Rethinking the Humanities at the age of digital technologies: Ecological and organological perspectives

Digital Studies Seminar – December 9, 2014

Gerald Moore and Erich Hörl

The cybernetization process which emerged in the middle of the 20th Century and the digital evolution of information and communication technologies in the beginning of the 21st Century are today resulting in a growing technicization and reticulation of social and cognitive human environments and to their invasion by media technologies at all scales ("smart" and real-time evolving algorithmic environments, analysis of micro-sensitive data, colonization of daily life by "social networks"). Thus revealing the primary technical condition of human beings, this cybernetic becoming of contemporary environments imply to ask anew the ecological question and to rethink the Humanities, in the context of digital capitalism and hyper-industrial society.

The concept of participation has played a fundamental role in the theoretical attempts to describe the new forms of subjectivity, objectivity and agentivity distributed in these complex technological and reticular environments. This notion, by insisting on the prime and essential role of relationship and mediation, constitutes a pivot toward a forthcoming "general ecology", which allows re-considering the relationship between nature and technique and the associations between human and non-human agents. The possible reassessment of the concept of participation testifies a new conception of meaning, no longer thought from its mental, interior or representative side, but from its constitutive exteriority thanks to the concepts of opening, communication and indetermination. Erich Hörl will aim at revisiting two crucial origins of this "participative" conception of meaning: Lucien Lévy-Bruhl's work about participation in the primitive mentality, and Gilbert Simondon's ones regarding the speculative ecology of participation.

These fundamental transformations in the history of machines and thought demonstrate the link between the technologies of an era and the conception this era has of the human and the world. "Human" would no longer be the name of a steady referent but of a series of cultural projections, generated by the proper technics of each society and the dreams it raises. "Humanity" would not designate an exhaustively definable species but a horizon of possibilities towards which we incline intermittently. This idea of a "promise of the human", always reinvented through its artificial prostheses, will lead Gerald Moore at the heart of general organology, which constitutes a paradigm to think the reinvention of the Humanities at the digital age, and allows understanding their necessary transformation into digital studies.

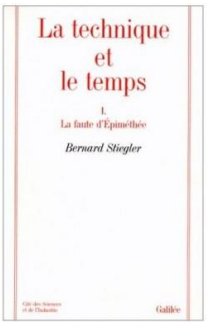
Erich Hörl is a philosopher and a professor of media studies at the Institute for Culture and Aesthetics of Digital Media of University of Leuphana (Germany). Student of Frederich Kittler (theoretician of media and founder of the German "media studies"), specialist of Simondon and the history of cybernetics, he works on the question of the "technological condition" of man, which implies to support a new ecological paradigm. He challenges the role of media theories within this "general ecology", as well as its conceptual, political and institutional consequences.

Gerald Moore is a philosopher and a lecturer in the School of Modern Languages and Cultures at University of Durham (United Kingdom), where he revisits the Digital Studies program, aiming at redefining the political role of humanities and university in the digital era. He is currently working on the redaction of a manifesto for Digital Studies, *The Digital Studies Manifesto*. He is notably interested in the questions of pharmacology and general organology. He is the author of *Politics of the Gift: Exchanges in Poststructuralism*, Edinburgh University Press, 2011, *Bernard Stiegler: Philosophy in the Age of Technology* (forthcoming), and co-director of the collective work *Stiegler and Technics*, Edinburgh University Press, 2013. He is a member of the association Ars Industrialis and of the network Digital Studies, and will present during the *Entretiens du Nouveau Monde Industriel* 2014 a paper on the theme: "Humanities and the computational turn of the hyperindustrial society".

Gerald Moore – The promise of the human

In this conference, **Gerald Moore** relies on the following publications:
- "*Adapt and Smile of Die!* Stiegler Among the Darwinists", in Christina Howells & Gerald Moore, *Stiegler and Technics*. Edinburgh University Press, 2013;
- "On the Origin of *Aisthesis* by Means of Artificial Selection, or the Preservation of Favored Traces in the Struggle for Existence", à paraître in Arne de Boever (ed.), *Bernard Stiegler: Amateur Philosophy*, *special issue of Boundary 2*;
- *The Digital Studies Manifesto*—Thesis 4. The task of the humanities, and of culture in general, is to create and preserve the promise of the human—but this promise is threatened with dissolution by the 'crisis (that is more than a crisis)' of hyperindustrial society.

1/ Understanding the human as a promise



-The status of the "human" in B. Stiegler's philosophy

During the "General Organology" colloquium in November 2014 at Kent University, B. Stiegler affirms that he is not, and never has been interested in the human. He says: "The human is not an interesting question for me". For two reasons, this assertion induced a confusion regarding the status of the human in B. Stielger's philosophy.

1/ First, because of an ambiguity of translation: indeed, the title of the part of *La faute d'Epiméthée* untitled "Qui? Quoi? L'invention de l'homme" has been translated in English by "Who? What? The Invention of the Human". The use of the French word "**homme**" by Stiegler is generally translated in English by "**human**" rather "**man**", in accordance with the fact that English uses the word "human" rather than "man" to refer to the human kind, under penalty of being accused of chauvinism. This translation however compromises the nuance existing in Stiegler's words.

2/ Second, if the status of the human makes problem, it is also because in many ways, B. Stielger is opposed to the anti-humanism characteristic of the poststructuralist tradition (notably Deleuze and Guattari's "inhumanism"), and seems interested in the "**composing**" of human subjectivity rather than in its **deconstruction**.

-**The theory of epiphylogenesis**

Indeed, Stiegler appears as an exception among the philosophers who have given up the idea of a constitutive difference between *Homo sapiens sapiens* and other animals: his theory of epiphylogenesis (conceived as the "différance of the différance") preserves this distinction, asserting that only the members of mankind transmit themselves an **acquired and cumulative experience** through their tools. This distinction does not lead to an anthropocentric position, in so far as it is **empiric** and not **a priori or essentialist**:

-there is no **metaphysical reason** why other organisms could not teach the use of their tools and transmit them to future generations,

-the fact that there is not any collective use and intergenerational transmission of tools among other species is simply a **fact**, more or less established by primatology and paleo-anthropology.

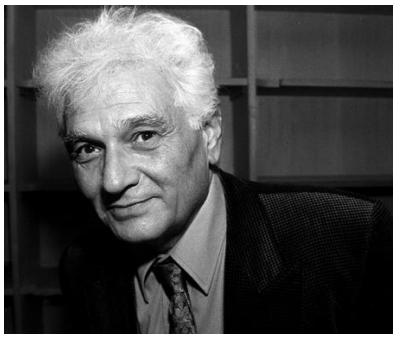
-**Technics open the possibility of man**

However, Stiegler would nuance this point affirming that if other organisms had this **cumulative technical culture**, they would also have a **potential of humanity**. But humanity or agentivity is then understood:

-not as the **exclusive property** of a given biological species

-but as a **horizon of possibility** that can open itself (or not) through technics.

Technics thus does not guarantee agentivity, it only opens its possibility.



Jacques Derrida

-Cultivating the promise of man embodied by institutions

Gerald Moore then proposes to understand the human as a promise, at the sense of Derrida but going further than Derrida himself. Indeed, contrarily to Stiegler, Derrida does not insist on the **fallible** aspect of the promise, which can lose its meaning if it is not adequately **cultivated** and if the institutions that embody it are destroyed. This **collapse of the human as a promise** is what we are today witnessing: this is why an **ecology of the mind** has to be added to the **environmental ecology** and why the **Neguenthropocene** has to reverse the **Anthropocene**.

2/ Being non-inhuman

-Tendency to inhumanity and ability to an intermittent elevation

The stieglerian criticism of humanism applies to the hypostases of "man" as well as "human". In his first works, there is no **essence of humanity** but only **men** in plural: "the most terrifying would be that *the* Man does not exist, it does not exist… There are *men*" (*Technics and time, 2*, 1996).
But thereafter, he is going further since in *Taking care*, he writes that instead of being completely human or completely inhuman, we are predominantly inhuman while possessing **the ability to rise beyond inhumanity**: « *Mais la plupart du temps, nous tendons à ne pas être non inhumains-en acte : nous* tendons *à la non-humanité, entendons ici 'humanité' comme ce qui s'accomplit dans ce que l'on appelle* les humanités » (*Prendre Soin, 2008*). By default, we tend to non-humanity and inhumanity and we tend to stay what we are: instinctive animals, creatures of habits.

-**Technics offers the possibility to transgress automatic behavior**
Technics gives us the possibility to escape such behaviors: non-humanity can then become a **state of exception**, an **intermittent elevation** beyond **automatic behaviors** that are biologically or technically determined.
Being non-inhuman then appears as a moment of **transgression**, during which we use our technics to invent a future that differs from the entropic tendencies of present. But using technics is not sufficient to make this transgression, since this one also can lock us up into **instinctive models of behavior** (making us stupid) as it is the case with the specific technics of contemporary consumerism.

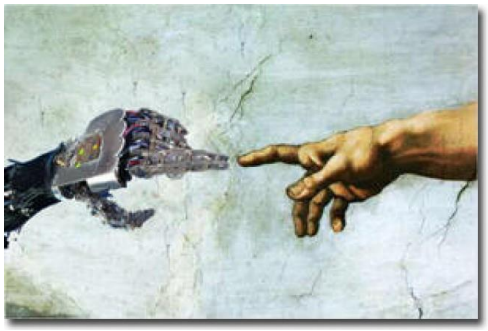
-Phase shift and acting out: co-individuation of the "who" and the "what" and future projection
This moment of non-inhumanization happens when the use of tools leads to a **phase shift** of the user's internal milieu: a re-organization of the neuronal circuit occurs in the brain, while physiological organs are de- are re- functionalized by the tools and cultural organizations that govern their use. This phase shift between physiological organs and brain is also a différance, a transductive re-interpretation or a co-individuation of the "who" by the "what" and of the "what" by the "who". But this phase shift in itself is not sufficient: it has to culminate into an "**acting out**" during which the adoption of tools by the "who" allows it to reinvent itself as well as its surrounding milieu, by projecting a **future** alternative.

-The "différance of the différance": transformation of the experience field
B. Stiegler distinguishes two regimes of evolving difference, respectively belonging to **natural selection** and **artificial selection**:
-when a foot becomes a hand, it is retroactively re-interpreted as a proto-organ of prehension which allows the organism to adapt itself and survive
-when a tool is added to the hand, the hand is also re-interpreted, freed or re-invented through the technics (e.g. the organ of prehension becomes available for writing)
These transformations of the experience field also lead to a **reinvention of subjectivity**: by learning to use a tool, one internalizes the new horizon of possibility it opens. With the différance specific to

the artificial selection (which constitutes the "différance of the différance"), the "**who**" and the "**what**", the subject and the tool, constantly reinterpret mutually themselves. The delegation of the **function of the physiological organ** to a **technical prosthesis** produces a **differentiation of the experience**: the physical sensation enters in a circuit with the technics, resulting in the production of feelings, meanings and aesthetic values, and submitting *aesthesis* to a symbolic and logic horizon. This **technical submission of aesthetic** gives rise to the **life of the mind** or **noetic soul**, of which the existence consists in the transgression of biological and automatic behavioral models.

-**The promise: the field of the possible interpretations of a trace**

Derrida's concept of différance expresses the **opening of the meaning of a sign** to its numerous interpretations: at each occurrence, the meaning is always able to be understood in a new way. This **movement of différance** gives rise to what Derrida describes as a **promise**: i.e. the set of meanings associated to a concept in the course of its historical iterations. The meaning of a concept (such as friendship or democracy) is thus always able to be retroactively **reanimated**, **transformed and reinterpreted** and cannot be reduced to a **homogeneous and identical essence**: it is always **in excess** regarding the attempts of seizure and control of the meaning. The space-time of the différance thus constitutes a **field of possible interpretations** which leads to a "messianic power" of the concept. This "messianic power" depends on the capacity of the concept to resist both the **enforcement of a determined meaning** and **too vague a use**: the promise of democracy becomes meaningless if its meaning is overdetermined – for example by the criteria of American foreign policy – but also if the concept is used indifferently to describe any political regime. There is indeed a **pharmacology** of the promise. However, if Derrida underlined the potential toxicity of the promise, he did not insist on the fact that a promise can collapse, if something happens to the **technical objects** and **social organizations** which serve as memory supports.



-Humanity: the consistency of a promise of emancipation

It is possible to think the messianic power of the promise in terms of quasi-causality, as its capacity to operate as a **still-to-come object of desire**, for which we build a future that breaks with the entropic tendency of present time.

Gerald Moore suggests that "**man**" is nothing more than such a quasi-causal promise: a fragile dream we project when our body de- and re-functionalize itself through a self-differentiation in the course of its coupling with technical prostheses.

The idea of humanity would then be to understand:

-not as a **species of existing beings**,

-but as the **fragile consistency of a promise of emancipation**

3/ From clocks to (negu)entropy: the promises of man

-Conceptions of man: a series of projections inspired by technologies

It is striking to remark that the **conceptions of man or humanity** vary with the evolution of **technical objects** in the course of history: one may understand the human as a **series of technological projections**, historically situated and generated by the technical culture and the dreams to which it gives rise.

→For example, Canguilhem shows that the Cartesian theory of dualism is rooted in the forms of his time's technics, and that the use of the models of clocks, watches or watermill is only an example among others of the explanation of organisms thanks to machines.

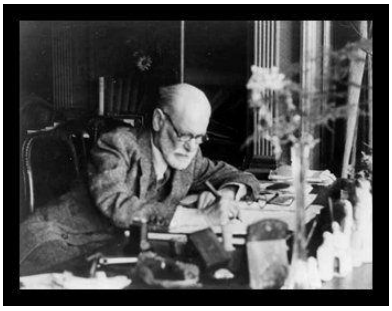
Ludwig von Bertalanffy

→ Ludwig von Bertalanffy emphasizes the role played by levers and pumps in the understanding of the functioning of the heart and lungs by the Enlightenment, the one played by the thermodynamic machines in the industrial era, as well as the one of homeostatic regulation cybernetic machines in the conceptions of animal and human organisms.

→ The steam engine model gave rise to Emile Zola's conception of "entropic bodies", which inspires Claude Bernard's notion of internal milieu.

→ John Bowlby's works about instinct are inspired by thermostats operation systems and missiles built during the Cold War.

→ Freud has learnt from a variety of technical and technological objects to explain the functioning of the psyche: for example, the theory of sublimation displayed by 1915 is known as "Freud's hydraulic model" and, in a 1925 note, Freud thinks the unconscious and memory based on the Wunderblock (magic-pad), on which writings erased on a superficial sheet let traces on a wax tablet.



Sigmund Freud

→ More contemporary models of man can also be linked to recent technologies: the idea of "connectome" in neurosciences – according to which the individual identity lies in the specific plan of an individual's own synaptic connections – seems to coincide – and maybe to have been designed from – the arrival of distributed networks in IT.

→ Even the conceptions of human collective consciousness – from Auguste Comte's idea of "religion of humanity" to Michael Bauwens' conception of the evolution of sharing, going through Teilhard de Chardin's "noosphere" – owe their inspirations to the information and communication technologies specific of their age – information circulating through the press and printing and then transported by cables to the speed of light.

Teilhard de Chardin

-The status of technological models to think the human

Sciences do not aim at using these technologies as models which would progressively lead them to the underlying truth of humanity: on the contrary, each new model implies the **discovery of new complexities** and preserves an **irreducible element of interpretation**. All these models of man are **pharmacological**, both healing and toxic.

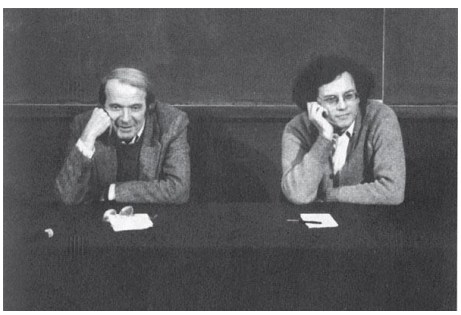
-Pharmacology of the cybernetic conception of man

The vision of man as freed from cybernetics is typical of this pharmacological character: it tends to understand man as a **cybernetic machine learning**. But if this vision can be read as an attempt to minimize entropy, it monopolizes current speeches and supports the contemporary fetishization of productivity. It is opposed to a **neguentropological** vision of man, which would conceive him as a technical animal able to use his tools to break with his imposed environment.

-Digital studies: a reinvention of humanities

Once reconsidered as **digital studies** – i.e. as studies of the reinvention of the non-inhuman animal through his technics – one of the goals of humanities should be to analyze the relationship between:
-the typical **technics** of a time
-the **conceptions of man** to which they gave rise
Humanities would also aim at reinterpreting the diverse conceptions of ethics in terms of entropy and neguentropy.

Conclusion



Deleuze et Guattari

This technically rooted idea of a promise of the human can be criticized thanks to Deleuze and Guattari's arguments, according to which the point is not to become human but rather to become inhuman and the humanities should rather become "inhumanities". However, this assertion of a "**becoming inhuman**" comprises a risk: it could tend to be confused with a dehumanizing bestialization, which would consider as its only perspectives our ability to adapt, to resist and survive. The real challenge then would less be to give up the concept of humanity than to be worthy of this promise of the human, which gradually debases itself.

This status of promise is fundamental. Promises are always threatened with destruction through the clearance of **supports of externalized memory** which constitute the culture itself: if the cultural traces are destroyed, then the promises to which they give rise also vanish.

The concept of democracy can only be meaningful today in so far as the gleam of its promise externalizes itself into political institutions. Similarly, if the institutions which embody the promise of the human fail to prescribe what is at stake in this promise (especially by upholding a vision of human as a hyper-adaptable and flexible being), then its horizons vanish. If **University**, as the place of expression of a **promise of self-invention of man through his technics**, is sacrificed and devoted to train workers adaptable to the current state of the market, then it also risks betraying its promise. It is necessary to **reinvent the institutions which embody or externalize the promise of the human**, to protest against its degradation.

Erich Hörl –
Other beginnings of participative sense culture: Wild media, speculative ecologies and transgressions of the cybernetic hypotheses

In this lecture, Erich Hörl analyzed the notion of **participation** which lies at the heart of a new sense culture carried by the **contemporary technological condition**. Once underlined the extension of the participative paradigm in numerous fields today, he tried to think its theoretical foundations through an interpretation of the concept of participation in Lucien Lévy-Bruhl's anthropology and in Gilbert Simondon's "general ecology".

1/ Participation in contemporary technological culture

a) Extension and pharmacology of participative model

Last few years, participation has been an omnipresent phenomenon in programming industries as well as social media and networks. We are in a zone of total participation, where participation itself has become a commodity, where it is followed and traced to form the fundamental operation of a new economy – not only the one of data extraction, but also of **realities extraction**. Indeed, it is only through participation that **behaviors-tracing data** can be produced.

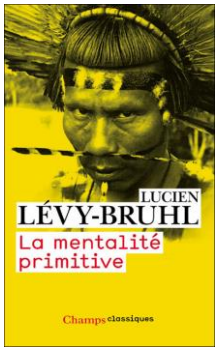
This apparently unprecedented extension of participative models is not without giving rise to sharp debates and contestations, pointing out a total loss of participation and a contemporary desindividuation, a symbolic misery and even a psychic and collective proletarization, an exploitation by algorithms, a monopoly of social media and new behaviorist economies. In this pharmacological frame, with its new expansion and toxicities, participation appears as a **total cultural fact** of the contemporary condition: it certainly is, at least, at the center of forthcoming governmentalities and the heart of the new political economy. The general injunction is to participate, raising the reaction of critical theories. A **pharmacology of participation**, deciding between its progresses and its new poisons, is therefore necessary and urgent to build a technological humanism.

b) A deep transformation of sense culture

But Erich Hörl's talk here focuses on another ground: for him, the ascent of the word "participation" to the status of fundamental category indicates a deep transformation of our sense culture – a transformation he has already begun to describe as a **technological displacement of meaning** of which he now explores how it appears or disappears in its center. So the main thesis of his reflection is to say that, in the technological displacement of meaning, **participation itself has become our meaning**, and this meaning in turn is no longer representative but participative.

The concept of participation is very old. It has been constitutive of western condition since the platonic teaching of *méthèxis* and the participative theory of soul and poetics in Aristotle; but the 20th century went hand in hand with an unprecedented reexamination of this traditional concept. Two theoretical scenes indeed announced the movement we are today witnessing: **Lucien Lévy-Bruhl**, whose impossible hermeneutics of an affective participation in wild media began in the 1910s and culminated at the end of the 1930s, and **Gilbert Simondon**, who undertook at the end of the 1950s and 1960s a speculative ecology of psychic, vital and psycho-collective individuation processes.

2/ Wild Media: the regime of affective participation



a/ Lévy-Bruhl: a radical ontology of communication

Shortly before his 81st birthday, Lucien Lévy-Bruhl wrote in his *Diaries*: « *Pour la mentalité primitive,* **être c'est participer**. *Elle ne se représente pas d'être dont l'existence se conçoive sans y faire rentrer d'autres éléments que ceux de ces êtres mêmes. Ils sont ce qu'ils sont en vertu de participations : le membre du groupe humain, par participation au groupe et aux ancêtres ; l'animal ou la plante par participation à l'archétype d'une espèce, etc. Si cette participation n'était pas donnée, déjà réelle, les individus n'existeraient pas* » (1949).

Such assertions are strong and outrageous; at least to a platonic hear. The **a-representative** constitution of the world and experience in wild media such as Lévy-Bruhl reconstituted it, where there is a constant communication between all kinds of entities which cannot be deciphered by the means of traditional methods – whether Aristotelian, Cartesian or Kantian – precisely sketches out a **radical ontology of communication** or more precisely, a **total *being-in-communication***. His analyze opens up an **ontogenetic** way of thinking. Lévy-Bruhl's central conceptual creation, through which he already asks the question of the technological displacement of meaning, is nothing but the concept of participation.

b/ Participation as an affective regime

Participation, as defined by Lévy-Bruhl in is 1931 book ***Primitive and the Supernatural***, is an "**affective category**", which cannot be "**thought**" but only "**felt**". He writes in his *Diaries*: « en tant qu'affective – ce qu'elle est éminemment – la participation n'a rien à voir avec les conditions logiques ou physiques de la possibilité ». Lévy-Bruhl's participation is then mainly an affective regime, and as Erich Hörl puts it, "it is an **a-personal feeling**, a feeling without feeler, an impersonal sensation that affects in manifold ways – a **dance of relations**". Each participation is **unique**, it is only real in so far as it is felt by each individual, who in turn is constituted by participation. This is precisely what makes participation the "general element of the affective order". Wild media, the first conceptual image of the ontogenetic theory here initiated by Lévy-Bruhl, lies at the **junction of communicative forces**: he writes, "***exister, c'est participer à une force***". Participating means, in this case, being doomed to take part to the uninterrupted flow of information and forces between entities and things, **being exposed to – and constituted by – participation**. It is not only a surreal ontology of undefined, impersonal and anonymous forces, but a genuine **cosmo-ontology**, which perfectly corresponds to the contemporary tele-technological realities.

3/ Speculative ecology of participation

a/ Gilbert Simondon: a reflection upon participation in a contemporary frame

What began to get virulent in Lévy-Bruhl's minor ecologies of wild participation is transformed with Gilbert Simondon into a real speculative program, nearly quarter a century later. **Canguilhem** and **Merleau-Ponty**'s student, Simondon stands at the convergence point of their respective programs – i.e. Cangiulhem's thought of the living, of the living individuation and of technology as an expression of life; and late Merleau Ponty's wild ontology and natural philosophy. As a philosopher, naturalist and technologist, Simondon created a **general ecology of participation** which includes the microphysical, living and psycho-collective individuation processes, as well as the evolution of technical objects, as multiple processes of participation. According to Montebello's formula (2012), "In a way, Simondon invents after Platoon a new theory of participation". With a movement similar to what **Cassirer** described as an **epistemological turn** from the notion of **substance** to the one of **function**, Simondon indeed gives up the "ontological privilege" of the "constituted individual" typical of the western tradition.

b/ Pre-individual reality. Technological state and general ecology of nature

If a machine – an already evolved individual, that takes over from the tool and the instrument – is already in itself a "relational reality" (Château, 2008), and if technology as a network of machines and open objects becomes the condition or associated milieu of our individuation, then the so-called contemporary relational technologies – that Erich Hörl holds for the paroxysm of the "third cybernetics" – are today prolonging the failover to a **relational reality era**. Erich Hörl's central thesis is here that Simondon unveils a philosophy of nature, which builds the general meaning of nature through **each individual's participation to the pre-individual reality**. Participative nature, where communication and participation flow, correspond to the **cybernetic state of nature** (Moscovici, 1968) – in this point our technological era of nature meets its theorization: the **general ecology**.

At the heart of this Simondonian general ecology of participation lies the speculative construction of a pre-individual level of reality. This is the source and matrix of all existence and all individual, of all individuation system – whether physical, living or psycho-collective – as connected *through* participation. The **pre-individual** background is the **reserve of potentiality**, the **origin of all becoming**, in which each participation process as such takes part. This pre-individual level of reality constitutes for Simondon a pre-physical and pre-living nature, only understood in a non-romantic way at the sense of the **Presocratics' *physis***. Simondon thus writes: « *On pourrait nommer nature cette réalité pré-individuelle que l'individu porte avec lui, en cherchant à retrouver dans le mot de*

nature la signification que les philosophes présocratiques y mettaient ». The Simondonian concept of being is always more than one, more than unity and identity: it is what **goes beyond**, a power of **mutation, excess and transformation**.

c/ Conclusion: contemporary becoming of Simondon's general ecology

What about today? If our sense culture is switching towards participation, then this movement covers much more than the varied collaborative practices. It is related to our image of thought, it involves a new image of thought and becomes an issue of the re-conceptualization of knowledge; it requires a speculative construction of nature, a reexamination of the collective and politics. It means that participation has to be explored as a **total fact of sense culture, specific to our technological condition**. Simondon understood this problem very early, and tried to solve it through his speculative ecology of participation.

Significantly, even the Simondonian theory of participation recognizes a magic-animist scene, which sheds light on the neo-animism of our eco-technological reality and the recent reconstruction of animist subjectivities and ontologies, from Guattari to Tim Ingold and Eduardo Viveiros de Castro. Simondon could not guess to what extent the cybernetic structuration of the Earth and the world, of perception, thought and experience, would be realized by data processing ubiquity, algorithmic environments, multi-scalar networks and sensorial environments. But the technological networks of his time yet stroke him as returns to a first pre-subjective and pre-objective structure – i.e. magic – displayed by Lévy-Bruhl. As Simondon puts it, « *En prenant la dimension des réseaux, la réalité technique retourne en fin d'évolution vers le milieu qu'elle modifie et structure (ou plutôt* texture*) en tenant compte de ses lignes générales ; la réalité technique adhère à nouveau au monde, comme au point de départ, avant l'outil et l'instrument* ». To follow him, it would be worth mapping the new media-technological textures as well as the different levels and layers of participation that happen in our cybernetic state of nature.