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Thank you for agreeing to do this interview. Can you tell us a little about yourself, your philosophical project, and who has influenced your work?

I was born in 1967 in Casablanca, while my father was a teacher of mathematics in a French school in Morocco. My father could have had a real influence on my philosophical commitment, but in fact one can only mention a strange coincidence: my father discovered the work of Gilbert Simondon with passion when I was in the womb of my mother. He never spoke to me about Simondon, and I discovered Simondon's work on my

own in 1989—the year Simondon died. Like many other philosophers of the new generation, I was introduced to Simondon's thought through reading *L'individuation psychique et collective* (1989), because I never had read my father's copy of *Du mode d'existence des objets techniques* (1958). I was 22 years old, and my personal project was that of what I still call "Philosophical Relativity": a global but *open* system, including a "philosophy of ontological information" (first "dimension"), a "philosophy of economical production" (second "dimension"), and a "philosophy of axiological education" (third "dimension"), based on a new and *pluri*-dimensional "philosophical semantics" inspired by the very late Wittgenstein (the author of *On Certainty*). I had already worked specifically on Hegel, Husserl, and Heidegger, and I realized that Simondon's ontology of individuation/information was incredibly close to my own project in the "ontological *translation*" of the new "philosophical semantics": the "philosophy of ontological information". The difference, however, was that in Simondon, ontology of individuation/information is "*first* philosophy".

In a few words, can you describe Gilbert Simondon's philosophical project?

Simondon was *first* a philosopher, who had been trained in the context defined by the *French* philosophy of the *École Normale Supérieure de Paris* (Jean Hyppolite, Jean-Toussaint Desanti), *La Sorbonne* (Gaston Bachelard, Georges Canguilhem, Martial Guéroult) and the *Collège de France* (Henri Bergson, Maurice Merleau-Ponty). As I often say, one can consider Simondon's ontology (that is to say: his main thesis on *L'individuation*) as the re-writing of Henri Bergson's vitalist cosmogenesis by the light of Gaston Bachelard's anti-substantialist and non-vitalist epistemology. But it is also a resumption and a transformation of the ontology exposed by Maurice Merleau-Ponty in *La structure du comportement*: the "orders" of the physical, the vital, and the "human" become in Simondon the non-substantial "régimes d'individuation" – the physical, the vital, and the "transindividual" or psycho-social – and the possible phases of each being. Here, a new conceptual logic takes place that is governed by the notions of "relation", "phases", and "orders of magnitude", as I recall in my new book *Simondon*. Obviously, Georges Canguilhem, Teilhard de Chardin, Raymond Ruyer, and the physicist Louis de Broglie have also had a role in Simondon's theoretical creation, but one can say that this creation is here too original to consider their role as decisive.

Now, this new genetic ontology – or "ontogenesis" – theorizes therefore the technical object – in *Du mode* – as what has a fortiori [par excellence] a genesis: contrary to the living being, the technical object will never be "concrete", says Simondon, and that's why it doesn't have an individuation as "absolute genesis" and "origin", but only a "concretization" that becomes "individualization" at the industrial age of machines. Here, the (never

complete) genesis of the individual is *already* an entire phylogenesis through a "*lignée*" of technical objects. But the new "technical individual" that is the industrial machine must be *now* recognized as *autonomous in labor*, and this "liberation of machines" will make possible the "liberation of humans" if the "psycho-physiological alienation" of workers is suppressed by means of such a technical autonomy. Here is the real and socio-political *terminus* of Simondon's thought, because his theory of the "phases of culture" – in the last Part of *Du mode* – is in fact a new problematic, which is a very strange manner to integrate technology in culture. I analysed the ambiguity of this theory, which is in fact a paradoxical *genetic eidetic* rather than a history of culture.

Why did you write four books on Simondon?

When I discovered Simondon's thought in 1989 by reading *L'individuation psychique et collective*, the coincidence with my own project was so strong that I decided to dedicate my future thesis to the exploration and the explanation of this theory of individuation: Simondon had to be (re)discovered and admired – it was certain to me – and I knew I was connected enough with his thought to reveal his genius by a meticulous investigation of his very difficult and ambitious work. The four books are only the consequence of the success of the thesis. First, in 2005, I published the two volumes that my thesis had made possible: *Penser l'individuation: Simondon et la philosophie de la nature* and *Penser la connaissance et la technique après Simondon*. This work was very technical, and therefore the French philosopher Dominique Lecourt, who is director of a collection at the *Presses Universitaires de France*, asked me to write a short and pedagogical book on Simondon's two theses. So, I wrote *Simondon ou l'encyclopédisme génétique*. But the discovery of Simondon's work was growing, and the year I published this book the French editor *Les Belles Lettres* asked me to write an introduction to the entire work of Simondon, including his courses on perception, imagination and invention, and opening on his legacy. I accepted this proposal, because I never had written a global explanation of Simondon's entire work.

What is new in your reading of Simondon?

My reading of Simondon is, first of all ,the result of a methodology that I called "exegesis" – and not "interpretation" – for two reasons: first, in 2000 there still wasn't any meticulous investigation of the "philosophical totality" composed by *L'individuation à la lumière des notions de forme et d'information* and *Du mode d'existence des objets techniques*; second, such an attempt had to reveal the paradoxes that had made Simondon's text obscure—and the

difference, in a "transductive" thought, between these paradoxes and what is called "contradiction".

My methodology was therefore based on a respect for the double meaning of the French formula "*penser au milieu*": it means both "to think the individual in relation to its milieu" and "to think being at its center". I assert that these are the two "laws" of Simondon's philosophical system, and the titles of the first and second chapters of my new *Simondon* (*Les Belles Lettres*, 2014) explicitly play with the double meaning of the formula "*penser au milieu*". But one must know that the two laws are more complex than it seems, and the two volumes that came from my thesis tried to explain the real complexity of Simondon's thought. Indeed, to think the individual in relation to its milieu means *in fact* that *such a milieu is itself the result* of the process of individuation, and *that's why* there is a relation between the individual and its milieu. Here is the subtlety of the first "law". The second law ("to think being at its center") means *in fact* that *all classical oppositions and alternatives in Western philosophy are illusions* and have to be overcome.

My first aim, in *Penser l'individuation*, was to show that this overcoming of classical oppositions is absolutely central in Simondon. And the best new scholars (Morizot, Duhem) consider that it is my first contribution to Simondon's exegesis. The other major points were: the rivalry with hylomorphism in the conquest of a transversal thought; his triple rehabilitation of *philosophy of nature*, of *analogy* as philosophical mode of thinking, and of *technology* as cultural dimension. I came then to the theme of encyclopedism in my book *Simondon ou l'encyclopédisme génétique*, where I proposed to name "difficult humanism" the new humanism that Simondon wanted to found through a "new encyclopedism". These two terms – "genetic encyclopedism" and "difficult humanism" – have had a real success among young French researchers. But they name a program as much as a complete doctrine. Here is Simondon's specificity: he opens as much as he establishes.

Why do you think interest in Simondon is growing now, almost 25 years after his death? Why has it been delayed?

There are obviously several reasons, both to this growing interest and to this delay. Sometimes the two facts are absolutely connected: for example, in 1958 the animal wasn't recognized as a subject, and Simondon's discourse on this question was therefore too original. Today, one can understand him! It is the same thing about the "informational ensembles" that he announced as a new age of technology that would make possible a real transindividuality. His epistemology of contemporary physics and his theory of "technical concretization" were very difficult for philosophers. And in France, for example, Marx and Heidegger were considered until 1990 as having entirely explored the question of technology. But there is another

reason for the delay of his reception: as I explained at the end of my recent *Simondon*, his ontology of individuation/information had been exploited early and transformed/masked by the metaphorical discourses of philosophical "celebrities" like Gilles Deleuze, first, and Edgar Morin, second. I must add a very simple fact: *L'individuation psychique et collective* was published for the *first* time in 1989: the year he died. This publication is also the origin of the real discovery of his work.

Who else has written on or about Simondon, other than yourself? Who are the other "Simondonians?"

As one can guess, lots of Deleuzians (in France, in the USA and Canada, as well as in Argentina and Brazil) are Simondon's readers. But the *real attention* to the *precise* and *conceptual* meaning of Simondon's discourse is *very* rare: the Deleuzians, for example, don't understand that *in Simondon* the *analogical* conceptualization is *not* a *metaphorical* conceptualization. Obviously, most of them are philosophers of art or politics, rather than science or ontology. As a "continental" philosopher, I do want to say here that analytic philosophers are *not* the only ones who know that it is difficult, for a Deleuzian, to be rigorous!

Now, the first good work on Simondon was the book written by Muriel Combes: *Simondon, individu et collectivité* (P.U.F., 1999). But Muriel Combes is not what one can call a "Simondonian", and her book tried to derive from Simondon a Deleuzian-Foucaldian political thought. Nevertheless, one can say that she understands Simondon's complexity, even if she *really* explores neither his epistemology – which is the *nucleus* of his ontology – nor his technology.

The other serious books are – at least for their historical erudition – those of the Italian researchers Giovanni Carrozzini and Andrea Bardin, and some young French researchers have also published good papers in *Cahiers Simondon*: Vincent Bontems, Ludovic Duhem, Baptiste Morizot, Sacha Loeve. My German friend, the Professor Erich Hörl, also is a "Simondonian" who tries to do rigorous work on Simondon. I'm happy to have him on the team of the CIDES (International Centre for Simondon Studies), that I created in January 2014 in order to gather all these serious researchers.

Where do you situate Simondon in the history of French philosophy, and philosophy more generally?

I recently published online a short paper dedicated to the first part of your question. One can *at least* consider Simondon as a *decisive transition* between Bergson/Bachelard/Merleau-Ponty – his three major sources, as I mentioned above – and Deleuze/Morin/Stiegler, because of his influence on

the latter three (I note that only Stiegler recognizes clearly the scale of his debt!). In my paper, I recalled the precise links they have to him. But in my point of view, Simondon is more than a decisive transition.

Since Kant, there have been at least two clear philosophical "lines": Fichte/Husserl/Heidegger/Derrida and Schelling/Bergson/Simondon/ Deleuze. Stiegler is precisely the one who considers Simondon as the complementary – that is to say: opposite in some respects – thinker with Heidegger. And he tries to construct a creative synthesis of their respective inquiries.

My own *Philosophical Relativity* will reveal, I hope, that Simondon can inspire another philosophical System – I recall that such a system will be *both* global and *open* – since one is able to see how to articulate his ontology with a new philosophical semantics that is inspired by the later Wittgenstein (and through a dialogue with Habermas, inheritor of a third "line" that is this one: Hegel/Marx/Horkheimer/Habermas).

As you mentioned, you recently released Simondon *with* Les Belles Lettres. *What did you intend to accomplish with this book?*

As I already said, it was an opportunity to explore Simondon's entire work: especially the two courses on perception and imagination, and also to expose the different uses and legacies of his thought—from Marcuse/Baudrillard/Deleuze to Morin/Stiegler and my own project on *Philosophical Relativity*. But there was another aim, developed in the third chapter: to explain Simondon's project of a "Universal Cybernetics", and its difference with Wiener's cybernetics, in light of Simondon's *re*-interpretation of the "crisis of meaning"—called a "crisis of culture" by him. The first and second chapters were respectively dedicated (a) to the pedagogical explanation of Simondon's main concepts by the light of his first "law" (see question four above) and (b) to the pedagogical explanation of Simondon's implicit dialogs with a few great continental thinkers by the light of his second "law".

In your previous book, Simondon ou l'encyclopédisme génétique, *you develop the theory of "genetic encyclopedism". Could you explain this concept?*

The theme of encyclopedism is developed by Simondon in the second Part of *Du mode d'existence des objets techniques*, because in Simondon's view encyclopedism is linked to humanism. Simondon wanted to found a new humanism – that I called a "difficult humanism", in opposition to the "easy humanism" that was rejected by Simondon (see questions four and five above) – through a new encyclopedism. But such an encyclopedism is in fact elaborated since *L'individuation à la lumière*, and not only in *Du mode*. Indeed,

the new encyclopedism does not only have the aim of founding a new humanism that would be able to integrate technical reality into culture (first aspect of the "difficult humanism"). It also has the aim of integrating human reality into living reality, and this second aspect of the "difficult humanism" needs a new form of *unification* of the sciences that theorizes the *"becoming psycho-social" of the living*: here is another function of the new encyclope*dism*, beyond all simple encyclope*dy*.

Why, then, is this encyclopedism *genetic*? In Simondon's view, the answer lies in the question: there is no really universal encyclopedism if the perspective is not genetic. *Du mode* explains that point, but by applying it to the study of technologies. *L'individuation à la lumière* constructs an encyclopedist unification of the sciences that is the privilege of philosophy. But there is another and more fundamental reason to build a *genetic* perspective: to *explain* reality means to refuse to *presuppose* it as substantial! Edgar Morin is here an inheritor of Simondon, because his own perspective is also both encyclopedist and genetic.

You are the editor of Cahiers Simondon. *Who else is involved in that project, and do you see it growing? Where is it heading?*

I created the *Cahiers Simondon* in 2009, thanks to *the Maison des Sciences de l'homme de Paris-Nord* and the editor Jean-Louis Déotte. My friend and collaborator Vincent Bontems and I decided to establish each year a selection of papers, among them those that were presented at the *Atelier Simondon*, derived by Vincent at the *École Normale Supérieure*. But some papers come from proposals that are external to the *Atelier Simondon*. Sometimes, I have to translate – or at least to correct –the papers in the French version. My *criterium* for the selection is only the seriousness of the work of exegesis, and that's why it is difficult, each year to have enough papers. Interest in Simondon is really growing in the world, but the seriousness of Simondon's studies is still a dream. Young researchers that are not French get an excuse: there is no English translation of Simondon's books, and some partial translations are quite wrong. I must add that when I worked with Arne De Boever, I corrected the American translation of *L'individuation psychique et collective*—I spent many hours on this passionate and *voluntary work*. But Nathalie Simondon asked the editor to publish the *entire* text of *L'individuation à la lumière des notions de forme et d'information*. Therefore, I have no news concerning the translation of *L'individu et sa genèse physico-biologique*. I just know that *this* part of the main thesis is the most difficult: its translation into English needs one or two philosophers of *science* that are also *specialists* on Simondon! Now, about the current translation of *Du mode d'existence des objets techniques*: here again, the information we have had does not make us optimistic.

Can you explain Simondon's relationship to cybernetics and information theory? What kind of interest did he have in the work of Norbert Wiener?

As I explained in my recent *Simondon*, his dialogue with Wiener is certainly the central dialogue within his entire work: Simondon's ontology of individuation and his philosophy of technology – and of its status within culture – are both based on a new reflection on information. Simondon's "Universal Cybernetics" is less a cybernetics than a strange effort to construct *a systemic concept of information*. One knows that systemics, as the creator of the General Theory of Systems Ludwig Bertalanffy said, is based on thermodynamic notions, while cybernetics is based on the notions of retroaction first, and information second—through the Theory of Information. Simondon seeks a new concept of information that would be systemic. There are many technical aspects of this epistemological and ontological debate that I can't expose here. But I recall that: (a) in his philosophy of technology, Simondon wants to think the *evolution* of technical objects, in analogy with living beings. There is a symmetry here with Wiener, who wanted to think living beings in analogy with machines. In Simondon's view, such a perspective remains reductionist; (b) *Du mode* also dialogues with Wiener about the way and the consequences of the integration of technology into culture. Wiener is everywhere, even in the final socio-political views!

Simondon helped organize a conference in Royaumont in 1962 about the concept of information in contemporary science, where he invited and spoke with Norbert Wiener and Benoit Mandelbrot, among others. Can you tell us a little about that meeting?

It was a very strange meeting. It offered both the occasion to introduce Wiener's work in France and the occasion to create a dialogue between specialists of different disciplines on the problem of information. But such a dialogue didn't take shape: Simondon was perhaps the only one able to create bridges, but he didn't intervene in the discussions! His only intervention was dedicated to the genesis of this conference.

What do you think needs more attention in Simondonian scholarship? What has been under-studied?

Many aspects of his thought have already been studied, and my own work has for example explored: (a) the French philosophical context in which Simondon developed his thought; (b) the epistemological nucleus – named "the realism of relations" – of his ontology, especially in the long and difficult chapter entitled "Forme et substance"; (c) his critical hermeneutics of hylomorphism in the masterly first chapter of this main thesis; (d) his thought of the three "*régimes d'individuation*"; (e) his thought of the technical

object and of its progress in the First Part of the secondary thesis; (f) his strange theory of the "phases of culture" in the Third Part of this secondary thesis. Now, Simondon's aim for a new humanism through a new encyclopedism (Second Part of the secondary thesis) is more a task for us than a complete doctrine! I can say that the most *global* contribution of my own work concerns *Simondon's triple unification of Nature, Technics, and Culture* – beyond the classical oppositions made by philosophers before him – and more generally his obsessive overcoming of all alternatives that been developed in the history of Western philosophy.

Even if I also dedicated some analysis both to his dialogue with the Theory of Information in the two theses and to his theory of the "cycle of images" in *Imagination et invention*, I would be very happy to read long analyses on these two questions. I await the publication of Ludovic Duhem's thesis, which was dedicated to Simondon's "techno-esthetics" and theory of the image. But the best thesis in the new generation was certainly that of Baptiste Morizot, which was dedicated to the problem of chance in the process of individuation as a process of information. I promised both of them a preface, not only because they are very good, but also because they are friends of mine and members of the CIDES!

Other works are dedicated to the notion of technology in Simondon (Vincent Bontems/Sacha Loeve) and to a Simondonian interpretation of nanotechnologies (Sacha Loeve). I guess my German friend Erich Hörl will explore the question of what he calls a "general ecology" after Simondon.

You are one of the only individuals who are trying to bring Simondon into conversation with thermodynamics and quantum physics. Can you tell us a little about the relation there?

This question is directly linked to the fact that Simondon's ontology has for its nucleus the epistemology of "the realism of relations". Indeed, such an epistemology has an ontological value: the interpretation of thermodynamics and quantum physics – and of the Einsteinian concept of "field" also – lead us to claim that "at the beginning, there is relation", as Bachelard already said in his anti-substantialist dialogue with the Western philosophical tradition. Simondon constructs the global ontology that Bachelard, as philosopher of physics, always refused to construct! The "physical schemes of thought" become in Simondon "paradigms", thanks to the irreducibility of such a *contemporary* physics to the "*modern* physics"that became a "classical physics". Here, there is no risk of reductionism when one wants to think the different "*régimes d'individuation*", thanks to the capacity of the new physics to found a philosophical theorization in which *individuality paradoxically grows by demultiplying relations*. Edgar Morin will remember this lesson.

Do you think Simondon's ontology can be described as "informational"?

Absolutely! Simondon claims that "information is the formula of individuation", and one of my central aims was to show how Simondon organized a *"conceptual reform"* whose *center* is the *re-foundation* of the concept of information: in Simondon, "information" means "genesis", because he wants to theorize *a non-hylomorphic taking-form*. Information is *both* the genesis of the object and that of the subject: the concept of information is the key to the *ontological mode* of overcoming the opposition subject/object. That's why I said above that when I discovered Simondon's ontology, I immediately realized that it was perfectly adequate for my own project of an ontology as "philosophy of information"—that is to say, in my project of Philosophical Relativity, as a uni-dimensional translation of "philosophical semantics" (this having to reveal the three dimensions of meaning: ontological information, axiological education, and economical production, before translating itself into each dimension).

What is Simondon's position on the division between subjects and objects? What is the special place he holds for technics?

The very famous "question of the division between subject and object" has *at least two* meanings, and Simondon helps us to see this duality.

First, this question means: "*Who* is a subject rather than an object, and are there objects that *help* the subject *to be a subject*?". Subjects are here defined as *individuals that are able to think*, and Simondon's originality is to recognize animals as subjects, thanks to their *affectivity*. But animals are bio-*psychic* subjects (animals that are bio-*social*, like ants, are not subjects but only *organs* of a "society"-*individual*), and they rarely reach the "transindividual" or bio-*psycho-social* "*régime d'individuation*". Here is the occasion to bring in the object: a *human* being invents *technical objects* that are the "supports" and the "symbols" of "a human relationship that is the model of transindividuality" (*Du mode*). Stiegler, who is using both Simondon and André Leroi-Gorhan, has radicalized this view by trying to show that *artefacts in general* are the "prosthesis" – in a new meaning of the word – of the human mind and the *conditions* of all psycho-social "interiority": they are the "crutches of mind", and they make the living being able to *overcome itself* and to become a *really psycho-social* being. One can already see this in a few primates, I would add.

Secondly, this question means: "can philosophy know *by objectifying* its objects of thought, like the sciences *do*?" This is *the fundamental question of twentieth century continental philosophy*. And Simondon's *original mode of overcoming* the opposition between the philosophizing individual and its objects is the following: "knowledge of individuation (that is THE "object"

of Simondon's ontology) *is itself individuation of knowledge*". My *own* mode of overcoming this duality with my objects of thought will be a radicalization of Simondon's questioning: after the later Wittgenstein, I would like to think "representations" (I call them "meanings") as *individuating themselves in me, thanks to their irreducibility to the only dimension of* ob-*ject of knowledge—or of information*. Here is the problem of my new "philosophical semantics". And I assert that this discourse can then be *translated* into *each* dimension of meaning: the ontological translation will give Simondon's ontology as a "philosophy of *information*"! Other translations will give a "philosophy of economic production" and a "philosophy of axiological education", because the two other *dimensions* of meaning are production and education.

What are you currently working on?

I'm writing two new books, which *prepare* the future treatise of Philosophical Relativity. One of them is an essay entitled *La Société de l'invention*. The aim is to introduce the *multi-dimensional structure* of the future open system, *via* elements of reflection which are bound to four central questions of our time.

The second book will be entitled *Philosophie du paradoxe*. The central question is here the question of knowledge, but already linked to the *archi-reflexive* problem of the *status of the philosophising individual* that will be posed by Philosophical Relativity. The aim is to overcome the new alternative (growing since 1960) between (a) what I call the "enlarged scientism" of analytic philosophy and (b) the "new tendancial relativism" of continental philosophy. These notions get a precise meaning here. The book is also a response to Meillassoux's *Après la finitude*, because I want to show that all the so-called "thoughts of finitude" were contradictory—by *absolutizing the philosophizing individual without the knowledge of himself*. Therefore, there is *not yet* any meaning to claim an "*après finitude*": Philosophical Relativity will be the *non*-contradictory thought of finitude, and the problem it will pose will concern the individual Meillassoux as a philosophizing individual.