatever one supplies. Facilitated by digital technology, crowdfunding draws on one's own social network to finance these artistic and cultural projects, yet the practitioner also needs to fulfil the crowd's (and one's network) requests. Concomitantly these online initiatives bring about a range of emotional and affective labour issues, tit-for-tat exchanges, indebtedness or the repercussions of gifting. In an attempt to understand the link between digital technologies and new forms of remuneration in online contexts, let us examine issues of value, affect and ethics that are all tied up in the monetization of social relations through the following hypotheses:

1. Crowdfunding draws on notions of community, acts of volunteerism and the herd mentality for support

Following the herd has always been part of human nature and nowadays crowdsourced activities, where groups of people come together to accomplish tasks, have been occurring offline as well with online events. The crowd as patron in the digital age is presently the motor of crowdfunding platforms. Closely converging with acts of volunteerism and 'do gooding' neighbourly support, the crowd has been the basis for many foundations of community help. In past decades U.S. volunteerism has fulfilled a certain percentage of incommensurable labour that keeps the economy going and provides community activities for retirees. Since 2010 the present UK governmental 'Big Society' policy demands participation from the public in the form of time and unremunerated labour. Based on these previous models of volunteerism and doing community good, crowdfunding "uses [the campaigner] to tap into a deep-seated belief in our culture that volunteering is an important social value"[11] and to draw on the neighbourhood[12] for not only time but help in the form of financial support.

If not time then on what does the public spend their money and why? Behavioral economist Dan Ariely's book, *Predictably Irrational* draws on research[13] conducted with test cases regarding valuations that challenge the assumption that people know their tastes.As a reversible business model he refers to the story of Tom Sawyer. Tom has to whitewash the picket fence and does the chore instead with feigned pleasure, making his friends consider the task a privilege and to be so envious that they not only takeover the job of painting the white picket fence but to pay him for it. In Twain's words, Tom "had discovered a great law of human action, without knowing it—namely, that in order to make a man or a boy covet a thing, it is only necessary to make the thing difficult to attain."[14] This scarcity value or 'Tom's law' questions economic assumptions regarding experiences being pleasant or unpleasant and whether people reliably know what they like, or not. This degree of uncertainty may be very substantial in regard to people's preferences, even if they are familiar with the experience. Therefore the valuation of goods and experiences has an arbitrary component "yet after one valuation has been

made people provide subsequent valuations that are scaled appropriately relative to the first- [forming] 'coherence'."[15]

2. Crowdfunding is not a sustainable solution as a replacement model of public support for arts and culture.

Public funding for culture is neither a solution nor does it differ so much from actuarial applications for crowdfunding. These subsidy applications entail enormous amounts of preparation, bureaucracy and experience, years of previous 'work', along with a high risk factor. After 'free labouring', the application appears before a board of paid 'experts' who decide the fate of the application and whether it gets funded- more likely not- resulting in unpaid labour for the applicant. 'Cultural gambling' is perhaps not the solution to creative endeavour yet when one weighs the odds it might provide more autonomy and higher financial return to the artist or cultural practitioner than crowdfunding.

What makes crowdfunding so attractive is that anyone can do it, if one has a posse (patrons) on social media to back it up, in other words finance it. In an era in which the cultural sector has less and less grant money and more and more art marketing of commodities, crowdfunding is an alternative to grant-giving foundations. "Kickstarter combined fundraising with opinion polling, marketing with grant-writing. Supposedly its original appeal was the "one-to-one relationship with the artist, without layers of grant. And weren't donors just a precursor to grants?"[16] Kickstarter has become the most talked-about example of this democratizing technology: an arts organization for the post-gatekeeper era."[17] Is this technology really democratizing and which white picket fence along with its gate is being painted, by whom and for how much?

Historically the US in general has provided less support for the arts and culture from tax revenue (the exception being the WPA) than Europe, where longstanding state funding and interest for culture has existed along with preservation trusts.The last fifty years in the US the cultural sector has progressively depended on private donations from benefactors and patrons as a form of philanthropy. The largest governmental support comes from the NEA (National Endowment of Arts), and depending on the state's politics, more or less money for culture, along with various city grants. Therefore, as a recognized system of patronage, the US has nationally embraced crowdfunding more quickly, in particular Kickstarter, which is being rumoured to be 'the people's NEA!'[18]. Recently it supposedly surpassed the funding for the arts provided by the NEA, although this was later retracted as the total amount included design, innovation and product development. [19] No wonder Wired magazine recently assessed Kickstarter not as the champion of artistic underdogs but as "a lab for daring prototypes and ingenious products." [20]

Across Europe cultural organizations are now also being forced by their governments to gather up private donations as well as crowdfund because they receive funding from their respective ministries[21]. In Brussels, millions of European Union monies earmarked for culture is even being distributed to certain organisations in the Netherlands so that they can organise seminars to teach cultural practitioners how to crowdfund![22] In the US Kickstarter has now started working with "private foundations, arts councils, and city governments to wrap their minds around what Kickstarter can mean to them as a 'compliment' for their ongoing efforts."[23]

The present financial crisis and initiation of austerity measures continue to force drastic reduction in state funding for the culture industry all across Europe. Crowdfunding is seen as a surrogate or ersatz model, serving as a replacement for state responsibility. Yet taxpayers would then be paying double, first with taxes that are distributed by how politicians see fit to spend them i.e. diminishing support for culture, health care and education; then with distributing taxpayers' 'surplus income' with crowdfunding initiatives. Workers in the 'culture industry' are now all being asked to crowdfund instead of/along with applying for state or governmental public funding, because these forms of public monies are diminishing and no longer (or barely) exist.

3. The successful rhetoric of crowdfunding campaigns masks the fact that the financial reward not only fails to account for the free labour but does not even pay for all of the material and personnel costs involved.

Crowdfunding is now being advertised in the media as a solution to 'interference' by the state and as less of a tax burden for citizens because the cultural sector receives less money. In turn people feel more empowered because unlike their tax money, they have a choice in deciding what projects should be funded and what not. To an outsider, crowdfunding looks normal, fair or even logical in present day capitalism. It promotes the illusion of democracy and participation by allowing the funder to choose where s/he spends her money, instead of governmental control and authority. Yet, with this obfuscation, what is largely ignored is the invisible labour that goes into every crowdfunding project.

In order to crowdfund one has to do a lot of lobbying, social media advertisement and emailing. First, there is the labour involved in organizing the campaign on the crowdfunding platform: making the introductory video, sending out emails, posting on all social media sites and lest we forget, emailing reminders. The time, energy and labour involved in running the campaign, (some campaigners even outsource the work to professional PR firms) not to mention the numerous updates and "thank-you's" afterwards all add up to the eternal indebtedness of successful campaigns.

The individual artist's investment of labour, materials and time involved in the production of works for the 'reward-based' crowdfunding model cannot be overlooked. For example, the production of prints, photographs, small objects and even designing and printing t-shirts all cost time and dedication, not to mention the risk of not being able to distribute them if the funding is not accrued. If one is funded and wants to remain in the network one just tapped into then one needs to package the rewards, invest in postal supplies as well as round up friends in order to send them out. Organizations, especially not-for-profits also are being asked to crowdfund but they don't have the staff, the resources or the volunteers to organize a crowdfunding campaign besides all the regular work involved in keeping the organization up and running.

If one actually paid a decent wage to all of the people involved in helping with the campaign, one would be loosing much of the money raised. The production costs of organizing a €10000 campaign will have already used up some of the funds for the project that is to be executed when funded. The actual

costs of organizing, raising money and carrying out the campaign are therefore not funded. It is the people who actually do most of the work (the campaigner) who are not paid enough (if anything at all) and then only if the project is successful, i.e. if the amount of funding requested has been raised.[24]

4. Crowdfunding campaigns make invisible affective and unpaid labour by reducing the process to questions of meeting the threshold financial reward, social networking, lobbying, etc.

Although everyone gets to feel good revelling in the fact that they are participating in a 'creative project', these activities that people enjoy are also shamelessly exploited. Tapping into the kindness and generosity of other people includes using the 'users' of the internet- those who are 'campaigning' as well as the 'backers' themselves who decide how and where they distribute their surplus in the form of contributions. Frequently disregarded is the free labour and affect that has been brought about by all the family, friends, neighbours and colleagues who have been solicited and coerced to read the emails, Facebook posts, emails, hyperlinks, etc. involved in the campaign in the first place, not to mention the labour involved in getting someone to bail one out at the last minute to make one's crowdfunding goal.

> *"With crowdfunding, much like the ego-centricity of social media, we are asked to gather cash from the network, which is the same as gathering 'friends' and being 'liked'."[25] As with many invitations one feels obliged to contribute, but this time the transactions are towards monetizing one's social relationships within the networks that one belongs to. "Kickstarter demands this social fabric, but only extracts from it, giving nothing of social value in return. It is up to us, those who run the campaigns, to invest the labour and capital back into our communities to keep them running, and to keep them sustaining us. In this light, the 10 percent taken off the top is a form of usury, taxation. We're paying for harnessing the economic power of our community, yet how does the community benefit?"[26]*

With the general equivalent, in the case of money for example, terms of exchange are fixed. This commensurability is something we do with anonymous exchange, using money to pay for goods and services where we do not know the parties involved. But with services rendered with colleagues or 'friends' or even family, other dynamics play a role in these intimate exchanges. Does crowdfunding really promote solidarity as it claims or is it rather a series of tit-for-tat exchanges? Indebtedness surfaces and even though the debt is only temporary and resolved with reciprocity. one knows that gifting is never equal. And unlike money, which is anonymous, the results of brokering agency for one's project are a continued negotiation in social relations.

5.Crowdfunding is another form of underpaid or unremunerated labour that ultimately monetizes the

network of social relations, mostly those friends, family, neighbours and colleagues who contribute.

> *"The digital economy is an important area of experimentation with value and free cultural/affective labour. It is about specific forms of production (web design, multimedia production, digital services and so on), but it is also about forms of labour we do not immediately recognize as such: chat, reallife stories, mailing lists, amateur newsletters and so on. These types of cultural and technical labour are not produced by capitalism in any direct, cause-and-effect fashion, that is they have not developed simply as an answer to the economic needs of capital. However, they have developed in relation to the expansion of the cultural industries and they are part of a process of economic experimentation with the creation of monetary value out of knowledge/culture/affect."[27]*

Ultimately, is not about the amount of funding for cultural practitioners generated from the 'creative projects' but for the crowdfunding platforms accruing their network of friends, family and colleagues who support them. These social relations are in this way commodified and, ultimately, monetized. The crowdfunding platforms desire that this network of backers who know the campaigner (75%) can be later harvested and made aware of other projects by visiting their sites and discovering more projects they can support to become the 25% of the unknowns for other projects. With the sharing of links, data, views and visits the users are tracked and their interests and favourites stored like many other websites that collate personal data. This network becomes the investor group of future projects, for those for-profit as well as for not-for-profit crowdfunding platforms. But not only does crowdfunding gather investors together, it makes potential campaigners out of them.

Accruing their cut of the private wealth from these networks as well as the members themselves is the goal of all crowdfunding platforms. Much like future investment, the numbers of investors add up and are able to keep investing in what could essentially be a Ponzi or pyramid scheme. And like all true community endeavours this sense of belonging is supported by reciprocity- a return financially in the form of contributions to those forthcoming projects. "The true product for sale on Kickstarter is not your art project, but your community and networks." [28] With Kickstarter the founders have values that determine the form of the creative projects which include favouritizing the campaigners who 'respect this process' and "who think through the rewards for backers, get the word out and engage an audience. In other words, the process doesn't shape the aesthetic. It is the aesthetic."[29]

6. Crowdfunding data so far shows that risky and experimental projects are less likely to be supported. Will this lead to crowdfunding giving form to art?

Crowdfunding platforms serve as a partner for supporting the less traditional forms of art commodities (films, theatre décor, dance/performance, orchestras, community art, etc.) and provide a means to finance artistic

activities that do not receive public monies. It is seen a new fusion model where private/ public partnerships have become the status quo. For some crowdfunding is understood as a method to raise private funds by the artist in combination with subsidies or for the general public who are interested in cultural endeavour. Crowdfunding is now becoming part of institutional policy where this public support would be considered 'matching funds' to subsidy and those projects that are 'crowdfunded' would receive positive advice, i.e. funding. [30]

Projects that are crowdfunded are usually those that are the most popular, much like Google's Page Rank where the indexing of linking, views and hits is ranked higher. This imposes on artistic freedom, because the project is now dependent upon popularity, not necessarily the content or value. The most successful crowdfunding campaigns are projects that are very popular, the artist (musician, actress) already known with an extensive fan club.[31] More obscure projects would need a particular use-value for a specific interest group in order to be financed. If you want to develop a project for a niche culture or a small audience then you either have to find your interest group, who wants to see the project financed or your own network, who wants to see you employed and not collecting welfare (which doesn't really exist anymore in most countries). Or you might get lucky with the sway of the crowd.

It is those projects that question, shock, startle and perhaps scandalize the status quo, which can't be contained within a box and are not especially palatable to the general public that do not get funded. "Experimental projects, risky or critical, cost more funding and are marginalized within the general context of crowdfunding platforms."[32] Populist politics extends and ever-increasingly determines the radical potentials and subversive intention of some forms of artistic and cultural activities.

Crowdfunding platforms such as VoordeKunst and Kickstarter benefit from the mix of design prototypes, innovation proposals, architectural community plans, book productions, film financing and 'art' campaigns that fall under their category of 'creative projects'. At least a third of these projects are rounding up funds for technology: gewgaws, gadgets, games and music projects with films being second only to game design. Not only involved in financing design products, Kickstarter is creating new markets and the founders see their approach "as a new alternative within a larger framework. Commerce shapes cultural output in subtle ways. Money demands answers. People want to put money into things that they think will be successful, and to be successful you have to participate in the market, and the market has very specific rules.A Kickstarter project, as a form, really does open up what forms art can take, Strickler (one of the founders) muses." [33]

Is 'art' really taking on other forms as these projects are being crowdfunded? These conceptual ideas are similar to the artistic proposals in grant writing, only now (if they are popular enough) they are being financed by individuals instead of the state. The 'creative projects' are being marketed as pre-purchases, with backers receiving a share of the artistic practice in the form of artifacts, some perhaps worthy, others definitely not. Are these successful 'creative projects' art or are they not rather examples of good 'cultural entrepreneurship',[34] as is increasingly expected of artists and creative practitioners all over the world in our neoliberal societies. It is an investment of time, energy, labour and creativity on the part of the campaigner to be geared toward the market; concomitantly the backer feels like a shareholder, an investor in a speculative 'creative project' where not only the material

reward is the pay-off, but the enticement of future backing of one's own crowdfunding campaign.

7. The distributed nature of funding facilitated by global technology networks offers a promise of support and subsidy that is disproportionately larger than the available corpus of anonymous private donations.

Drastic cuts to the public sector and funds for culture has led to an explosion of crowdfunding projects. The people who initiate them are acutely aware of the high-risk potential of these projects because there isn't enough public wealth available to finance all these projects. Moreover, the new model of patronage for the distribution of private wealth, to support the cultural sector, is riddled with a fundamental paradox: in order to seek financial support the cultural practitioner has to become a source of support for other stakeholders in the network. Our relationships with others then becomes even more entangled, with added exchanges of money between colleagues that incite mutual support, yet more often than not, financing is not reciprocated: those who once were supported do not like the project, the reward, are not interested or are cash-poor, indebted to the bank or unable to support others when called upon for a return.

The inherent trust implied in these networks builds relationships, in which one is mutually dependent on others. Where one once supported each other morally, with time and attention, a crowd of interest, one is now asked to finance the preproduction of the forthcoming goods, whether that be a film, a video, an installation, a community project or even more material production, such as a publication or fabrication of a monument. The actual product, the 'creative project' is pre-financed based on the trust contained within those social relations, the track record of the campaigner and whether it is a 'good idea'. What about the results from this exchange? Would one's bonds be stronger with each other because of supporting each other's projects? If money were tied into the equation would it then deepen one's relationships with others? Would one need to stay in contact like the mafia in order to be 'paid back' for example or would this also only happen virtually?

In regard to public funding for the arts, Kickstarter believes that it can be "wielded as a tool for public agencies to show that there is an incredible appetite for creative works in the public sphere. They see the "enormous public outpouring a support for creative projects on Kickstarter sites and others as fodder for fighting for increased government support in the arts and culture sectors, as there is obviously an enormous appetite for creative engagement demonstrated through the explosive growth in this form of funding."[35] Why would this private financial support of the general public encourage sustainability or incite increased governmental funding for 'creative projects'? Rather it shows that as long as people, patrons and backers donate their surplus to crowdfunding campaigns there is less of a need for public monies to finance cultural production. The question remains then whether all of these backers would be able to support each other in terms of financial reciprocity.

Funding the crowds

1. From governmental taxation to taxing our networks to tax deductions

So besides taxing the network that supported one's cultural endeavour one is paying tax on what one receives and yet others don't pay tax at all. Throughout history a model of patronage has been developed where wealthy private benefactors have invested in and supported culture, through philanthropy and donations to society. The same situation remains, however- those with money still decide what will get funded with their surplus. This type of redistribution of surplus has enabled patrons to support cultural projects as tax deductions and to finance many foundations for culture. Contributing to a crowdfunding campaign can be another viable means to avoid paying (more) tax.[36]

Philanthropy, although having the appearance of gifting, illicits control and censorship as well as reputation and attention with the recognition of the name of the patron. The wealthy may use crowdfunding as a tax write-off, being the donors, as long as they don't receive anything, otherwise it would constitute a purchase. In contrast with reward crowdfunding one pre-purchases concepts and buys a reward as if shopping online. With digital transactions crowdfunding now enables the micropatron is to be rebranded as a donor, with her name appearing in the credits of the film, on the sides of the building, next to the murals, on all publicity posters, etc. Crowdfunding remains a patronage model without liberation.

As a campaigner, the money you receive with crowdfunding is subject to tax and depending on one's status as a cultural entrepreneur, small business person, or freelancer, taxation occurs without the benefits of either employment or the ability to use the campaign as a tax-write-off. Rather the crowdfunding campaign is viewed as income.[37] One is taxed on the small amount one receives as the crowdfunding platform siphons off a percentage along with the transaction companies.

Certain types of crowdfunding, such as equity models, have benefited from the recent legislation in the US, such as the JOBS ACT, although some would argue that this has just made it easier to speculate and extract money from the crowds instead of creating jobs and structured labor conditions.[38] Other countries have analyzed crowdfunding networks along with those projects that appeal to smaller interest groups, or niche communities. Governmental legislation in Spain appears to be limiting the crowdfunding platforms from receiving funds from financial capital, as equity crowdfunding does, because the legislation for it does not yet exist. [39] Certain organizations however are interested in initiating law firms that would enable setting up a legal framework governing crowdfunding platforms worldwide and those who would use them, donors (backers) as well as campaigners.[40]

2. Monetization of social relations

In Marxist theory capitalism is unified through the exchange of unknowns by the obfuscation of interaction between people and their relations. In social exchange, relations do not have the anonymity of money but rather provide reciprocal returns in broader terms, open-ended networking models and tit-for-tat exchanges between people.[41] With

the present online monetary exchanges between willing parties that occur during crowdfunding campaigns, social obligations are made to appear as if they were relations between things instead of people. The reifying effects of universalised trade in commodities, involves a process Marx called "commodity fetishism" meaning that social relations become expressed as relations between things; for example, price relations. [42] This commodification process describes how something without value is assigned a market value, which can replace social value. However, commodity fetishism not only perverts the realities of society's economic base but moreover commodifies the entire social relations of capitalism.[43]

Unlike the factory's position in the supply chain where the manufacture and the people involved in the production of goods is hidden, crowdfunding attempts to make transparent the production process of the social factory including the amount raised so far, along with the acquisition of these goods (rewards) and services (the future project) by the consumer. Although acquiring the commodity (the reward) does not reveal the labour involved in the production of the reward by the campaigner, in crowdfunding the campaigner is usually known (75% of backers) and backers are now being asked to make a contribution using a universal equivalent, in this case money, in the form of digital micropayments. Alienated labour is replaced with community activities in the form of participation. Increasingly individuals feel obliged to contribute to the projects of others (especially during the financial crisis): friends, family, neighbours and colleagues are contributing cash in order to maintain their social relations within their networks. In turn these networks become commensurated through the online money-form and the social relations between the individual workers (campaigners) and the donors (backers) are objectified and reified.

Through this private distribution of wealth it becomes progressively difficult to create a surplus by those who work precariously, because of financialization of debt in which people are forced to pay back education, loans, credit cards, mortgages with higher interest. Debt rises yet wages do not. If no new value is created in the form of surplus how will other crowdfunding projects be financed? With the advent of technological advancement ideas are much more easily transformed into commodities, along with an expansion of goods for market exchange. Notwithstanding all of the contributors to be seen as future benefactors of other projects, with the crowdfunding platforms selling their data to third party profiteers or future systems of advertisement that are all made possible by digital technologies.

This monetization, in the sense of commodifying something not usually marketed (social relations), is the causality of crowdfunding. It now takes the form of not only giving one's time, or attention, but the commodification of one's very own social relations. In turn, these social relations are monetized and all of us, who are online and participating, are contributing to the commodification of this subjectivity. Crowdfunding is yet another model of surplus redistribution as part of a larger economic shift, brought upon by technology in the form of digital transactions and exacerbated by austerity measures. It helps keep capitalism in place by gearing all cultural production to the market by investing in futures, the presale of projects, which have yet to be determined.

Crowdfunding is being touted as a 'new economy' where buying personal or hand-made commodities occurs online from people we know instead of from larger companies or retailers who take the profit. Yet the micropayment does not buy into a collective or a communal project but rather supports the

authorship of the designated 'campaigner'. The new 'work' that is produced from the crowdfunding campaign corresponds to exclusive access to the commodity- ownership. The rewards in the crowdfunding production process remain for private consumption with indebtedness to the patrons by the campaigner. The campaigners accrue the symbolic capital with the help of social media, rumour and contributions, along with the further production of the 'creative project', their visibility increases and this 'valorisation' process adds value. The attention gained by the crowdfunder during the course of the campaign reinforces the circular course of capitalist production and enables the future productions of new commodities, generated from the labour power-producing surplus from the backers.

With the campaigner retaining the 'relations of production' along with sharing this spotlight with the crowdfunding platform, the production of new capital will continuously be generated in the form of these new commodities -the creative projects. In other words it is like the ever-expanding production needed to continue the manufacture of commodities and the continual process of producing more and selling more. Yet as surplus increases will this be kept in private pockets or distributed elsewhere, toward sustainable commodities or even savings, or will it be re-donated back to other creative projects, hence 'funding the crowds'?

3. A new model for the distribution of wealth?

As crowdfunding sites (700+) continue to mushroom worldwide they are a force to be reckoned with. Many of these platforms include the previously mentioned types of crowdfunding: donation, lending, equity and reward. Debt crowdfunding is also expanding with growth the past year with only more expected in years to come. The legal framework for all types of crowdfunding will be most likely be passed into legislation in the US and Europe in the coming year. Crowdfunding platforms are becoming more and more international, harvesting money from people all over the world, with free API technology made available to make it even easier for groups of people to charge and collect money for any activity. The past year (2012) the amount of donations from platforms has doubled, even tripled and this year promises to see an increase as the trend of crowdfunding spreads as even more people find it an acceptable means to raise money from their networks for their causes. Yet the statistics show that the ratio of 75% known and 25% unknown funders has remained the same. [44]

Often incorrectly attributed to Karl Marx, it was actually Louis Blanc, French politician and historian who, in 1839, championed co-operatives and stated, 'each according to his abilities, to each according to his needs.'[45] Steve Bell, cartoonist for the Guardian, altered Blanc's text to 'each according to their vulnerability, each according to his 'greed' in regard to the demands of UK's 'Big Society'. [46] One could also rewrite Blanc's statement in regard to precarity and crowdfunding as 'each according to his 'flexibility', each according to his 'greed'. With equity theory people see financial distribution based on 'to each according to his contribution' as fair, although not all cultures abide by the same value system nor wish to or are able to participate to the same degree. In this respect, contemporary society's embrace of crowdfunding as a new means of global funding is not without critique, especially in regard to the monetization of social relations. Is this leading to self-sustainability in which our own

networks create not only the monetary support for the production of activities outside of the market, but also produce goods (food for example) directly for private consumption?

Instead of being just another model that redistributes surplus there are alternatives to support cultural production that can be developed from crowdfunding. A future scenario might include a financial model in which the amount that we contribute to the crowdfunding campaign is a certain percentage of collective authorship in the project that will be financed. In this collaborative endeavor, the audience (those who contribute financial support) obtains distributed ownership of the works that are financed. If crowdfunding is made successful with the financial support of the multitude, so shouldn't we also be speaking of co- or multi-authorship? The campaigner ostensibly retains authorship yet Indiegogo for example keeps all of the online campaign for itself.[47] If the commons are fronting the cash why are the commons not reaping the benefits?

By breaking down the system of private property and looking at crowdfunding projects where communal good is supported by the community, for the community and of the community, we come across some examples of 'alternative crowdfunding'. Now, more than ever, shared authorship and collective agency is what makes things happen. Producers and users are coming in much closer contact with one another and in the process the roles in between 'artist' and 'audience' are multiplying.[48] Perhaps eventually the 'donors' who support the projects might join in the production.[49] Crowdfunding projects are not usually released with a free license, but there could be projects designed to fulfill this criteria, like 'crowdfunding the commons' where the 'results can be shared, reused, remixed, copied, replicated in whatever form.'[50] Therefore 'crowdfunding is a promising field because it can address many of the dynamics that underlie the crisis of the cultural economy and its transformation from a commodity to a commons-based environment.'[51] This is what the premise of goteo.org embodies, a 'social network for co-financing and collaborating with creative projects that further the common good.'[52] In other words, "those who use the platform to raise money should control the platform, collectively, and share in the benefits generated."[53] Organisations such as Brickstarter are attempting to improve upon the Kickstarter model into a social economy. The voices of the people contained within the platform gather together and use tools to form collaborative proposals, communities are involved in the experience and can follow the progress of the project as well as participate. In order to reach a 'technical democracy' the manner in which 'hybrid forums' and civic engagement play a crucial role is key – offline in the public aspect of confrontation and discussion, along with the organization and execution of the project; online with the collating of funds to facilitate it.[54]

Crowdfunding in its present form is not a self-sustaining model.[55] The campaigner is unremunerated for most of their labour and paid substandard wages for the production of the project. Networks are of the highest value and tapped into by the campaigner and harvested by the platform. Financing is sought from patrons (workers) who decide to spend their surplus income as funders. The funders do not end up with financial returns for their investment nor do they share in the authorship. Instead, with reward-based crowdfunding, they receive a perk, a token-an artifact of limited value. At the same time, personal relationships are commodified by an exchange of money that was previously not demanded between these networks of people. As Dmitri Kleiner points out, '[a]s such, it can never grow beyond the level of the retained income workers can sustainably

divert from consumption, at the expense of workers' savings. This means, that crowdfunding cannot directly have a significant effect on the social distribution of wealth unless what it funds is itself something that itself directly challenges political or economic power.'[56]

A series of questions remain unanswered: Isn't crowdfunding just another 'polite' form of begging, specifically donation crowdfunding? Is the decision to support a campaign by the backer based on the quality of the project or the backer's relation with the person? Are backers able to discern the quality of the project? Are the backers just going along with the crowd or are they relying on the reputation of the campaigner and the implied trust involved in their relationships with others and the potential kickback? Do they see their expenditure as a purchase, an investment or promoting solidarity? Will supporting those projects one trusts eventually lead to engagement with unknown crowdfunding projects by others, trusting total strangers and sharing wealth? Will crowdfunding lead to wider support for others and mutual interest in the form of a sharing economy, only what is shared is the general surplus of private capital of individuals? Why should one engage in these forms of expenditure that add to the growth of crowdfunded cultural activities and service neoliberal agendas worldwide?

As technology enables an even quicker flow of capital the state is no longer held accountable and it is increasingly private bodies, either individual or corporate, who decide what will be financed and for how much. Developing new cultural economies in our existent neo-feudalistic societies means looking beyond micro-networked patronage models such as reward-based crowdfunding. That is, if one wants to be remunerated for cultural endeavour that isn't exclusively market driven.

Notes

[1] http://en.wikipedia.org/wiki/Crowd_funding

[2] http://booomerang.dk
[3] http://voordekunst.nl

[4] http://indiegogo.org

[5] http://www.usaprojects.org

[6] http://kickstarter.org

[7] http://goteo.org

[8] http://goteo/about

[9] http://www.kickstarter.com/help/stats

[10] This information is well hidden and not publicized as such but came to light through the Mediamatic event, 'Kom jij Ook?- Crowdsourcing' on June 11, 2011 http://www.mediamatic.nl/44730/nl/kom-je-ook-crowdsourcing this 75% to 25% was announced by Daniel Cohen and reiterated by VoordeKunst on January 22, 2013. This was reiterated in a Q&A with the representative by the state sponsored Irish national crowdfunding site http://www.fundit.ie/ at the 'Collaborative Change' conference in Dublin, July 2011. In their 'Best of Kickstarter 2012' http://www.kickstarter.com/year/2012 Kickstarter shows similar stats (albeit cryptically) yet unchanged from the previous years. This was confirmed by Kickstarter in NYC on January 9, 2013.

[11] Macphee, Josh (2012) Who's the Shop Steward on Your Kickstarter? *The Baffler*, No.21 http://www.thebaffler.com/past/whos_the_shop_steward_on_your_kickstarter

[12] "I think Kickstarter helps people do something a lot of us have forgotten how to do — ask our neighbors for help." This was stated by Lewis Winter, a designer in Melbourne, Australia, has given financial support to 373 projects (including three portrait commissions, an interest of his). http://www.nytimes.com/2011/08/07/magazine/the-trivialities-and-transcendence-of-kickstarter.html?pagewanted=4&_r=0

[13] Ariely, Dan; Loewenstein, George; Prelec, Drazen (2005) *Tom Sawyer and the Construction of Value* http://www.bos.frb.org/economic/wp/wpchrono.htm

[14] "Tom said to himself that it was not such a hollow world, after all. He had discovered a great law of human action, without knowing it — namely, that in order to make a man or a boy covet a thing, it is only necessary to make the thing difficult to attain. If he had been a great and wise philosopher, like the writer of this book, he would now have comprehended that Work consists of whatever a body is OBLIGED to do, and that Play consists of whatever a body is not obliged to do. And this would help him to understand why constructing artificial flowers or performing on a treadmill is work, while rolling ten-pins or climbing Mont Blanc is only amusement. There are wealthy gentlemen in England who drive four-horse passenger-coaches twenty or thirty miles on a daily line, in the summer, because the privilege costs them considerable money; but if they were offered wages for the service, that would turn it into work and then they would resign." Twain, Mark (1876) *The Adventures of Tom Sawyer*, p. 69

[15] Ariely, Dan; Loewenstein, George; Prelec, Drazen (2005) Tom Sawyer and the Construction of Value http://www.bos.frb.org/economic/wp/wpchrono.htm

[16] Walker, Rob (2012) Interview with Kickstarter founders Perry Chen and Yancey Strickler http://www.nytimes.com/2011/08/07/magazine/the-trivialities-and-transcendence-of-kickstarter.html?pagewanted=4&_r=0

[17] Walker, Rob (2012) Interview with Kickstarter founders Perry Chen and Yancey Strickler http://www.nytimes.com/2011/08/07/magazine/the-trivialities-and-transcendence-of-kickstarter.html?pagewanted=4&_r=0

[18] 'We'd turn to Kickstarter: the people's N.E.A.!' Walker, Rob (2012) Interview with Kickstarter founders Perry Chen and Yancey Strickler http://www.nytimes.com/2011/08/07/magazine/the-trivialities-and-transcendence-of kickstarter.html?pagewanted=1&_r=2

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19] http://idealab.talkingpointsmemo.com/2012/02/kickstarter-expects-to-provide-more-funding-to-the-arts-than-nea.php

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20] Walker, Rob (2012) Interview with Kickstarter founders Perry Chen and Yancey Strickler http://www.nytimes.com/2011/08/07/magazine/the-trivialities-and-transcendence-of kickstarter.html?pagewanted=1&_r=2

[21]http://www.mondriaanfonds.nl/Nieuws/item/Nieuwe_regelingen/;http://www.mondriaanfonds.nl/Nieuws/item/Mondriaan_Fonds_voordekunst/; http://www.mondriaanfonds.nl/Activiteiten/Alternatieve_financiering/

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22] http://www.cultuur-ondernemen.nl/nieuws/agenda/-/asset_publisher/GV8h/content/crowdfunding-1

[23] Email exchange on October 24, 2012 with Stephanie Pereira, director art programme at Kickstarter. Kickstarter site: 'This year the site introduced a feature called curated pages, which gives (thoughtfully chosen) entities like Sundance Institute, the Rhode Island School of Design, the New Museum and Pitchfork space to highlight Kickstarter projects proposed by people associated with their organizations, or anything else on Kickstarter that they happen to think deserves promotion.'

[24] Payment gateways like PayPal in turn charge if a purchase is deemed to have been made (3.4% + € 0.35 between 0 and € 2.500) In turn, those receiving the money are self-employed or have business billing for revenue (invoice with 21% VAT) and consequently pay tax on that amount. In short, you can earn about 30% less than expected at the end of the process. In this amount we add the costs to produce and distribute gifts and different bonuses and hours of work invested in keeping up the campaign (estimated at about 4 hours a day for over for 30 days for projects seeking € 12,000). It is therefore not surprising that many of the people we consulted who have worked with crowdfunding platforms have an ambivalent relationship with their experience with them. P. 17, P.16, Caparrós, Silvia (2012) *Experiencias de crowdfunding en el estado Español y Cataluña: principals características, retos y obstáculos. Inspiración y recomendaciones para un instrumento más sólido de financiación transversal colectiva, pública y privada de la cultura*. X-net report, http://whois–x.net/

[25] Hopkins, John (2012) http://www.mail-archive.com/nettime-l@mail.kein.org/msg01310.html

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26] Macphee, Josh (2012) Who's the Shop Steward on Your Kickstarter? The Baffler, No.21 http://www.thebaffler.com/past/whos_the_shop_steward_on_your_kickstarter/ P2

[27] Terranova, Tiziana (2004) *Network Culture: Politics for the Information Age*. Pluto Press: London. p.79

[28] Macphee, Josh (2012) Who's the Shop Steward on Your Kickstarter? *The Baffler*, No.21 http://www.thebaffler.com/past/whos_the_shop_steward_on_your_kickstarter/ P2

[29] Walker, Rob (2012) Interview with Kickstarter founders Perry Chen and Yancey Strickler http://www.nytimes.com/2011/08/07/magazine/the-trivialities-and-transcendence-of kickstarter.html?pagewanted=1&_r=2

[30] VoordeKunst is now partnered with the Mondriaan Foundation, a Dutch institution for cultural and heritage subsidies. Mondriaan's new policy(as of January 1, 2013) includes a personal contribution of €3500 for project subsidies, including money raised from crowdfunding.

[31] Amanda Palmer is the highest successful campaigner ($1,192,793) so far only afterwards she didn't pay local musicians while on tour: Clover, Joshua (2012) http://www.newyorker.com/online/blogs/culture/2012/10/amanda-palmers-kickstarter-scandal.html. Whoopi Goldberg ostensibly needed funds ($73,764) for her documentary 'I Got Somethin' to tell You.' http://www.kickstarter.com/projects/1085942094/whoopi-goldbergs-documentary-i-got-somethin-to-tel?ref=live

[32] These platforms have been born thanks to the facilities of digital networks for access to databases fans or prospective clients and monetary exchange. This implies that in the long run, the products produced by these platforms are closed tangibles or consumables. This can be detrimental to the production of cultural events where the experimental, procedural or criticism is present. That is, the danger is that crowdfunding popularizes the popular and ends up as a complement to the market. P.16, Caparrós, Silvia (2012) *Experiencias de crowdfunding en el estado Español y Cataluña: principals características, retos y obstáculos. Inspiración y recomendaciones para un instrumento más sólido de financiación transversal colectiva, pública y privada de la cultura*. X-net report, http://whois–x.net/

[33] "That traditional set of rules, he continues, "dictates what people make" — like paparazzi photos, let's say." Walker, Rob (2012) Interview with Kickstarter founders Chen and Strickler http://www.nytimes.com/2011/08/07/magazine/the-trivialities-and-transcendence-of-kickstarter.html?pagewanted=4&_r=0

[
34] "What is not to love about these new forms, so sleek and attractive on the outside, with the promise of aiding us in the fulfillment of the last remaining human right in our society: the right to be an entrepreneur?" Macphee, Josh (2012) Who's the Shop Steward on Your Kickstarter? *The Baffler*, No.21 http://www.thebaffler.com/past/whos_the_shop_steward_on_your_kickstarter/ P2

[35] Email exchange on October 24, 2012 with Stephanie Pereira, director art programme at Kickstarter

[36] Offering tax deduction to backers can be an appealing way to draw in more funds. But, you can only offer tax deductions if you are a tax-exempt non-profit organization (501©(3) organization), otherwise backers funds are not tax deductible. If a backer is giving money through a 501©(3) organization, make sure the money is funded under the name of the organization, if it does not go through the organization the money will not be tax deductible. For Kickstarter, you must fill out the 1099-K tax form and, for Indiegogo, the organization must have a PayPal account that the money can go to. Daily Crowdsource http://dailycrowdsource.com/crowdsourcing-help/case-studies/1004-understanding-crowdfunding-fees

[37] A successful campaign requires hard work and in some cases, on time investment, fees and taxes imposed on results mean that many users would reconsider whether to use this mechanism to make future projects. This factor is exacerbated by the improbability drawn from the patronage law that despite being on the political agenda in recent legislatures, for now will seem not to materialize. P.17 Caparrós, Silvia (2012) *Experiencias de crowdfunding en el estado Español y Cataluña: principals características, retos y obstáculos. Inspiración y recomendaciones para un instrumento más sólido de financiación transversal colectiva, pública y privada de la cultur*a. X-net report, http://whois–x.net/

[38] The JOBS Act also loosens a whole range of other reporting requirements, and expands stock investment beyond “accredited investors,” giving official sanction to the internet-based fundraising activity known as “crowdfunding.” Taibbi, Matt (2012) http://www.rollingstone.com/politics/blogs/taibblog/why-obamas-jobs-act-couldnt-suck-worse-20120409

[39] Crowdfunding support limit is is becoming clear. Many open source projects or proposals by nature conservationists have niches and very small population to support them. That they can not contribute to the financing of all projects that arise can be a real limit the growth of the crowdfunding. This problem could be solved by opening the possibility that these platforms receive funds from financial capital. P.16, Caparrós, Silvia (2012) *Experiencias de crowdfunding en el estado Español y Cataluña: principals características, retos y obstáculos. Inspiración y recomendaciones para un instrumento más sólido de financiación transversal colectiva, pública y privada de la cultura*. X-net report, http://whois–x.net/

[40] A law of patronage that rewarded donations more clearly would be a key factor in launching these initiatives and make them more interesting for big donors. Local and regional authorities have great difficulty integrating the crowdfunding as one of the sources of financing of serials, movies or other initiatives which in turn are likely to need public funding. We need to generate frames that accept this new reality and normalize its operation as a means of financing. It is important to conceptualize and to better define the concept of social return. Crowdfunding not only earns a pre-purchase and is an efficient tool for funding projects seeking a more fundamental socio-cultural aspect. Finally it would be very useful, in addition to the necessary changes in the current fiscal framework to compile a guide of good practice for the sector to facilitate the understanding of the rights and benefits to be gained by users, but also to define clear legal limits facing the platforms themselves. This would allow the sector to grow continuously without facing uncertainty. Given these circumstances, we have proposed a law firm with the intention

of proposing solutions to these problems. P.18, Caparrós, Silvia (2012) *Experiencias de crowdfunding en el estado Español y Cataluña: principals características, retos y obstáculos. Inspiración y recomendaciones para un instrumento más sólido de financiación transversal colectiva, pública y privada de la cultura*. X-net report, http://whois–x.net/

[41] Spehr, Christoph (2007) Free Cooperation. In *The Art of Free Cooperation*, ed. Lovink, Geert & Scholz, Trebor. Autonomedia: New York. Institute of Networked Cultures: Amsterdam.

[42] http://en.wikipedia.org/wiki/Commodity_%28Marxism%29

[43] Crowell, Jacqueline (2012) http://www.scientificterrapin.umd.edu/Fall2011/articles/Marxism.php

[44] According to Kickstarter in 2012: 2,241,475 (up 134% from 2011) people pledged $319,786,629 (up 221% since 2011) and $274,391,721 was collected (up 238% from 2011). Of which 570,672 people backed two or more projects; 50,047 people backed ten or more projects; 452 people backed 100 or more projects. The most popular pledge amount is $25. Successful project average: $5487. Music had the most funded projects: 5,067. Games had the most money pledged at 83,000,000. Art had 3,783 projects launched, of which 1837 were 'successful' with $10,477,939 pledged by 155,782 people. http://www.kickstarter.com/year/2012

[45] In the *Revue du progres*, which he founded, he published in 1839 his study on *L'Organisation du travail*. The principles laid down in this famous essay form the key to Louis Blanc's whole political career. He attributes all the evils that afflict society to the pressure of competition, whereby the weaker are driven to the wall. He demanded the equalization of wages, and the merging of personal interests in the common good– "à chacun selon ses besoins, de chacun selon ses facultés", which is often translated as "from each according to his abilities, to each according to his needs." http://en.wikipedia.org/wiki/Louis_Blanc

[46] Referring to Marx, the award-winning political cartoonist Steve Bell in the Guardian on 21 January 2011 and the Guardian Weekly newspaper on 28 January 2011 adapted Marx's slogan "From each according to his ability, to each according to his need" for the Big Society: "*From each according to their vulnerability, to each according to their greed*". http://en.wikipedia.org/wiki/Big_Society

[47] Indiegogo: Our Proprietary Rights: Except for your User Content, the Service and all materials therein or transferred thereby, including, without limitation, software, images, text, graphics, illustrations, logos, patents, trademarks, service marks, copyrights, photographs, audio, videos, music, and User Content (the "Indiegogo Content"), and all Intellectual Property Rights related thereto, are the exclusive property of Indiegogo and its licensors. Except as explicitly provided herein, nothing in this Agreement shall be deemed to create a license in or under any such Intellectual Property Rights, and you agree not to sell, license, rent, modify, distribute, copy, reproduce, transmit, publicly display, publicly perform, publish, adapt, edit or create derivative works from any materials or content accessible on the Service. Use of the Indiegogo Content or materials on the Service for any purpose not expressly permitted by this Agreement is strictly prohibited.

[48] Stadler, Felix (2012) *Crowdfunding the Commons: Goteo.org Interview*. Shareable. http://www.shareable.net/blog/crowdfunding-the-commons-interview

[49] Burns, Axel (2008) *Blogs, Wikipedia, Second Life and Beyond, from production to produsage*. New York: Peter Lang Publishing

[50] Kluitenberg, Eric (2012) http://www.mail-archive.com/nettime-l@mail.kein.org/msg01336.html

[51] Stadler, Felix (2012) *Crowdfunding the Commons: Goteo.org Interview*. Shareable. http://www.shareable.net/blog/crowdfunding-the-commons-interview

[52] Ibid

[53] Macphee, Josh (2012) Who's the Shop Steward on Your Kickstarter? *The Baffler*, No.21 http://www.thebaffler.com/past/whos_the_shop_steward_on_your_kickstarter/ P3

[54] Hill, Dan (2012) Conversation with Rodrigo Araya, Tironi Asociados, Chile. That the involvement of citizens in everyday decision-making about their environment is likely to result in outcomes that are more inclusive, holistic, faster, scalable, and better, as they are decisions "owned" by the citizens. In other words, sustainable. http://brickstarter.org/conversation-rodrigo-araya-tironi-asociados/

[55] Although sometimes crowdfunding has served communities to make visible the need for funding and distributing creative projects that otherwise would not have been known, certainly crowdfunding is not sufficient to meet the needs of all areas of cultural production and contemporary thought that have become more exposed thanks to constant public funding cuts. This makes us question the role of having this tool in the production of culture and forces us to be cautious about their possible role in the funding of contemporary culture. P.16, Caparrós, Silvia (2012) *Experiencias de crowdfunding en el estado Español y Cataluña: principals características, retos y obstáculos. Inspiración y recomendaciones para un instrumento más sólido de financiación transversal colectiva, pública y privada de la cultura*. X-net report, http://whois–x.net

[56] Kleiner, Dmytri (2012) http://www.mail-archive.com/nettime-l@mail.kein.org/msg01335.html

Florian Alexander Schmidt

FOR A FEW DOLLARS MORE: CLASS ACTION AGAINST CROWDSOURCING

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This paper will give an introduction into the rise of crowdsourcing, its methods and the controversies surrounding it.

Class Action Against Crowdsourcing

Something is brewing in the world of digital labour. In October 2012, online worker Christopher Otey filed a class action lawsuit against the US based company CrowdFlower, one of the largest crowdsourcing platforms for the completion of so called 'micro-tasks'. CrowdFlower has a reserve army of, as they claim, millions of workers that can be hired instantly to process data. According to its CEO Lukas Biewald the company can hire 10.000 people in an hour and they do hire up to 3 man-years of work on a daily basis (Biewald). Through the pending lawsuit, Christopher Otey is challenging the companies failure to pay the minimum wage under the Fair Labor Standards Act to its US workforce and his lawyers are now searching the web for other underpaid members of the online crowd who might want to join the class action. CrowdFlower's lawyers point out, however, that Christopher Otey did his work completely voluntarily and that he and all the other 'cloud-workers' are not employees but free contractors. The case is still open, but it has the potential to shake the foundations of a business model that has been mushrooming around the globe over the last five years. Crowdsourcing has become a huge industry, with the size of the workforce doubling each year and revenues rising by 75 percent per annum (Massolution 9-19).

> *Contrary to a commonly held view of crowdsourcing as a transfer of low-skill work to low cost locations, our analysis shows that more than half of all the crowdsourcing workers live in North America and Europe and workers are generally very well educated. Almost half have a bachelor degree and only 5% are truly low skills workers with only an elementary education. (Massolution 19)*

The website Crowdsourcing.org which issues the report and understands itself as a hub for the industry already lists over 2000 different websites for crowdsourcing and crowdfunding. (Crowdfunding is an important subcategory of crowdsourcing in which the crowd simply is the source for money, but in this paper I will focus on the crowd as a source for data, knowledge, ideas and, most importantly, work.) To some, crowdsourcing is a neutral umbrella term that describes new processes of distributing labour; to others it is the exploitation of cheap or free labour with detrimental effects for workers and professions. The questions are: Is crowdsourcing exploitative even when all participants are volunteers and know the conditions? Is it labour when people do the work as a hobby? Is crowdsourcing inherently unethical or is it just a question of how the parameters are configured? And how can national labour laws tackle a global phenomenon? It is not easy to evaluate crowdsourcing because of its varying definitions and methods. The deal between those who do the work and those who profit from it varies from platform to platform. The different approaches in crowdsourcing are scattered across a spectrum that reaches from productive leisure and play over altruistic volunteering to precarious labour. In the following, I will outline some of the aspects that are relevant in regard to the ethical dimension of crowdsourcing.

From the Empowerment of the User to the Harnessing of the Crowd

> Buy it, use it, break it, fix it,
> trash it, change it, mail – upgrade it,
> charge it, point it, zoom it, press it,
> snap it, work it, quick – erase it,
> write it, cut it, paste it, save it,
> load it, check it, quick – rewrite it,
> plug it, play it, burn it, rip it,
> drag and drop it, zip – unzip it,
> lock it, fill it, call it, find it,
> view it, code it, jam – unlock it,
> surf it, scroll it, pause it, click it,
> cross it, crack it, switch – update it,
> name it, rate it, tune it, print it,
> scan it, send it, fax – rename it,
> touch it, bring it, pay it, watch it,
> turn it, leave it, stop – format it.
> (Daft Punk, *Technologic*, 2005)

Every day, we click our way through an endless succession of micro-tasks. Isolated, they are only meaningful to us, but in aggregated form, they are of great value for companies. On the lowest level, these tasks are almost under the threshold of perception: Surf it, scroll it, pause it, click it. But all this creates data for Google & Co to further develop their algorithms and sell personalised ads. Write it, cut it, paste it, save it. Other tasks already demand more engagement, they not only create data but content be it for self-expression or as a service to others. Amateurs online write articles for Wikipedia, moderate help forums, debug open source software and make valuable contribution to sciences such as astronomy to ornithology. With increasing complexity, these task stop being micro and demand a high level of engagement and expertise. They eventually become indistinguishable from work. The lines between amateur and professional, between consumption and production, usage and creation, play and labour, have been continuously blurred in post-industrial production and especially online. Portmanteaus such as 'prosuming' and 'produsage', 'playbour' and 'weisure' or the 'pro-am revolution' have tried to express this. It is the collapse of the boundaries between the two domains, that makes the valuation of appropriate remuneration is so tricky. It is a spectrum, with hybrids that are predominantly fun on one side and hybrids that are predominantly work on the other. The most drastic illustration for this strange amalgam is probably 'goldfarming', where the fun of playing a game is perverted into pointless virtual drudgery for real world currency. While the criticism used to be about the low quality of amateur work (Keen), the controversy has shifted. Since it is evident that these free contributions can be of great value also economically, the question is now who owns them and is therefore entitled to make a profit of them?

Let's take the harvesting of data: It is well known that the services of Google, Facebook and the like are not actually free, payed for with personal data. In other words, if the service is free, the users are the product being sold to advertisers. With the accusation of exploitation already looming in the background, Nicholas Carr has described Facebook's business model as 'digital sharecropping'. Carr refers to what FB calls ARPU or average revenue per user, which was at $5,11 for 2011. Not much for a single user, but they got over a billion of them. It is puzzling that the majority of users obviously prefer to sell their privacy instead of paying a relatively small fee for the maintenance of the social network, but privacy issues aside, I wouldn't call Facebook's business-model exploitative. The value creation of the users happens as a side-effect of their activities and in return they get a service that they use intensely.

User-generated content became the central idea of the so called Web 2.0, a term popularised in 2004 by publisher Tim O'Reilly. The new version of the internet, so it was said, had become more collaborative and participatory. Tim Berners-Lee strongly objected the whole notion of a Web 2.0 — getting people together to collaborate online was exactly what he developed the world wide web for in the first place, and critics such as Trebor Scholz have shown, that the proclaimed novelty of the Web 2.0 was deceptive. It was actually just a clever marketing label from which even O'Reilly distanced himself eventually (Scholz, "Market Ideology and the Myths of Web 2.0"). But still, something had changed on the internet around the time that Web 2.0 rose to fame. The masses had arrived online and with them came a revival of the notion of the crowd. What's more, after the burst of the dotcom bubble in 2000, the enthusiasm for e-commerce had cooled down for a few years. What united many of the websites that arose from the ashes was that they all found ways to let the newly arrived masses of users produce the content for each other. The companies only had to provide the infrastructure, the tools, the stage and Web 2.0 delivered the narrative for this transformation.

In the case of Amazon, users already contributed ratings, reviews and recommendations but they did not influence the actual products. With the launch of Second Life in 2003 and, most importantly, YouTube in 2005 the concept of user-generated content was elevated to a new level. Now, the users also created the core product. Wikipedia had started in 2001, but it was between 2004 and 2006 that it was growing exponentially. All this contributed to a great hype about the empowerment of the user, which peaked in December 2006 when *Time* magazine made *You* the *Person of the Year*, showing on the cover a mirror foil, framed by a YouTube player. Below it read: "*Yes, you. You control the Information Age. Welcome to your world*." In the corresponding article, Time continued: "this is not the Web that Tim Berners-Lee hacked together […] and not even the overhyped dotcom Web of the late 1990s. The new Web is a very different thing. It's a tool for bringing together the small contributions of millions of people and making them matter. […] It's about the many wresting power from the few and helping one another for nothing" (Grossman). It turns out that this was, at least to some extent, an illusion. While the many do indeed help each other for nothing, the power today seems to be back firmly in the hands of the few. Users had much more control over their data and content before everything moved over from the personal homepage to the servers of the global aggregators and social networks.

The Rise of Crowdsourcing

> *Welcome to the age of the crowd, (where) […] distributed labor networks are using the Internet to exploit the spare processing power of millions of human brains. […] The labor isn't always free, but it costs a lot less than paying traditional employees. It's not outsourcing; it's crowdsourcing. (Howe)*

In 2006, in an article for *Wired*, the journalist Jeff Howe combined the terms crowd and outsourcing to describe the new form of cheap labour online. The framing of labour as spare processing powers suggests that something is put to good use that would otherwise be wasted. At the same time, this already has a dehumanising tone to it and is clearly not about the empowerment of the individual anymore. Now that plummeting costs and

widespread dissemination of technology had made the aggregation of human activities and mental capacities feasible on a massive scale and people started thinking about how to put this new resource to good use. The attempt to fathom the dimension of the yet to exploit resource quickly led to astronomic calculations. Internet guru Clay Shirky wrote in his book *Cognitive Surplus: how technology makes consumers into collaborators* that "the world's educated population has three trillion hours of free time each year" (Shirky, *Cognitive surplus* 27). His vision is to use at least a fraction of the time otherwise wasted in front of the TV for more productive causes. A popular example in these calculation is, that it took 'only' about 100 million man-hours to create the Wikipedia.

Along these lines, the game-designer and author Jane McGonigal has pointed to the total number of hours people played World of Warcraft, which in 2011 accumulated to 5.93 million years, just for this one game alone. According to McGonigal, people also played 3.5 million years of Bejeweled and 250.000 years of Halo and so on. Her vision is to create games that have a positive influence on real world problems such as health and sustainability and she also created games with that ambition (McGonigal). The problem with this approach is, that it cuts both ways and the so called 'gamification' of work, that is to say, the introduction of points and badges and other virtual reimbursements has become a popular tool in crowdsourcing to 'pay' the contributors without having to pay cash. Gamification propels competition and ambition among the workers and transform the feeling of loss of time into a feeling of achievement and progress (Herz). Because of its manipulative power in the business context, media philosopher Ian Bogost has suggested to better speak of this approach as 'exploitationware' (Bogost).

Luis von Ahn, researcher at Carnegie Mellon university has developed a very special from of harnessing the 'cognitive surplus' or 'human computation' as he calls it. He is the inventor of CAPTCHA, those distorted letters that we have to type in when we create a new account on a website. With that, we prove to the computer that we are human and allow the machine to keep spambots out of the system. Von Ahn had observed, however, that spam companies would hire humans to type in these squiggly letters as a full time job. People would get paid $2.50 per hour and in that time would solve about 720 CAPTCHAs. Access to a new account from which to send spam would cost the company only a third of a cent. This lead von Ahn to the invention of reCAPTCHA, now commonly used across the web. In this new system, we help with the digitisation of books, whenever we type in the letters, we recognise a fragment of a scan that the computer could not decipher. As von Ahn says that he wants to "solve large-scale computational problems and/or collect training data to teach computers many of these human talents. To this end, I treat human brains as processors in a distributed system, each performing a small part of a massive computation." The interesting thing about Ahn's method of crowdsourcing is, that people often don't even know that they are accomplishing a useful task when they solve the reCAPTCHA.

All these examples for the aggregation of usage data, unconsciously performed micro-tasks, and user-generated content are examples for crowdsourcing in a broader sense. In a narrow sense, "crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call" (Jeff Howe 2006 on his website). This is not about skimming off something that is already there, this is about replacing proper jobs with often precarious

labour. While business gurus love it and even the most derivative crowdsourcing websites repeatedly get awards and accolades for their innovative ways to slash costs of production, many workers in the creative industries feel threatened by crowdsourcing. It is not only those whose jobs are in danger that see crowdsourcing critically. In an interview with the *San Francisco Chronicle*, Jimmy Wales said:

> *One of my rants is against the term "crowdsourcing," which I think is a vile, vile way of looking at that world. This idea that a good business model is to get the public to do your work for free — that's just crazy. It disrespects the people. It's like you're trying to trick them into doing work for free. (Wales)*

This might come as a surprise from the founder of Wikipedia, after all, the online encyclopedia wouldn't exist without people constantly contributing their work for free. But the essential difference is that as with open source software, the volunteer work done by the community creates a free resource for the commons. It becomes useful to even more not less people. In the case of most crowdsourcing projects, the participants have no direct use for their contributions and usually give away their intellectual property rights automatically, therefore the open process end with a closure. The final owner is someone outside of the community and the re-introduction of the term crowd as a substitute for the term community is already very telling in this regard. A crowd is other people.

The Reinvention of the Crowd

Until the end of the twentieth century the term crowd had a clear connotation. It was a disorganised, unruly gathering of people with a dynamic that could quickly turn a group of cheering spectators into a raging mob. This image of the crowd gained particular relevance during the Industrial Revolution when a steep rise in population combined with massive urbanisation led to overcrowded tenements, people densely packed under grim conditions, never far away from taking it to the streets. The term was also used its more abstract sense by Charles Mackay, who published *Extraordinary Popular Delusions and the Madness of Crowds* in 1841. The book was mainly a detailed description of historic hypes and speculative bubbles such as the tulipomania — cases in which groupthink and information cascades had caused whole populations to collectively (and metaphorically) run into the wrong direction. This crowd didn't have to be in one physical place. But the predominant meaning of the crowd was that of a group of people defined through proximity, acting as one and potentially dangerous to those in power. The crowds became a field of study and in 1895, Gustave Le Bon published *The Crowd: A Study of the Popular Mind*. Having studied the aftermath of the French Revolution, the sociologist was convinced that by joining a crowd, every human would degenerate and succumb his will to the brutish and animal-like hive mind. The sum of people would always be less then its parts — a crowd might occasionally do some heroic act, but it could never act in any intelligent, trustworthy or productive way. "Civilisations as yet have only been created and directed by a small intellectual aristocracy, never by crowds. Crowds are only powerful for destruction" (Le Bon 10). With

the spectre of democracy haunting Europe, the question for Le Bon was how to keep the crowd at bay and influence it in favour of those in power. Part of his study therefore reads like a manual for crowd manipulation. Stephen Reicher, a modern day expert on crowd psychology writes about Le Bon:

> *Certainly, Le Bon influenced a plethora of dictators and demagogues, most notoriously, Goebbels, Hitler and Mussolini. This influence was not in spite of but rather an expression of Le Bon's intentions. He repeatedly urged contemporary establishment figures to employ his principles in order to use the power of crowd for, rather than against, the state. His perspective matched the concerns of the age in their entirety: fear and fascination in equal measure; denigration of the collective intellect, harnessing of collective energy.*
> *[…] The majority of his crowd text is, in fact, essentially a primer on how to take advantage of the crowd mentality, how to manipulate crowds and how to recruit their enthusiasms to ones own ends (Reicher 5-6).*

Occupy Wall Street, the London Riots and the Arab Spring are recent examples, that the classic form of the crowd, the one that Le Bon studied and feared, still exists today, but since the turn of this century we have experienced a split in our image of the crowd. There are now two stereotypical crowds that almost look like a mirror images: the revolutionary and destructive crowd in the streets, fighting against oppression, and the docile crowd online, productively clicking in the hours. The challenge is not anymore how to suppress and manipulate its destructive power, but how to harness its collective intelligence.

The reinterpretation of the crowd was triggered by the journalist James Surowiecki who argued that "Gustave Le Bon had things exactly backward. If you put together a big enough and diverse enough group of people […], that groups decision will, over time, be 'intellectually (superior) to the isolated individual,' no matter how smart or well-informed he is." (Surowiecki, introduction). His book *The Wisdom of Crowds – How the Many are Smarter than the Few*, published in 2004, not only echoes the early days of crowd psychology in its title, it also turned its core beliefs upside down and let to a paradigm shift in the predominant image of the crowd. Even though Jeff Howe did not mention Surowiecki in the original article on crowdsourcing he later acknowledged, that the book was an important influence for the coinage of crowdsourcing. Surowiecki was able to show with an array of research from various fields, that under certain conditions, a crowd would indeed deliver better results than any expert. This alone was a significant revelation, but it could only unfold its full potential in combination the other discovery already describes above, that on the internet, people were willing to do complex tasks for free. Wikipedia and Linux had become the undeniable proves of concept for what would have been unimaginable in theory.

Core Methods of Crowdsourcing: Micro-tasking vs. Contests

Crowdsourcing is sometimes used by companies on their own website as a one-off marketing stunt to engage costumers with a brand, for example by letting them design a new, temporary label. It also serves as market research tool to find out about opportunities

for new products through involving the users. In its more elaborate form, crowdsourcing becomes a business in its own right. Specialised companies create online platforms, not unlike a beehive, to attract and accommodate permanent communities of workers and sell their produce. Their workforce is offered to external clients, and the platform owner makes a profit by taking a commission for all the work done by the hive. The methods for orchestrating the workforce of the hive vary greatly. Some owners put emphasis on the collaborative aspects inside the community and especially give incentives for cooperative behaviour, while others foster competition. Many platforms offer non-monetary gamification incentives, like virtual badges or credit points that give the contributors reputation in their community — others actually pay their workers. While the crowd is, by definition, not limited to a certain number, the money that is being paid out certainly is. Because everyone can participate it is practically not possible that everybody get paid in full. When money is involved, there are basically two different models. In the first model, the workers get micro-payment for repetitive micro-tasks, e.g. for categorising items or recognising something in an image a fraction of a cent is paid. In the second model, popular when the work is more complex and time consuming and can't easily be split in tiny units, it is organised in the form of contests. In this model, many competitors do the same job at the same time but only one person gets paid in the end.

CrowdFlower.com, the company now faced with the class action law suit, is a typical example for the micro-payment model. The most prominent is Amazon's Mechanical Turk, named after the historic chess robot that was actually operated by a human, hidden on the machine. Amazon describes its service also as 'artificial artificial intelligence'. Essentially they tackle the same sort of problems as Luis von Ahn with his human computation. One of the most baffling applications in this area is 'Soylent – a word processor with a crowd inside'. It is basically a plug in for MS Word which allows the user to assign parts of a text to the crowd of Mechanical Turkers for correction or shortening without even leaving the program (Bernstein). (The name, by the way, comes from the apocalyptic science fiction film Soylent Green (1973) and stands for a popular snack in that turns out to be made out of humans…)

The numbers vary from job to job and also depend a lot on their experience, but on average workers on micro-tasking platforms earn about $2 per hour, often less. This equals roughly the minimum wage of $2 in Beijing, and is a far cry from the US minimum wage of $7.25. The case Otey vs. CrowdFlower could therefore have a huge impact, depending how the judges decide. As Eric Mack of crowdsourcing.org points out, the case "challenges the assumption at the very foundation of crowdsourcing", that "cloud workers" are not employees, it could undo or cement the whole industry in the US (Mack). When looking at the numerous debates online among those being crowdsourced, it is surprising to see that even though the workers do feel exploited, they also often defend the platforms and are worried that a change in legislation could take this last straw of income away from them. It is already difficult to imagine how to live from this form of labour in a developing country, but people actually try to do just that in the wealthiest nations. To give just one example of this, on August 25, 2012, a Jacqueline Parks comments on the website ConcurringOpinions.com under an article that discusses whether universities should continue to conduct research with participants through Amazon's micro-task platform Mechanical Turk:

I am a Mechanical Turk worker. I am American, and our family has found ourselves in a hard place financially. I work at Turk for about 12 hours a day, and my average pay is $1.40 an hour. […] I keep working because we need money to be OK right now. I can't wait until some unknown future date when I might find a better job. Matter of fact, we are at risk for having our electricity shut off, and I need $179 fast and am hoping to have that total deposited in my account soon. […] I do feel like a sweat shop employee. I do not make minimum wage. I work really hard. […] I also feel somewhat trapped. I have to keep working at Turk to get the 16 or 17 dollars deposited into my bank account each day. This leaves me no time to find other money earning opportunities. I do not know if using Mechanical Turk for research or other crowd sourcing is ethical or not. I clearly see the dichotomy of not enough pay and yet not wanting this small amount of income to lessen or disappear. Just thinking about it is a source of anxiety. I would express my desire that the contractors at least remember that those doing work this way are very low paid but still people and to treat them with respect both with regards to writing tone and with regards to paying as high a rate as possible. (Cherry)

Let Them Design Logos

CrowdSpring.com, DesignCrowd.com, are typical examples for the use of contests to organise the workforce. More specifically, both platforms are so called 'logo mills', that are aimed at the crowdsourcing of graphic design. There is already more than a dozen of them and 99designs.com is probably the largest. The platform claims to be "the fasted growing design market-place in the world". It has more than 200,000 registered designers and it already conducted over 180,000 design contests. Even though the site boasts a lot of numbers, the pricing schemes of 99designs are complicated and deliberately opaque in regard to the commission the company takes. It is not directly visible, neither to designers nor clients, that the site actually takes a share of 40 to 45 percent. A client is for example paying $300 for a logo contest and gets on average 116 different finished designs for that money while only one designer gets paid for the work. From the initial $300 99designs takes $120 leaving the designers with a chance of 1 in 116 to eventually getting paid $180. That means the average renumeration comes down to about $1.50 per design, before taxes. There are higher paying contest for things more complex then a logo, but the average money paid out per design on 99designs is $2. Designing a logo usually takes significantly longer then an hour, which means that either, the logos on offer can only be highly derivative, of very low quality or the contributing designers work for even far less then their colleagues toiling away in the micro-payment sweatshops described above. It is, by the way, the external client that decides who wins and if anyone will get paid at all. 99designs offers a 1*00% money back guarantee* if the client doesn't like the results.

At first sight, there are some similarities with the notorious pitches in architecture. In the documentary Urbanized, Rem Koolhaas bemoans that problem:

There is an incredible amount of wasted effort in the profession. A fair amount of it is generated through

> *the procedure of competitions which is a complete drain of intelligence. I don't know of any other profession that would tolerate this. At the same time you are important, we invite your thinking, but we also announce that there is an eighty per cent chance that we will throw away your thinking and make sure that it is completely wasted (Hustwit, Urbanized min 51:50).*

Nevertheless, there are also huge differences between pitches in architecture and crowdsourcing in design. With crowdsourcing in design, it is not just a handful of selected studios competing for one job that will then be paid properly and is prestigious for the studio. Instead hundreds of designers actually complete the job simultaneously and beforehand. But Koolhaas has an important point here: the ethical problem lies not only in the low average wages but especially in the systemic waste of effort and creativity.

There are other crowdsourcing models, also in the design world, in which the contributors become shareholders of the products they help to create (Quirky.com) and others, in which the cash rewards in a contest are significantly higher and the community decides who will get them (Jovoto.com). In other words, there are possibilities to at least mitigate the hardship of crowdsourcing to some extent.

A system such as that of 99designs, however, in which the workers have to gamble for their remuneration, where they have a 1% chance to get paid for their labour while the organisers make a 40% revenue in 100% of the cases, can only be called exploitative and unethical, last but not least because of the way the true price calculation is hidden. There are initiatives such as No!Spec (no-spec.com) that try to prevent designers from participating in so called speculative work, but it is unlikely that these mode of production are going away. There is just too much profit to be made by the platform owners and too much desperation or naivety among those who participate. Even if Christopher Otey should win his case against CrowdFlower, a national class action lawsuit will not be enough against such a global phenomenon, especially if the crowd chooses to be exploited in that way, instead of revolting against it.

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EMOPORN

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Let the man go where he has never been
Feel what he has never felt
Think what he never thought
Be what he has never been
We need to provoke this movement and this crisis
Let's create astonishing objects.
Paul Nougé, René Magritte ou Les images défendues, 1996
As with all I do,
I remain a pretender, an impostor, a charlatan, a dissembler, a shyster, a deluder,
a pharisee, defrauder, fast talker, cheat, liar, prevaricator, simulator.
Barbara DeGenevieve, C'lick Me, 2007

BACK WHEN PORN WAS A PLANET. QUEER EPISTEMOLOGIES

"BWPWAP" presents a colorful range of epistemological questions. From one side my interest is to reflect about Pluto as the object of the research: a queer entity, a planet which does not fit a proper categorization. It creates questions, a strange space, a hiatus. This brings me directly to to the other side, to analyze and to discuss the solar system in which Pluto is contextualised and continuously shifted; therefore the platform signifying Pluto as the result of a scientific process. To analyse the relationship between subject, object and method, I start to wonder in terms of scientific discourse about how sure are we that Pluto wants to be defined. How sure are we that Pluto accepts the system in which it is continuously shifted as a planet or a star. Did we ever question Pluto's definition of the solar system? Did we ever question the method imposing Pluto a specific identity? And following, what is the meaning of objectivity in the scientific method? What influence is produced by emotions as enemies of scientific "objectivity" in the representation of the "other"? Could they be used within the scientific method to produce a excentric and multiplied vision? Through this meteorites rain of questions my body of work emerges, bringing the "Netporn Studies" field to the surface.

PORN FRONT. FROM GENDER OPPRESSION TO BODIES' REVOLT

Porn is so safe; everything is inscribed in a master plan. Like a drug designed to consume entertainment and to be back to work in time, pornography allows you to be at ease in the corner of your world. Through masturbatory micro-rituals, it reaffirms all Western societies values. Back when Pluto was a planet, pushed by the advent of digital technology, a lightning ripped through the grey sky of this boredom valley. In the historical period between the nineties and the two-thousands, pushed by the possibilities of digital communication, a new body front emerged as theoretical and activist battleground, deconstructing the dogmatic anti-sexwork positions of historical feminism and LGBT[1]-identities. "Porn Studies" came out as an open, multidisciplinary field, mixing Queer Theory, Gender Studies, Media Studies, Cinema History and Performance Art. One of the main goals stands in the use of pornography as text, in which to read and to deconstruct identity boundaries where either heteronormative or LGBT-gentrifying politics produce a flat market space. The application of D.I.Y.-ethics[2] to "Porn Studies" moved the thought to a political and

activist level through the practices of self-representation and cultural individualization. Like a stroboscope, this momentary flash is now subsumed back by the squashing processes of information economies, where Cool Hunters are unchained to chase, spot, de-symbolise and sell the tendency; Suicide Girls[3] become mega-brand testimonials like MTV and academy goes to war to conquer the velvet goldmines of the last intellectual markets. Using the words of the situationist philosopher Raul Vaneigem:

> *As the philosophy of crisis that does not perish becomes an economy of crisis, [the act of] surviving the crisis of culture becomes a culture of crisis. (Vaneigem 20)*

The meaning of this intervention is thus to appropriate and to enact this culture of crisis by producing knowledge fractures through politically incorrect narratives.

EMOPORN THOUGHT. FEAR AND JOY IN CLINICAL PERVERSIONS

Proceeding in order, I start with the definition of Barbara DeGenevieve's "Pornografic Sublime"-concept as the beginning of a socio-anthropological perspective of emotions[4] applied to pornography. Barbara DeGenevieve is a pioneer in netporn activism, an art historian and feminist, who had anti-porn positions until 1988; the year when she started to re-think pornography, arriving to produce her own. In her presentation "The hot bods of queer porn", performed at the conference "Arts and Politics of Netporn" in Amsterdam in 2005, one of the most impressive and effective definitions of pornography is found:

> *Porn is made to get people off. In order to do this, bodies must not only be highly sexualized, but objectified, fetishized, eroticized and made to accommodate very particular individual kinks. Political correctness has become an intellectual prison within which an extremely limited dialogue can take place, and in fact where monologues and diatribes are usually the discursive practice. Embracing the need to objectify and be objectified, to fetishize and be fetishized, to play the willing victim as well as the victimizer, opens up a mine field that will be difficult to traverse, but it is a more intellectually provocative and honest terrain from which to understand who we are as complex sexual beings. (DeGenevieve, "Ssspread.com. The Hot Bods of Queer Porn" 56)*

It's exactly this black-out between bodies and emotions, this absence of breath, this adrenaline of self-discovery as complex sexual beings that pushes DeGenevieve, apart from inscribing herself, to "write pornography". The emotional anthropology perspective[5] is clear in the point where Barbara DeGenevieve touches such visions as Clifford's "The predicament of culture: Twentieth-century ethnography, literature, and art" and Marcus' and Fisher's "Writing Cultures: the Poetics and the Politics of Ethnography". These texts represent the beginning of a critical anthropology which clarifies that culture as the object of anthropological analysis is not based on the "other", but on "ourselves as others"; hence the crisis of the representational authorial power in ethnographic writing as the tool of

knowledge-generation in the methodology and techniques of research. In 2001, www.ssspread.com[6] blossoms from this intellectual humus. It's a free website, where DeGenevieve publishes self-made porn videos. In this work, queer pornography traces a subtle line, distinguishing itself from heterosexual and gay/lesbian pornography. Bodies are battlegrounds; disobedient, wild, insubordinate, anarchic. No actor is a pro. Plots are made-up and performed in an immediatist way. Narratives are far from mainstream porn marketing rules. The most important accent is on the sexual arousal mechanisms and, specifically speaking, on how bodies identify themselves and communicate among each others via digital video technology, inside and outside the screen. DeGenevieve does not fit the perception of the "exciting" but the one of "uncanny", blasting a bomb on the construction of the self through the hydraulics of audience excitation in their objectifying inscriptions. The act of "in/scribing" unfastens the safety of the theoretician's seatbelt, hurling the subject into the experience crash. The black-box-rhetorics will be self-evident, showing you the "Whys". In such an epiphenomenal dialogic relationship between viewer, vision and seen, a crisis is produced. Here, a revelation of knowledge shines on through. DeGenevieve can be regarded as the first interpreter of the "emoporn"-thought, introducing and performing a theory of "indie porn" applied to the web. The closing part of her essay „The pornographic sublime" underlines the "crisis" as method by saying:

> *Sex is an activity not well integrated into everyday life. This then is a philosophical inquiry into an order of experience within the sexual realm that makes evident the precarious border that has separated art and pornography, art and non-art, the beautiful and the grotesque, intellectual contemplation and action, self and other. Pornography is the cultural temptation that moves us toward the verge of psychological dissolution [….] So here I am, trying to grasp the incomprehensible, trying to understand what makes me so interested in all of this, trying to decipher the distinctions we make between what's good and what's bad (whether it's art, writing, lecturing, performance, pornography, whatever). What I come up with is that there are no answers and it doesn't really matter because in the end, what it's all about is the challenge the questions present. That is the sublime – being in a constant state of disruption, having what and who I think I am provoked and disputed at every turn, because the answers will always change. Twenty years ago I knew what I thought and anyone who disagreed just wasn't reading the right theory. Today I question everything and prefer to put myself in situations in which the potential for either failure or censure is greatest (DeGenevieve, "The pornographic sublime" 13)*

NETPORN. RISE AND FALL OF THE DIGITAL UTOPIA

The styleful losing as sense of pragmatic provocation is well described by Katrien Jakobs and psychologically enacted by her male alter ego, Doctor Jakobs. New Media and Performance Art professor at the Chinese University of Hong Kong, Katrien Jakobs is a hyper-productive scholar grounding the "netporn study field". She co-produced such conferences as "The art and politics

of Netporn" (2005 Amsterdam), "C'lick Me: Netporn" (2007, Amsterdam)[7] and two texts entitled "Netporn, D.I.Y., webculture and sexual politics" and "C'Lick Me: A Netporn Studies Reader", collecting the two years of conference presentations. Jakobs defines herself as a woman, teacher, artist and curator, who looks at pornography from her own individualising, multiple perspective, aroused by a huge range of pornographic genres. Her definition of pornography is strongly influenced by digital communication technologies. She moves the perspective on a networking level, where nomadism in instant information access and technical reproduction creates a game of micro-identitarian recalls taken by a female vision. The accent is posed on net-performative pornographies, digitally mediated by chat platforms, in which the normalities of bodies clash with a porn market's gender stereotypes. Between this ruling dichotomy, a narrative of self-representation silently sprawls towards socio-sexual needs and desires in a dissolving porn palette. Starting from the daily human comedy of little computer people, Jacobs elaborates a concept of pornography divided in two bodies. The first is tied to a neo-medial construct, while the other accords to D.I.Y.-ethics. In the first case, she applies the Foucauldian concept of "heterotopia" to the definition of porn. This is intended as inter-zone, undefined entity, chaotic fronteer, zonal production acted through the dissolving act of cruising. In these residuals, the online porn consumption explores, performs – and gets trapped in – emotional experiences. Katrien Jakobs develops then D.I.Y.-dimensions by applying the concept of subculture and counterculture to the online sex cultures. She works with the acronym "AltPorn" which stands for alternative porn. This pun is based on the prefix "Alt", used in the early dawn of Internet to identify the "usenet"-discussion groups[8]. "AltPorn" is a category with a profoundly independent profile as it distributes its contents, developing alternative distribution channels through and beyond the mainstream corporative pornography. There is a parallel with Nick Hebdige's concepts of "subculture" and "counterculture". If the self-production of pornography becomes political in-vitro by producing languages, identities and rhizomes through the access to technology, its consciousness enlights the "countercultural" by producing digital bodies as a space for an information guerrilla. Joanna Angel's "Burning Angels" website has ignited the firestarting countercultural spark for the "Suicide Girls" stylistic element, using sexwork as a joyful weapon and complexifing "sex" to destroy "work" with a subversive and neo-feminist perspective. A screaming pornography is here again centuries far from dominant standards. Dropouts act in absurd sets, with impossible sound tracks, a surreal photography and intervening fragments of outsider images to decontextualise the plot. Or pornography for digital sex workers with Xerox Art aesthetics[9], where independent music, political statements, private blogs and porn are self-published by girls in a riot. This pornography deconstructs arousal identification mechanics of the average consumer looking for macho men and submissive women, acting on a sterile couch or bed in a sequence of masturbation, fellatio, cunnilingus, vaginal penetretion, sodomy, facial cumshot. As the NetPorn-society rises, oxymoronically speaking, the concept of authentic body is produced as the signifying playground for libertarian actions in a desymbolising process.

REAL TO THE CORE. FUCKING IN THE REALMS OF COR-PORN

If losing oneselves is erotic and finding each other is pornographic, betraying the rules is ecstatic. In the centre of this illuminati triangle stands the core of Sergio Messina's theory. Messina is not just one of the founders of the Italian political Hip Hop-scene, but a true pornologist. Throughout an immense photographic research, he was able to develop a omnicomprehensive and playful theory, focusing on how "amateur" productions have been transformed in "AltPorn" through the impact of digital and information technology in the "Yahoo Groups" period.[10] This fluctuating data experience has a very compact definition: "RealCore". Messina's signification of "RealCore" adopts an emotional socio-anthropological perspective[11], affirming that the basis of this concept unfolds on the resolution of the digital divide in terms of videotechnology and bandwidth as the infrastructure of image-based discussion groups. This gave the wider population the possibility and ability to self-produce online body narratives for the simple, joyful pleasure of doing it. In the "RealCore" imagery, you'll find the smile of the authentic body silently emerging between the moral pits of "SoftCore" and the repressive pendulum of "HardCore". "RealCore" is the wet flesh of a daily moment, where you sometimes shine, this uncontrolled fragment of passion that you just have to witness: to watch yourself in 16 million colours and to excite yourself by seeing what is the impact, what communicational process it unleashes in specific online-communities. It sets off a slide show of bold clerks and fat housewives, playing with each other's representations as much as some teenage guy publishing his first masturbations. But there's more. On "RealCore's" paradigmatic horizon, the concept of "body" expands its boundaries towards the concept of "location". "RealCore" subjects mostly, enact their representations inside private, intimate spaces. You develop a "RealCore" eye when your excitation is stimulated not just by the fact that bodies are "daily", i.e. different from corporative porn stereotypes, but by the fact that you see rotten furniture, Christmas trees, the pictures of parents or children on the table, strollers and baby bottles, clothes, books, records and DVDs, a dirty kitchen. It's the background revenge making the deal. The "RealCore" body is a porn ecology where subjects enact as holographic synthesis. Undressing the private body in a public act becomes the joyful autopsy of dead corporative porn. The politicisation happens when the viewer becomes conscious of his or her own morbid eye. Conscious of the fact that it's exactly the little violence of invasion, outraging the sense of the private that puts the excitation on fire.

FAKE IS THE BEST-SELLING TRUTH. EMOPORN RISING

The "RealCore" concept defines the codes of the "authentic body", providing the basis of countercultural indie-porn production. Now, what happens if one claims that authenticity does not exist as a ontological value, but as a product? What, if one claims that the category of "authentic" becomes such, just according to its productive processes? "Authenticity" falls when Walter Benjamin declares the death of art through reproduction technologies. Its power dies with the death of the author. Authenticity is fake. And this is emphasized in the second

NetPorn-conference, “C’lick me. Net Porn”. If the previous conference was focused on porn as a strategy to resist sexist assimilation and subvert misogynist and identitarian narratives of subjugation, the new questions were: Is indie porn becoming a new market niche and what are the possible strategies to produce new pornographies of liberation? Two positions clarified the dialectic. Audacia Rey, writer, film director and executive editor of the “Spread“-magazine represents the first pillar. In her paper ”I am Woman, see me Nude: The Rise of Independent Women in Online Porn” she affirms that women’s independency through pornography has to be valuable on a economic profit level. According to that, models have to be hyper-exposed to become popular, to be porn stars. It seems that in Rey’s vision, the extreme commercialization of such websites as “Suicide Girls“ is the path to freedom as self-affirmation in gender politics. The accent is put here on “professionalism” and “market” from a feminist perspective as warranty of political correctness. “Work“ is the condition of the emancipation of women. Florian Cramer, Media Design professor at the Kooning Academy represents the second pillar, producing a conscious analysis of the indieporn gentrifying process through the sedimentation of subversive identities as niche-market simulacra. In his work “Indieporn: Loss of obscenity and imagination”, he defines the concept of a pornographic “obscene” related to a previous work in another essay entitled ”Sodom blogging. Alternative porn and aesthetic sensibility” commissioned by the German art magazine “Texte zur Kunst”. He affirms that there are two historical intersecting processes applying the “obscene” as fetish. The first is the “obscene” used by empowering movements through pornography, while the second is depowering them by sell-out. Exemples of the first are the cross-fading operations between biker and gay leather S/M cultures, satanism and fascist iconography in Kenneth Anger’s filmography or in COUM Transmission performances, or again, in Lydia Lunch’s and Kern’s “Cinema of Transgression“, or still, in Buttgereit’s filmography. On the other side, we can see McLaren’s and Westwood’s punk desemantisation dressed up as easy situationism with their boutique “SEX”, re-signifying fetish and porn as fashion design accessory. After this contextualisation, Kramer arrives at today’s proclamations of an alternative pornographic culture by denouncing the dogmatic positions in need of taboo avoidance through politically correct narratives. Indieporn is a game without consequences, where power is not faced, but rationalised and repressed. An operation of replacement is done. The artificial mainstream pornographic rhetoric is replaced by the rhetoric of the authentic. A new standard follows a old standard, but are the fair values of a “good porn“ questioning “bad porn” and advancing the emancipation of minorities and oppressed groups or is it just a neo-porn-liberal master plan taking form? Authentic porn becomes a niche-market of online pornography, reproducing micro-identifying niches functional to the new viral marketing strategies, pushing porntainment in Web 2.0-social networks. “User generated content” utopia becomes mere window dressing to organize the best-selling porn contents. An explicit example is www.xtube.com.[12] This huge online database is a porn shop in social network’s clothing. The networking structure is comparable to a social network, with profiles, friendships and the possibility to upload porn contents in video and photo format. But to find “RealCore” contents is quite difficult, because every tag or searching key brings you back to the “X-Tube” porn productions. Every micro-niche generates commodified contents enhanced by the exponential growth of the network. No other promotional system is required as it is the same user becoming a

"door-to-door-salesperson" by producing relationships inside the social network frame. The authenticity reconstruction is legitimatised by the self-published contents that proffers a "RealCore" aura as a selling strategy. The avatar becomes the guardian of authenticity as selling unit; a strategically marketed re-humanisation. "Xtube" assumingly tells us not to waste our money anymore on glittering porn where plastic stars produce frustrated expectations. It's better to reflect ourselves in its mirrors, where our need of identification puts us at ease, touching the base of our daily life porn democracy; a simple world made of fat housewives and micropenises in citizenships granted by the "user generated content". Circuses, carnivals and freak shows had distorted mirrors that exposed the image of one's self to the multiple grotesque of impossible genetics. Fear and fun were one, proposing the radical experience of alterity. The funfair market was a building process of different communities in loving menace. The concept of "exotism" was a queer weapon in a desymbolising process; from Coney Island to John Waters. Now monsters are well systematised in "RealCore" dungeons of the information economy, where experience is consumed online with a false idea of free access to information. And you gotta be fast if you want to cum for free, as the proposal is synthesized in a fifteen seconds teaser of paying films. The macroemersion of the "Tube"-model as "video network of networks" promotes teasers of maistream porn websites in a continuous platform eco. Gender stereotypes came back in a tag system, bringing you to the membership dead end. Solitude is the key. Consuming it with a PayPal-system is so historically post-modern. The compulsive research and consumption of online-sex based on the inability to perform our own "impossibility" is the porn digital platforms profits engine and in the same time a self-feeding viral marketing. The online porn production becomes cause and effect, pathology and remedy, authenticity and reproduction in the same time. To penetrate inside this mechanism and enucleate its destructive sides, the "Emoporn" concept can be a way to perform what DeGenevieve defined as "Pornographic sublime" intended here as the conscious pleasure to lose control and make an interpretative model out of it. So the pornography of emotions is proposed in this frame as a white noise disturbance meta-language; the naked exposure of emotions producing the impossibility of a safe identification in the masturbative process. To shape the concept more, I rethink the theoretical horizons of George Devereux in the field of epistemology as a pioneering work to use emotions as methodology in human sciences. French ethnopsychiatrist of the mid-twentieth century, George Devereux wrote a seminal text entitled "De l'angoisse à la méthode dans le sciences du comportement" in which he carried an extreme epistemological thought. Such a theory puts into a crisis the power construction of scientific roles which defines a field of study. This happens by epistemologically deconstructing the objectification processes institutionalizing the vertical position between the "subject-scientist" and the "object of study"; hierarchy which certifies the subject's auratic power to represent the object. Method-as-distance is the safe space between the first and the second. Any other approach is non-scientific has it menaces, more then scientific knowledge, the scientist status quo. Proximity is dangerous to the acquired power of the subject. For this purpose all the intervening variables have to be erased. Devereux subverts the perspective and gives methodological dignity to these variables, using them as a out-of-focus lens, not just to understand the "object" in a more complex way by giving him the status of "subject", but by complexifying and criticising

the position of the subject as scientist. This is why a methodology of closeness has to be created in a dialogic scientific relationship with the objectification processes. The accent is posed on disgust, fear and desire of aggression that the scientist sublimates. With this interlude I reframe “Emoporn” as a concept that does not want to be a post-modern thought and it does not pretend to resolve the power relationships around the institutionalization processes through masturbation. “Emoporn” wants to open them by subverting, inverting and perverting. “Emoporn” wants to be a provoking and seductive thought; a thought of conflict and flirt, a thought of kiss and fist, A deeply impossible thought revealing how semantic mechanisms enact to produce a certain reality proposed as universal. So this is an invitation to enjoy the representation of your own fears as the compulsive desire of an assassin to mentally repeat his and her murder until the discovery of his and her own pleasures.

Falling. Floating. Flying.
The dissolvence between being and becoming
in the space of compulsion.
How do you control your life
through the research of desire.
And how does your life control you
through compulsive behaviours.
And if repetition is a form of change,
can you unchain your obsessions
towards an emotional crash
where assassin and victim are always one
in the crime scene.
A suspended garden of evil flowers,
obsessive thoughts,
sirens seducing your senses,
poisoning your mind,
abusing your organs,
dropping you out.
Where you can find yourself in a near death apnea,
remembering futures
in your own
mute
film.

Notes

[1] Lesbian, Gay, Bisexual, Transexual.

[2] abbr.: Do It Yourself

[3] Porn platform based on subcultural aesthetics.

[4] An emotional anthropological perspective conceives the implication of emotions as intervening variables in the making of social sciences.

[5] See footnote 4.

[6] The website has ceased to operate.

[7] “The art and politics of NetPorn” (2005 Amsterdam), “C’lick Me: NetPorn” (2007, Amsterdam). Conferences organized by Katrien Jacobs, Matteo Pasquinelli and Marie Jansen, which grounded the field of “NetPorn Studies”.

[8] Thematized online forums.

[9] Artistic language based on the photocopy aesthetics.

[10] Discussion groups provided by Yahoo in the beginning of the 1990’s
[
11] Emotional sociological anthropology is here intended as the implication of emotions as intervening variable in the making of social sciences methodology.

[12] http://www.xtube.com last retrieved 20th October 2012.

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MUSIC AND BODY AS RITUAL-PERFORMANCE

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In this paper I want to connect different kinds of knowledge: some ideas of the philosopher Gilles Deleuze, phenomenology, interactive technology, performance, music and ritual. The central idea is the concept of difference as a generative tool of thinking, doing, performing and understanding technology. This is realized through a constant exchange, a movement between these different activities: this communication is the practice of generating difference.

Connector of this idea of movement is the concept of body, considered in his variety of meanings: a physical body, flesh, an object or a concept – important is to be open to interaction. The resulting exchange can be deeply understood just with practice: for this reason this written work has to be accompanied and intertwined by a practical work and a first-person approach research. The process of learning something becomes then one opportunity to show the importance of practice and the role of the body as a decoder of technology: the moments of instability while we learn a new technology are actually the opportunity to feel the technology.

To better analyse this experience I will use a phenomenological approach to decode interactive systems in real cases and use them in my research. This exercise of closeness is realized in the act and the process of performing: there it is to find an opportunity to create this connection – the technology comes then closer to the body too, for examples with sensors attached to our skin. As a practical example I will briefly tell about my experience with the team of MotionComposer.

Interactive technology shows also the connection of body and music, something that is actually not new at all but exists since ever.

1 Gilles Deleuze, becoming performance

The act of thinking is for Gilles Deleuze a dynamic action that can be better described through movement rather than a static image of an idea. This philosophical breakdown is summarized by the word difference, understood as a generative and independent concept that makes itself. The theory of difference supports movement in the process of though and has his roots in theater and dance; for this reason I consider it a good tool for creating performance arts too – thought becomes performance.

1.1 A philosophy in movement

An idea is for Deleuze not a static image, but a generative tool, that supports the activity of thinking. So he wishes a new philosophy:

> *Philosophy is no longer synthetic judgment; it is like a thought synthesizer functioning to make thought travel, make it mobile, make it a force of the Cosmos. (Deleuze and Guattari 343)*

The definition of synthetic judgment includes a connection to other philosophers like Kant (Judgment), Hegel (synthetic) and more in general the whole philosophy from Aristotle until Hegel: the classical philosophy, that distinguishes the west culture.

Deleuze defines it the philosophy of Representation and Identity and provides as an alternative a Philosophy of Difference and Repetition. These ideas cannot be described in a static definition: they are concepts that have to be understood in movement. Therefore they can be combined with the

subject performance: theory and practice can influence each other. This movement of thought influences also the idea of movement in music, in dance and in technology – becoming rather than being.

1.2 Difference and Repetition

The work of Deleuze Difference and Repetition is a critic of the concept of representation, i.e. a history of representation in the western philosophy. He describes how the idea of representation limits our possibilities of thinking and doing. Since Aristotle difference and repetition are subordinated to the concepts of identity and representation. Difference should be thought in itself, independently from the philosophy of representation.

> *In the concept of reflection, mediating and mediated difference is in effect fully subject to the identity of the concept, the opposition of predicates, the analogy of judgement and the resemblance of perception. (Deleuze 34)*

These four characteristics of representation are the effects of difference, because they are produced by itself.

> *Opposition, resemblance, identity and even analogy are only effects produced by these presentations of difference, rather than being conditions which subordinate difference and make it something represented . (Deleuze 145)*

In the world of representation, difference is understood as the difference between objects. Thereby the identity of objects is taken for granted.

Deleuze thinks that difference has to make and explain itself and does not have to refer to something else: so it has to get free from the four properties of representation. Aristotle, Leibniz and Hegel are criticized for the same reason: the understanding of difference is limited because it has been adapted to the context of representation. For Deleuze, difference is an independent and positive concept of thinking and doing: this will be the starting point of my work.

1.3 Body of Learning

A body is for Deleuze a milieu of pure intensity (Deleuze and Guattari 185), an open grouping that is in continuous movement and exchange. The body can be a physical body, an object oder a concept:

> *Body for Deleuze is defined as any whole composed of parts, where these parts stand in some definite relation to one another, and has a capacity for being affected by other bodies. (Parr 44)*

This definition is very wide and can be better understood through the practice of learning. (Deleuze 46) Anna Cutler and Iain MacKenzie extend this example in order to better show the importance of this concept.

When someone wants to learn to swim, has to engage him/herself in a process, i.e. between his/her body and the body of water. For Deleuze every body has a peculiar aspect:

> *Each body has a universal aspect to the extent that it is constituted by a system of differential relations such that we can talk of how a human body embodies these relations as opposed to the manner in which these relations*

> *as opposed to the manner in which relations are embodied within a body of water. […] None the less, every body is composed of particular variations within the system of relations that constitute the objective idea. To learn to swim is to bring the singularities of one's own body into contact with particular depths, waves and eddies of the body of water that one enters. (Cutler and MacKenzie 53)*

A third body acts in this exchange: the body of knowledge, in this case embodied by the body of the teacher. Deleuze understands the act of learning as an active practice: the knowledge is not a goal to reach or something that we receive in a one way direction, but a process, a creation of new relationships within our biologic body, that influences the interaction with the body of water.

> *The place of learning will only be 'found' if we go in search of the nonobjectifiable brain by creating new relationships between the three bodies involved in the learning process: organic bodies, physical bodies and bodies of knowledge. (Cutler and MacKenzie 59)*

The relationship between body and mind has been already discussed by Merleau-Ponty, considering the body as the source of thinking. Although this theory is very important and revolutionary, the body of knowledge remains uninvolved in the process of learning. These three bodies have to interact while avoiding that one of them is privileged. Cutler and MacKenzie take advantage of the theory of the neuroscientists O'Shea and Singer to find a possible explanation: the brain is understood as an extended corporeal system, that interacts with its ambience.

> *In proposing the differentiated nature of each 'brain' that communicates with others, Singer is arguing that any knowledge of ourselves is conditioned by the prior emergence of differentiated brains that have the capacity of communicating with each other. (Cutler and MacKenzie 65)*

What Singer calls communication, is for us the process of learning: the three bodies learn while they exchange their differences. As this interaction is a continuous exchange, the emerging knowledge is not a state to reach but is something produced by the process of learning.

2 Technology of movement, perception and ritual

The concepts in movement of Gilles Deleuze are going to be used together with a few interactive technologies that allow the human movement to generate or influence music. A phenomenological approach will also be very useful in order to analyse the technological extension of the human body and put it in relation with the ritual.

2.1 Phenomenology: body as a unstable source of knowledge

Phenomenology is the philosophical study of the structures of subjective experience and consciousness. In my work, phenomenology is a very useful way of understanding what technology offers: often a great way to expand human perception, though lacks sometimes of an easy way to access to this information. The phenomenological approach can render

some complex concepts easier and some events more readable: the body can be understood at this level as a source of intelligence. Another advantage of phenomenology is that gives voice to deeper perception and personal experience, that otherwise would be not involved in this process or just seen as not or less relevant.

Instability, a typical quality of the body, is the starting point of this process because just in this way we can appreciate the limits and the possibility of technology in its very use. The corporeal level becomes then very central because it is the opportunity for a transformation of how we use and understand technology. Susan Kozel appreciates this unstable quality, this formlessness that Merleau-Ponty already investigated:

> *This describes digital media, particularly imagery and sound, which often follow a dissolution and a redevelopment of form when they are rendered interactive. Since they exist in a constant state of transgression and restoration of shape, they cannot hold onto a fixed notion of form, or to a fixed point in space. The same is true of the body when it is represented in media, but also when it exists in entirely physical space: bodily shape gives way to bodily shape in our lives, and despite our materiality, physical states are fleeting and unsustainable. The human body simultaneously belongs to us and escapes us to the point that it becomes an ever-shifting thing at the same time as it is one's body.(Kozel 47)*

This implies a connection of philosophy and body work, that smooth down the boundaries between technology and body: a way to integrate two apparently separated concepts like mind and body, to give value to subjective experience but at the same time consider the cultural and social role of the body.

2.2 Rituality

The drifting away from a unitary religious common context that is symbolic of the 20th Century's new approach to art is epitomised in Nietzsche's well known statement God is dead. Yet only God is dead; spirituality is not and contemporary art thrives in this Godless void – taking on the task of a new form of spiritualism. Susan Sontag proclaims

> *Though no longer a confession, art is more than ever a deliverance, an exercise in asceticism. (Sontag)*

The practice of performance during the Avant Garde period at the beginning of the 20th Century and then later in the 60s and 70s became more and more ritualized (Jappe). Artists such as Marina Abramovic˘ and Joseph Beuys played with the re-use of traditional symbology; taking inspiration from old social rites they juxtaposed these against the context of the modern society. Furthermore the influence of both oriental philosophy and religion helped contemporary art developing ways of communicating through not saying – this is exemplified in works such as John Cage's 4'33".

The connection between rituals and performances have been studied by humanists such as Richard Schechner who analysed traditional ceremonies in order to find new ways of expression for the theatre. Conversely anthropologists have analysed ceremonies and rituals as though they were performance: the book The Performance of Healing edited by Carol Laderman and Marina Roseman clearly shows this connection, presenting different kind of healing

ceremonies and evaluating their performative potential.

Being body perception a basic element of every ritual, I want to connect and discover the augmented knowledge given by technology in a ritual context. The rituality of interactive technology resides in the understanding this expanded body, this cyborg (Haraway): getting closer (Kozel) to our flesh, body and also technology. This can be done taking advantage of the theories that I described in the previous chapters together with a practical situation.

2.3 Technology: Motion Capture, Xth Sense, Electromyography

Motion Capture is the process of recording the movement of objects or people. I have used this technology with the software Eyecon that allows a great spectrum of possibility of interaction. One can creates fields of different sizes and different kind of sounds that for a dancer/performer can be a limit or an extension, reshaping their bodies in order to perform and create music.

Another kind of Motion Capture technology, that has been lately quite famous is the Kinect camera. Kinect is the hardware of the Gameconsole Xbox 360 that allows to use the body as a control interface. The peculiarity of this camera is the possibility to track objects and humans in three dimensions and to recognize human shapes.

Both systems have been in used in my work ”A Performance without Organs”. The ideas of Deleuze already influenced this work, using difference as a generative tool for movement, music and technology. Though the focus of that performance was about the Body without Organs, used as a practice of interaction of different kinds of arts.

In the current case I want to concentrate on the concept of difference and how it can be realized in practice, how difference can explain and generate itself and how to show this process. Difference wants to become the recurring pattern of this work.

In order to do that it is essential to use a phenomenological methodology, that can take into account direct experience and deep perception. The broad and cryptic concept of flesh of Merleau-Ponty will be then central, offering the needed connection with technology:

Flesh is my body, is others' bodies, and is the space between bodies; it comprises things, organic and nonorganic. (Kozel 34)

For this reason I consider important to use also different technology that allows a deeper relationship with the body, creating a more direct connection with flesh – a closer (Kozel) relationship of human beings and technology. Two sensors will be particularly relevant in this context:

- *Xth Sense a biophysical interactive that can record the sound of muscles and use them as a source of interaction*
- *Electromyography (EMG), that involves the study of the electrical signals associated with the activation of muscle.*

2.4 The example of Motioncomposer

Since one year I am collaborating with MotionComposer, a project that aims to turn movement into music using the technology of motion-tracking for people with disabilities. The creators of MotionComposer are the dancer and choreographer Robert Wechsler and the general manager Josepha Dietz.

Robert has been working with interactive technologies since more than 20 years. I am a musician and programmer for the company.

In November 2011 I prepared some music for an interactive installation of the festival Cynetart in Dresden. The team of MotionComposer was also there, doing a workshop with people with different disabilities. So I had the possibility to get in touch with them and I was fascinated by their work: people who could never do music in their life were now able to interact with this art, the smile on their faces was very touching. After the workshop I got to know Robert Wechsler and Josepha Dietz, hoping for a future collaboration. For me was interesting to work with the co-creator of Eyecon, Robert Wechsler and understand the motion tracking technology from a very practical point of view. I also liked the idea of using this technology not just for performances, but also for more tangible purposes.

What I find very interesting of this project is that the approach to interaction is very intuitive. Usually a musical instrument is shaped on the capabilities of a normal person. Motioncomposer turns the tide and rewrites this pattern radically: every body is able to make music and to make it special thanks to her individual valuable features. Instead of using specific gestures – that are usually based on some corporal requirements – to control the music, Robert has preferred an intuitive way of using the movement as a sound experience.

On one hand it can sound a bit outdated: nowadays technology can offer low-cost but quite precise gesture recognition. The explanation is that the body does not work as the mind: movement involves shifting of weight, rotation, making big or little movement, basically feeling and experiencing the body; the goal is not to find a formal language between body and music. What really matters is to find a way to connect the feeling of the body moving, together with the act of hearing music. This way of understanding interaction fits very well with Susan Kozel's theory of closeness: we have to learn to feel the closeness of our body and technology, in our case passing also through music.

The disability becomes then an opportunity and not a limitation. It opens space for a different understanding of the body: both the physical body but also the body that is created through the interaction. This allow a synesthetic experience that extends the boundaries of our movements into the space that we live and enrich the understanding ourselves. This is something that we have to learn, using the body as a source of intuitive knowledge: this is what the Body of Learning explained in Paragraph 1.3 means.

2.5 The Body-Music connection: back to the ritual

The connection that is created by body movement and music allows a new experience, both for the performer and the spectator. On the other hand dance and music have been always present in every cultures and often understood as one thing: some languages have even just one word for both activities.

The closeness of this two practices makes clear how technology deserves also a new understanding, based on feeling and not just on intellect. My aim is then to create a special, ritual connection between body, technology and the process of learning: a way to create difference, to feel and not just to understand.

My work aims to show the importance of this relationship and find new way to feel the body, technology and music. That means also a reciprocal learning that develops every ability without focusing on just one practice but interacting with the relative knowledge. This process of learning is a movement of

the thought, a practice of the body that the mind can learn.

Does interactive technology bring us back to our body-mind connection?

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ABSURD CONGRUENCIES

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Facing some facts

Bruce Springsteen was invited by the mayor of Naples to inaugurate a significant movie theatre in the city. So it was published in local newspapers as, for instance, Napoli Reppublica. Some citizens of Naples thought the idea rather absurd and complained frustratedly, feeling impotent with the fact. Is it Mr. Springsteen's fault? Is the mayor's choice untactful? How responsible is the movie theatre for that choice? Is it really happening in Naples?

Mleeta is a war theme amusement park. Run by the Hezbollah, it is both a touristic leisure option for local families and a questionable event for non-locals. Mleeta is understood as a normalized atraction in Lebanon. A sightseeing spot for war. Scary, right? How amazing is a park in which one might rebuild local identities and culture! Mleeta is located in South Lebanon. Mleeta is located alongside the Israel/Palestine conflict. Mleeta is 09/11, it is Osama Bin Laden's and Saddam Hussein's death and murder. Is Mleeta about amusement? Is Mleeta about war? Can war and amusement be related? Well, we know they can. We have seen it in games, on the news, and authors have extensively analyzed this connection. However, it had never been as explicit as in this theme park.

Then, we are introduced to INRI Cristo, a Jesus Christ aspirant, who re-elaborates musical video clips. His crew remakes Britney Spears, Rihanna and Amy Winehouse – to mention just a few divas. Is he delusional? YouTube has been a potent platform for designing glocal identities. But, how do all these Anglophone female pop singers end up in his remakes?

What do the three facts above have to do with one another? Well, they are and are not bizarre. They emerge as events of digital cultures (Badiou). Made with, coming from, as well as being glocal biopolitical tensions and communication, they become communication themselves and reveal new values and contemporary traces – the very same that shape them as mediabodies, i.e., each and every one of those events manifests a trans glocal matter.

Reverberating on crossed dimensions, in the Mediabody Theory the concept of "body" is a system of constant dialogues with environments in which human bodies take a part, but are not the central agents anymore (KATZ&GREINER, 2006). The absurd congruences above are mediabodies of an ongoing flux of changes.

Emerging communicational processes

The facts described above are communicational events and still have not been completely identified neither properly approached. They are phenomena of microtensions, coming from macrotensions. They are expressed in varied formats (people, ads, billboards, flyers, dresscodes, networks) as contamination spreads out and proliferates into several unequitable ways, which regulate the production of absurd congruencies. These sparkling and infiltranting ways of crossed contamination, a trans way, scratch bodies regulating the modus operandi and later camouflage into normality.

They are constituted more of contemporary political and cultural cognitive tensions and constructions than necessarily (and properly) their form-content specificity. They are both symptom and system.

It really does not matter if it manifests itself in fashion, architecture, performance, advertising, musical video-clips etc. because in the absurd congruence the media is no

longer the most important parameter, but rather the way through which mediation has been passing (a system): "to the extent that the announcement does not refer to a text but to a vivid language event (…), its territory would never match a defined level of linguistic analysis (…) nevertheless it constitutes much more a function" (AGAMBEN, 2008: 141). Furthermore, once mediation has become its own subject (a symptom) and is a kind of mediation phenomena, then, in theory, to approach the absurd congruence – one has to switch "from media to mediation" (Martin-Barbero).

No "starting point". No development. No end. No distinct "object". No distinct "subject-object" (a system and a symptom). The absurd congruence, as mediation, as a mediabody of transcommunicational processes, carries traces of contemporary capitalism: it is a system-symptom. Thus, the absurd congruence emerges as contemporary glocal sensitivities while becoming a mediabody of ongoing glocal geopolitics. "… the glocal represents the way in which capital (…) falls promptly in each dome, in every workplace, in every locus private or public, so all transformed into functional support of an image-circularity informational absolute billionaire and ad infinitum." (Trivinho, A dromocracia cibercultural 261).

Communication phenomena have been permeating contemporary new desires and sects while glocality elevates its more relevant cultural and communicational events: "The category of glocal sheds light on an infinite series of phenomena, events, practices, processes and current trends" (Trivinho, A dromocracia cibercultural 324). If "real time is a time-that-fades well done caricature", the glocal mediabody is a self-rebuilt-symbolic-space-time sort of caricature. It is an imbrication of contrasting processes; obliteration; changing and preservation (Trivinho, A dromocracia cibercultural). Their expressions seem to be made from a mix of apparently distinct elements. However, those elements cannot really be considered distinct because the equality and distinction parameter depends on a very specific epistemology that does not fulfill contemporary realities anymore. They would be incongruent within their environment only if origin and land could be named, only if they were analog and societarian, only if one sole epistemology existed. But, instead they are bodies emerging from the digital culture of heterocontamination, i.e., communication embracing analogical traditions, costumes and habits. Their realm turns out to be concomitant consequences or incidental phenomena, so to speak. On treating the absurd congruencies, these supposedly lateral events manifest themlseves in different formats, in a tangential way as a part of contemporary analog-digital glocal realities, whereas in glocal displacement signs have multiple, complex and upside-down literacy, as well as starting points other than its own, that is, mutable multiple starting points.

The absurd congruencies, as events, are metropolitan choreographies with their own aesthetic context, sometimes with costumes, performers, location, script, scenario, technique, time-space and language. Their authorship is no longer precise, and although it could be guessed, no one is specifically implied.

Let us now consider digital cultures taking Native, an organic food brand, as example. Its cookies are wrapped twice: they come in a big "Amazonian" green package (one) that contains three small aluminum bags (two). Could they ever be sustainable? It is a native, who comes from a factory, from a nutritionist's recipebook, from officially "eco-certified" and environmentally conscious institutions, from designers and advertising campaigns. Where could it be native from? The only possible "native" today is the communicational mediabody.

Glocalism draws both from origin as well as from the global mediatic traces. Thus, on one hand, its signs refer to belonging. They reaffirm a clearly known, fixed identity: the will to reproduce a hint of "authenticity", things, values and references that claim to be culturally incorrupted, as if the reproduction of signs could ever maintain their specific constitution intact. On the desire level at least, belonging ensures a comfortable belief in a stable geographic territoriality: "roots" (rooted ones). Nevertheless, a genuine "non-alien-self" is rebuilt. On the other hand, the absurd congruence is a complete reinvention and, by being so, is part of a "global community", not the analog, but the analog-digital one. This community transits among several displacements (loss and fear) while neocapitalism forces and imposes fluxes, transits, and multiple "métisse" selves. Thus, the identified phenomena could only be considered incongruent through a dichotomic epistemology and by being viewed as "glocal is obliteration" (Trivinho, A dromocracia cibercultural 273). It runs through, pierces and surpasses fetishistic complexities, facing rising communicational processes and becoming a new kind of "native" – no longer from an analogic composition. Thus, the mediabody of the analog-digital results from contemporary dynamics and communication.

Beyond any precise form of boundary, guide or landmark (no land and no mark), nothing else can distinguish itself because we are talking about samples of both complex interconnected realities except for the immaterial parameters of the absurd congruence of contemporary capitalism. Fathoming these samples of apparent incongruity can be a key to understand post-dichotomic cultures.

Analog-digital mediabodies as glocal communicational metropolis

Coming from the Mediabody Theory (KATZ & GREINER, 2006), the absurd congruence is a mediabody, i.e., a system. In this theory, each and every body is a collection of information in constant codependent dialogue with the environment, being both process and state:

The body is not a means by which information simply passes. Any new information enters into negotiation with those already there. The body is the result of these crossings and not a place where information is just housed. It is with this notion of the itself media that the Mediabody Theory deals, not with the idea of media designed as a vehicle of transmission. The media to which the Mediabody Theory refers relates to the evolutionary process of selecting information that will constitute the body. The information is transmitted in the process of contamination (Katz and Greiner, "Por uma teoria do corpomídia" 131).

Things are not centered in the body, but are latent in a mediabody which is porous, symptomatic, circumstantial. In this sense, it is something of an amorphous mediabody. It is latency and organization of all kinds of movable materials. Because there is no central body acting, all objects have that function. What exists is a body in the gerund because of the continuous flow of processing.

As an "itself media", the mediabody announces the environment-body in a flux of permanent porosities and all-vectorial mutations:

Some information of the world is selected to be organized in the form of the body – a process always conditioned by the understanding that the body is not a

container, but what it is turning into at this co-evolutionary process of exchanges with the environment. And since the flow does not stagnate, the body lives in the state of an ever present, which prevents the notion of the body as a container. The body is not a place where the information coming from the world is processed for later returned to the world (Katz and Greiner, "Por uma teoria do corpomídia" 64).

The absurd congruence is post-dichotomy geopolitics. It is a trans matter analog-digital mediabody in a constant dialogue with what digital cultures have been producing and training as perceptual behavior of things, bodies, congruencies. It is a communicational metropolis (Canevacci, Una stupita fatticitá) in an imbrication of contrasting processes; running through dimensions of glocal sensitivities. The absurd congruence is mainly tension coming from and living throughout the triad communication-culture-consumption:

The difference between the city and the modern industrial metropolis is increasingly characterized by the diffusion of the triptych communication-culture-consumption. Communication is increasingly determining the configuration and features of this kind of metropolis in which the concept of historical society loses strength with changes, innovations, conflicts and tensions. This metropolis is beyond any industrial dualism (Canevacci, *Una stupita fatticitá* 120).

When we observe Canevacci's concept of the communicational metropolis, we can immediately relate it to the mediabody theory, as location and bodyscape are both its mediabodies, mediabodying as and through the flux, signs, tensions, vectors, escapes…

Location: place-space, zone, interstices (Canevacci, *Una stupita fatticitá* 32).

Bodyscape is the panoramic body that floats between the interstices of the communicational metropolis. The suffix "scape" joins "body" in order to accentuate the floating concept of the body, which extends the itself and others observation – while being dense fetishistic codes' visual panorama (Canevacci, Una stupita fatticitá 30).

The absurd congruence is glocalization, and more than the body of a time and space dissolution, it is a remix of cognitive tensions, loitering on the intermediations of contemporary capitalism. These intermediations infiltrate the private or public locus, moving across land and territory (analog and dialectic), as well as floating and combusting the non-cartographic flux of the communicational metropolis, and finally establishing itself as communication. Pulsing this glocal multividuality (Canevacci, Una stupita fatticitá) at the analog-digital, this phenomena is both extension and expansion.

Identifying an absurd congruence:

- *It is a communicational event that is somehow both a cognitive combination and a consequence;*
- *It is visibly glocal, analog and digital, industrial and post-industrial;*
- *It astonishes for its apparent incongruence;*
- *It is normalized locally, but considered globally weird;*
- *In spite of its strangeness, it is not exotic. It is an accepted "locally-born stranger". Thus, an absurd congruence is completely normalized, infiltrated, almost invisible as if it were not there. It is the bizarre unrealized and for being so it is accepted;*
- *It is not clear, but it is not ambiguous: neither dichotomy, nor non-dichotomy. It is not a dualist event. But, it turns out to make complete sense once it*

is seen through analog-digital glocal tensions and parameters;

- *Its codes cannot be considered pure or impure. It has no precise origin, no clear destination, nor destiny.*
- *It is an ongoing mutation and preservation; it is the native and the other;*
- *Its authorship is undefined;*
- *It is a symptomatic cacophony.*

It is emblematic and imprecise signal constructions manifested within microphysics that reveal contemporary glocal sensitivities, new values and traces;

- *It belongs to the contemporary power mutations and reveals new contemporary traces;*
- *It is nondefinitive and incomplete: even though it is an overwhelming phenomenon, its partiality seems to bring an event that is both abundant and precarious;*
- *Although humans are a part of it, they are no longer its center, nor do they interfere with its cognitive decisions autonomously. The human body has been decentered. It is just one more thing, one more thinking-thing thing, as autonomous as any other non-thinking-thing;*
- *It is cognitive vectors and realities established by the mediabody (and disestablished?) and these are built throughout and "trans-upon" human awareness.*

Starting trans

Perspicuity and certitude would not fulfill a research based on the states of itinerant contemporary capitalism, particularly, on how the communicational politics of capitalism manifest themselves in all the several communication mediations. Then, one must float while creating new methodologies in order to contribute to the rising of a needed roaming epistemology.

Without a pinpointed origin and dealing with partially accessible realities, contemporary glocal communicational power relations do not follow the intelligibility of totalitarian or authoritarian parameters. There is no visible torture, no visible killing, no visible retaliation. However, they rule untouchable and imprecise parameters and evolve into expanded and decentered perversions, i.e., "near tortures", "in-between retaliations" and "possibly killing" modes. That is when, once again, we detect the impertinence of dialectics as the dialectical parameter deals with dichotomy, double, extremes and a cause-and-consequence equation, distinguished dimensions and uncrossed ones. In dialects we have confrontation and comparison, and the parameters mentioned above do not meet the needs of the trans. Contemporary glocal communicational power relations indicate circumstances, while a transresearch might be an indication, may those adverbs which now accompany contemporary dimension have to do with trans and for something trans that happens.

As we face analog-digital cognitive tensions, would it be possible to escape from the dialogic of the dual analog/digital and sit on the hyphen? And if so, could this hyphen, an orthographic tension of only two worlds, make links as a non-linear multidirectional and multidimensional vector partially tensing diverse realities would? The hyphen as interstitial data (Canevacci, *Una stupita fatticitá*), as the main mediabody.

The absurd congruence is a trans event. It flickers from a maybe, to a yet, and then an almost. The absurd congruence still is at the while it never will be. There are no valuable actions, no verbs. It is totally

unclear, like neocapitalism. This mediabody is also circumstantial. There is no able discipline neither is there an indiscipline available to research an "adverbial reality".

Therefore, this might be how and when apparent dispersions bring ways of operating in the contemporary realities. What disciplines would deal with tensions and vectors? Would contemporary realities take new methods? New epistemologies? An adiscipline? Would new methods be possible within the current academic fields?

Dialectics cannot resolve trans realities because they lack the concrete oppositions which are crucial for the dialectical debate. There is no compass that could work for transrealities. Trans promotes impossible passages that pass things through. What would the methodology for impossible passages be? How approach the enhancement of intersections flyovers, broken upside-down equations? Is this methodology lockable from its bodies' dialogics? Is there an inside in a partial, uncertain, confusing and imprecise event such as the absurd congruence? Would this decentered rhizomatic thinking inspire contemporary trans epistemologies to deal with trans at the same time it ensures to stay away from the logics of dialectics? How to face itinerant approaches, itinerant thinking (which first has to be acknowledged as legitimate)? How to avoid being trapped into dialectical epistemologies?

In order to approach complex interstitial events still partially identified, an epistemology has to disable pertinence or legitimacy, which predetermine whether something is "worth being looked at" as, for instance, old fashion pop-ups. They are not much fancied anymore, but although they have been blocked and regarded as illegitimate, they still exist in a hidden form.

An epistemological frame could not go backwards and decide whether an event exists. Thus, it has to identify apparent inconsistencies, mutations, sobbings, stumbling and deformations. The approach of incidental, invisible and interstitial contemporary events needs no grabbing, no comparison, but some description. It should instead highlight the crossings as it creates tools to realize its impossible crossings, focusing on cognitive tensions. In order to deal with these phenomena, it has to consider apparent incongruity as legitimate. Therefore, a possible epistemology has to embrace fuzzy logics considering complex elements as research material, including writing, visual and sonic ones, and crossed mimetics multiple views. A risky epistemology for risky realities: getting lost, floating, navigating and displacing as a methodology.

It must have the ability to weave into the "in between", the "still", and to pass through the adverbial equations, geometries and indescribable actual configurations, without turning them away as if they were invisible and "not worth looking at".

Astonishment might not be enough to approach symptom-system events anymore. A foreign mediabody epistemology might be established inside itself and discuss its own demonstrations, i.e, a foreign epistemology is foreigner as long as it belongs to transits and their cognitive tensions. Then, its parameters find themselves into other porous, mutable, crossed-over and unstable parameters – not central ones. A foreign epistemology is an adverbial mediabody. Therefore, it is an epistemology that samples as it becomes samples itself.

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GLITCHING PARALOGY

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Is research today occupied more with mundane acts of recategorisation, and – after Bologna – with what Lyotard already called performativity? Or does it still engage the kind of marvel and wonder that so many ascribe to Pluto and that BWPWAP captures as a cultural term? (Transmediale)

Abstract

In the late seventies, Lyotard claimed that research and culture would be increasingly legitimated not on their own terms, but through their performance in supporting the smooth running of governmental, economic and bureaucratic systems; treating them as inputs and outputs in the production of power, something he referred to as 'performativity' (xxiv).

He suggested a 'paralogical' approach to offset this tendency, which broadly meant pursuing those kinds of research and culture that highlight and de-stabilise underlying systemic conditions, and that critique, or change the rules of such systems. This paper suggests that glitch-art practices constitute a vibrant 'paralogical' response to a performativity within arts and research, though this is not to say that they are, de facto, immune to it. The argument contends that t(h)inkering (Huhtamo), DIY and heuristic strategies provide a useful way forward in critiquing and sustaining glitch paralogies.

Knowledge and Performativity

Although the epithet of postmodernism now feels distant and somewhat stale, we have not yet experienced any clear break with it, (Varnelis) indeed many of the concepts around which it was formulated hold true now more than ever – the distrust of meta-narratives; the championing of plurality; subjectivity, contingency and context; the problems of authorship and originality… these issues remain today, though are perhaps thought of as truisms, stable enough to be considered done-to-death within academia.

Reading Lyotard's 'The Postmodern Condition: A Report on Knowledge' today however, one is struck by its prognostic accuracy. In it, one of Lyotard's key arguments was that the cybernetic characteristics of contemporary culture legitimate knowledge not for its own sake, but for its performance. His claim suggests that the world of ideas and aesthetics is no longer valued in itself, warning that their institutionalisation, or at least the changing qualities of institutions, might drain them of meaning.

It is interesting to note the central role accorded to cybernetics in this argument. The wide applicability of cybernetics has been due to its emphasis on systems over content: biology, economics, weapons, ecology and many other fields, might all be thought of as network structures of control and feedback; interlinking operations and transformations of signals and messages. Accordingly, Lyotard's notion of performativity (which he draws from Niklas Luhman and Jürgen Habermas) implies performative legitimation is granted not on the inherent qualities of research, practice, education etc. but on their ability to produce maximal results by minimal means, for the upkeep of the system they exist within. (Halbert 1)

The systems emphasis of cybernetic thinking took its cue from information theory, and one can note parallels between performativity and the qualities ascribed to information within this field. Key to the development of information theory was the

conceptualisation of information as quantity without semantic meaning, of interest solely in engineering or mathematical terms. Similarly, the issue with performativity is that it ignores the content of research, education, science and the arts, in favour of their ability to perform and produce results. As Terranova has argued, our culture has been dubbed informational not simply because of the vast morass of information we now live with, but also because the characteristic dynamics of information now impact upon all spheres of contemporary life. (7) In discussion around politics, business, education and other fields Terranova suggests:

Communication management today increasingly involves the reduction of all meaning to replicable information—that is, to a redundancy or frequency that can be successfully copied across varied communication milieus with minimum alterations. (57)

Legitimation through performativity can be seen as a natural result of the increasingly informational and networked quality of a post-industrial context. Perhaps the key problem for Lyotard is the assumption that knowledge can undergo a translation into something that suits systematisation, without in itself being changed irrevocably: that it is commensurable with the systems which use it in the production of power. It might be argued that the informational, performative emphasis within research and culture leads to a flattening out and instrumentalisation of socio-cultural processes, grounded in the smooth running of the system, rather than in meaning for it's own sake. Such an approach ignores detail, grain, and interest – favouring the paths of least resistance.

On the other hand, Lyotard suggested (perhaps somewhat provocatively) that even performativity has positives: including its emphasis on transparency, it's predictability and broadly speaking, its efficiency. (op.cit. 62) In the recent climate of economic austerity, such characteristics take on new significance, though as a characteristic of post-industrial society, performativity has, of course, been on the rise for many years. Broadly speaking, performativity is a fact of life within post-industrial, informational culture and as such, here to stay. The challenge then, rests in how it is dealt with – and here Lyotard suggests a typically post-modern move.

Paralogy

'Paralogy' as an alternate mode of legitimation to that of performativity. Lyotard uses the term to refer to legitimating discourses that: explore paradoxes and anomalies; foreground the critique and destabilisation of existing methodologies; create new methodologies; and that disrupt the Habermasien notion of 'consensus community'. Habermas felt that 'legitimacy [was] to be found in consensus obtained through discussion', (Lyotard op.cit. xxv) which Lyotard sees as problematic, as it flattens diversity and difference. (Halbert op.cit. 2) Paralogy is therefore an approach that favours dynamic tensions and heterogeneity over operativity and consensus. It is the bending of rules, the creation of new rules, and a self-reflexive awareness of the rules that govern research and culture.

It must be said at this point that performative and paralogical legitimation are not mutually exclusive: research might be in the best interest of the institution even whilst it is critically aware; artistic processes may be antagonistic and self-reflexive and nevertheless benefit the systems of legitimation they exist within – for example through incorporation into art markets, festival circuits, commercial products, the language of film, television and music. Moreover, paralogy need not be confined to the arts. For Lyotard it can be used across disciplinary boundaries and beyond

academic contexts. One might say that in any given field it reverses the cybernetic model, foregrounding the specifics and granularity of knowledge over its systemic characteristics.

Glitch practices

Glitch practices are interesting in this respect as they often concern themselves with systems at the point of failure: communications, software, media technologies – systemic materials at the moment they collapse into granularity and difference. Therefore glitch art might constitute a paralogous approach in drawing our attention to the materiality of its media, the conditions of technology and the constructed character of aesthetics. In hacking, bending, and repurposing they are changing the rules of the systems they exist within; simultaneously helping us better understand the conditions of technology, and suggesting new approaches and attitudes through with to approach such conditions.

By focussing on failures, inconsistencies and the problematics of systems, glitch practices foreground the incommensurability of materials, knowledge, culture – in other words that such things do not, and should not be treated as inputs and outputs within the production of power. Glitch practices have, for some time taken the detritus of technology as their subject; reimagining material cast-offs, marginalised ideas and aesthetics as valuable, despite (and because) they have been deemed ineffective by the matrices of legitimation they existed within. In such a context, glitch practices stand in dynamic tension to the smooth running homogeneity of various systems – corporate, informational, cultural, social – feeding from their trips and mistakes; delineating the cybernetic dream even as they reveal its status as illusion.

A further paralogical aspect of glitch practices is that they are often participatory and based on do-it-yourself (or do-it-together) practices, which in some sense take powers of legitimation away from institutions and corporations. Lyotard argues that through the 'thorough exteriorization of knowledge […] the old principle that knowledge is indissociable from the training of minds is becoming obsolete…' (op.cit. 4) However, this emphasis on DIY methodologies is often connected with self-taught approaches and motivated by surprise and engagement with the materials. Here, glitch practices are a way to understand technology, culture and aesthetics from a hands-on perspective, forming a heuristic function that displaces the need for institutional legitimation. In this regard glitch practices (and open source values more widely) raise some significant issues for academia – both because they call into question the relevance of academic validation itself, and if this issue is put to one side, because the critical frameworks through which to understand these emergent phenomena necessarily struggles to catch up with such grass-roots participatory practices.

Performativity of Glitch

Despite the potential of glitch practices, such aesthetics are not immune from recuperation into performative legitimation structures. What remains problematic is that aesthetics – even noisy ones – are determinate – governed by codes and rules of language. Whilst glitch is well placed to reveal the inconsistencies of the system, and temporarily bring about personal or poetic encounter; faced with finite aesthetic outcomes it becomes easy for systems to account in advance for such disturbances and recuperate antagonism into standardised processes. Through over-exposure glitch aesthetics can become

clichéd and drained of their impact; they lose their ability to provoke when their tactics are aped by more stable, easily accountable fields such as advertising, popular music, and the music technology industry (for example in the production of glitch plug-ins); in short, their sharp shock loses its punch.

Glitch theorists and practitioners already attempt to account for these issues (though conceptualised somewhat differently) through an emphasis on process, 'wild' or 'pure' glitches (Cloninger 10 and Moradi 8 respectively) and the moment(um) of glitch (Menkman). Rosa Menkman discusses this tension in the 'Glitch Studies Manifesto':

> *…to design a glitch means to domesticate it. When the glitch becomes domesticated, controlled by a tool, or technology (a human craft) it has lost its enchantment and has become predictable. It is no longer a break from a flow within a technology, or a method to open up the political discourse, but instead a cultivation. (7)*

Whilst the essence of glitch is an unexpected malfunction, (Motherboard 1) to use it within aesthetic contexts means, in some sense, to prompt – and expect – such malfunctions. If performativity can be aligned with stability and efficiency, a key ambition for Menkman and others is to avoid this trend towards homeostasis and predictability by invoking glitches in the moment(um) or 'in the wild' (Cloninger 10) – through, for example, live performance, or unreliable machines rather than plug-ins and recordings.

Such discourses provide useful concrete examples of tensions between performativity and paralogy in action – playing out the tension between system and unstable rule set; yet there remain questions around the degree to which such strategies solve the problem or simply parallel the notion of Just-In-Time manufacture. Clearly the tensions between wild and conserved glitches are full of productive antagonisms that, in themselves keep discourses firmly focussed on the assumptions and conventions of such practices: a good indicator of their status as paralogous. But there are other strategies diagrammed by the notion of paralogy that glitch suits very well.

Perhaps the problem here is not the individual instances that might be thought of in terms of glitch and noise practices, but their aggregation into a stabilised genre and defined generic conventions. In all good examples of glitch-art (or any other art for that matter) the subject overflows generic characteristics. In glitch art it's not the noise that is interesting per se, so much as the relation of noise-to-signal (known as the 'equivocation' within Information Theory) that counts: whilst noise is the unifying generic convention, the meaning is derived in how the signal is modulated by it. From this perspective, context becomes the dominating structure, not genre.

To extend the paralogical potential of glitch and noise means to avoid its stabilisation as a genre geared to fulfilling the expectations of the art market, festival circuit, or research institution. What remains of glitch when one leaves behind generic convention? An emphasis on the materiality and limits of media; of a hands-on, tinkering, heuristic approach; on 'doing it yourself', but perhaps more importantly on community practices – Do It Together or Do It With Others. Finally, if one substitutes an emphasis on noise for its equivocation, such work can be critiqued and mobilised without resorting to generic conventions. It becomes less important to emphasise the affective shock of glitch, and more important to trace the ecologies and archaeologies of such ruptures. This way of thinking further aligns glitch and noise practices with disciplines such as Media

Archaeology, already a fruitful connection made by many practitioners but theorised by, amongst others, Garnet Hertz and Jussi Parikka in their Zombie Media project at Transmediale 2011.

Thinkering Approaches

Many glitch practitioners turn to media archaeological means to do this (Cory Arcangel, Paul DeMarinis, Garnet Hertz, Derek Holzer, Rosa Menkman, Yasunao Tone to name a few), and indeed the overlap between such practices is significant. Archaeology in this case is used in a Foucauldien sense to refer to an epistemological exploration of power and knowledge, specifically through the careful unpicking and disentanglement of objects, practices and discourse to reveal the 'layered "unconscious" of technical media culture.' (Parikka 2012:5) Such a focus enables a very direct addressing of the issues around contextualisation, rooting the momentum of glitch within the threads of long standing paralogical histories.

> *…media archaeology becomes not only a method for excavation of the repressed, the forgotten, or the past, but it extends itself into an artistic method close to Do-It-Yourself (DIY) culture, circuit bending, hardware hacking, and other exercises that are closely related to the political economy of information technology. Media in its various layers embodies memory: not only human memory, but the memory of things, of objects, of chemicals, and circuits. (Hertz & Parikka 2012:2)*

The shared tendency to attempt to unearth the hidden technical, aesthetic and socio-political apparatus' at work, through the hacking, reverse engineering and meddling with media artefacts is a process Erkki Huhtamo see's in the interests of a thinkerer – 'a philosophically oriented artist-archaeologist, always reflecting on the significance of his/her findings and inventions and relating them to wider cultural frames of reference.' (2000:2). The term aptly sums up a hands-on engagement with technical media that stands as a direct metaphor for the critique and destabilisation required of paralogy. It is a DIY model that emphasises critical reflection and a heuristic approach extending the contextual reach of glitch practices; and moving the shocks and noise of glitch beyond technical channels and into the realm of human engagement. Such a move upsets existing models of legitimation and holds great paralogical potential.

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MUSICAL INSTRUMENT INTERFACES

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Controlling digital tools, instruments or appliances can be a quite tedious task. It could seem as if the huge computational and technological potentials of digital technologies—often internalized and inaccessible—in many cases take precedence over the very interface that is to unleash its powers. The following is a preliminary overview of my motivation and some of the main issues within the context of my research on musical instrument interfaces. My own experiences and frustrations as a musician and sound engineer is probably the primary driving force behind this project. Originally being a drummer, my approach to creating music have always had a very physical and tactile dimension to it. Problems and difficulties arose, however, when I started working with other instruments, such as analog and digital synthesizers, tape machines and computer software. I am not particularly interested in the quality of analog vs. digital sound, though this is probably one of the most prevalent discussions within music technology discourse to this day. What I am interested in, however, is the interaction between the musician and the relevant instruments or pieces of technology. Having worked with 4-track cassette tape recorders up through my early teen-age years, my excitement was naturally enormous when I first laid my hands on a computer with multitrack digital recording software. The vastness of features, and the possibilities of virtually lossless digital recording, an almost infinite number of tracks, non-destructive editing, and virtual instruments and effects processors, and so on, were astounding, coming from an analog 4-track cassette recorder with very limited technical possibilities in comparison. After a while, however, I noticed that my workflow after switching to computer-based recording had actually become significantly slower. Tracking instruments, setting monitor and track levels, figuring out signal paths, etc. were suddenly much more time-consuming tasks than before I did the switch, and furthermore I had lost the very subjective feeling of actually objectifying the sound by committing the it to a physical tape, by instead laying it down as incomprehensible 0's and 1's distributed on a spinning metal plate.

I won't go into further detail about the latter of these issues, but the main reason for my working speed slowing down—I suspect—was the fact that all the buttons, wiring, switches, knobs and faders for controlling the recording and mixing of audio—when remediated to a computer interface—had to be accessed through either a 3-button mouse or the standard QWERTY-keyboard. This resulted in not only longer execution time for each task, but also in tedious puzzle-solving in trying to figure out the logic of the digital signal paths of the audio, which I used to be able to figure out by simply following the analog audio cables from inputs to outputs. Though the technical qualities of my recordings were greatly improved, the production time for each recording went up as the enjoyment of using the recording device went down. This story, however, is hardly unique and thus many peripheral control interfaces for computer music software have been developed over the years to enhance and speed up the workflow, and arguably early MIDI-controllers, such as the Roland CF-10, CN-20 and CA-30 (see fig. 1) were arguably some of the earliest examples of tangible user interfaces. The past couple of years, however, the research into tangible user interfaces for musical applications have been highly focused around tabletop interfaces and fiducial tracking technology such as Reactable (Jordá et al.), mixiTUI (Pedersen & Hornbæk) and D-Touch.

These token-based systems are highly versatile and efficient in translating the digital musical "objects" from the monitor and into real tangible objects that can be directly

manipulated. What these interfaces lack, however, is a clear physical relation between the physical and digital representation. The token we manipulate may be a physical object that represents data in the digital realm, but the physical properties of the token always stays the same, as there can be fed no data or instructions back to the token itself. To put it another way – the token can change the state of the computer, but the computer cannot change the state of the token. Surely some of the above mentioned systems have visual feedback, and can project visuals onto the token, but the very physicality and tangible qualities that is the core of the interaction-mechanism is essentially static. Pedersen and Hornbæk have approached this conflict with their "Tangible Bots" actuating the physical tokens with robotics. This technology, though, seems to be primarily focused more on automatization, and much less on establishing a haptic feedback relation between the computer and the physical extremeties of the interface.

Back when electronic sound synthesis entered the world of musical instruments, a hitherto fundamental premise was instantly dissolved. Until then musical instruments had relied purely on mechanical technology and the unique sound and timbres of the various instruments was a direct result of the acoustic properties of physical components such as pipes, strings, membranes and reeds that made up the instrument. The advent of electronic and digital audio technologies severed the ties between the physical form of the mechanical instrument artifact and the actual generated sound, thus paving the way for sound generation liberated from the confinements of physical acoustics.

The invention of electronic sound synthesis made it possible to create sounds never heard before, and were adopted by sound artists, composers and musicians alike within virtually all musical genres, from experimental classical music to jazz, pop and rock. But as lush of a palette of novel and other-worldly sounds that this new electronic audio technology offered, the natural mappings between the bodily gestures of the musicians and the audible and haptic feedback determined by the very shape and materiality of acoustic instruments were nevertheless entirely missing. The musical instrument interface was no longer part of the sound generating mechanism, and would retain only its role as a control mechanism for the instrument. This fundamentally new premise for interacting with these electronic instruments naturally introduced challenges for musicians and instrument manufacturers in terms of expression, playability and performance. And up through the second half of the 20th century, when analog synthesizers became affordable, instrument manufacturers spent much effort developing interfaces and to address technical solutions to these control issues. Discourses surrounding the challenges posed by electronic sound synthesis were quite well-articulated, for instance, in synthesizer-ads throughout the seventies and eighties (ARP Instruments; Yamaha Corporation, "Yamaha DX-7 …" 42-43; Yamaha Corporation, "Freedom of Expression" 25), all focusing, on issues related to the control, performance and expression of electronic musical instruments.

My research investigates haptic feedback and how it might be integrated purposefully into digital and electronic musical instruments, however, as Chang and O'Sullivan (3) have pointed out, there is a general lack of an oral vocabulary for describing haptic phenomena and sensations, and one of my working hypotheses is that by narrowing down the span of haptic phenomena to a musical interaction context, different sensations can more easily be categorized in terms of physicality and musical significance. Such a framework could prove useful when setting

up experiments for exploring various ways of integrating haptic technology in musical instruments.

Perhaps looking into augmenting the feel—or the haptics—of interfaces for digital musical instruments, and more specifically to the design of proper haptic feedback. By varying the way the interface responds mechanically by means of actuation, we can change how the handling of the interface feels. If we are to enhance expression, engagement and playability, however, this feedback should be carefully designed so that it responds in musically meaningful ways. I suggest that a framework relating musical expression to physical gestures will be of great use in this endeavor to close the gap between sound and gesture, created by electronic and digital technology. Thus proper integration and design of actuated haptic feedback in, for instance, synthesizers could be of great value. Not only would it be possible to mimic mechanical properties of acoustic instruments, making the interaction embodied aspects of the interaction bidirectional, but also for paving ways for new experimental interaction paradigms.

There should be little doubt that there are some great advantages of electronic musical instruments compared to acoustical instruments (and vice versa). There seem, nevertheless, to be a tendency in the music instrument industry to produce instruments that mimic analogue and acoustic instruments by digital means, which hint that analog and acoustical instruments have some sought–after qualities. We see heaps of virtual analogue (digital) synthesizers; vast libraries of simulated grand pianos, drum kits and symphony orchestra s for digital sampler instruments; digital effects simulating vacuum tubes and tape recorders, etc.

Admittedly, the sound quality of such digital instruments and effects units is constantly improving, but as the feature- and sound-richness expand—often packing hundreds of sounds within the same hard- or software-based instrument—the limitations of the emphasis on designing generic control interfaces (typically piano keyboard interfaces and “buttons-knobs-and-sliders interfaces”) become increasingly obvious. We may be able to assign the keys, sliders, etc. of the interface to control whichever expressive parameter we may so desire. The multitude of sound combinations offered expands exponentially, but physically and mechanically the interface looks and feels the same. As the effort to integrate ever more computing power and feature-richness into new products continues, the interface becomes ever more alienated from the internal workings. In other words; the more sounds and expressive parameters a single musical instrument interface is to support, the more generic and thus less musically significant it seems to become.

An instrument that offers vast possibilities for generating various sound, and which by its very nature completely lacks haptic feedback is the synthesizer. Being essentially a workbench for making synthetic sound, and traditionally one that liberated sound generation from its mechanical necessity, the physicality of the interaction with the synthesizer is very limited. A few tactile interaction technologies are found, nevertheless, in some synthesizers. Weighted keys are probably the most prevalent of these, and is essentially a simulation of the trigger-action found in acoustic pianos (see fig. 2), intended to give a more realistic playing feel. Another technology is aftertouch — a feature often confused with pressure-sensitve keys — which enables the player to manipulate the sound after a key has been pressed, by varying the pressure applied to the pressed-down key and thereby controlling e.g. pitch bend, filters, modulation depth, etc.

There are, nevertheless, still a number

of control issues relating to the lack of haptic feedback when we take a deeper look at common synthesizer instruments. The synthesizer fundamentally changed the haptic aspects of musical performance, by essentially eliminating it. At the same time, however, the synthesizer also augmented the sonic vocabulary, paving the way for new musical expression through sounds and timbres never before heard at the time. Though the earliest experiments with synthesized sound took place in the early 1900's, the first commercially available synthesizers emerged in 1963-1964. Attempts to explore the possibilities of interaction with these new instruments, had been going on for years, and though very interesting attempts—such as Léon Theremin's well-known theremin, which was played by varying the distance of the hands from two antennas, continually controlling pitch and velocity of the sound—were made, the concept of the piano keyboard quickly became the all dominant interface for playing these new musical machines.

Compared to the acoustic piano, however, synthesizers offer almost indefinite possibilities for control and shaping of the sound. Hence one would think that synthesizers in terms of performance and aesthetics would offer great expressive benefits over traditional instruments. In practice. however, it is quite hard to manually control these expressive variations during performance on a synthesizer, mainly because note-triggering and sound manipulation, unlike acoustical instruments, are not part of the same gesture. The sound can easily be designed as a 'preset' or a 'patch' (denoting the fact that early synthesizers were modular systems of interconnected sound-generating and -shaping parts, 'patched' together with cables) but the details of sounds are often very hard to control dynamically during actual performance where the playing of notes and manipulation of expressive parameters must take place at the same time. By expressive parameters, I point specifically to the dynamic shaping of the sound during performance, such as bending, applying vibrato, modulation of timbre, etc.

In a so-called subtractive synthesizer (based on subtractive synthesis – a pioneering technique, that is still widely used in many digital synthesizers today) users can tweak and modify many aspects of the sound, such as filtering, wave form, amplitude envelope, etc., thereby (in principle) having control of all expressive parameters of the instrument. The parameters, however, are often controlled separately from the triggering of individual notes. Where the triggering of notes is mainly done by pressing the piano keys, the expressive parameters are controlled almost exclusively by sliders and knobs, or (even through menus and buttons in some digital synthesizers), all placed at a good distance from the keys (see fig. 3).

It should be clear that expressive parameters are conceptualized and controlled very differently in acoustic vs. electronic/digital instruments. In acoustical instruments the coupling between the triggering of notes and the control of the expressive parameters is very tight. A guitarist, for instance, would achieve vibrato by initially triggering a note by placing his fingers on one hand on the desired frets and strings, picking these with the other hand then – more or less gently – bending the strings back and forth with his fingers to achieve the vibration.

On most synthesizers the same effect could be achieved in a number of different ways; by programming a low frequency oscillator (or LFO – a standard function in most synthesizers) to do vibration, which would mean that the musician would be unable to arbitrarily start, stop or modify the vibration. It could also be achieved by manually jerking the sliders or knobs for volume or pitch, which would mean, that the hand doing this

could not simultaneously trigger any keys. Furthermore, anyone who has tried to simulate vibrato using a knob or a slider, would probably agree, that it is in fact quite difficult both motorically but also expressively.

In all acoustical instruments, the human voice included, the depth and speed of a vibrato is proportional by the amount of force applied to the instrument. A strong vibrato on a guitar, for instance, would require the guitarist to bend the strings quite a bit in both directions, and the force exerted from the strings on the fingers would increase with the amount of bending. This not only helps prepare the following downward motion required to finish one cycle of the vibrato, which is in itself supporting the very act of the vibrato, but it also gives the player some sense of what is going on, on a tactile perceptual level. Manipulating a knob or slider on a synthesizer that offers no resistance and no meaningful physical feedback other than the perceived sound, thus, would seem like a bad design choice as an interface for achieving musical vibrato. The same point could be made for other common synthesizer controls such as filters, attack and sustain-controls to name a few, and even the pitch of the keys. In fact the argument also applies to most music software and software synthesizers, where interaction can be solely based on mouse and keyboard – or simply on raw programming at the topmost layer of abstraction.

There clearly are issues concerning musical interaction with digital instruments. This is not to say that the notion of virtuosity is under attack or that expression cannot be made on instruments with digital sound generation and no noteworthy haptic feedback mechanisms. However, research shows that performance can be enhanced—at least in quantitative terms (Askenfelt & Johansson 347)—through augmenting instruments with physical feedback. Research should however not be limited to investigating how to simulate feedback patterns in already known instruments, but on a more general note, how haptic feedback relates to musical phenomena. Haptic feedback may improve performance quantitatively in some cases, but the notion of a haptic vocabulary, that can be applied on a more general level, adding an extra dimension to instrument design and interaction design in general is a vastly promising perspective.

Appendix

Figure 1: The Roland CF-10 Digital Fader. Roland Corporation 1989. [http://2.bp.blogspot.com/_rScBRKlTdoE/TIu5MRkXTDI/AAAAAAAABgOM/NWtAMl0781A/s1600/04222c6ea1.jpg]

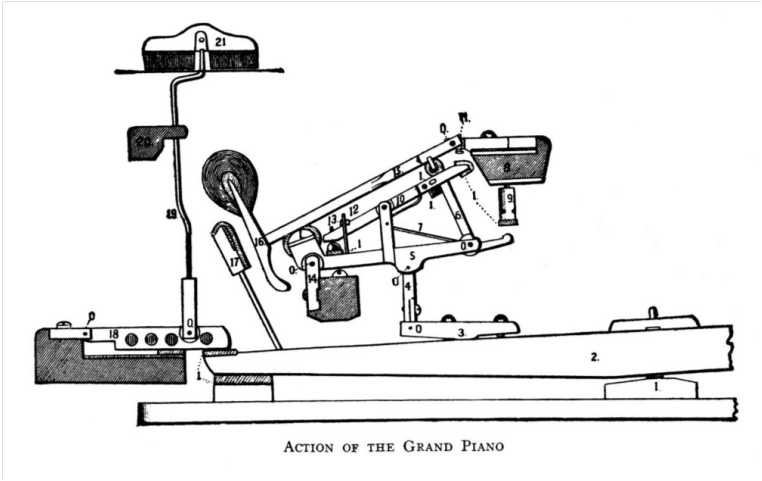

Figure 2: Key trigger-action diagram for a typical grand piano. [http://2.bp.blogspot.com/-j6Wq8uxIdaw/T9Pw2Q_-0LI/AAAAAAAAAC8/f4bfLlqmi1M/s1600/grand+action+scetch.jpg]

Figure 3: The Minimoog analogue synthesizer. Moog Music, 1970 – … [http://switchedonaustin.com/sites/default/files/styles/uc_product_full/public/IMG_0044.JPG]

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Helen Pritchard

THINKING WITH THE ANIMAL-HACKER: ARTICULATION IN ECOLOGIES OF EARTH OBSERVATION

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What happens if Nature is neither lacking nor primordial, but rather a plentitude of possibilities a cacophony of conversation? Indeed what if it is that same force field of articulation, reinvention and frission that we are used to calling – culture? (Vicki Kirby)

The 'eyes' made available in modern technological sciences shatter any idea of passive vision; these prosthetic devices show us that all eyes, including our own organic ones, are active perceptual systems (Donna Haraway).

Prologue

In the depths of the Cumbria hills a dairy cow changes its route to stare deep into the camera lens of the 'Environmental Virtual Observatory' (EVO) (www.evo-uk.org). Downstream at 15 minute intervals organic matter is pushed through turbidity probes, sometimes causing the computation to glitch and upload its own movement into a data storage warehouse. In this muddy, messy situation of the EVO there is something lurking, something which might be described as the 'Animal-Hacker' the non-human animal, an entity that exploits the computational ecology, reconfigures it in an act of what Donna Haraway would describe as "worlding" (92).

The EVO

The EVO is one of a number international projects that have emerged from the convergence of cloud computing, big data, remote sensing technologies, large scale government funding initiatives, the rising temperature of the earth and the co-evolving vision of a computational universe (Hayles 3). In networked observatory projects such as the EVO distributed sensors monitor and upload 'non-human' environmental processes and store them in the 'cloud'. The assumption is that we can use the 'gathered' data from earth processes (both live and archived) to analyze, predict, act and prevent 'changes' in the biophysical world. (Nold 3)

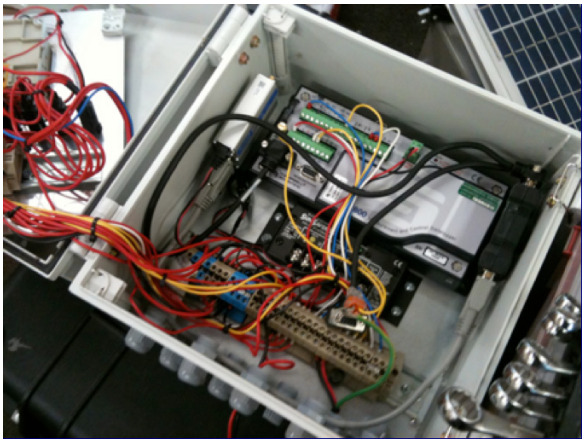

Image 1: Assembling sensing equipment in the Eden Dtc office (photo: Helen Pritchard)

This paper arises from embedded arts-based research in the EVO in order to grapple with the practices, sites and processes of Earth Observation. It emerged through a process of 'hanging out' (Pfaelzer 3)—talking, sharing resources, looking through microscopes, reading policy documents, lingering in cow sheds, lurking on social media sites, handling equipment, sharing long car journeys and downloading data sets.

Embedded arts-based research provides the method to inquire, interrogate and hold "apparatuses and the processes by which they are produced" (Barad 202). It shares many similarities with participant observation in feminist technoscience studies (Barad 202). It makes space for the researcher to 'do' with the instruments of interdisciplinary practice, rather that just observe them "to hold them to one's lips", to experience them through sensation, "like the

smell of machinery grease, noxious chemicals, and other organic and inorganic matter" (ibid).

Through my initial inquiries I have experienced a mix of soggy samples, chemicals, mud, soldering irons, I have searched, rambled through lines of code in order to find a 'mistake', I have asked sunlight to write itself. I have held out my hand to the dripping nostrils of dairy cow and hung out during coding sessions to 'hold' incommensurable datasets, matter and ideas.

New Materialist Approach

In this short paper I attempt to build a framework on which to grapple with the entities of the EVO. I explore the provocation that nature writes itself into the folds of computation and collective becoming, drawing on New Materialist work of Haraway, Barad and Kirby. The New Materialist approach to practices of 'earth observation' provides a theoretical framework for witnessing and exploring human and non-human practices, interactions, knowledges and affects. In the context of research on computing ecologies it provides a way to grapple with "the material artifacts and natural stuff that populate our [computational] environments as well as on socioeconomic structures that produce and reproduce the conditions of our everyday lives" (Coole 1). The methodologies of New Materialism evoke the more-than-human agencies, knowledges and politics that circulate through inquiry of material realities. They make space to consider the non human writer, the 'Animal Hackers'.

By examining the matter and discourse of 'Earth Observations', that are enabled by network technologies, cloud computing and sensors, such as networks of remote sensors, pulsating live data sets, mud covered cameras, networked animals and computational imaginaries, I aim to foreground non-human forces in these assemblages. The 'non-human' forces I am referring to include nonhuman animals, plants, watercourses, earth energies as well as hardware and software .

There has been a surge in applying 'New Materialist' thinking to technological assemblages that place emphasis on non-human forces. However, my concerns are specifically in recognition of the drive towards planetary-scale computation and the wider imaginary of nature-objects in the 'internet of things'. My aim is to make apparent the relative invisibility of non-human forces/writers in these assemblages and to work towards developing a set of practices as a manifesto for 'More-than-human' collective computing.

The EVO

The EVO is a proof of concept project and exemplar of the drive towards what has been described as 'planetary scale computation' (Bratton DG.P) and 'computational planetary skins' (Stepney 3). As Bratton explains the practice of planetary scale computing is both the distribution of large amounts of data across "far-flung data centres" together with "the layering of software and hardware across a multitude of scales from 'cloud computing to addressable nano bots". In the EVO the planetary-scale computational vision is that layers of hardware and software are spread across multiple sites and entities. Large data sets are stored in data centres and automatically moved and replicated through computation without human intervention. These layers form what Donna Haraway might describe as profound reconfigurations of bodies and processes; as both human and non-human bodies are entangled in computational

practices. In the EVO Dairy Cows staring down remote cameras or peaks in river flow bring us “face-to face [through the network] with significant others” (93). If we consider these events not as measuring or writing the other, but instead as co-writing with articulate non-humans, “Textual Adventures”(Kirby 76) then the question arises of how we might think with and from non human animal-writers in order to “speculate, imagine, feel, build something better”(Haraway 92). In this paper I tentatively introduce the figure of the ‘Animal-Hacker’ to consider the articulation of nonhuman entities in these computational ecologies.

Non-Human Coders

The ‘Animal-Hacker’ is a proposition to consider within the context of ‘environmental observation’ Haraway’s call to “open up the question of non humanism” (92). To breakdown existing abstractions of nature and computation in order that “richer, more responsive inventions, speculation and proposing – worlding- can go on” (93). Franco “Bifo” Beradi writes in the foreword to Geoff Cox’s book ‘Speaking Code’ that “the effects of code are not [as might be assumed] deterministic, as far as code is the product of code writing, and code writing is affected by social, political, cultural, and emotional processes”(x). Therefore code writings in the EVO can perhaps be considered in Haraway’s terms as “relational knots” the “co-production” of knowledge”and a “becoming with” that occurs as two “things” (animal and code) have an encounter. In this proposition ‘Hacking’ code, might be considered as new “worldings” or as Beradi describes “lines of escape”. (x)

The familiar co-constituted animals that appear in computational ecologies such as the EVO are productive agents who contribute vital affordances of one kind or another. As Kirby would describe they are articulate and write themselves through a variety of instruments, translations and representations (81.) However, these articulations, these interferences with computation, are not always compliant. In this muddy, messy situation of the EVO I have experienced something which might be described as the ‘Animal-Hacker’ the non-human animal, an entity that exploits the computational ecology, reconfigures it in an act of worlding. In my tentative observations, entangled entities, such as cows, diatoms, owls and plants articulate themselves both through compliance with, and disruption of, the computational architecture that has been laid down ‘for’ them.

If we address the ‘Animal-Hacker’, not as a passive object of observation, but as co-creating computational environments, how might we consider the non human animal? If we are serious about forms of engagement with non humans, can we engage with the ‘Animal-Hacker’ as a possible invitation to reconsider a possible introduction to other-worlding?

Environmental Observation

To date, the majority of research in ‘Environmental or Earth Observation’ has focused on the deployment of the technologies (as observed in Gabrys) both through large-scale government initiatives (Teillet et al) and via localized, citizen sensing and so-called DIY projects (Cuff 3). Concurrent research in the areas of histories of earth observation (Dourish), media archaeologies of ubiquitous computing (ubicomp), weather systems, earth observation and sensor technologies has broadened the context for this research project. Recent research

has considered how ubicomp might inform parallel sensing practices through distributed sensation and experience (Hansen, Gabrys) and interspecies sense-making (Mancini, et al) the 'Animal-Hacker' project engages with these bodies of work to consider articulation distributed across agents and entities. There is also a rapidly increasing amount of work on coupling computational earth observation systems with cloud-based services, described. These cloud-based services will be used for remote trading, with trades based on computational measurements of the non human 'living'. One example is the implementation of water trading in which fresh clean water and river flows will be measured through remote sensing, calculated and sold to both individuals and corporations within the cloud infrastructures (Marshall).

Existing research on environmental observation emerges both as inter-disciplinary and/or located in a number of areas of research for example Computing, specifically, Human-Computer-Interaction (Bell & Dourish, Stepney) Design & Geopolitics (Bratton) Software studies and Critical Engineering (Gabrys, Fuller, Chun & Hui, Nold), Media Theory and Design. My work does not intend to polarize the different approaches of science and humanities to environmental observation, but rather, by drawing on the work of feminist technoscience (Haraway, Suchman) and ecological methodologies, attempts interdisciplinary arrangements.

Planetary Skins

As a proof of concept project and prototype the EVO is part of and produces the the vision for the 'internet of things',as part of the imaginary of ubicomp (Weiser). Outlined in 1999 the vision for ubicomp or calm computing was a world of serenity in which technology was to keep us "perpetually informed of what is happening around us, what is going to happen and what has just happened". The EVO is a project informed by Weiser's vision, with the aim to use ubicomp and remote sensing to inform us of earth processes and non human activity in order to create warning systems and comfort.

As a 'proof of concept' project the EVO both enacts the processes of environmental observation and imagines its future practice. The EVO is also knotted with a deeper history, the desire to expand human sensory capacities (Hansen 2). This imagination revolves around making the 'whole' of human and non-human environments legible for computer systems (Nold).

It enacts both the means and the metaphor of what Katherine Hayles describes as the 'Computational Universe' (3). For Hayles this universe is one in which we make and imagine the universe through the lens of our own computational age.

The computation of non-human environments in computer science or 'natural computation' is an ambiguous term. It refers to the space at the intersection of 'nature' and computation. Wikipedia defines natural computation as a terminology that was introduced to encompass three classes of methods (wikipedia.org). Those that take inspiration from nature for the development of novel problem-solving techniques, such as bio-inspired software or evolutionary algorithms. Secondly, methods that use computers to 'synthesize natural phenomena' and, thirdly, those methods that employ natural materials (eg. Molecules) to compute.

However, as in Hayles' 'Computational Universe' there is also a dual co-evolving aspect to 'natural computation', namely, the drive towards "understanding nature as information processing". This understanding draws on the work of physicists such as Stephan Wolfram who claim that the

universe is generated through computational processes running on a vast computational mechanism underlying all of physical reality (15). Bratton explores the notion of the world as made up of discrete units, referencing thinkers such as Wolfram. He notes that these diverse and complex theories trickle down to simplified and widespread sensibility that "the world is a computer and the best way to listen to that computer is with other computers" (15). The layer of computational technologies smeared over the planet is just a way to get closer to a primordial digital unfolding of all things (ibid). For others, such as Alex S. Taylor at Microsoft Research, what is crucial is that, as work develops at the intersection of the biological, geological and the computational, inhuman nature that fails to 'register' within the computational regime, will become excluded from systems of recognition. His concern is that nature that cannot be computerized will no longer be recognized as nature.

Close up Mess

'Environmental Observation' through remote sensing, big data and cloud computing is the coming together of a number of computational systems which are part of the vision of ubicomp. Alongside the myth of ubicomp is the practical reality of working with these technologies day to day. Bell and Dourish use mess to suggest that practices of technology are never quite as simple, straightforward or idealized as we might imagine them to be. For any infrastructures, the mess, Bell and Dourish argue, is never very far away. Mess is both the matter of these technologies the "mazes of cables, the connectors, clips, clamps and duct tape" and the productive discourses "the regulatory authorities who authorise intervention, governments that set policy, bureaucrats" (Bell & Dourish 1). In contrast to the vision of ubicomp as a slick system it "looks" very different (Bell & Dourish in Anderson & Pold 2). As Anderson & Pold observe "Ubicomp has developed as a messy cultural interface rather than a seamless tool for work". (2)

The messy practices of sensing technologies are also explored in the work of Antti Oulasvirta in when "Users do the Ubicomp". Oulasvirta argues that ubicomp can be viewed from two distinct perspectives, on one hand there is the avant garde of ubicomp that gets presented at conferences, a conceptualization that draws on visions from Mark Weiser and others. On the other hand is what she describes as "the real ubicomp" a massive non-centralized agglomeration of devices, connectivity, electricity means, applications, services and interfaces, as well as material objects such as cables, meeting rooms and support surfaces that have emerged anarchically. In the EVO this also includes other agents such as nonhuman animals, plants, forests, rivers, fences, muddy puddles and cow feaces.

These infrastructures are fragmented, and across practices, technologies are lashed together (Dourish and Bell 1). Oulasvirta argues that this often means that technologies are affected by seemingly remote factors. This is apparent in the EVO where everyday practices are affected by policy, funding, laws on data storage, fragmented data sets, theft of equipment and the energy of non-human forces, such as sediment contaminating readings or an owl's wing blocking the webcam. In some ways the ecologies of the EVO are as complex, as the ecologies it seeks to 'observe'.

From 'Sensemaking' to Sensation

One of the key themes in ubicomp and earth observation is that of ''Sensemaking'' through computation. In the case of earth observation the term draws on the HCI definition (Russell, Stefik, Pirolli, & Card) and is used to describe "making sense of the world using information technology". As described in a special issue for ACM "'Sensemaking' involves collecting, organizing and creating representations of complex information sets, all centered on the formation and support of mental models involved in understanding a problem that needs to be solved" (Pirolli et al, 1).The ACM journal cites examples of such problems including "understanding a health problem to make a medical decision, understanding the weather to make a forecast and intelligence analysis to identify strategic threats" in the case of the EVO, the problem to be understood is that of water pollution and climate change "the EVO faces the challenge of finding and making sense of environmental data" (evo-uk.org). In the positivist paradigm, 'Sensemaking' is premised on understanding through discovery. The positivist understanding of ''Sensemaking'' in much computing literature leads to a focus on the algorithms and technologies of sensing. The notions of "collection" and "organization" can be recognized as prevalent in the literature and in the technologies developed for earth observation.

The concept of 'Sensemaking' is deeply embedded within the regime of the computational universe as the engineering of remote sensor networks and the positivist conceptualization of 'Sensemaking' continuously inform each other in a series of feedback loops. As Kathryn Yusoff explains an 'understanding of how sense is enrolled into our habits of thought and theories of materialities is crucial if we are to create new practices of sensations and new sensibilities" (2) In the positivist framework the desire to make-discover the world positions the 'thing' being sensed in this case as an object rather than a process. It perpetuates a human-centered understanding of the 'environment' which is recognized within these schemes as passive, discoverable and accessible. Environmental sensing in this paradigm assumes that 'nature' exists in discrete units, units which can be measured, organized and made sense of. 'Sensemaking' becomes an important part of the computational regime, and in itself a way to articulate other activities. So much so that even citizen scientists become rebranded as "Sensemakers" human bodies extending the sensor network, such as in the website http://sensemake.rs for their "air quality egg project".

This particular 'Sensemaking' approach to remote sensing obscures what is revolutionary about the complex dynamic of environmental sensing and big data.Which is not simply a development of remote sensing and data crunching, but is as research from Post Humanities suggests (notably Chun, Gabrys, Hayles and Hansen) the overlapping or imbrication of technics and sensation. This overlapping can be understood as Gabrys describes as significantly extending the distribution of sensation (5) and collective becoming.

Collective Life

In the particular case of the EVO, computation is part of the reconfiguration of entities, the formation of space for collective life and the organization of communities. A common theme in post-humanities work on Earth Observation is the conceptualization of

Image 2 : Cow address 1: Automated image from a Bushnell motion detector camera, (2012)

sensing as a form of questioning, a codely call to an active agent rather than the observation of a passive subject (Bratton & Jeremijenko 21 , Bassett in Jones 200). This might also be described in terms of computation as questions thrown across a space in the form of energy and a response bounced back (200). In Basset's work remote sensing is approached through vision and touch through the network, remote sensors are explored as an assemblage that make it possible to touch a surface to interrogate it from a distance, without being in direct contact with it. However, Bassett argues that this touch is asymmetrical and without haptic clues. For Basset the significance of remote sensing is not in terms of the information, the messages that the remote sensing interactions carry, but instead the 'affect' they have. It is the not the message (meaning) but the energy (affect) that is sent and received that provokes a response. In this paradigm sensing is a process of affect.

In 'Sensing an Experimental Forest' Gabrys (2) invokes the theoretical perspective of Isabelle Stengers on Alfred North Whitehead to discuss the composition of sensing as a merging of experiment and experience. Gabrys considers sensors not as ''Sensemaking' tool" "sensing something out-there" but instead as devices that make present and interpretable ecological processes. (2). Gabrys describes computational process as drawing together "experiencing entities" (2) that inform new arrangements of environmental sensing. These new arrangements are the new kind of science of big data, one which is fragmented, contingent, distributed "new worldings". Gabrys reconceptualises the biophysical world as an active entity which becomes present through technological arrangements, rather than a passive object awaiting measurement.

Image 3 : Cow address 2 : Catchment science, management and stakeholder participation

Worldly Configurations

In the EVO the computation of 'nature' provides an intimate, pervasive and profound reconfiguring of bodies and processes (both human and non-human). Computation is an entanglement of apparatus and entities. Understood through Barad's agential realism, computation does not allow us to observe the earth neutrally, nor does it only constrain what we see, rather it "helps produce and is part of" the earth-body it images ("Meeting the Universe"101). The thoroughly distributed, networked and embedded multitudes of computational entities from which Earth observation emerges give the world a specific material form, creating 'specific worldly configurations which in turn make

knowledge' ("Posthumanist Performativity" 393). The processes effect "what's real and what's possible, as some things come to matter and others are excluded, as possibilities are opened up and others are foreclosed" (ibid) .

Who, and what, participates in the computational worldings of earth observation is a question of ethical, political and ecological urgency. It concerns Haraway describes as "who and what are to be forged" ("staying with the trouble"). For Haraway the forging "is the biological cosmopolitical practice of articulating bodies to other bodies" (ibid) the importance is that these practices are done with care so that significant others might flourish".

Exploits and Hacks

The promise of ubiquitous computing, remote sensing, environmental observation has been to make the 'invisible visible' (Cuff & Hansen 2). The whole purpose of these systems is to script some sense of order into the world (Bratton "Post Oil World" 8). The layering of measurement, observation, listening, speaking, of big data and cloud computing, creates a possibility space of information on how wordly systems perform and relate (8). To monitor the earth through remote sensing has an impact on culture that is similar in scale and complexity as the invention of the microscope (Hansen 2). To model (through the use of distributed computing power) the interrelationships of complex ecologies, is to "open up the complexity and agency of worlds we could not imagine" (ibid). Earth Observations claims to expand vision-making and, as a result, make new domains of sensation accessible to human experience. The promise of making the invisible visible positions the 'thing' being sensed/made visible as an object. It perpetuates a human-centered understanding of the 'environment' which evokes schemes as passive, discoverable and accessible.

Haraway describes this as a political practice. In the emerging knowledge systems of contemporary earth observation, there is a similar question of how we regard the material practice of computing and the way we labor on, exploit and interact with nature. What is at stake is participation within nature and the collective productions of meaning and affect. As Barad would say what is in question is the nature of 'nature' (67). How we are 'done, undone or redone' ("staying with the trouble") through our collective becomings of worlding in the "conjoined flesh of multispecies tangles". (ibid)

A material account of sensing technologies highlights a particular tension with the promise of making visible the invisible. As Chun explains, the idea that information [computation] makes the invisible visible is in conflict with the actual operations of computation. As, for "computers to be a machine that makes things 'transparent', the fact that they 'compute', that they generate images, models and texts, rather than merely represent or reproduce what exists elsewhere must be forgotten" (1).

However, this does not mean that we must assume that the 'computation of nature' is an interpretation, is an illusion of a world that cannot be accessed. Because as Kirby suggests we are well-aware that data is indicative, that it "throws up nodes of reference that effectively correspond" (Latour 24 cited in Kirby 81).The process of articulation is very different to the act of making the 'invisible visible'. The articulation of experiencing entities in computational systems emerges through intra-actions, entanglement between component parts entities, between the 'measured object' and the 'measuring device'" (Barad 337). If we reconsider the participation of

living matter in computational ecologies as not just something which is 'sensed', 'measured' 'written', or even 'written with' but rather as itself, simply writing, then how might we enact worldings that care for, learn with and from the 'Animal-Hacker'? How might we think with the 'Animal-Hacker' to rethink the roles of non-human participation in practices of earth observation, computation and collective becoming?

Image 4 :Animal Hacker: Owl intervention: Automated image from timelapse webcam, Eden DTC (photo courtesy of Eden dtc)

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BACK TO THE FUTURE IN A PLACE CALLED AMERICA: ANCIENT LOGICS, MEDIA AND TECHNOLOGIES

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Introduction

Our media and current technologies are the result of a global form established by Western thought. This thought, as in many parts of the world was imposed particularly in The New Spain in the discovery by Christoph Columbus in the late 16th century. Before the European contact, pre-America had a different way of thinking to the West and therefore a different development and understanding of concepts such as media, technology, time, body and space. On one hand the official history shows a pre-Columbian poor picture in technological developments, but on the other hand archaeological discoveries demonstrate an illuminated past with a more sustainable and different form of "hight technology." To get closer to this form, we have to consider the worldview of pre-Columbian cultures as the central matrix for their technological developments. The aim of this research is to extend the pre-Columbian understanding so that we could approach archaeological discoveries and access to alternative forms of knowledge to expand Western boundaries.

Approach

Upon reaching the Americas, Christopher Columbus initially believed that he had arrived at the Asian Islands imagined by Europeans as beyond the Ganges River. This scenario was legalized by the Spanish Crown and Church, who declared themselves landowners of these (imaginary) territories eventually conceived of as New Spain, and, later, America in the name of Americo Vespucio. The Mexican historian Edmundo O'Gorman has argued that America was not discovered, but rather created, molded by Europeans. In this sense, Columbus, in his desire to find new lands, did not arrive in America because America did not yet exist. What Europeans conceived as the New World was thoroughly reshaped by the project called , the New Spain; languages, religion, science, technologies, political concepts like freedom and modernity—all were imported with the intention of wiping out the preexisting civilization. America was newly created as the holy version of Europe and Christianity.

The vast majority of indigenous cultural artifacts found until now, contain some degree of post-Colonialist intervention and much of our comprehensive knowledge comes out of the combination of both purely indigenous and Europeanized artifacts; indeed, it is almost impossible to get closer to their original concepts.

For pre-Columbian Mesoamerican records including the Codex Dresden, indigenous documented their history for over ten centuries before the Spanish colonization by using a more robust paper than the Egyptian papyrus called Huun[1]. Almost ten centuries of knowledge are lost between the Spanish burning and trades, leaving only few invaluable codices.

Mayan media also included stones, buildings, clothing, jewelry, and painted ceramics (the ceramic codex). This multiplicity of media raises the question of whether the Maya dealt with concepts such as media, multimedia, mass media, and information overload. In the Andes, the Inca Empire used a tactile writing system called Quipu. The Inca Quipu of Quechua language Knot, also burned in the conquest of the area, used this complex three-dimensional medium together with a mathematical device called Yupana Inca, a three-dimensional abacus, to form a complete and precise record of events. In theory, the Quipu stores the mathematical data derived from the Yupana. This unusual form of documentation complicates a broader understanding of Inca Empire; therefore,

most historical knowledge is based on post-colonialist codices such as the Murua Codex, dating from 1590 and reedited in the 17th century.

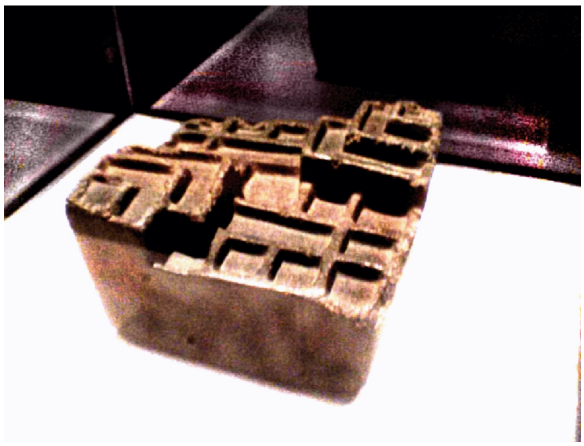
There are many theories for how to understand the Quipu and Yupana, but most fall within mathematical decimal reality, simple mnemonic techniques, or binary theories that are ground on Western reality and production. In 2002, the Italians researchers Nicolino de Pascuale and Mauricio Orlando tested the abilities of the Yupana Inca, performing astronomical calculations, complex mathematical operations, and even applying the Yupana to a modern microprocessor architecture that would result in a much more powerful design than the current binary architecture of the computer. Pascuale and Orlando provided a very interesting approach since they distrust text created by Spanish-colonizers by trying best to find clues hidden in the texts made by natives, patterns in the fabrics, ceramics, planets, constellations and stars.

Archeological evidence, such as the already mentioned Quipu and Yupana, reveals a technological heritage that required much longer than just 400 years of the Inca Empire to develop this technology. Rather, the Tiwanaco civilization, Andean precursors of the Incas, originally developed these highly sophisticated mathematical and astronomical technologies. Their civilization is potentially the oldest on earth; using archaeo-astronomical techniques and investigations of the ruins, the Inca expert Arthur Posnansky hypothesized in 1945 that the Tiwanacotas culture was almost 13,000 years old (Hays 1125).

The technology used to build some of the Tiwanaco ruins is comparable to that used to make the Pyramids of Egypt. Similar to the Pyramids, the Kalassaya temple in Tiwanaco is a megalithic construction, created from stones weighing over 400 tonnes which are stacked against one another in a way that even a paper cannot fit between the fissures, and theoretically is positioned astronomically with the movements of the sun annually. The Tiwanaco ruins, together with similarly sophisticated constructions including the Nazca lines, may have been erected by earlier civilizations, with the Incas inheriting, restoring, interpreting, and adopting them to their contemporary culture. Indeed, when the Spaniards came to the ruins of Tiwanaco in Bolivia for the first time, they asked the indigenous people how they had built the structures; “[t]hey laughed at the question, affirming that they were made long before the Inca reign… .” (Cieza de Leon) Likewise, “Garcilaso de la Vega… gave an account of how, in historical times, an Inca king had tried to emulate the achievements of his predecessors who had built Sacsayhuaman… this boulder was hauled across the mountain by more than 20,000 Indians, going up and down very steep hills… At a certain spot, it fell from their hands over a precipice crushing more than 3000 men.” (233). Based on the study of the forms of the ruins of this lost civilization, the Bolivian theoretical Jorge Emilio Molina proposed a logic called Tetralectics (Tetraléctica) that seeks a new way of understanding indigenous worldview separated from the Old World perspectives. This theory explored a new paradigm, a new logic that points to deal better to the context of pre-colonial times to reinterpret the vestiges and concepts. The Tetralectic theory also suggests that the peoples of the Andean and Amazonian, and possibly Central and North America as well, worked with a logic of four dimensions. In the Tetralectica, ideas are expressed through a union of geometry and reality. Furthermore, rather than the two -dimensional dialectic, four conditions rule their reality: the certain thing, the false thing, the possibly certain thing, and the possibly false thing. It is also related to Tiwanaco because Tawa means in Quechua language “Four”

as well as Tiwana in Aymara language, both languages of the region.

The three-dimensional abacus called Yupana Inca, might had worked under this theory, being his three-dimensionality and different levels the factor of unsertanty, resulting in more complex operations. This could be also related to the fact that pre-Columbian way of writing was metaphoric, open by using images, or three-dimensional forms. This openness in their way of writing, including the possibility or uncertainty factor intuit in the Tetralectics, could give us more ideas on how did the indigenous peoples understood and conceptualized their technologies.



Yupana, Abacus Inca. Image. Wikipedia.

We see the idea of uncertainty of equal form in their way of thinking. For the Aymaras, the cultural group descendant of Tiwanakotas his thought is seminal, as the biological processes where the things are given in events. “Sprout by the life force of the universe and generating divine: Pachamama.”(van Kessel 37). There is not a priori or a control of the results, and everything spins or depends on the relation body and environment.

In the Andean region, scientific methodologies externalizing the body as the object of study cast out psychoactive medicinal practices emphasizing the deep relation between the body and environment, such as Ayahuasca, Peyote, San Pedro, between others. Animism, a source of knowledge was almost exterminated, giving the task of understanding to a technological media, external to the body, minimizing the possibilities of uncertainty.

Scientific drawings, microscopes, telescopes, cameras, and other media are external technologies reaching for an ideal objective entity supposedly providing pure truth and pure control. Nature as a machine was broken in to parts. God, external to nature was his new designer and later human kind, but for indigenous we are not external to nature (Pachamama), we are born of her and we are part of her, everything is interconnected. Knowledge is considered a living organism as the indigenous thinker Fausto Reinaga argued.

Folk taxonomies (folkxonomies) used by the natives lost importance and were replaced by names settle by the conquerors to be considered as illegitimate. Antonio de Ulloa, scientific, military and Spanish writer says, “the Quechua language of the Incas is closer to the language of children.” (van Kessel 37)

Similarly, the way of documentation was standardized, in order to eliminate subjective interpretations on each species found.

> *The scope of study should be limited to copy nature with accuracy, especially in plants, without adding adjectives and attributes with their imagination (Ortega).*

In pre-Columbian times the body was understood as a medium that connects or relates us to knowledge; “So here are people without electron microscopes who choose, among some 80,000 Amazonian plant species, the leaves of a bush containing substances that inactivate an enzyme of the digestive tract, which would otherwise

block the hallucinogenic effect. And they do this to modify their consciousness… when one asks them how they know these things, they say their knowledge come directly from hallucinogenic plants." (Narby 14).

For the church and scientists of that time, this medium of connection called body brings with it uncertainty–an uncertainty principle initially unacceptable and bizarre to the Western objective reality, but nowadays intuited with tweezers by quantum mechanic physicists. So how is it possible that on having the presens of the body (uncertainty), many technological advances have been developed in pre-Columbian times?

Notes

[1] Huun (Maya: "handmade") paper is made from the cortex of the plants *sanseviera* and *typhus latifolia*.

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