

Parrhesia—A Journal of Critical Philosophy
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On Gilbert Simondon

EDITORS' INTRODUCTION

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On the occasion of the forthcoming publication of the English translation of Gilbert Simondon's *L'individuation psychique et collective*, *Parrhesia* is publishing its first themed issue, dedicated entirely to Simondon. Given the importance of Simondon's thought for continental philosophy, this translation constitutes nothing less than an event within the journal's field of interest—not just because of Simondon's importance for the work of, most notably, Gilles Deleuze, but also because of his central place in the work of contemporary philosophers such as Bernard Stiegler, whose essay on Simondon and Heidegger is published here in English for the first time.

Although the issue explores Simondon's position within the field of continental philosophy—the significance of his work for philosophers such as Stiegler, Paolo Virno, and Brian Massumi, as well as for continental philosophy at large (Simondon's relation to Heidegger, Marx, Nietzsche), the issue is first and foremost dedicated to the exploration of what one could call “Simondon *without X*”, with X standing in for any of the philosophers already mentioned. Indeed, because the translation of Simondon into English is only now beginning to happen, the English-speaking public has read Simondon largely through the lens of other thinkers, whose minds have conditioned their readers' familiarity with Simondon. But Simondon is of course not Deleuze, nor Stiegler, nor Heidegger, nor Marx: by publishing here two English translations of texts by Simondon, *Parrhesia* intends to return attention to Simondon's own thought, a return that the future publication of his work into English should help facilitate.

The first translation—“The Position of the Problem of Ontogenesis”—is an excerpt from the forthcoming *Psychic and Collective Individuation*. It constitutes the first part of Simondon's introduction to that book and presents a good introduction to his ontology: its theory of individuation, the pre-individual, the transindividual and ontogenesis. The second translation—“Technical Mentality”—is an essay that was published after Simondon's death, in a special issue (co-edited by Jean-Hugues Barthélémy) of the journal *Revue Philosophique*. This essay represents the second, major strand of his thought: technical objects. Taken together, these two translations can provide an introduction to Simondon's work as a whole.†

EDITORS' INTRODUCTION

The difficulty that we have had in putting this issue together can illustrate the importance of promoting English-language work on Simondon. There is a great deal of interest in his work, in particular on philosophy blogs, yet that interest hasn't, as yet, manifested itself as extensive scholarly exegesis. With this publication, *Parrhesia* would like to signal its interest in work related to Simondon's thought, and invite readers to contribute their essays, articles, or reviews related to Simondon or to aspects of his thought to future issues of the journal. *Parrhesia* would like to thank the publishers of the French originals of Simondon's work (Aubier and the Presses Universitaires de France) as well as the University of Minnesota Press for generously granting us permission to publish the English translations. We would also like to thank the Melbourne School of Continental Philosophy for funding translation rights. Finally, thanks are of course due to our contributors and translators for their commitment to the issue ■

† "The Position of the Problem of Ontogenesis" previously appeared as "The Genesis of the Individual" (trans. Mark Cohen and Sanford Kwinter) in: Crary, Jonathan and Sanford Kwinter, eds. *Incorporations*. New York: Zone, 1992. 296-319. The translation included here differs from this earlier version on a number of counts and features an extensive footnote apparatus by Jean-Hugues Barthélémy. "Technical Mentality" is published here in English for the first time.

THE POSITION OF THE PROBLEM OF ONTOGENESIS

Gilbert Simondon, translated by Gregory Flanders¹

The reality of being as an individual may be approached in two ways: either via a substantialist path whereby being is considered as consistent in its unity, given to itself, founded upon itself, not created, resistant to that which it is not; or via a hylomorphic path, whereby the individual is considered to be created by the coming together of form and matter. The self-centered monism of substantialism is opposed to the bipolarity of the hylomorphic schema. However, there is something that these two approaches to the reality of the individual have in common: both presuppose the existence of a principle of individuation that is anterior to the individuation itself, one that may be used to explain, produce, and conduct this individuation. Starting from the constituted and given individual, an attempt is made to step back to the conditions of its existence. This manner of posing the problem of individuation--starting from the observation of the existence of individuals--conceals a presupposition that must be examined, because it entails an important aspect for the proposed solutions and slips into the search for the principle of individuation. It is the individual, as a constituted individual, that is the interesting reality, the reality that must be explained. The principle of individuation will be sought as a principle capable of explaining the characteristics of the individual, without a necessary relation to other aspects of being that could be correlatives of the appearance of an individuated reality. *Such a research perspective gives an ontological privilege to the constituted individual.* It therefore runs the risk of not producing a true ontogenesis--that is, of not placing the individual into the system of reality in which the individuation occurs.

What is postulated in the search for the principle of individuation is that the individuation has a principle. Within this very notion of principle, there is a certain characteristic that prefigures the constituted individuality with the properties it will possess once it is constituted. The notion of a *principle of individuation* arises, in a way, from a genesis in the other direction, a *reversed* ontogenesis: in order to account for the genesis of the individual with its definitive characteristics, one must suppose the existence of a first term, the principle, which contains that which will explain why the individual is an individual, and which will account for its *ecceity*. However, it would remain to be shown that the ontogenesis could have a first term as its first condition: a term is already an individual, or, in any case, something individualizable and that can be a source of *ecceity* and can turn itself into multiple *ecceities*. Anything that can serve as the basis for a relation is already of the same mode of being as the individual, whether it be an atom, an external and indivisible particle, *prima materia* or form. An atom can enter into relation with other atoms via the *clinamen*. It constitutes thereby an individual, viable or not, through the infinite void and the becoming without end. Matter can receive a form, and within this form-matter relation lies the ontogenesis. If there were not a certain inherence of the *ecceity* to the atom, the matter or the form, there would be no possibility of finding a principle of individuation within these realities. *Looking for the principle*

*of individuation in a reality that precedes individuation itself means considering the individuation as merely ontogenesis.*² The principle of individuation is thus a source of *ecceity*. In fact, both atomist substantialism and the hylomorphic doctrine avoid directly describing ontogenesis itself; *atomism* describes the genesis of that which is composed, such as the living body, which has but a precarious and ephemeral unity, arising from a chance encounter and dissolving again into its elements once the cohesive force that binds it in its compound unity is overpowered by a greater force. The cohesive forces themselves, which can be considered as the principle of individuation of the compound individual, are placed into the structure of the elementary particles that exist for all of eternity and that are the true individuals. In atomism, the principle of individuation is the very existence of the infinity of atoms: it is always already there at the moment thought attempts to grasp its nature. The individuation is a fact: for each atom, individuation is its own given existence, and for each compound, individuation is the fact that it is what it is--a compound--by virtue of a chance encounter.

According to *the hylomorphic schema*, on the contrary, the individuated being is not already given at the moment one considers the matter and the form that will become the *sunolon*.³ We do not witness the ontogenesis because we always place ourselves before the taking-form that is the ontogenesis. The principle of individuation is not, therefore, grasped in individuation itself, as an operation, but in that which this operation needs in order to exist--that is, a matter and a form. One supposes that the principle is contained either in the matter or in the form, because the operation of individuation is not considered capable of *providing* the principle itself, but only of *putting it to work* [mettre en oeuvre]. The search for the principle of individuation occurs either before individuation or after individuation, depending on whether the model of the individual is physical (for substantialist atomism) or technological and vital (for the hylomorphic schema). However, there is *an obscure zone* in both cases that masks the operation of individuation. This operation is considered as something to be explained and not as that in which the explanation must be found--hence the notion of the principle of individuation. The operation is considered as something to be explained because thought tends towards the complete individual being that must be understood, going through the stage of individuation in order to come to the individual after this operation. There is, therefore, the presupposition of the existence of a temporal succession: first there is the principle of individuation, then this principle undertakes an operation of individuation, and finally the constituted individual appears. If, on the contrary, one supposes that individuation does not only produce the individual, one would not attempt to pass quickly through the stage of individuation in order to arrive at the final reality that is the individual--one would attempt to grasp the ontogenesis in the entire progression of its reality, and *to know the individual through the individuation, rather than the individuation through the individual*.

We would like to show that the search for the principle of individuation must be reversed, by considering as primordial the operation of individuation from which the individual comes to exist and of which its characteristics reflect the development, the regime and finally the modalities. The individual would then be grasped as a relative reality, a certain phase of being that supposes a preindividual reality, and that, even after individuation, does not exist on its own, because individuation does not exhaust with one stroke the potentials of preindividual reality. Moreover, that which the individuation makes appear is not only the individual, but also the pair individual-environment.⁴ The individual is thus relative in two senses, both because it is not all of the being, and because it is the result of a state of the being in which it existed neither as individual, nor as principle of individuation.

Individuation is thus considered as the only ontogenesis, insofar as it is an operation of the complete being. Individuation must therefore be considered as a partial and relative resolution that occurs in a system that contains potentials and encloses a certain incompatibility in relation to itself--an incompatibility made of forces of tension as well as of the impossibility of an interaction between the extreme terms of the dimensions.

The term "*ontogenesis*" receives its full sense if, instead of giving it the restricted and derived meaning of the genesis of the individual (in opposition to a greater genesis: that of the species for example), one uses it to designate the character of becoming of being, that by which being becomes, insofar as it is, as being. The opposition between being and becoming can only be valid within a certain doctrine that supposes that the

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very model of being is a substance. However, it is also possible to suppose that becoming is a dimension of being corresponding to a capacity of being to fall out of phase with itself, that is, to resolve itself by dephasing itself. *Pre-individual being is being in which there is no phase*; the being in which individuation occurs is that in which a resolution appears through the division of being into phases. This division of being into phases is becoming. Becoming is not a framework in which being exists, it is a dimension of being, a mode of resolution of an initial incompatibility that is rich in potentials.⁵ *Individuation corresponds to the appearance of phases in being that are the phases of being*. It is not a consequence placed at the edge of becoming and isolated; it is this operation itself in the process of accomplishing itself. It can only be understood on the basis of the initial supersaturation of being--without becoming and homogeneous--that then structures itself and becomes, bringing forth individual and environment, according to becoming, which is a resolution of the initial tensions and a conservation of these tensions in the form of structure. In a certain sense, it could be said that the only guiding principle is *that of the conservation of being through becoming*; this conservation exists through the exchanges between structure and operation, proceeding by quantum leaps through successive equilibriums. In order to think individuation, being must be considered neither as a substance, nor matter, nor form, but as a system that is charged and supersaturated, above the level of unity, not consisting only of itself, and that cannot be adequately thought using the law of the excluded middle. Concrete being, or complete being--that is, preindividual being--is being that is more than a unity. Unity, which is characteristic of the individuated being, and identity, which permits the use of the law of the excluded middle, do not apply to preindividual being, which explains why the world cannot be re-constructed *post factum* with monads, even by adding other principles such as that of sufficient reason, so as to order them into a universe.⁶ Unity and identity only apply to one of the phases of being, posterior to the operation of individuation; these notions cannot help us discover the principle of individuation; they do not apply to ontogenesis understood in its fullest sense, that is to say, the becoming of being as a being that divides and dephases itself by individuating itself.

Individuation has not been able to be adequately thought and described because previously only one form of equilibrium was known--stable equilibrium. Metastable equilibrium was not known; being was implicitly supposed to be in a state of stable equilibrium. However, stable equilibrium excludes becoming, because it corresponds to the lowest possible level of potential energy;⁷ it is the equilibrium that is reached in a system when all of the possible transformations have been realized and no more force exists. All the potentials have been actualized, and the system having reached its lowest energy level can no longer transform itself. Antiquity knew only instability and stability, movement and rest; they had no clear and objective idea of metastability. In order to define metastability, the notions of order, potential energy in a system, and the notion of an increase in entropy must be used. In this way, it is possible to define this metastable state of being--which is very different from stable equilibrium and from rest--that Antiquity could not use to find the principle of individuation, because no clear paradigm of physics existed to help them understand how to use it.⁸ We will try therefore to first present *physical individuation as a case of the resolution of a metastable system*, starting from a *system state* like that of supercooling or supersaturation, which governs at the genesis of crystals. Crystallization provides us with well-studied notions that can be used as paradigms in other domains; but it does not exhaust the reality of physical individuation.

One can also suppose that reality, in itself, is primitively like the supersaturated solution and even more completely so in the preindividual regime, where it is *more than unity and more than identity*, capable of expressing itself as a wave or as a particle, as matter or energy, because every operation, and every relation within an operation, are an individuation that divides, or dephases, the preindividual being, while at the same time correlating extreme values and the orders of magnitude that were primitively without mediation. The complementarity⁹ would be the epistemological repercussion of the primitive and original metastability of reality. Neither *mechanism* nor *energetism*, which are theories of identity, can completely account for this reality. Field theory, particle theory, and the theory of the interaction between fields and particles, are all still partially dualist, but *they lead to a theory of the preindividual*. In a different manner, quantum theory grasps *this regime of the preindividual* that goes beyond unity: an exchange of energy occurs through elementary quantities, as if there were an individuation of energy in the relation between the particles, which can be considered in a sense to be physical individuals. This could perhaps

explain how the two new theories that have remained incompatible to this day--quantum mechanics and wave mechanics--could finally converge. They could be viewed as *two manners of expressing the preindividual*, through the different manifestations where it intervenes as preindividual. Below the continuous and the discontinuous, there is the quantum and the metastable complement (the more than unity), which is the true preindividual. The necessity of correcting and coupling the basic concepts in physics is perhaps due to the fact that *the concepts are adequate only to individuated reality*, and not to preindividual reality.

The paradigmatic value of the study of the genesis of crystals becomes apparent as a process of individuation: it would permit the macroscopic study of a phenomenon that is based on system states belonging to the micro-physical domain, which is molecular and not molar. It would grasp the activity that *is at the limit* of the crystal being formed. Such an individuation is not the meeting of pre-existing form and matter that exist as previously constituted, separate terms, but a resolution springing from a metastable system that is filled with potentials: *form, matter and energy pre-exist in the system*. Neither form nor matter suffices. The true principle of individuation is mediation, generally supposing an original duality of orders of magnitude and the initial absence of interactive communication between them, followed by communication between orders of magnitude and stabilization.

At the same time that a potential energy (the condition of a *higher* order of magnitude) actualizes itself, a matter organizes and divides itself (the condition of a *lower* order of magnitude) into individuals structured into an *average* order of magnitude, developing itself by a mediate process of amplification.

It is the energetic regime of the metastable system that leads to and supports crystallization, but the form of the crystals expresses certain molecular or atomic characteristics of the chemical and constitutive species.

In the domain of the living,¹⁰ the same idea of metastability may be used to characterize individuation; but in this case, individuation no longer occurs, as in the physical domain, only in an *instantaneous*, brusque and definitive manner that is like a quantum leap, leaving behind it a duality of environment and individual, with the environment being impoverished by the individual that it is not and with the individual no longer having the dimension of the environment. This type of individuation also exists for the living being as an absolute origin; but it is accompanied by a perpetuated individuation, which is life itself, according to the fundamental mode of becoming: *the living conserves within itself a permanent activity of individuation*. It is not only the result of individuation, like in the case of the crystal or the molecule, but it is the theater of individuation: not all of the activity of the living is concentrated at its limit, such as with the physical individual. Within the living itself, there is a more complete regime of *internal resonance*, one that requires permanent communication and that maintains a metastability that is a condition of life. This is not the sole characteristic of the living, and the living cannot be reduced to an automaton that maintains a certain number of equilibriums or that searches for compatibilities between different exigencies, according to a complex equilibrium formula composed of simpler equilibriums; the living is also the being that is the result of an initial individuation and that amplifies this individuation--an activity not undertaken by the technical object, to which cybernetics would otherwise compare the living, in terms of its function. There is, in the living, *an individuation by the individual* and not only a functioning that would be the result of an individuation completed once and for all, as if it had been manufactured; the living resolves problems, not only by adapting itself, that is to say by modifying its relation to the environment (which a machine can do),¹¹ but by modifying itself, by inventing new internal structures and by completely introducing itself into the axiomatic of vital problems.¹² *The living individual is a system of individuation, an individuating system and a system individuating itself*; internal resonance and the translation of the relation to itself into information are in this system of the living. In the physical domain, internal resonance characterizes the limit of the individual that is in the process of individuating itself; in the living domain, this resonance becomes the criterion for the individual in its entirety insofar as it is an individual; it exists in the system of the individual and not only in that which the individual forms with its environment. The internal structure of the organism is not only the result (as with a crystal) of the activity that occurs and of the modulation that occurs at the limit between the interiority domain and the exteriority domain. The physical individual, perpetually de-centered, perpetually peripheral to itself, active at the limit of its domain, does not have a veritable interiority; the living individual, on the contrary,

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does have a veritable interiority because individuation carries itself out within the individual; the interior is also constitutive in the living individual, whereas in the physical individual, only the limit is constitutive, and that which is topologically interior is genetically anterior. The living individual is contemporary to itself in all of its elements, which is not the case for the physical individual, which carries something of the past that is radically past, even when it is still growing. Within itself, the living is a nexus of informative communication; it is a system within a system, containing *within itself* a mediation between two orders of magnitude.¹³

Finally, it is possible to put forward the hypothesis, which is analogous to that of the quanta in physics and also to that of the relativity of potential energy levels, that individuation does not exhaust all of the preindividual reality, and that a regime of metastability is not only maintained by the individual, but carried by it, so that the constituted individual transports with itself a certain associated charge of preindividual reality, animated by all of the potentials that characterize it. An individuation is relative, just like a structural change in a physical system; a certain level of potential remains, and further individuations are still possible. This preindividual nature that remains linked to the individual is a source for future metastable states from which new individuations can emerge. According to this hypothesis, it would be possible to *consider every true relation as having the status of being, and as developing itself within a new individuation*. The relation does not spring up from between two terms that would already be individuals; it is an aspect of the *internal resonance of a system of individuation*, it is part of a system state. This living, which is both more and less than unity, carries an *inner problematic and can enter as an element into a problematic that is larger than its own being*. Participation, for the individual, is *the fact of being an element in a greater individuation*, via the intermediary of the charge of *preindividual reality that the individual contains*, that is, via the potentials that the individual contains.

In this way, it becomes possible to think of the relation that is interior and exterior to the individual as participation, without referring to new substances. The psychic and the collective are constituted by individuations that occur after the vital individuation.¹⁴ *The psychic is the continuation of the vital individuation in a being that, in order to resolve its own problematic, must itself intervene as an element of the problem by its action, as a subject*. The subject can be conceived of as the unity of being as an individuated living being, and as a being that represents its actions through the world to itself as an element and as a dimension of the world. The vital problems are not closed upon themselves; their open axiomatic can only be saturated by an undefined series of successive individuations that engage ever more of the preindividual reality and that incorporate it into the relation to the environment. Affectivity and perception integrate themselves in emotion and in science, both of which suppose the making use of new *dimensions*. However, the psychic being cannot resolve its own problematic within itself; its charge of preindividual reality--at the same time that it individuates itself as a psychic being that goes beyond the limits of the individuated living and incorporates the living into a system made up of world and subject--enables participation in the form of a condition of individuation of the collective. Individuation in the form of the collective turns the individual into a group individual, linked to the *group* by the preindividual reality that it carries inside itself and that, when united with the preindividual realities of other individuals, *individuates itself into a collective unity*. Both individuations, the psychic and the collective, are reciprocal to one another; they allow for the definition of a category of the transindividual, which can be used to explain the systematic unity of the interior (psychic) individuation and the exterior (collective) individuation. The psycho-social world of the transindividual is neither purely social nor the interindividual; it supposes a veritable operation of individuation from the basis of a preindividual reality, linked to the individuals and capable of constituting a new problematic with its own metastability. It expresses a quantum condition, correlative to a plurality of orders of magnitude. The living is presented as a *problematic being* that is at the same time superior and inferior to unity. To say that the living being is problematic is to consider becoming as a dimension of the living; the living is according to its becoming, which operates a mediation. The living is both agent and theater of individuation; its becoming is a permanent individuation, or rather, *a series of outbreaks of individuation* advancing from one metastability to another. The individual is thus neither substance nor a simple part of the collective: the collective intervenes as a resolution of the individual problematic, which means that the basis of the collective reality is already partially contained in the individual, in the form of the preindividual reality that remains linked to the individuated reality; that which we generally consider to be a *relation*, because of the mistaken hypothesis of the

substantialization of individual reality, is in fact a dimension of the individuation through which the individual becomes. The relation--to the world and to the collective--is a *dimension of individuation* in which the individual participates starting from the *preindividual reality* that individuates itself step by step.

Psychology and the theory of the collective are therefore linked: it is ontogenesis that shows what participation in the collective and what the psychic operation that is conceived of as the resolution of a problematic are. The individuation that is life is conceived of as the discovery, in a conflictual situation, of a new axiomatic that incorporates and unifies--into a system containing the individual--all of the elements of that situation. In order to understand psychic activity within a theory of individuation as the resolution of the conflictual character of a metastable state, we must find veritable ways in which metastable systems are instituted in life. In this sense, both the notion of the *adaptive relation of the individual to its environment*,¹⁵ and the critical notion of the relation of *the knowing subject to the known object* must be modified; knowledge is not constructed through abstraction starting from a sensation, but in a problematic manner starting from an *initial tropistic or taxonomic unity, a pairing of sensation and tropism, an orientation of the living being in a polarized world*. Here again we must detach ourselves from the hylomorphic schema; there is no sensation that would represent a matter that would be an *a posteriori* given for the *a priori* forms of sensibility. The *a priori* forms are an initial resolution--via the discovery of an axiomatic--of the tensions that result from the confrontation of the *primitive tropistic or taxonomic unities*; the *a priori* forms of the sensibility are neither the *a priori* nor the *a posteriori* that would be obtained by abstraction, but the structures of an axiomatic that appears in an operation of individuation. In the tropistic or taxonomic unity the world and the living are already present, but the world only figures in it as a direction, that is, as the polarity of a gradient that situates the individuated being in an *indefinite dyad* of which it occupies the median point, and that spreads out from this individuated being. Perception, then science, continue to resolve this problematic, not simply by the invention of spatio-temporal frameworks, but by the constitution of the notion of object, which becomes the *source* of the primitive gradients and which orders them according to a *world*. The distinction between *a priori* and *a posteriori*, an effect of the hylomorphic schema in the theory of knowledge, masks with its central obscure zone the veritable operation of individuation that is the center of knowledge.¹⁶ The very notion of a qualitative or intensive series should be thought according to the theory of the phases of being: it is *not relational*¹⁷ and is not maintained by a pre-existence of extreme terms, but it develops starting from a primitive average state that localizes the living and inserts it into the gradient that gives a direction [sens] to the tropistic or taxonomic unity. A series is an abstract vision of the direction [sens] according to which the tropistic or taxonomic unity orientates itself. One must begin with individuation, with being grasped at its center according to spatiality and becoming, not with an *individual* that is substantialized in front of a *world* that is foreign to it.¹⁸

This same method may be used to explore affectivity and emotivity, which constitute the resonance of being in relation to itself, and which link the individuated being to the preindividual reality that is linked to it, just like the tropistic or taxonomic unity and perception link it to its environment. The psychic is made of successive individuations that allow the being to resolve the problematic states that correspond to the permanent putting into communication of that which is larger and that which is smaller than it.

But the psychic cannot resolve itself at only the level of the individuated being alone; it is the foundation for the participation in a greater individuation, that of the collective; the individual being alone, putting itself into question, cannot go beyond the limits of anxiety, which is an operation that has no action, a permanent emotion that is not able to resolve the affectivity, a test by which the individuated being explores its dimensions of being without being able to go beyond them. *To the notion of the collective, taken as an axiomatic that resolves a psychic problematic, corresponds the notion of the transindividual.*

Such reforms¹⁹ of the notions described above are supported by the hypothesis according to which a given information is never relative to a unique and homogeneous reality, but to two different orders that are in a state of *disparation*;²⁰ information, whether it be at the level of the tropistic unity or at the level of the transindividual, is never available in a form that could be given; it is the tension between two disparate realities, it is *the signification that will emerge when an operation of individuation will discover the dimension according to which two disparate realities may become*

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a system. Information is therefore a primer for individuation; it is a *demand for individuation*, for the passage from a metastable system to a stable system; it is never a given thing. There is no unity and no identity of information, because information is not a *term*; it supposes the tension of a system of being in order to receive it adequately. Information can only be inherent to a problematic; it is *that by which the incompatibility of the non-resolved system becomes an organizing dimension in the resolution*; information supposes a *phase change of a system*, because it supposes an initial preindividual state that individuates itself according to the discovered organization. Information is the formula of individuation, a formula that cannot exist prior to this individuation. An information can be said to always be in the present, current, because it is the direction [sens] according to which a system individuates itself.²¹

This study is based on the following conception of being: being does not possess a unity of identity, which is that of the stable state in which no transformation is possible; being possesses a *transductive unity*, which is to say that it can dephase itself in relation to itself; it can overflow out of itself from one part to another, beginning from *its center*. That which we take to be *relation or duality of principles* is in fact the spreading out of being, which is more than unity and more than identity; becoming is a dimension of being, it is not that which happens to being according to a succession to which a primitively given and substantial being would be subjected. Individuation must be understood as the becoming of being, and not as a model of being that would exhaust its signification. The individuated being is not all of being, nor the first being; *instead of understanding individuation starting from the individuated being, the individuated being must be understood starting from individuation, and individuation from preindividual being*, according to several orders of magnitude.

The intention of this study is therefore to study the *forms, modes and degrees of individuation*, in order to situate the individual in being according to three levels: the physical, the vital and the psychic and psycho-social. Instead of supposing substances in order to account for individuation, we take the different regimes of individuation as the foundation of domains such as matter, life, spirit and society. Separation, hierarchization, and the relations between these domains appear as aspects of the individuation according to its different modalities; that is to say that notions of substance, form and matter are replaced by the more fundamental notions of initial information, internal resonance, metastability, energy potential, orders of magnitude.

However, in order to render this terminological and conceptual change possible, a new method and a new notion are needed. The method consists of not attempting to compose the essence of a reality using a *conceptual* relation between two pre-existing extreme terms, and of considering all veritable relations as having the rank of being. The relation is a modality of being; it is simultaneous to the terms for which it ensures the existence. A relation must be understood as relation in being, as a relation of being, a manner of being and not a simple relation between two terms that could be adequately known using concepts because they would have a separate and prior existence. It is because the terms are understood as substances that the relation is a relation of terms, and being is separated into terms because being is primitively--that is to say before any investigation of individuation--understood as substance. If, however, substance is no longer taken to be the model of being, it is possible to understand relation as the non-identity of being to itself--as the inclusion in being of a reality that is not only identical to it--so that being, as being, before all individuation, may be understood as more than unity and more than identity.²² Such a method supposes an ontological postulate: at the level of being prior to any individuation, the law of the excluded middle and the principle of identity do not apply; these principles are only applicable to the being that has already been individuated; they define an impoverished being, separated into environment and individual. They do not apply therefore to all of being--that is to say to the ensemble formed later by the individual and the environment--but only to that which, from the preindividual being, has become individual. In this sense, classical logic cannot be used to think the individuation, because it requires that the operation of individuation be thought using concepts and relationships between concepts that only apply to the results of the operation of individuation, considered in a partial manner.

From the use of this method, which considers the law of identity and the law of the excluded middle as too restrictive, a new notion emerges that possesses a multitude of aspects and domains of application: that of *transduction*. By transduction we mean an operation--physical, biological, mental, social--by which an activity propagates itself from one element to the next, within a given domain, and founds this propagation on a structuration of the domain that is realized from place to place: each area of the constituted structure serves as the principle and the model for the next area, as a primer for its constitution, to the extent that the modification expands progressively at the same time as the structuring operation. A crystal that, from a very small seed, grows and expands in all directions in its supersaturated mother liquid provides the most simple image of the transductive operation: each already constituted molecular layer serves as an organizing basis for the layer currently being formed. The result is an amplifying reticular structure. The transductive operation is an individuation in progress; it can, in the physical domain, occur in the simplest manner in the form of a progressive iteration; but in more complex domains such as the domains of vital metastability or of a psychic problematic, it can advance in constantly variable steps and it can expand in a domain of heterogeneity. Transduction occurs when there is an activity that begins at the center of being--both structurally and functionally--and that expands in various directions from this center, as if multiple dimensions of being appeared around this center. Transduction is the correlative appearance of dimensions and structures in a being of preindividual tension, that is to say in a being that is more than unity and more than identity, and that has not yet dephased itself into multiple dimensions. The extreme terms reached by the transductive operation do not exist prior to this operation; its dynamism comes from the primitive tension of the system of the heterogeneous being that dephases itself and develops dimensions according to which it structures itself; the dynamism does not come from a tension between the terms that will only be reached and placed at the extreme limits of the transduction.²³ Transduction can be a vital operation; it expresses, in particular, the direction [sens] of the organic individuation; it can be a psychic operation and an effective logical procedure, even though it is not limited to logical thought. In the domain of knowledge, it defines the veritable process of invention, which is neither inductive nor deductive, but transductive, which means that it corresponds to a discovery of the dimensions according to which a problematic can be defined. It is that which is valid in the analogical operation. This notion can be used to understand the different domains of individuation: it applies to all cases where an individuation occurs, expressing the genesis of a network of relations founded on being. The possibility of using an analogical transduction to understand a domain of reality indicates that this domain is indeed the location of a transductive structuration. Transduction corresponds to this existence of relations that are born when the preindividual being individuates itself; it expresses individuation and allows it to be thought; it is therefore a notion that is both metaphysical and logical. *It applies to ontogenesis, and is ontogenesis itself.* Objectively, it allows us to understand the systematic conditions of individuation, the internal resonance,²⁴ the psychic problematic. Logically, it can be used as the foundation of a new type of analogical paradigmaticism, allowing us to pass from physical individuation to organic individuation, from organic individuation to psychic individuation and from psychic individuation to the subjective and objective transindividual, all of which define the trajectory of this study.

One could, without a doubt, affirm that transduction cannot be presented as a model of logical procedure having the value of a proof. Indeed, we do not wish to say that transduction is a logical procedure in the current sense of the term; it is a mental process, and even more than a process, it is a functioning of the mind that discovers. This functioning consists of *following being in its genesis*, in carrying out the genesis of thought at the same time as the genesis of the object. In this quest, this functioning of the mind is called to perform a role that the dialectic could not, because the study of the operation of individuation does not appear to correspond to the appearance of the negative as a second stage, but to an immanence of the negative in the first condition in the ambivalent form of tension *and* incompatibility. What is the most positive in the state of preindividual being--the existence of potentials--is also the cause of the incompatibility and the non-stability of this state. The negative comes first as the ontogenetic incompatibility, but it is the other side of the richness in potentials; it is therefore not a substantial negative. It is never a stage or a phase, and individuation is not a synthesis, a return to unity, but a dephasing of being starting from its preindividual center of potentialized incompatibility. Time itself, in this ontogenetic perspective, is considered to be the expression of the *dimensionality of being individuating itself*.

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Transduction is not, therefore, simply a functioning of the mind, it is also intuition, because transduction is that by which a structure appears in the domain of a problematic, that is, as that which provides the resolution of the posed problems. However, transduction, as opposed to *deduction*, does not search elsewhere for a principle to resolve the problem of a domain: it extracts the resolving structure from the tensions of the domain themselves, just as a supersaturated solution crystallizes using its own potentials and according to the chemical species it contains, not using some foreign form added from the outside. Nor is transduction comparable to *induction*, because although induction retains the characteristics of the terms of reality that are contained within the studied domain, extracting the structures of the analysis of these terms themselves, induction only retains that which is positive--*that which is common* to all of the terms--eliminating that which is singular to them. Transduction is, on the contrary, a discovery of dimensions of which the system puts into communication the each of its terms, and in such a way that the complete reality of each of the terms of the domain can come to order itself without loss, without reduction, in the newly discovered structures. The resolving transduction *undertakes the inversion of the negative into the positive*: that by which the terms are not identical to each other, that by which they are *disparate* (in the sense this word takes in the theory of depth perception) is integrated into the system of resolution and becomes the condition of signification. There is no impoverishment of the information contained in these terms; transduction is characterized by the fact that the result of this operation is a concrete network that contains all the initial terms; the resulting system is made of this concrete network and contains all of it. The transductive order retains all that is concrete and is characterized by the *conservation of information*, whereas induction requires a loss of information. Transduction, like the dialectic process, retains and integrates opposing aspects; unlike the dialectic, transduction does not presuppose the existence of a prior time as the framework in which the genesis occurs, time itself being a solution, a dimension of the discovered systematic: *time comes out of the preindividual just like the other dimensions according to which individuation occurs.*²⁵

In order to think the transductive operation, which is the foundation of individuation in its different levels, the notion of form is insufficient. The notion of hylomorphic form makes up part of the same system of thought as that of substance, or that of relation as being posterior to the existence of the terms: these notions have been elaborated using the results of individuation; they can only grasp an impoverished reality, without potentials, and as a consequence, incapable of individuating itself.

The notion of form must be replaced by that of information, which presupposes the existence of a system in a state of metastable equilibrium that can individuate itself; information, unlike form, is never a unique term, but the signification that springs from a disparation. The ancient notion of form, such as provided by the hylomorphic schema, is too independent of any notion of system and metastability. That which Gestalt theory provided contains, on the contrary, the notion of system and is defined as the state towards which the system tends when it finds its equilibrium: it is the resolution of a tension. Unfortunately, an all too summary physical paradigmaticism caused Gestalt theory to only consider the state of stable equilibrium as a system state of equilibrium capable of resolving tensions: Gestalt theory was unaware of metastability. We would like to take up Gestalt theory and, through the introduction of a quantum condition, show that the problems posed by Gestalt theory cannot be directly resolved using the notion of stable equilibrium, but only by making use of the notion of metastable equilibrium. The Good Form is no longer the simple form, the pregnant geometric form, but *the signifying form*, that is, that which establishes a transductive order within a system of reality that contains potentials. This good form is that which maintains the energy level of the system, that which conserves its potentials by rendering them compatible: good form is structure of compatibility and viability, it is the dimensionality that is invented and according to which there is compatibility without degradation. ²⁶The notion of *Form* therefore deserves to be replaced with that of *information*. In doing so, the notion of information must never be reduced to signals or to the supports or carriers of information in a message, *as the technological theory of information tends to do, a theory that was initially abstracted from transmission technologies*. The pure notion of form must therefore be saved two times from an all too summary technical paradigmaticism: first, in relation to classical culture, the notion of form must be saved from the reductive manner the notion was used in the *hylomorphic schema*; and a second time, in order to save information as signification from the *technological theory* of information in modern culture, with its experience of transmission through a channel. For indeed the same aim is found in the successive theories of

hylomorphism, Good Form, and information theory: the discovery of the inherence of significations to *being*; we will attempt to find this inherence in the operation of individuation.

In this way, a study of individuation can lead to the reform of fundamental philosophic notions, because it is possible to consider individuation as that which must be known first about being. Before even considering whether it is legitimate to make judgments about beings, it is apparent that being can be spoken of in two manners: in a first, fundamental sense, being is insofar as it is; but in a second sense, always superimposed upon the first in logic theory, being is being insofar as it is individuated. If it were true that logic provided statements about being only after individuation, it would be necessary to institute a theory of being that is anterior to any form of logic; this theory could serve as the foundation to logic, because nothing proves in advance that there is only one possible way of individuating being. If multiple types of individuation were to exist, multiple logics would also have to exist, each corresponding to a specific type of individuation. The classification of the ontogeneses would allow us to *pluralize logic* using a valid foundation of plurality. As for the axiomatization of the knowledge of preindividual being, it cannot be contained within a pre-existing logic, because no norm, no system that is detached from its contents can be defined: only the individuation of thought can, by realizing itself, accompany the individuation of beings that are different from thought itself. Therefore it is neither immediate nor mediate knowledge that we can have of individuation, but a knowledge that is an operation that runs parallel to the known operation. We cannot, in the common understanding of the term, *know individuation*, we can only individuate, individuate ourselves, and individuate within ourselves. This understanding is--at the margins of what is properly considered as knowledge--an analogy between two operations, a certain mode of communication. The individuation of the reality that is exterior to the subject is grasped by the subject using the analogical individuation of knowledge within the subject; but it is *through the individuation of knowledge*, and not through knowledge alone, that the individuation of non-subject beings is grasped. Beings may be known by the subject's knowledge, but the individuation of beings can only be grasped by the individuation of the subject's knowledge ■

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NOTES

1. [This text is an advance publication from the forthcoming English translation of Gilbert Simondon's *L'individuation psychique et collective*. The text constitutes the first part of Simondon's introduction to the book, and will be accompanied in the English translation by a number of footnotes by Jean-Hugues Barthélémy (also reproduced here). The complete English translation of the book (by Arne De Boever, Gregory Flanders, Alicia Harrison, with Rositza Alexandrova and Julia Ng) will be published by the U of Minnesota P. The translator would like to thank the U of Minnesota P as well as Flammarion for giving *Parrhesia* permission to publish this text.—Trans.]
2. [This formulation only makes sense if the notion of “ontogenesis” is understood to designate the genesis of the individual or of the “being insofar as it is individuated,” as Simondon states further on. Simondon will later provide a second meaning to ontogenesis: it will designate the becoming of being in general or the “being insofar as it is,” which is to say the pre-individual being that will later come to replace, for Simondon, any “principle of individuation” that has already been individualized. This is why it can be said that if he is criticizing here the reduction of individuation to ontogenesis in the first meaning of the term, it is precisely in order to suggest that this genesis of the individual is only truly a genesis within ontogenesis in the second, broader meaning of the term. Simondon will soon show that this becoming of the being in general produces both the individual and its environment. It also must be pointed out that the notion of ontogenesis possesses a third meaning, one which designates the ontological theory itself understood from now on as a genetic ontology. The underlying reason behind this third meaning is that the thought of individuation must itself be an individuation; here we find the specificity of Simondon's thought in regards to the going beyond of the opposition between the subject and its object. Ontogenesis as a theory therefore is no longer an onto-logy in the strict sense of the term, that is to say as a logos that is exterior to what it knows or an ob-jectifying logos. --J.H. Barthélémy].
3. Aristotle, *Metaphysics* 1037^a 32.
4. It is not necessary that the environment be simple, homogeneous and uniform, but it may be; it can be originally crossed by a tension between two extreme orders of magnitude that the individual mediates when it comes to be.
5. And constitution, between extreme terms, of a mediate order of magnitude; ontogenetic becoming may itself be considered, in a certain sense, as mediation.
6. [Simondon is alluding here to Leibniz, who is the quintessential *substantialist* thinker.--J.H. Barthélémy].
7. [The notion of potential energy had been explored by Simondon in one of the properly *epistemological* chapters of *L'individu et sa genèse physico-biologique* [The Individual and Its Physical-Biological Genesis]. The two following pages, which are dedicated to *physical* individuation, are actually announcing the first part of *L'individu et sa genèse physico-biologique*, of which *Psychic and Collective Individuation* is the continuation, with both works being originally printed in one volume and with both having, for this reason, the same introduction. The original text represents Simondon's main thesis, defended in 1957 and entitled *L'individuation à la lumière des notions de forme et d'information* [Individuation in the Light of the Notions of Form and Information]. The text *L'individu et sa genèse physico-biologique* appeared in France in 1964, and greatly influenced the early thought of Gilles Deleuze, whereas *Psychic and Collective Individuation*, which inspired Bernard Stiegler, was not published until 1989, the year of Simondon's death. --J.H. Barthélémy].
8. Intuitive and normative equivalents existed in Antiquity for the notion of metastability; however, because metastability generally supposes both the presence of two orders of magnitude and the absence of interactive communication between these orders, it owes much to the development of the sciences.
9. [The notion of “complementarity” was invented by the great physicist Niels Bohr to designate the fact that quantum reality sometimes manifests itself as a wave, sometimes as a particle; for Bohr, these two aspects are “complementary.” In Chapter 3 of the First Part of *L'individu et sa genèse physico-biologique* [The Individual and Its Physical-Biological Genesis], Simondon reinterprets this complementarity: he criticized Bohr for thinking of it as a “duality”--that is, an impossibility of being both at the same time--instead of as a “couple.” For Simondon, when the quantum reality manifests itself in the form of a particle, the wave characteristic is also present, but it is in the measurement apparatus, which is part of the phenomenon by virtue of the famous “quantum of action”--J.H. Barthélémy].
10. [The two following pages, dealing with *vital* individuation, are intended to announce, within the introduction common to both *L'individu et sa genèse physico-biologique* [The Individual and Its Physical-Biological Genesis] and to *Psychic and Collective Individuation*, the Second Part of *L'individu et sa genèse physico-biologique*.--J.H. Barthélémy].

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11. Ashby's homeostasis and homeostat.
12. It is by this introduction that the living has an informational effect, becoming itself a nexus of interactive communication between an order of reality that is superior to its dimension and an order of reality inferior to its dimension, which it organizes.
13. This interior mediation can intervene as an intermediary relative to the external mediation that the living individual realizes, which allows the living to bring into communication a cosmic order of magnitude (for example, solar light energy) and an infra-molecular order of magnitude.
14. [The next three pages, which deal with *psychic and collective* individuation, announce, within the introduction that is common to both *L'individu et sa g n se physico-biologique* [The Individual and Its Physical-Biological Genesis] and to *Psychic and Collective Individuation*, this final volume.--J.H. Barth l my].
15. In particular, the relation to the environment is impossible to imagine, before and during individuation, as a relation to a unique and homogeneous environment. The environment is itself a *system*, a synthetic grouping of two or more levels of reality, without intercommunication before individuation.
16. [This sentence summarizes a decisive critique that is addressed to Kant, and that will be developed in multiple sections of *Psychic and Collective Individuation*. Deleuze read this same introduction in *L'individu et sa g n se physico-biologique* [The Individual and Its Physical-Biological Genesis], and his critical relationship to Kant was influenced by it.--J.H. Barth l my].
17. [This passage is deceptive: Simondon uses the word "relational"--only to reject it--for that which is in fact a *link* between two *pre-existing* terms. However, a true *relation* is that which *constitutes* the terms that it connects, because it is an *individuation*. Thus, in *L'individu et sa g n se physico-biologique* [The Individual and Its Physical-Biological Genesis], Simondon rejects the "link" *in order to affirm the "relation,"* as will soon become clear in this introduction.--J.H. Barth l my].
18. By this we mean that the a priori and the a posteriori are not found in knowledge; they are neither form nor matter of knowledge, because they are not knowledge, but extreme terms of a preindividual--and, consequently, a pre-noetic--dyad. The illusion of a priori forms stems from the pre-existence, in the preindividual system, of *conditions of totality*, of which the dimension is superior to that of the individual in the process of ontogenesis. Inversely, the illusion of a posteriori stems from the existence of a reality of which the order of magnitude, in terms of spacio-temporal modifications, is inferior to that of the individual. A concept is neither a priori nor a posteriori but *a praesenti*, because it is an informative and interactive communication between that which is larger than the individual and that which is smaller than the individual.
19. [After having announced the three "regimes of individuation"--physical, vital and psycho-social--only the last of which being the object of the present study--Simondon turns to *general* and *methodological* considerations that are valid for the entirety of his genetic ontology, that is, for both the physical and vital individuations discussed in *L'individu et sa g n se physico-biologique* [The Individual and Its Physical-Biological Genesis] and for the psycho-social or "transindividual" individuation from *Psychic and Collective Individuation*. These general and methodological considerations are of capital importance, because they allow the reader to understand that the entire Simondonian ontology is a "philosophy of information," without, however, information being understood in the terms used by the Information Theory that founded Cybernetics, with which Simondon often enters into dialog. Here it is the notion of "transduction" that will supply the new *schema*, in order to *replace the classical hylomorphic schema while conserving the goal of a universal understanding of information considered as genesis and as the taking-form.*--J.H. Barth l my].
20. [On the notion of disparation, see the note in part 2, chapter 2, section 3.--J.H. Barth l my].
21. This affirmation does not lead us to contest the validity of the quantitative theories of information and the measurements of complexity, but it supposes a fundamental state--that of the preindividual being--prior to any duality of the sender and of the receiver, and therefore to any transmitted message. It is not the source of information that remains of this fundamental state in the classic case of information transmitted as a message, but the primordial condition without which there is no effect of information, and therefore no information: the metastability of the receiver, whether it be technical being or a living individual. We can call this information "primary information." [This note by Simondon is of a fundamental importance, because it helps dispel the misunderstanding that persisted for a long time in France in regards to the Simondonian conception of information--a misunderstanding that plagued not only *Du mode d'existence des objets techniques* [On the Mode of Existence of Technical Objects], but also *L'individu et sa g n se physico-biologique* [The Individual and Its Physical-Biological Genesis] when they appeared in 1958 and 1964. Simondon foresaw what he would call a "notional reform," *which begins with the notion of information*, insofar as information would be understood as "the formula of individuation": information is *first genesis*, and what

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information theory calls “information” is a transmission of a message that is *derived* from this initial genesis *of which it is the continuation*. That is why the living being can only receive an information through the metastability that it maintains, and that during the “absolute genesis” or the “first information” was *prior to any sender/receiver duality*. Simondon, therefore, replaces the *technological paradigm* of information, which is too reductive in his eyes, with a *physical, but pre-individual, paradigm*, that is to say, *both truly genetic and anti-reductionist*.--[J.H. Barthélémy]. In particular, the plurality of the orders of magnitude, the primordial absence of interactive communication between these orders, is part of such an understanding of being.

22. It expresses, to the contrary, the primordial heterogeneity of two levels of reality, one larger than the individual--the metastable system of totality--and the other smaller than the individual, such as matter. Between these two primordial orders of magnitude, the individual develops itself by a process of amplifying communication of which transduction is the most primitive mode, already existing in the physical individuation.

23. Internal resonance is the most primitive mode of communication between realities of different orders; it contains a double process of amplification and condensation.

24. This operation is parallel to that of vital individuation: a vegetable institutes a mediation between a cosmic order and an infra-molecular order, sorting and distributing the chemical species contained in the ground and in the atmosphere by means of the luminous energy received from photosynthesis. It is an inter-elementary nexus, and it develops as the internal resonance of this preindividual system made of two layers of reality that are primitively without communication. The inter-elementary nexus fulfills an intra-elementary task.

25. Form appears as the active communication, as the internal resonance that brings about the individuation: it appears with the individual.

TECHNICAL MENTALITY¹

Gilbert Simondon, translated by Arne De Boever²

This paper is not concerned with ontology but with axiology. It aims to show that there exists a technical mentality, and that this mentality is developing, and therefore incomplete and at risk of being prematurely considered as monstrous and unbalanced. It requires a preliminary attitude of generosity towards the order of reality that it seeks to manifest, because this incomplete genesis brings into play values that a general refusal [of this mentality] could condemn to ignorance and would risk negating.

We will try to show that the technical mentality is coherent, positive, productive in the domain of the cognitive schemas, but incomplete and in conflict with itself in the domain of the affective categories because it has not yet properly emerged; and finally, that it is without unity and is almost entirely to be construed within the order of the will.

I. COGNITIVE SCHEMAS

The theoretical domain was the first to emerge in Western civilizations, the first to have been theorized, systematized, and formalized. It has led to productive constructions and it presents in itself a method of discovery and interpretation that can be generalized. In this sense, the technical mentality offers a mode of knowledge *sui generis* that essentially uses the analogical transfer and the paradigm, and finds itself on the discovery of common modes of functioning--or of regime of operation--in otherwise different orders of reality that are chosen just as well from the living or the inert as from the human or the non-human.

Leaving Antiquity³ aside, technology has already yielded in at least two ways schemas of intelligibility that are endowed with a latent power of universality: namely, in the form of the Cartesian mechanism and of cybernetic theory.

In the Cartesian mechanism, the fundamental operation of the simple machine is analogous to the functioning of logical thought capable of being rigorous and productive. A simple machine is a transfer system that, in the particular case in which the movement is presumed to be reversible, in the state of equilibrium, establishes the identity of a work that puts into motion and a work that resists. If each piece of the machine carries out

this transfer rigorously, the number of pieces can be whatever; what changes is merely the direction of forces--as with the pulley--or the factors (force and movement) of a product that remains constant, as in the case of the pulley-blocks. The rational mental process returns the essence of the customary technical objects to this transfer schema: a chain is an enchainment of links, with the second link being fixed to the first just as the first is fixed to the anchoring ring. The transfer of forces goes from link to link, so that if each link is welded well and there are no gaps in the enchainment, the last link is fixed to the anchoring point in a more mediated but also more rigorous way than the first. A building, stone upon stone, row upon row, in a transfer of the “*certum quid et inconcussum*”,--the resistance of the stone of the foundations--all the way to the top, through successive levels that each act as the foundation for the immediately following higher level.⁴ This intelligibility of the transfer without losses that mechanizes ideally and analogically (but also in reality, by virtue of the Cartesian conception of knowledge) all the modes of the real, applies not only to the RES EXTENSA but also to the RES COGITANS: the “long chains of reasons” carry out a “transport of evidence” from the premises to the conclusion, just like a chain carries out a transfer of forces from the anchoring point to the last link. The rules of the method are not only inspired by mathematics; they are also perfectly conform to the different stages of fabrication and technical control. Thought needs an anchoring point that is the operative equivalent of the stone under the building, or of the ring that is attached to the origin of the chain: *certum quid et inconcussum*: it is *evident* what remains after all attempts at deconstruction, even after hyperbolic doubt. The conduct of reasoning requires an analysis--a division of the difficulty in as many parts as possible and as needed in order to better solve the difficulty--because each piece of the intellectual montage must play a simple, univocal role--like a pulley, a lever of which the mechanical function in the whole is simple and perfectly clear. The third rule (of the synthesis or the order) is the arrangement according to the schema of the completely unified whole of the machine. Finally, the fourth rule, that of control, is the unification of the placement of the different pieces and the adaptation of the machine as a whole to the two realities at both ends of the chain.

What is carried out in both the rational study of machines and in the conduct of thought is the *transfer without losses*: science and philosophy are possible because the transfer without losses is presumed to be possible. Consequently, the only domains that are accessible to philosophical reflection are those with a continuous structure. It will therefore be clear why one has wanted to consider living beings as machines: if they weren't machines *ontologically*, they would have to be so at least *analogically* in order to be objects of science.

Cybernetics, which was born from the mathematization of the automatic regulation apparatuses [dispositifs]--particularly useful for the construction of automatic equipment of airplanes in flight--introduces into this the recurring aim of information on a relay apparatus as the basic schema that allows for an active adaptation to a spontaneous finality. This technical realization of a finalized conduct has served as a model of intelligibility for the study of a large number of regulations--or of regulation failures--in the living, both human and non-human, and of phenomena subject to becoming, such as the species equilibrium between predators and preys, or of geographical and meteorological phenomena: variations of the level of lakes, climatic regimes.

In this sense, technology manifests in successive waves a power of analogical interpretation that is *sui generis*; indeed, it is not hemmed in by the limits of repartition of essences or of domains of reality. It does not take recourse to categories, leaves aside generic relations, special relations, and specific differences. None of the schemas exhausts a domain, but each of them accounts for a certain number of effects in each domain, and allows for the passage of one domain to another. This transcategorical knowledge, which supposes a theory of knowledge that would be the close kin of a truly realist idealism,⁵ is particularly fit to grasp the universality of a mode of activity, of a regime of operation; it leaves aside the problem of the atemporal nature of beings and of the modes of the real; it applies to their functionings; it tends towards a phenomenology of regimes of activity, without an ontological presupposition that is relative to the nature of that which enters into activity. Each of the schemas applies only to certain regimes of each region, but it can in principle apply to any regime of any region.

The application of such schemas of intelligibility requires two main conditions, which can be presented as postulates of the “technical mentality”:

1. *The subsets are relatively detachable from the whole of which they are a part.* What technical activity produces is not an absolutely indivisible organism that is metaphysically one and indissoluble. The technical object can be repaired; it can be completed; a simple analogy between the technical object and the living is fallacious, in the sense that, at the moment of its very construction, the technical object is conceived as something that may need control, repair, and maintenance, through testing, and modification, or, if necessary, a complete change of one or several of the subsets that compose it. This is what one calls anticipated “maintenance,” to use the Anglo-Saxon term.

This postulate is extremely important when one questions the way in which one can engage with a living being, a human being, or an institution. The holistic postulate, which is often presented as an attitude of respect for life, a person, or the integrity of a tradition, is perhaps merely a lazy way out. To accept or reject a being wholesale, because it is a whole, is perhaps to avoid adopting towards it the more generous attitude: namely, that of careful examination. A truly technical attitude would be more refined than the easy fundamentalism of a moral judgment and of justice. The distinction of the subsets and of the modes of their relative solidarity would thus be the first mental work that is taught by the cognitive content of the technical mentality.⁶

2. The second postulate is that of the levels and the regimes: *if one wants to understand a being completely, one must study it by considering it in its entelechy, and not in its inactivity or its static state.*

The majority of technical realities are subject to the existence of a threshold to start up and to maintain their own functioning; above this threshold, they are absurd, self-destructive; below it, they are self-stable. Very often, the invention consists in supposing the conditions of their functioning realized--in supposing the threshold problem resolved. This is why the majority of inventions proceed by condensation and concretization, by reducing the number of primitive elements to a minimum, which is at the same time an optimum.⁷

Such is the case, for example, with the stato-reactor of Leduc: on the ground, it is merely an absurd structure, incapable of providing a push in a determinate direction: but starting from a certain speed of movement, it becomes capable of maintaining its speed--in other words, its pushing forward--and of furnishing a usable energy of movement.

The GUIMBAL group--which is held entirely in the forced conduct of a dam--originally seemed absurd. The alternator is of such small dimensions that it seems that the armature must be destroyed by the Joule effect. But it is precisely this small dimension that allows for the alternator to be lodged completely within the canalization, on the turbine axis itself. This ensures a cooling that has a considerably greater effect than that of an alternator placed in the air. This disposition is made possible by putting the alternator in a casing filled with oil, which heightens the isolation and improves the thermal exchanges, all the while ensuring the lubrication of the different levels and preventing water from coming in: here, the multifunctional character of the oil of the casing is the very schema of concretization that makes the invention exist, as a regime of functioning.

Analogically, it is possible to anticipate the existence, within different orders of reality, of certain *effects* (used here as in the expressions “the Raman effect,” “the Compton effect”) that for their existence require determinate thresholds to be crossed. These effects are not structures; they are different from these structures in that they require the threshold to be crossed. An internal combustion engine that is turned off is in a stable state and cannot turn itself on; it needs a certain amount of energy coming from outside, it needs to receive a certain angular speed in order to reach the threshold of self-maintenance, the threshold beyond which it functions as a regime of automatism, with each phase of the cycle preparing the conditions of completion for the following phase.

From these few observations, we can conclude that the technical mentality already offers coherent and usable schemas for a cognitive interpretation. With the Cartesian mechanism and cybernetics, it has already yielded two movements of thought; but in the case when there is an awareness of the systematic use of the two postulates presented above, it also appears to be capable of contributing to the formation of larger schemas.

II. AFFECTIVE MODALITIES

The picture is much less clear, however, as soon as one tries to analyze affective contents. In this case, one encounters an antagonism between the artisanal and the industrial modalities, an antagonism that is paired to an impossibility of completely separating these two aspects. The craftsman's nostalgia traverses not only the industrial life of production, but also the different daily regimes of the consumption of goods coming from the industrial world.

It is difficult to return a bundle of perfectly coherent and unified traits to the opposition between the artisanal and the industrial modality when one wants to account for the genesis of affective modalities. However, we will propose a criterion that, after several attempts, seemed to be the least problematic: in the case of the craftsman, all conditions depend on the human being, and the source of energy is the same as that of information. The two sources are both in the human operator; there, energy is like the availability of the gesture, the exercise of muscular force; information simultaneously resides in the human operator as something learned, drawn from the individual past enriched by education, and as the actual exercise of the sensorial equipment that controls and regulates the application of the learned gestures to the concrete materiality of the workable material and to the particular characteristics of the aim [of the work]. The manipulation is carried out according to continuous schemas on realities that are of the same scale as the operator. Correlatively, the distance between the act of working and the conditions of use of the product of the work is weak: the shoemaker has directly taken the measurements, the saddler knows for which horse he is working; recurrence is possible: the speed with which the object wears off, the types of the deformation of the product during usage are known to the craftsman, who does not only construct but also repairs.

Moreover, in the case of the craftsman the relation between the Human Being and Nature is immediate, because it lies in the choice of the materials and of the work that is done on them. In the artisanal modality, work is artifice, it orders and makes act differently workable materials that are almost primary materials, but that remain close to the natural state, like leather or wood. Artisanal work is generally not preceded by a complete transformation of these primary materials. The latter would require the investment of sources of energy taken from outside of the human body. In this sense, such a transformation comes--even in the pre-industrial state--from an industrial schema, namely that of metallurgy, which is industrial through the transformation of the mineral into metal, even if it remains artisanal because of the way it produces objects.

The industrial modality appears when the source of information and the source of energy separate, namely when the Human Being is merely the source of information, and Nature is required to furnish the energy. The machine is different from the tool in that it is a relay: it has two different entry points, that of energy and that of information. The fabricated product that it yields is the effect of the modulation of this energy through this information, the effect that is practiced on a workable material. In the case of the tool, which is handheld, the entry of energy and the entry of information are mixed, or at the very least partially superimposed. Of course, one can guide the chisel of the sculptor with one hand, and push it with the other, but it is the same body that harmonizes the two hands, and a single nervous system that appropriates their movement into such detail from the material and for the set aim. The potter's work, which is moved by his feet, is still of the same kind, but it allows one to anticipate the birth of the machine. Glass-making is artisanal insofar as the glass-maker furnishes the energy that dilates the initial bubble by blowing, and insofar as he regulates through the rhythm of his blowing the speed of the plastic deformation of the glass. But it becomes industrial when the energy is borrowed from a compressor.

When he borrows energy from a natural source, the human being discovers an infinite reserve, and comes to possess a considerable power. For it is possible to set up a series of relays, which means that a weak energy can lead to the usage of considerable energies.⁸

Unfortunately, the *entry of information* that comes into the work is no longer unique in the way it is with the artisanal gesture: it happens through several moments and at several levels. It takes place a first time with the invention of the machine--an invention that sometimes implies the bringing into play of considerable zones of knowledge and the gathering of a large number of human beings. It happens a second time with the *construction* of the machine and the regulation of the machine, which are modes of activity that are different from the machine's usage. Finally, it happens a third and a fourth time, first in the learning to work with the machine, and then in the machine's usage. Whereas the machine constitutes a complete technical schema, as the relation of nature and the Human Being, as the encounter of an information and an energy operating on a material, none of the four moments of information contribution is organically linked to and balanced out by the others. The act of information contribution becomes dissociated, it is exploded into separate moments taken on by separate individuals or groups. In order for the craftsman to recognize his equivalent in the industrial modality, the same human being must be inventor, constructor, and operator. However, the effect of this amplification and complication of the industrial world is to spread out the different roles from each other: not only the source of information from the source of energy and the source of primary material, but even the different tasks of information contribution. It is thus a weaker part of the total capacities of the human being that is engaged in the industrial act, both when s/he is operator and in the other roles of information contribution. The iterative and fragmentary regime of the task of the operator in industrial production is an "anatomy of work"⁹ that provokes different effects of industrial fatigue. But it is also exhausting to have only invention as a task, without also participating in construction and operation. The figure of the unhappy inventor came about at the same time as that of the dehumanized worker: it is its counter-type and it arises from the same cause. To put itself at the dimension of the machine's energy entry, the information entry complicates itself, becomes divided and specialized, with the result that the human being is not only isolated from nature¹⁰ but also from himself, and enclosed in piecemeal tasks, even as inventor. He thus encounters the discontinuous through work.

However, trying to return to directly artisanal modes of production is an illusion. The needs of contemporary societies require not only large quantities of products and manufactured objects, but also states that cannot be obtained by means of the human body and by the tool. This is because the temperatures, the pressures, the required physical reactions, the scale of the conditions do not match those of human life. The workplace, on the other hand, is a *human environment*.

It is in this very emphasis on industrial production, in the deepening of its characteristics that an overcoming of the antithesis between the artisanal modality and the industrial one can be studied with a greater likelihood of success. And this not only generally and superficially but by means of what, within the industrial organization of the production, has pushed to its extreme limits the specialized fragmentation of human information contribution: the rationalization of work through a series of methods of which Taylorism was the first.

III. VOLUNTARY ACTION: A STUDY OF NORMS

But we must cut short here the consideration of the affective modalities in order to investigate norms of voluntary action, and thus to complete this construction of the technical mentality. Indeed, the technical mentality can be developed into schemes of action and into values, to the point of yielding a morality in human environments that are entirely dedicated to industrial production. But insofar as these environments remain separated from the social field of the usage of products, insofar as they themselves remain fragmented into several specialized groups by their different functions of information contribution to machines--mastery, technicians, workers--, they cannot elaborate a value code that is capable of becoming universal, because they do not have the experience of technical reality as a whole. The technocratic attitude cannot be universalized because it consists of reinventing the world like a neutral field for the penetration of machines; constructing

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a metal tower or an immense bridge undoubtedly means making a pioneer work and showing how industrial power can leave the factory in order to gain in nature, but there is something of the isolation of the inventor that subsists in this activity insofar as the tower or the bridge do not become part of a network covering the Earth in its mazes, in accordance with the geographical structures and living possibilities of this Earth. The Eiffel Tower and the Garabit viaduct must be considered as the arrival of the end of the industrial concentration around sources of energy or primary material sources, that is to say not as spectacularly isolated centers and successes, but as the first maze of a virtual network. The Eiffel Tower, which was entirely designed and fabricated in the factory, and only assembled on site, without a single correction, has now become the carrier of antennae; it interconnects with hundreds of pylons, masts, and stations by which Europe will be covered. It becomes part of this multifunctional network that marks the key points of the geographical and human world.¹¹

It is the standardization of the subsets, the industrial possibility of the production of separate pieces that are all alike that allows for the creation of networks. When one puts railroad tracks over hundreds of kilometers, when one rolls off a cable from city to city and sometimes from continent to continent, it is the industrial modality that takes leave from the industrial center in order to extend itself through nature. It is not a question here of the rape of nature or of the victory of the Human Being over the elements, because in fact it is the natural structures themselves that serve as the attachment point for the network that is being developed: the relay points of the Hertzian “cables” for example rejoin with the high sites of ancient sacredness above the valleys and the seas.

Here, the technical mentality successfully completes itself and rejoins nature by turning itself into a thought-network, into the material and conceptual synthesis of particularity and concentration, individuality and collectivity—because the entire force of the network is available in each one of its points, and its mazes are woven together with those of the world, in the concrete and the particular.

The case of information networks is so to speak an ideal case where the success is virtually complete, because here energy and information are united again after having been separated in the industrial phase. At the same time, the assemblages and the substructures of the industrial gigantism return in a more manageable way, in a lighter form: electronics and telecommunications use reduced tonnages, moderate energies, dimensions that are not crushing. The factory rediscovers something of the workplace when it is transformed into a laboratory. It is no longer for the individual user, as in the artisanal modality, but for the simultaneously collective and individual user—nature itself¹²—that the laboratory anticipates a made-to-measure assemblage. Such lines of pylons, such a chain of relays constitutes the harness of nature. Only the fabrication of separate pieces remains industrial. At the same time, the distance between the inventor, the constructor, and the operator is reduced: the three types converge towards the image of the technician, this time both intellectual and handy, who knows at the same time how to calculate and how to install a cabling.

Very close to the case of information networks is that of networks of *energy distribution*: electric energy is at the same time information and energy: on the one hand, it can be indefinitely paired down without a loss of productivity. A vibrator, which is a motor, can be located in the point of a tool as light as a pencil and feed on the network. A human being can easily manipulate with one single hand a 1/3 horsepower engine. This energy can, at the very moment of usage, entirely be modulated by an information of which it becomes the faithful carrier. On the other hand, the very standardization of the conditions of energy production, which allows for the interconnection and normalized distribution, turns this energy into the carrier of information: one can ask the alternative network to make function (as the source of energy) a watch whose workings it regulates as carrier of information. The simultaneous usage is concretized in the synchronic motor.

Communication and transportation networks are, by contrast, less pure. They do not succeed to reveal themselves in their true function, and the technical mentality does not succeed to make itself heard in any preponderant way, first of all because social or psychosocial inferences put a considerable burden [on these networks]; second, because unlike information or energy networks, they are not entirely new and without functional antecedents.

The railroad enjoyed a privileged situation because it was relatively clearly distinct from the road, which meant that it could develop in an almost autonomous way. In the case of these other networks, however, the social begins to manifest itself in the form of *obsolescence*, the kind of disuse that is linked to the aging of convention and the transformation of social habits rather than a wearing off or a loss of functionality of the technical object. A wagon with merchandise or a tender of a locomotive ages less quickly than a passenger car, with its ornaments and inscriptions: the one that is most overloaded with inessential ornaments is the one that goes out of fashion the most quickly.

But it is in the technical objects suited for the road network that the resistance opposed to the development of the technical mentality is the clearest: obsolescence hits the passenger car much faster than the utility vehicle or the agricultural tractor, which nevertheless are its close cousins—the car ages faster than the plane, whereas the plane has technically gone through more important transformations than the car. This is because the plane is made for the runway and for the air. It is necessarily a *network reality* before being a separate object.¹³ The car is not only conceived as a network reality—like trucks—but as a social object, an item of clothing in which the user presents himself. It thus receives characteristics like the ones one used to wear on clothes and that overburdened them with lace and embroideries... these scurf-like ornaments of psychosocial life—here, they become paint, chrome, antennae. The social importance can also express itself through mass, volume, and the size of the vehicle.

To bring about the production of the technical mentality in the domain of voluntary choice, one could try to apply the categories of a common ethics of the relation between human beings, for example the category of sincerity: a car deteriorates quickly because it was made to be seen rather than to be used; the space taken up by the width of the doors is not protected against rust; the underside is not treated according to the principles of aerodynamics whereas the visible parts are abundantly profiled.

But the essential is not there, and the introduction of a dualist moral system of good and evil, of the hidden and the manifest, would not lead one very far. To find real norms in this domain, one must return towards the cognitive schemas that have already been drawn out, and ask oneself how they can respond to the exigency manifested by the pressing incoherence of the affective modalities.

The reason for the inessential character of technical objects, which is at the same time the cause of this inflation of obsolescence that has hit the population of produced objects, is the absence of an industrial deepening of production.

A car becomes obsolete very fast because it is not one and the same act of invention, construction, and production that simultaneously makes appear the road network and the cars. Between the network—this functional harness of the geographical world—and the cars that traverse this network, the human being inserts himself as a virtual buyer: a car only comes to function if it is bought, if it is chosen, after it has been produced. There is a recurrence that comes into play on the basis of this mediation: the constructor, who has to produce serially, needs to calculate the possibilities of sales; he must not only simultaneously construct the network and the cars, but he also has to anticipate this sales option. In order to be valuable, a car must be bought after having been constructed, like the Roman child who was put into the world by the mother but was only admitted to life after *elevatio*. One could also compare this alienated condition of the produced object in the situation of venality to that of a slave on the market in Antiquity, or to that of a woman in a situation of social inferiority: the introduction to active existence happens through means that are inadequate to the real functions. It takes place against entelechy and thus creates a duality, a prevalence of the inessential, a distortion of true nature: choice is made under the dubious influence of charm, prestige, flattery, of all the social myths or of personal faiths. In the inessential situation of the buyer—who is neither a constructor nor a user in act—the human being who chooses, introduces into his choice a bundle of non-technical norms. It is the anticipation, in the project of production, of the play of these norms that creates the mixed character of the venality of the industrial product, and that is the main source of obsolescence. The *distance* between the act of production and the act of

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usage, this lack of real information allows for the introduction of the inessential, which creates obsolescence. Because it is judged once and for all, accepted or rejected in full in the decision or the refusal to buy, the object of industrial production is a closed object, a false organism that is seized by a holistic thought that was psychosocially produced: it allows for neither the exercise nor the development of the technical mentality at the level of voluntary decisions and norms of action.

But how is it possible to pass to a structure of the object that would allow one to draw out the technical mentality? First of all, and generally speaking, a position of asceticism allows one to get rid of the artificial and unhealthy character of social burdens, which expresses itself through hypertelic developments or developments that in reality don't function. A contemporary transatlantic liner--a fake floating city rather than an instrument of travel--slowly tends towards the recruitment of lonely, idle ones; the cargo ship is more pure. This proliferation of the inessential already takes hold of the commercial airplane: the companies flatter the traveler; the plane grows bigger and heavier. But the essential lies in this: in order for an object to allow for the development of the technical mentality and to be chosen by it, the object itself needs to be of a reticular structure. If one imagines an object that, instead of being closed, offers parts that are conceived as being as close to indestructible as possible, and others by contrast in which there would be concentrated a very high capacity to adjust to each usage, or wear, or possible breakage in case of shock, of malfunctioning, then one obtains an *open* object that can be completed, improved, maintained in the state of perpetual actuality. An electric machine that is not provided with an organ of protection, whether a fuse or a circuit breaker, is only in appearance more simple than a protected machine. When there is an overload, the system of protection kicks in, and the machine becomes absolutely comparable to what it was before the accident, once the system of protection has been returned to its initial state. This return to the initial state presupposes standardization, normalization; the more rigorous this normalization, the more perfect the machine: this is the case of calibrated fuses, or also of electronic tubes that one replaces in a machine. This is the key point: the postindustrial technical object is the unity of two layers of reality: a layer that is as stable and permanent as possible, which adheres to the user and is made to last; and a layer that can be perpetually replaced, changed, renewed, because it is made up of elements that are all similar, impersonal, mass-produced by industry and distributed by all the networks of exchange. It is through participation to this network that the technical object always remains contemporary to its use, always new. However, this conservation in a state of full actuality is precisely made possible through the structures that the cognitive schemas provide: the object needs to have thresholds of functioning that are known, measured, normalized in order for it to be able to be divided into permanent parts and parts that are voluntarily fragile, and subjected to replacement. The object is not only structure but also regime. And the normalization of *thresholds of functioning* expresses itself in the difference between relatively separate subsets [of the whole]: the degree of solidarity is precisely the measure (in the Greek sense of "metrion") of the relation between the permanent parts and the parts subject to replacement: this measure is what defines the optimum of the regime in the relation of thresholds of functioning.

In conclusion, one can say that the technical mentality is developing, but that this formation has a relation of causality that recurs with the very appearance of post-industrial technical realities: it makes explicit the nature of these realities and tends to furnish them with norms to ensure their development. Such a mentality can only develop if the affective antinomy of the opposition between the artisanal modality and the industrial one is replaced by the firm orientation of a voluntary push towards the development of technical networks, which are postindustrial and thus recover a continuous level [of operation].

If one seeks the sign of the perfection of the technical mentality, one can unite in a single criterion the manifestation of cognitive schemas, affective modalities, and norms of action: that of the *opening*; technical reality lends itself remarkably well to being continued, completed, perfected, extended. In this sense, an extension of the technical mentality is possible, and begins to manifest itself in the domain of the Fine Arts in particular. To construct a building according to the norms of the technical mentality means to conceive of it as being able to be enlarged, continued, amplified without disfiguration or erasure. The "Le Corbusier monastery" is a beautiful example of the contribution of the technical mentality in architecture: it includes

within its plan its proper line of extension, for a further enlargement. And this is possible not only because of the architectural conception of the whole, but also because of the spirit of pairing down that manifests itself in the choice of forms and the use of materials: it will be possible, without any break between the old and the new, to still use concrete, shuttering, iron, cables, and the tubulature of long corridors. The non-dissimulation of means, this politeness of architecture towards its materials which translates itself by a constant technophany, amounts to a refusal of obsolescence and to the productive discovery amongst sensible species of the permanent availability of the industrial material as the foundation for the continuity of the work ■

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NOTES

1. [This unpublished text by Simondon was given to us by his son Michel, to whose memory this publication is dedicated.—J.-H. Barthélémy and Vincent Bontems. *Parrhesia* also gratefully thanks Nathalie Simondon for her permission to publish this text.]

2. [This text initially appeared in: Barthélémy, Jean-Hugues and Vincent Bontems, eds. *Gilbert Simondon. Revue philosophique* 3 (2006). Paris, P.U.F., 343-357. The translator would like to thank Jean-Hugues Barthélémy for bringing this text to *Parrhesia*'s attention. The text is published here in English for the first time, and with new footnotes by Jean-Hugues Barthélémy.—Trans.]

3. [W]hich has been rich in schemes of plasticity and of phase changes, reversible or irreversible. These come without a doubt from the artisanal techniques of preparation, the shaping and baking of the clay. These schemes of ontogenesis, coming from an operation entirely possessed by the human being, an operation that is continuous, progressive, and conform with the human being's scale, have encountered other schemes, themselves also ontogenetic, but including the encounter of opposed and qualitatively antagonist principles that are spatially and geographically distinct, and of a dimension that renders them *transcendent* in relation to the human being: the earth and the heavens, the hot and the cold, the dry and the humid. In order for these two realities to encounter each other, they have to be at the same scale. The nature philosophy of Antiquity comes from the encounter of the artisanal and the magical schemes of genesis, of the schemes of continuity and the schemes of discontinuity. Agriculture and nursery are indeed industries and craftsmanships, when the human being does not hold the possession of their means in hand.

4. [The French text is presented in the same way, with the sentence consisting of a relative proposition that adds an example to the previous sentence.—J.-H. Barthélémy.]

5. [This contradictory expression is used by Simondon to refer to the *overcoming of the classical oppositions* (which is what his entire thought aspired to). The “theory of knowledge” that Simondon invokes here is a theory whose task is to extend-overcome the “Copernican revolution” of Kant—who was already oriented towards the overcoming of the classical oppositions—by that which I have called, in my own work, an “Einsteinian revolution” or philosophical relativity. This entire paragraph by Simondon is of fundamental importance here, and its relation to the previous paragraph, which discussed cybernetics, extends the argument of his text “Allagmatics.” In this text, Simondon presents cybernetics as a “theory of operations” that aims to “be a universal Cybernetics” (*L'individuation à la lumière des notions de forme et d'information* [*Individuation in light of the notions of form and information*]. Paris: J. Millon, 2005, 561). One should therefore be careful not to reduce Simondon's thought to cybernetics, because the universality that is targeted in “Allagmatics” imposes a double critique of the cybernetic schema of feedback and the classical conception of information. Finally, it should be noted that the text “Allagmatics” also insists on what the end of the paragraph under discussion here will say more precisely: the theory of operations is relatively independent from the ontological domains of being.—J.-H. Barthélémy.]

6. When the Boeings started exploding in flight, it was a gross mistake to judge them as “bad planes”; a more precise approach has consisted in studying the behavior of cells subject to vibrations and constraints of internal suppression, so as to determine the zones of “fatigue” of metal. A jurist, De Greef, says in *Notre destinée et nos instincts* [Our Destiny and Our Instincts] that a criminal would never be condemned if he were judged in his “nursery” [in English in the original]; this is undoubtedly because, starting from this initial phase of his life, one would consider him as *constructed*, as composed of different layers in relative solidarity to one another. The condemnation generally sacrifices something by considering the individual as a homogenous whole. This is how racism and xenophobia are produced.

7. [On this famous “process of concretization,” see the first chapter of Simondon's classic work: *Du mode d'existence des objets techniques*. [On the Mode of Existence of Technical Objects.] Paris: Aubier, 1958 (with several new editions since). Simondon is going to come back in this text as well to the famous example of “Guimbal's turbine.”—J.-H. Barthélémy.]

8. In a certain sense, agriculture, nursing, navigation with sails are more industrial than artisanal, to the extent that they appeal to forces that *do not depend on the human being*, and that come from a reality of which the scale surpasses the scale of that which can be manipulated. These operations introduce the *discontinuous* to the same extent; they are, eventually, alienating, and can give rise to a *magico-religious exercise of thought*. Indeed, they *commodulate the human operation of preparation and the cosmological action*. Human work remains without results, after the seeds have been sown or the ship has been constructed, if the cosmic act (rain, wind, overflowing of the river) does not come in to receive and amplify the human effort. The human effort must be in accordance with the cosmic act, and be “en kairo.” In the nursing of cattle, the prosperity of the herd does not only depend

on the growth of vegetables and of the regime of waters, but also on the epizooties.

9. [This is a citation of the title of a work by Georges Friedmann: *Le travail en miettes* [literally, “work in pieces”; translated into English by Wyatt Rawson as *Anatomy of Work: Labor, Leisure, and the Implications of Automation*. New York: Free Press of Glencoe, 1962—Trans.]. In *Du mode d’existence des objets techniques* [On the Mode of Existence of Technical Objects], in 1958, Simondon had extended and deepened Friedmann’s reflection on the “physical and mental” alienation of the worker in a world of machines—capitalist as well as communist. The genius of Simondon was to show that the solution is not to condemn machines, but to recognize their status of a “technical individual” that must “carry the tools” and thus liberate the human being from its status as a simple assistant. Of course, the problem of unemployment that will be sparked by this simultaneous liberation of the human being and the machine means that such a progress would in fact only be possible within an *other* economic system, to which ecological risks, the current economic crisis, and also soon technical advances themselves—for example, the replacement of the human beings working as supermarket cashiers by machines—will *forcibly* lead us.—J.-H. Barthélémy.]

10. Industry isolates the human being from nature because it takes charge of the relation human being-nature: it *is*, indeed, through the relation to the human being, which replaces the reality of the cosmic order (the wind, the rain, the overflowing of the river, the epizooty) while diminishing to a certain extent its independence in relation to the human being, but conserving the transcendence of the dimension and the character of discontinuity, of irreversibility.

11. [The notion of “key points” had appeared in the Third and final Part of *Du mode d’existence des objets techniques* [On the Mode of Existence of Technical Objects], which dealt with a theory of the “phrases of culture”. The “key points” characterized there the “primitive magical unity” as the human being’s first mode of being—so before any “phase shift” of this primitive unity into the *technical* and the *religious* phase. If in this text, Simondon uses the notion of “key points” again, this time with respect to the technical world itself, it is because with the twentieth century, there emerges a *new unity* which will be that of the “multifunctional network” as a unity of the human being, nature, and technology. This is also what the rest of the text leads to suggest, and one must be attentive to the fact that Simondon’s valuation of “networks of information” really dates from 1968, even from 1958: Simondon was in this respect a true visionary.—J.-H. Barthélémy.]

12. [It may seem strange that Simondon considers nature itself to be a user of techniques. The rest of the paragraph explains what he means by this: a “line of pylons” or a “relay chain” are “harnesses of nature”. One could object that the *use* of techniques remains *human* here, and that nature is merely a constraint that imposes what Simondon calls the “made-to-measure assemblage”. The latter would then be a false point of commonality with the workmen—for in the latter case, the “made-to-measure” refers to the *user*. This is why the real reason for Simondon’s proposition lies elsewhere, namely in an extension—which is absent in this case but present in other texts—of what was said *at the same time* about the “thought-network” as unity of the human being and of nature *and* about the “laboratory”. This extension consists of the following idea: in the *technical whole* that the *scientific and informationalized* laboratory represents, technical reality ultimately concretizes itself, a technical reality which effectively aims, through the *instrument* of knowledge as *technical relation of the human being to nature*, to enable *the nature that is in the human being* to transform itself into a “transindividuality” that is inseparably human and technogeographical. For the notion of “transindividual” and its link with technical “concretization”, see *Du mode d’existence des objets techniques* [On the Mode of Existence of Technical Objects], 247-249, as well as the last chapter of *L’individuation psychique et collective* (forthcoming as *Psychic and Collective Individuation* with the U of Minnesota P).—J.-H. Barthélémy.]

13. [This status of the plane can be compared to what Heidegger says of the commercial plane in his famous seminar “The Question of Technology”. I have myself discussed this comparison—which is also an internal critique of Heidegger’s thought—in my article “La question de la non-anthropologie” [“The question of non-anthropology”] (in Vaysse, J.M. ed. *Technique, monde, individuation. Heidegger, Simondon, Deleuze*. [Technology, World, Individuation. Heidegger, Simondon, Deleuze.] Hildesheim: Olms, 2006. 117-132).—J.-H. Barthélémy.]

‘DU MORT QUI SAISIT LE VIF’:
 SIMONDONIAN ONTOLOGY TODAY¹
 Jean-Hugues Barthélémy, translated by Justin Clemens

INTRODUCTION: THE CHEMICAL, THE APOPTOTIC, AND THE ARTEFACT;
 OR, THE HYPOTHESIS OF THREE TYPES OF ‘NON-LIFE’ THAT CONDITION
 LIFE AS EVOLUTION

As the title of this Introduction indicates, I will not ask myself about the as-it-were metaphysical distinction between the dead [*‘le’ mort*] and death [*‘la’ mort*]. What interests me is more generally the presence of ‘non-life’ in life, and as the very *condition* of life. I would like to suggest that different *stages* of life qua evolution correspond to different *types* of essential non-life. The ‘non-living’ can certainly designate the artefact, but it first of all signifies inert *naturalness* [*naturel*], therefore the physical. Simondon sees in the physical and the ‘vital,’ as he says, two ‘regimes of individuation.’ But in choosing to treat of ‘*le mort qui saisit le vif*,’² I propose in fact, as will appear, to cover the whole genetic ontology of *Individuation in the light of notions of form and information*³ insofar as it derives from the living the third regime of individuation itself, called by Simondon the ‘transindividual.’ But the red thread of this traversal of genetic ontology is in another way what, to my mind, allows us at the same time to unify and exceed it, because this red thread is what I have elsewhere called the ‘auto-transcendent sense’⁴ of the Simondonian genetic ontology. Such are the stakes of my account, because the exegesis of the Simondonian *oeuvre* from which my first two works emerged would already be polemical in its very fidelity, and concerned by this to locate in Simondon what might give him all his contemporaneity.

The expression ‘*du mort qui saisit le vif*’ comes from Marx, who in fact wrote at the beginning of *Capital*: ‘We suffer not only from the living, but from the dead. *Le mort saisit le vif!*’⁵ Marx here concludes a remark about political and social consequences ‘à contre-temps,’⁶ which are engendered by certain past modes of production. For my part, I want to give another sense to this formula, broader and closer to the famous proposal of Auguste Comte regarding the historicity of humanity as the presence of the dead. My thesis will be more precisely the following: humanity is that form of *psycho-social* life which, *by means of the non-living artefacts* that support it and

found its historicity, *extends bio-psychic* animal life of which the non-living *condition* is not yet the artefact but simple *apoptosis* ('cellular suicide'), and whose *origin* is a third form of 'non-life': the *chemical* non-living.

In order that there is no misunderstanding about this thesis, I will immediately specify, and raising it in the order of its different points, that:

1. It is supposed here that the life of the living comes from what it isn't. Simondon himself, while refusing mechanism as reductionism applied to life, accepts that vitalism isn't any more defensible. His own way of refusing mechanism thus consists in thinking the physical and the vital as both coming from a 'pre-physical and pre-vital' reality, because preindividual. Moreover, Simondon envisages applying the idea of neotenia to the passage of the non-living towards the living: vital individuation would be the perpetuation of an inchoate phase of physical individuation itself. I won't have the opportunity to return here to this question of the non-living origin of life, and will dedicate myself instead to the question of apoptosis as the second form of 'non-life' rendering life possible. I will analyse the text of Simondon's that expresses an intuition in the direction of this reality that has recently been confirmed and accepted by biology, after a century of dispersed inquiries.

2. The artefacts produced by animals other than humans, such as, for example, the bird's nest or the beehive, don't aim at making possible a *psycho-social* life, but only a *bio-psychic* or *bio-social* life: as Simondon remarks, the 'pure social,' that we must understand in opposition to the *psycho-social* and not in opposition to the biological, exists in insects because their social character doesn't nourish a psyche. Reciprocally, birds and, even more so, mammals develop a psyche without passing by the social. Only the primates and, even more so, humans, are psycho-social, that is, a reality in which the *individual* psyche is paradoxically developed *on the basis of the collective*. This paradox is that of what we call 'interiority' or rather, with Simondon, 'personality,' of which Simondon said that it could precisely not be thought on the basis of the opposition exterior/interior (or transcendence/immanence).

3. When I affirm that artefacts make possible a psycho-social life and that this is only fully realised with the human, I do not put language *next to* artefacts, nor do I forget the artefacts produced by our 'psycho-social cousins' the primates. Because, *on the one hand*, language is itself also an artefact, undoubtedly moreover indispensable so that other artefacts can become supports for our psycho-social personality. Through language, in which thought is elaborated, the artefacts produced in the 'external world' nourish in return the human mind. This thesis corresponds in fact to Bernard Stiegler's extension of works that were already a major source for Simondon: I speak of the works of Leroi-Gourhan on the *parallelism* between the development of language and that of tools. *On the other hand*, the artefacts produced by primates are not preserved by them after use, and thus cannot define a historic world coming to nourish mind, even if these artefacts are certainly an extension of the living body.

THE ARTEFACT, OR THE 'NON-LIFE' THAT MAKES A *PSYCHO-SOCIAL* LIFE POSSIBLE

I will pick up the order of the complexification in a reverse direction and begin with the question of the transindividual regime of individuation insofar as it is a *psycho-social* life conditioned by this ultimate form of 'non-life' that is the artefact. That it is a matter here of a question, including when one starts with Simondon, sticking with the fact that psycho-social life and culture seem to have technique as a 'phase,' as Simondon magisterially demonstrated in *Du mode d'existence des objets techniques*.⁷ But the question is knowing if this necessary phase would not be even more, that is, *a foundation and a frame* for the other phases of culture. We know that with Simondon technique is only a phase issuing from the 'phase difference' [*déphasage*] of the 'primitive magical unity,' which for him does not seem to contain the presence of artefacts but only that of natural 'key points.'

This is, moreover, what I criticized Simondon for at the end of the second volume of my polemical exegesis.⁸ But I want to come back here to the elements of his thought, and perhaps also to its *tensions*, which may themselves call for a revision of this thought in the direction of a *foundation* of the transindividual or of the psycho-social *upon* artefacts.

In the secondary thesis [*Thèse complémentaire*] for his doctorate *Du mode d'existence des objets techniques*, Simondon returned to the question of the transindividual that he had treated in his main thesis [*Thèse principale*] *L'individuation à la lumière des notions de forme et d'information*. He writes:

The technical object taken according to its essence, that is, the technical object insofar as it was invented, thought and willed, assumed by a human subject, becomes the support and the symbol of this relation that we would call *transindividual*. [...] Through the intermediary of the technical object an interhuman relation that is the model of *transindividuality* is created. We can understand by this a relation that does not put individuals in relation by means of their constituted individuality separating them from each other, nor by means of what is identical in each human subject, for example the *a priori* forms of sensitivity, but by means of this charge of preindividual reality, of this charge of nature that is preserved with individual being, and that contains potentials and virtuality [*virtualité*]. The object that comes from technical invention bears with it something of the being that produced it, expressing of this being what is the least attached to a *hic et nunc*; one could say that there is human nature in technical being, in the sense that the word nature could be employed to designate what remains original, anterior even to the constituted humanity in the human.⁹

Why is the thought of the transindividual taken up here from the point of a thought of technique *nonetheless absent* from the main thesis? Before responding, two preliminary remarks should be made on the very letter of the text. Firstly, what the *end* of this passage says about the meaning of the word 'nature' allows us to understand that, in making the technical object the 'support' of the transindividual relation, the *beginning* of the passage does not envisage detaching the human from 'nature' and contradicts the main thesis. It is even rather *because* the technical object is elevated to the status of support of the transindividual relation that Simondonian thought escapes from what it combats under the name of essentialist 'anthropology.' Indeed, the technical object is for Simondon *nature in the human* — and not human 'nature' or the essence of the human —: 'the human invents by putting to work his own natural support, this *apeiron* that remains attached to each individual being.'¹⁰ It is therefore in subverting the opposition *nature/technique* that Simondon understands here to subvert the opposition *nature/humanity*, just as the Introduction to the work announces a subversion of this third opposition that is the opposition *humanism/technicism*.¹¹

Secondly, the passage cited is itself inhabited by a tension, since it makes the technical object *at once* the 'support' and the 'symbol' of transindividuality, which does *not* exactly come back to the same thing. Nonetheless it's the idea of symbol that prevails in the book, the 'interhuman *relationship*' that is made 'through the intermediary of the technical object,' being, moreover, 'the model of transindividuality,' as Simondon says. The proposal of *Du mode d'existence des objets techniques* more generally consists in making the technical object a paradigm for the comprehension of what Simondon, following Merleau-Ponty rather than Heidegger, names our 'being in the world,' a paradigmaticism that considers the technique, however, only as being, in 'human reality', a 'phase' that comes from the 'phase difference' of the 'magic unity' in technique and religion.

But the sensed theoretical tensions here could only be the translation, in the secondary thesis, of tensions present at the heart of the main thesis. Above all, the idea of the technical object as the *support* of the transindividual relationship should *to my mind* be revalorised, because it is this that allows the resolution of the *ultimate difficulty* whose presence it is now a question of revealing at the heart of the main thesis. Undoubtedly what is at once the most profound and problematic text on the transindividual is in fact that dedicated to the 'problematic of reflexivity in individuation,' in which we find the following passage:

In fact, neither the idea of immanence nor the idea of transcendence can completely account for the features of the transindividual in relation to the psychological individual: transcendence or immanence are indeed defined and fixed before the moment when the individual becomes one of the terms of the relation in which it is integrated, but of which the other term has already been given. But if we accept that the transindividual is auto-constitutive, we will see that the schema of transcendence or the schema of immanence only accounts for this auto-constitution by their simultaneous and reciprocal position; it is indeed at each instant of auto-constitution that the relation between the individual and the transindividual is defined as what *exceeds the individual all the while extending it*: the transindividual is not external to the individual, yet is nevertheless detached to a certain extent from the individual.¹²

In order to problematise this passage, I will first refer to what appeared in the survey of the last chapter of my *Penser l'individuation*: with Simondon, the *psycho-somatic* split of the *living* manufactures the *psychic* 'transitory way' that concerns the 'subject,' whose 'personality' is, after a 'provisory emotional de-individuation,' *transindividual* actualisation, the paradoxical place of the greatest individuality *as at once* the most accomplished subversion of the opposition individual/milieu — the social *no longer* even being a milieu. This is why the transindividual or 'real collective' is the actualised type of the psychic itself: 'Psychological individuality appears as being what is elaborated in elaborating transindividuality.'¹³ Simondon specifies that this subversion of the opposition between immanence and transcendence by the transindividual draws from that 'there is an anteriority of the transindividual in relation to the individual,' this anteriority being indeed what 'hinders defining a relation of transcendence or immanence.'¹⁴ But such an anteriority can not signify that there would be an equivalence between the transindividual and the preindividual, even if certain passages favour the confusion, as is the case in these lines: 'The psycho-social is of the transindividual: it is this reality that the individuated being transports with it, this charge of being for future individuations.' This possible confusion is only another aspect of an insistence — crucial — on the fact that transindividual *individuation* — because it is certainly such — constructs radical individuality beyond even the individual, because it is the 'subject' as a preindividual-individual ensemble that individuates itself. It is this that renders transindividual individuation *thinkable with difficulty*, except by saying with Simondon, in a passage cited above, that 'the transindividual is defined as what *exceeds the individual all the while extending it*: the transindividual is not external to the individual and is nevertheless detached to a certain extent from the individual.'

It remains that the difficulty represented by the idea of the anteriority of the transindividual is not thereby resolved. If the anteriority of the transindividual over the individual does not signify that there would be an equivalence between the transindividual and the preindividual, *how* then to give it [any] *sense*? It is here that the idea of the technical object as support of the transindividual seems to me able to work. Because this support is first of all the 'symbol' that 'expresses,' as Simondon says, the preindividual part attached to the 'subject.' Then, passing from the idea of the technical object as 'symbol' to that of the technical object as 'support,' is to consider that the technical object receiving the preindividual part of the 'subject' is also reciprocally what makes this 'subject' accede to transindividual individuation in its *distinction* with the preindividual. The technical object would thus be this mediation by which the transindividual is constituted in its incomprehensible psycho-social indissociability, *because it would offer the place sought by Simondon in his main thesis under the name of what 'interiorises the exterior' and 'exteriorises the interior,'¹⁵ and that as such is 'anterior.'*

But Simondon thinks the technical *beyond* the simple artefact, under the pretext that the technical is only truly 'concretised' in the modern machine, and will thus never posit the technical object as at the same time an 'expression' of the preindividual attached to the 'subject' *and as foundation of the transindividual individuation*. He writes, on the contrary, that 'between the human and nature is created a technogeographic milieu that becomes possible only through the intelligence of the human being: the autoconditioning of a schema through the result of its functioning necessitates the use of an inventive function of *anticipation* that finds itself neither in nature nor in technical objects already constituted.'¹⁶ If it is therefore necessary to recognise here my 'infidelity' to the letter of Simondon's text, the question *at the very least* proposes itself of knowing if the transindividual, such

as Simondon *himself* attempts to think it through his main, *then* his secondary thesis — that is, such that he is *embarrassed* by it and finds himself plunged into *theoretical tensions* — is not in fact artefactually founded. In such a perspective, one could say with Stiegler that the *finitude* of the living requires the latter to not be able to be transindividually individuated, therefore in psycho-social 'personality' to speak with Simondon, *except by resting* on those 'crutches of the mind' that are non-living artefacts.

THE TWO MEANINGS OF DEATH AND APOPTOSIS AS 'VITAL DEATH'

I come now to this living [being] itself before its psycho-social individuation, to demonstrate in which way it is also rendered possible by *a type* of 'non-life': the life of the living is only developed by passing by apoptosis or 'cellular suicide.' Simondon himself had, in a passage from *L'individu et sa genèse physico-biologique*, divided the idea of death in order to think a certain *constitutivity of death* in relation to life:

Death exists for the living in two senses that do not coincide: it is adverse death [...]. But death exists also for the individual in another sense: the individual is not pure interiority: it weighs itself down with the residues of its own operations; it is passive in itself; it is itself its own exteriority [...]. In this sense, the fact that the individual is not eternal should not be considered as accidental; life in its ensemble can be considered as a transductive series; death as final event is only the consummation of a process of deadening that is contemporaneous with each vital operation as operation of individuation; every operation of individuation lodges death in the individuated being that is progressively charged with something that it cannot eliminate; this deadening is different from the degradation of the organs; it is essential to the activity of individuation.¹⁷

Because death, understood in the second sense, is here only a deposit [*dépôt*] for vital individuation, it could seem to be confused with death understood in the first sense. Indeed, the idea of a deposit— even necessary rather than accidental — does not yet allow thinking a *constitutivity of death* in relation to the living. This is because the deposit, as such, is 'stripped of potentials and can no longer be the basis of new individuations.'¹⁸ But the difference resides in that death in the first sense 'translates the very precariousness of individuation, *its confrontation with the conditions of the world,*' while death in the second sense 'does not come from the confrontation with the world, but from the convergence of internal transformations.'¹⁹ Nothing could be further from my mind than the idea that Simondon would have thought apoptosis as condition of life for an epoch in which biology was yet to ask itself as to the nature of apoptosis. Simply, he enters into the logic of a thought of the individuation by wanting, as Simondon had in effect wanted, to subvert all the classical oppositions — and even that between life and death, for the little that we distinguish between *scales* of individuation.

Contemporary biology is in a position to affirm, as does Jean-Claude Ameisen in his work *La sculpture du vivant*, that death is at the very heart of life. Ameisen's work in fact seems to me to reveal *two* different aspects of this presence. *On the one hand*, the construction of the embryo implies the auto-destruction of a great number of cells. Whence the metaphors of 'sculpture' and of its condition — the cellular 'suicide' —, applied not only to the formation of the brain and immune system, but also to that of the organism in its entirety:

From the first days that follow our conception — at the very moment our existence begins — cellular suicide plays an essential role in our body in the course of construction, sculpting successive metamorphoses of our form in becoming. In the dialogues that are established between different families of cells in the course of being born, language determines life or death. In the sketches of our brain and our immune system — the organ that will protect us from microbes — cellular death is the integrative part of a strange process of apprenticeship and auto-organisation whose accomplishment is not the sculpture of a form but that of our memory and our identity [...]. It is cellular death that, in successive waves, sculpts our arms and legs on the basis of their sketches, to the extent that they grow, from their base towards their extremities. At the interior of our pre-arms, it creates the space that separates our bones, the radius and the cubitus. Then it sculpts the extremities of our members: our

hand is first of all born in the form of a mitten, of a palm, containing five branches of cartilage that project themselves from the wrist and prefigure our fingers. Death thus brutally makes the tissues that join the superior portion of these branches disappear, individualising our fingers and transforming the mitten into a glove.²⁰

On the other hand, and this second aspect verifies at the same time that the first aspect is really an *auto*-destruction of cells, every cell is equipped at the same time for auto-destructing and hindering this auto-destruction, in such a way that the life of the organism once formed is only an *inhibited death* [*mort empêchée*], and that it is moreover not long for the cells that should be renewed each day or close to it, like the cells of the skin:

Whatever their duration of normal life in our bodies, from forty-eight hours to several weeks, from several months to several years, from some decades to perhaps more than a century, each of the cells that constitute us is, permanently, at each instant, capable of auto-destruction. And it will trigger its suicide within hours — at most in several days — if it is deprived of signals that allow it to survive. At the beginning of the 1990s, a new notion of life emerged: living, for each cell that composes our bodies, is, at each moment, to have succeeded in restraining the triggering of suicide. The differentiation that leads, in different cell families, to the locking mechanism of most genes — including, in numerous cell families, for example the neurones, and the locking mechanism of genes that allow the cells to divide themselves — never obliterates, it seems, in any cell, throughout our life, certain genetic information allowing the triggering of the implementation of suicide [...]. The daily suicide of hundreds of billions of cells in our bodies only represent the visible manifestation of a permanent potentiality, anchored in each of our cells.²¹

Conclusion: life as difference from itself or 'non-essence'

At the end of this rapid examination of types of 'non-life' that condition life as biological evolution, then as psycho-social history, we can make a hypothesis regarding the nature of what we have thus named 'life': this 'nature' of life is perhaps precisely an anti-nature or a 'non-essence,' because life will be defined as *difference from itself* if:

1. it is anchored in what is not it (the chemical non-living [being]);
2. it evolves by using death as potentiality inscribed in each cell;
3. it is capable of sublimating itself into a psycho-social life where it fully accomplishes its character of non essence, since [hu]man, of whom it is said that he is historical and has no 'nature,' constructs his mind and personality through a process of 'exteriorisation' in artefacts that paradoxically condition the development of his 'interiority.' ■

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NOTES

1. This text is from a paper given in Paris 16 June 2007 at the colloquium 'Actualité de Simondon,' organised by the Centre Georges Canguilhem of the University of Paris 7 – Denis Diderot and the College International de Philosophie.

2. [This utterly untranslatable phrase, which in fact functions as the original title of this article '*Du mort qui saisit le vif*,' is, as Barthélémy explains in his next paragraph, derived from Karl Marx's *Das Kapital*; to be precise, from the 1867 Preface to the first German Edition, where it appears, naturally enough, in the original French. The phrase originally arises in the context of medieval French law, where it denominates the instantaneous transmission of sovereignty to the heir on the death of the previous monarch, or of property to the inheritor—a transmission which is considered to have taken place whether or not anybody marks the death-transfer with a speech-act or, indeed, whether or not anybody is aware of that death at the time. As such, the maxim is at the origins of the notorious utterance '*Le Roi est mort, vive le Roi!*', which crystallises one biopolitical way in which the dead affect the living. Not only a fundamental principle of law and sovereign power, however, the specific translation problem here hinges on the currency of the word '*vif*,' which, though retaining etymological links to the sequence that interests Simondon and Barthélémy, including: *vivre* (to live), *vivant* (the living [being]), *vie* (life), *vivace* (vivacious), *viable* (viable), etc., has lost in modern French the meaning of the 'living,' meaning something more like 'vivid,' 'bright,' 'lively.' While it is thus tempting to leave the phrase in French throughout—as I have done sometimes here—this proved unworkable, given its consistent and dedicated re-purposing in the article as a whole. I have therefore essayed to keep something of the etymological and the operational in my translating, preferring to render '*vif*' as 'live,' in the sense of both what lives and what is 'lively.' Given Barthélémy's retranscription of this phrase into that of evolutionary ontology, it may well be worth noting Marx's own analogies, in the very same Preface, to microscopic anatomy and to physics. The other term here that has proven particularly frustrating to translate is the common '*actualité*,' which refers to 'current events,' to what's 'topical' or 'present,' and which, in the plural '*actualités*,' is simply 'the news.' Unfortunately, the word also retains links to an entire rat's-nest of philosophemes, such as the distinction between the 'actual' and the 'virtual,' among others. I have tried to mark this when possible and appropriate; otherwise, I have simply gone for idiomatic English—TN.]

3. G. Simondon, *L'individuation à la lumière des notions de forme et d'information* (Grenoble: Millon, 2005).

4. J.-H. Barthélémy, *Penser l'individuation: Simondon et la philosophie de la nature*, preface de J.-C. Beaune (Paris: L'Harmattan, 2005).

5. K. Marx, *Capital*, trans. B. Brewster, intro. E. Mandel (London: New Left Review, 1976), p. 91.

6. Marx, *ibid*, emphasis in original.

7. G. Simondon, *Du mode d'existence des objets techniques* (Paris: Aubier, 1958). See also my commentary in the second part of *Penser la connaissance et la technique après Simondon* (Paris: L'Harmattan, 2005), as well as the more recent final chapter of my work of synthesis *Simondon ou l'Encyclopédisme génétique* (Paris: P.U.F., 2008).

8. See *Penser la connaissance et la technique après Simondon*, *op. cit.*, second part, chapter II, 4.

9. Simondon, *Du mode d'existence*, pp. 247-248 (emphasis in original).

10. *Ibid*, p. 248. The non-contradiction between the Simondonian critique of essentialist anthropology and the idea of a technical support of the transindividual has been developed in my *Penser la connaissance et la technique après Simondon* (*op. cit.*), on the occasion of the polemical exegesis of *Du mode d'existence des objets techniques*.

11. Simondon in fact writes: "The opposition erected between culture and technique, between [hu]man and machine, is false and without foundation; it only covers over ignorance or resentment. It masks behind a facile humanism a reality that is rich in human efforts and natural forces, and that constitutes the world of technical objects, mediators between nature and the human," *Du mode d'existence des objets techniques*, *op. cit.*, p. 9. It is truly the three oppositions mentioned that are here combated in a single gesture. For 'facile humanism,' Simondon substitutes, not a technicism — nor at least a 'naturalism' — which would be an anti-humanism, but a *difficult humanism* because it wagers on the subversion of interlaced oppositions between nature, humanity and technique. This is why I cannot agree with Daniel Colson's presentation in *Petit lexique de l'anarchisme, de Proudhon à Deleuze* (Paris: Livre de Poche, 2003). Besides, if Deleuze did the first review—even laudatory—of *L'individu et sa genèse physico-biologique* and was personally inspired by this work, this is evident on all other points, relative to his thought of 'difference' and of the 'impersonal and preindividual transcendental field'—even if one could also denounce a recuperation there. As far as anti-humanism and anarchism, Simondon is less approached by it than by the excellent *Pour l'homme* of his friend Mikel

Dufrenne, whose subtle critique—addressed to anti-humanism—would be in the service of this ‘difficult humanism’ that corresponds to the subversion, of utmost importance to a phenomenologist like Dufrenne, of classic alternatives. On this question, see my *Simondon, ou l’Encyclopédisme génétique*, *op. cit.*

12. On *a certain* anticipation, notably by the Merleau-Ponty of *Signs*, of the Simondonian thought of technology, see Xavier Guchet, ‘Theory of the social bond, technology and philosophy: Simondon as reader of Merleau-Ponty,’ *Les études philosophiques*, n°2, Paris, 2001.

13. G. Simondon, *L’individuation psychique et collective* (Paris: Aubier, 1989), p. 156 (emphasis author’s). We recall that this work of Simondon’s forms the last third of his main thesis, which appeared in a unified and complete fashion under the title of *L’individuation à la lumière des notions de forme et d’information*.

14. *Ibid.*, p. 157.

15. *Ibid.*, p. 195.

16. *Ibid.*, p. 157 (emphasis in original).

17. *L’individu et sa genèse physico-biologique* (Grenoble: Millon, 1995), pp. 213-214. We recall that this work of Simondon’s is left to the first two thirds of the main thesis. Regarding the passage cited, it is undoubtedly not by chance if Simondon wrote it when he anticipated a second time—after its first anticipation in the sub-chapter ‘The successive levels of individuation’—on the treatment of the ‘collective’ in its relation to ‘the individuation of the living’

18. *Ibid.*

19. *Ibid.*, p. 213, my emphasis.

20. Jean-Claude Ameisen, *La Sculpture du Vivant. Le Suicide cellulaire ou la Mort créatrice* (Paris: Seuil, 2003), pp. 16 and 40.

21. *Ibid.*, p. 138.

“TECHNICAL MENTALITY” REVISITED:
BRIAN MASSUMI ON GILBERT SIMONDON
With Arne De Boever, Alex Murray and Jon Roffe

Parrhesia Several years ago, you already tried to get Simondon translated--and to no avail. We thought we could start with the question: why Simondon today? One can see why it would be important, historically, that Simondon is finally translated into English. But is there any reason why his thought strikes you as particularly relevant--philosophically, politically, culturally-- today?

Brian Massumi I did make strenuous efforts over a number of years, starting almost twenty years ago, to have Simondon translated for a book series I was co-editing. The director of the press flatly refused to consider it, saying there was no interest in Simondon and no audience for the work. At the time, he was probably right. Now the translations are under way, and are impatiently awaited in many quarters, with a sense that they are long overdue. So what changed? Why today?

It might help to start by talking about, why not then? The early 1990s was a very particular moment in English-speaking academics and cultural thought. The intellectual movements of the preceding three decades had succeeded in chipping significant cracks into the walls separating the academic disciplines, which had undergone a process of increasing specialization in the post-War period that many experienced as a Balkanization of knowledge. It wasn't just a question of the much-discussed "two cultures" divide between science on the one hand and the humanities and social sciences on other. It was just as strong between the humanities and the social sciences, and even internal to each. An interdisciplinary field of thought had emerged that asserted the right to draw syncretically on wide arrays of disciplines. Although the diversity of this interdisciplinary field was great, it had come to be known in the singular: "Theory". That infamous term (used mainly by its detractors) was unfortunate for many reasons, not the least of them being that a major stake for "Theory" had always been not only renegotiating the divide between branches of knowledge, but placing the resulting interdisciplinary field of thought back into immediate connection with cultural practice (Cultural Studies' interest in contestatory reappropriations of popular culture being the most obvious example). All of this coincided with an increasing preoccupation with what was already perceived to be an epochal shift toward a world integrally reshaped--

culturally, socially, and economically--by digital technologies. The issue of technological change brought a reflux of interest in scientific modes of knowledge and the associated practices constituting them as a cultural force (as seen in the rise of Science and Culture Studies, and more generally in the concern with “power-knowledge” formations). This wasn’t a return of the “two cultures” question, although rear-guard attempts were made to rewrap it in that old packaging, most symptomatically in the Sokal affair. In fact, what was happening was that the intellectual terrain had shifted to the extent that the imbrication of the “two cultures” was taken as a given.

The question was where this latest phase of their imbrication was leading. For many, it was toward the dawn of a posthuman age. Others scoffed at the millenarian tone. But where the opposing camps met was in the assumption that what was playing out potentially concerned the very nature of the human, and the conditions under which it changes--basically, how we *become*. Technology had come to be seen to be a constitutive factor in human life--and with biotechnology, in life itself. The question of technology was now directly a question of the constitution of being--in a word, ontology. Or more precisely: because given the juncture, the question of being had to be approached from the angle of becoming; it was a question of *ontogenesis*. The ontogenesis at issue was constitutively entangled with modes of knowledge and their associated practices, so the problem was as directly epistemological as it was ontological.

What makes all this relevant to the question of Simondon is that his work was already there. His key concept of “individuation” asserts the primacy of ontogenesis, a primacy of processes of becoming over the states of being through which they pass. Further, Simondon approached the question of epistemology as a function of ontogenesis. There is an individuation of thought, he said, by the same token by which there is an individuation of matter, on the physical plane and from there on to the plane of life, and following--or prolonging--the same constitutive principles. He recognized technological innovation as a key theater of thought materializing in matter becoming, in ways imbricated with life transformations. Technology was a fundamental concern for him throughout. So Simondon was already there. The problem was that the terrain of “Theory”, or whatever less loaded appellation the interdisciplinary landscape of that period might be called by, was not really as there as where it was. It was in fact unequal to the question of ontogenesis that it was called upon to take up by virtue of the juncture at which it found itself.

The problem was that the dominant currents of thought were hobbled by the very moves that had enabled them to reach that juncture, and in ways that excluded Simondon’s approach gaining any purchase. Speaking very generally, the overall orientation was constructivist. Constructivism does connote becoming. Its posture is that things can’t be taken as givens, rather they come to be. Up to that point at least, the constructivism of this period was not incompatible with Simondon. But the constructivism of the period played out in ways that radically diverge from the direction he indicates. What was considered to come into being was less things than new social or cultural takes on them. What is constructed are fundamentally perspectives or paradigms, and the corresponding subject positions. Within the 1990s constructivist model these were understood in terms of signifying structures or coding, typically applying models derived from linguistics and rhetoric. This telescoped becoming onto the human plane. At the same time, it reduced the constitution of the human plane to the question of the human subject (if not its effective construction, then the impossibility of it, or if not exactly that, its subversion). A vicious circle results. The only conceptual tools available are pre-humanized by virtue of the models they derive from. But becoming-human only makes sense in relation to a nonhuman phase-shifting into it. And becoming-posthuman only makes sense in terms of the human phase-shifting out of itself, back into a nonhuman. If the nonhuman phases in and phases out, it is conceivable that it phases *through*--which raises the issue of the immanence of the nonhuman to all of the vicissitudes of the human. Constructivism does not have the resources even to effectively articulate the issue of the nonhuman necessarily raised by ontogenesis, let alone begin to resolve it. All the less so in that the figure of the nonhuman is ultimately that of matter, and the question of matter that of nature--which is radically bracketed by constructivism for fear of falling into a “naive realism”. In other words, for fear of attributing an ontological status to what lies “outside” of social and cultural constructs. Ontology, several generations of theorists were taught, was the enemy. Epistemology, which always carries ontological presuppositions of one kind or another, was at best a false friend. Finding a path to

ontogenesis by unabashedly bringing the two together again, albeit in a new way, was simply inconceivable.

Had it been conceivable, bringing them together on a level with matter, as part of what, as a result, could only be considered a nature philosophy, would be scandalous. To do that while purporting to make the resulting nature philosophy coextensive with a theory of information, would be downright absurd. Information, on a level with matter, would be a-signifying, making signification... what? “An invention”, Simondon would not hesitate to answer. And not just in the technical sense. Already in relation to the nonhuman, with the individuations of the physical and biological planes. For Simondon’s thought to resonate, constructivism has to make room for an integral inventivism (if such a word exists). An inventivism that is not afraid of nature, and *its* creativity.

This is all to say that I think the conditions are right today for Simondon to have a major impact, for it to make sense to consider an inventivist conversion of the kind of constructivism whose portrait I just painted, in far too brutal strokes. Much has changed in the intervening years. Modes of thought more comprehensibly and suggestively in dialogue with Simondon’s have left their mark. Deleuze and Guattari, Bergson, Spinoza, and now Whitehead have garnered significant interest. Linguistics-based models have been reconsidered in light of models privileging affect (or affectivity, as Simondon would say). New forms of constructivism privileging the notion of invention are being developed, for example by Isabelle Stengers. The conditions are right. The one thing that worries me is that there seems to be a tendency to concentrate on Simondon’s theory of the technical object to the exclusion of the other aspects of this thought--physical individuation, vital individuation, and psychic individuation (synonymous for him with collective individuation). The force of *Du mode d’existence des objets techniques* [On the Mode of Existence of Technical Objects] cannot be fully understood in isolation from the overall theory of qualitative change--what he calls “allagmatics”--which is dedicated to understanding these modes of individuation in their relation to each other. Even within the book on technology, a major stake is the distinction between the technical object and the aesthetic object. In the context of Simondon’s overall philosophy, the study of the one necessarily invokes the other. The appearance of his works in translation will hopefully do much to encourage an understanding of his thinking about technology in their “natural” Simondonian habitat.

P You say that Simondon’s thought on technical objects cannot be understood outside of the context of his theory of individuation. Could you explain this a little bit further, perhaps by drawing from the essay “Technical Mentality” that is published in this issue?

BM The essay on “Technical Mentality” is a fascinating case in point and might very well occupy us for the rest of the conversation. On the one hand, it is startlingly contemporary in its concerns, linking as it does the question of the nature of technical object to the evolution of the network, long before the developments we have all experienced since his time--most notably, the rise of the internet--had created a general awareness of the necessity of that move. His evocation of the technical object evolving through the network into a postindustrial “open object” frames the discussion in a way that is of the utmost relevance to today’s situation. On the other hand, the essay employs a good deal of vocabulary which, read in isolation from the rest of his work, can come across as terribly anachronistic, if not downright off-putting. He speaks of a technical mentality “harnessing nature” through increasingly norm-based functioning structurally embodying the proper “cognitive schema” so as to eliminate the “proliferation of the inessential” that comes when consumer choice interferes with design. This comes after a discussion of the difference between the Cartesian mechanism, with its structured hierarchy ordered by an ideal of stability, and the cybernetic model of the continuously self-adapting system regulating itself through feedback mechanisms horizontally linking recurrent operations as a condition of possibility for any functional hierarchy. Simondon falls, of course, more to the cybernetic side, which he praises for its kinship with a “true realist idealism”. A rapid reading might well be forgiven for mistaking Simondon’s “technical mentality” for a scarily normative vision of ultra-rationalized technocratic cyber-control. It would be just that, though--a mistake. While Simondon is unarguably closer to cybernetics than to Descartes, his theories diverge from cybernetics in fundamental ways, and his ethics also turn out to be anything but normative and technocratic.

It's complicated to untangle what he's getting at from a single essay addressing a specific question concerning the technical object, particularly one as thorny as its "mentality", in isolation from the larger theoretical context he develops in his books. For example, in this essay Simondon mentions a water turbine invented by Jean Guimbal, which managed to miniaturize key components while ingeniously solving the associated problem of overheating. He refers in this connection to the "schema of concretization which brings the invention into existence". It would be natural to identify the schema of concretization with the cognitive schema he mentions far more frequently in the essay, and to understand the cognitive schema as an abstract model in the mind of the engineer that comes before the object and guides its construction. By that understanding, the origin of the technical object is purely cognitive, and entirely internal to the human thinking subject. Human thought pre-cognizes a solution, then externalizes it by finding a way to mould matter to the form of its pre-thought solution. The practical finding of that way would be the technical process: the set of mediating actions shepherding the abstractly thought object into concrete embodiment. Invention would move from the past of a thought, cognitively fully formed, toward the future of an embodiment materially repeating the original thought's abstract form. The relation of the technical object to its cognitive origin would be one of resemblance: conformity to a formal model.

This is clearly *not* what Simondon means by concretization. If this were all there were to the story, Simondon would be trafficking in "hylomorphism". Hylomorphism, or the idea that the generation of form is reducible to the imposition upon inert matter of a pre-given abstract form, is the philosophical enemy which Simondon endeavors to undo throughout his work—not least in the opening section from *L'individuation psychique et collective* [Psychic and Collective Individuation] published in this issue. There may indeed be an abstract model in the mind of human engineer that, as Simondon says, "presupposes that the problem is resolved". But that is not what interests Simondon. He sees something else that takes him in very different direction.

P Could you explain this a bit more, perhaps again by means of an example?

BM Just how far away his own thinking moves from any conventional cognitive model that might be applied to invention is signaled by the fact that he scrambles the causal order it assumes. In the section of *Du mode d'existence des objets techniques* following his discussion in that book of the Guimbal turbine, he links invention to an *action of the future on the present*. What can this mean? The veritable moment of invention, he says, is when a circular causality kicks in. In the case of the Guimbal turbine, it has to do with the potential for the oil in the turbine and the water around it to each play multiple roles. The water brings energy to the turbine, but it can also carry heat away from it. The oil carries the heat of the generator to the housing where it can be dissipated by the water, but it also insulates and lubricates the generator, and thanks to the pressure differential between it and the water, prevents infiltration. There are two sets of multi-functional potentials, one in the water and the other in the oil. The moment of invention is when the two sets of potentials click together, coupling into a single continuous system. A synergy clicks in. A new "regime of functioning" has suddenly leapt into existence. A "threshold" has been crossed, like a quantum leap to a qualitatively new plane of operation. The operation of the turbine is now "self-maintaining". It has achieved a certain operational autonomy, because the potentials in the water and in the oil have interlinked in such a way as to automatically regulate the transfer of energy into the turbine and of heat out of it, allowing the turbine to continue functioning independently without the intervention of an outside operator to run or repair it.

Before the passing of the threshold, there were two discontinuous energetic fields. The oil and the water were separated by differentials of temperature, pressure, viscosity, and pattern of movement. The respective energetic fields of the oil and the water were in a state of what Simondon calls "disparity". When the synergy kicked in, the disparity rolled over into an emergent continuity. The differentials between the two fields are still there. But there is also something else, which has leapt into existence. There is a circularity between them, a recurrent feedback that has crossed a threshold to bring another plane of operation into existence. That plane of operation—of self-maintenance—is continuous. But its continuity moves *across* the difference. It comes into itself across the difference, from which it simultaneously separates itself to claim an operative autonomy as a

qualitatively new regime of functioning. The new quality of operation arises as an “effect” of the disparity. This is not the same as saying that the disparity is the cause. What brings the new quality of operation into existence is the circling into each other of the multifunctionalities of the energetic fields of the oil and the water: their entering into a dynamic relation.

What matters for Simondon is the paradox that before the oil and the water entered into relation, the respective multifunctionalities were not in effect. They were nowhere. They are not to be found in the past. It is when the relation kicked in that they were determined, by that very event, to *have been* the potential for what has come. If the potential was not effectively there in the past, there is only one place it could have come from: the future. The respective multifunctional potentials of the oil and the water came into existence at the very instant their disparate fields clicked together into automatic relation. The potentials in the oil and the water for the turbine have been *invented* by the relation’s energetic kicking in. Invention is the bringing into present operation of *future* functions that potentialize the present for an energetic leap into the new. The effect is a product of a recursive causality: an action of the future on the present. This is why Simondon insists that the technical object is not the product of a hylomorphic causality moving from past to future. A technical invention, he says, does not have a historical cause. It has an “absolute origin”: an autonomous taking-effect of a futurity; an effective coming into existence that conditions its own potential to be as it comes. Invention is less about cause than it is about self-conditioning emergence.

This completely changes how we must think about the “mentality” of the technical object. The fact that there was an abstract model of the turbine in the mind of the designer is in a way secondary. The idea for the technical object is finally dependent for its effectiveness on the autonomous taking-effect of the relation. Either it clicks in, or it doesn’t. The designer can bring the two disparate fields of the water and the oil to the brink of relation, but the passing of the threshold belongs absolutely to *their* potential. The designer is a helpmate to emergence. He can put the pieces in place, moving through a linear series of steps progressing from the past of abstract conception to a present on the brink. But the passing of that threshold to invention depends on the potentialization of the elements presently in place as a function of their future. The new-found potential expresses itself as “operative solidarity” between the elements, across the disparity of their fields. That solidarity is not the result of a simple step-by-step accumulation, or of piecemeal adding together of elements. It is nondecomposable. It is holistic. It’s not a structure, he says. It does not add elements together to form a structural unity. Rather, it is a holism-effect that adds a whole new dimension of existence to the elements’ diversity.

P You seem to be going directly against Simondon’s first postulate of the technical mentality here. It appears that for him, “Technical Mentality” is precisely about leaving the holistic mentality behind; it’s about the decomposability of the technical object.

BM I should pause here for a moment to say something about why I am using the words “holistic” and “nondecomposable” here in spite of Simondon’s bitter criticism of holism in the essay, and his listing of the decomposability of the elements as the first postulate for a thinking of technical mentality. Simondon insists at the same time that the elements remain decomposable *and* that they give rise to an “effect” that consists in a “mode of functioning” characterized by an “operational solidarity”—and thus an effective continuity. These two propositions must not be seen to be in contradiction. As Deleuze liked to say, the whole is not of the parts, but alongside them and in addition to them. Whitehead also has a formula for this: the many become one, and are augmented by one. What I am calling a holism-effect is just that: an effect. The word “effect” is taken in a sense akin to the optical “effect.” Deleuze, under Simondon’s influence, also speaks of scientific effects attached to the proper names of the scientists who invented them. He takes the optical effect as a model. An optical effect is an excess effect of a visual whole that detaches itself from the diversity of the elements conditioning its appearance, without in any way annulling that diversity. An example is an optical illusion that suddenly “snaps-to,” carrying the perceiver in one nondecomposable go across a threshold to a new unitary appearance. Simondon’s bitter critique of “holism” in the “Technical Mentality” essay applies to philosophies which

replace the diversity of conditions from which an effect arises with the nondecomposability of the arising whole, annulling their diversity and attributing a foundational ontological priority to the whole rather than rightly placing it on the level of emergent effect. This is one example of one of the most original aspects of Simondon's thought: his endeavoring to always think discontinuity and continuity *together* (an orientation he shares with William James's radical empiricism). This endeavor is encapsulated in his emphasis on the *quantum*, borrowing from physics. A quantum leap in physics is non-decomposable as a movement across a threshold. But its nondecomposability takes off from one set of diverse and decomposable conditions (a collection of particles in a particular configuration) and leads to another (a collection of particles in a changed configuration). The dynamic wholeness of the quantum event (the all-or-nothingness of its occurrence) interposes itself between two diversities, whose discontinuity it marks by a change in level accompanied by a qualitative change in the defining properties of the system (a passage, for example, from one element of the periodic table to another). For Simondon, all transition, all change, all becoming, is quantum.

Now to return to the role of the cognitive schema as preexisting abstract form, in relation to the absolute origin as quantum event of emergence. Following intermediary steps suggested by the cognitive schema, the designer organizes diverse elements, moving through a process of past conditioning, to the brink of the present. At that "critical point", the future effect takes over. It takes care of itself, making the automatic leap to being a self-maintaining system. That moment at which the system makes the leap into operative self-solidarity is the true moment of invention. The past-conditioning by the designer is boosted into a new dimension of existence by the sudden taking-effect of a future-conditioning. Potentialities snap into place, enabling a new regime of functioning, anticipatorily useful for the future, from whose own back-action they effectively came into being.

It is crucial to understand that the "schema of concretization" is the snapping-to of the emergent operative solidarity. That is why Simondon says in "Technical Mentality" that the schema of concretization *is* the multifunctionality of the oil. He means it literally. The oil, in its potential coupling with the water, in operative solidarity with it toward future uses, *is* the schema of concretization. The schema of concretization is the effective entering-into-relation of the oil with the water. It does not conform to the cognitive schema that was in the mind of the designer, according to a principle of resemblance, as copy to model. It effectively takes off from it into a new dimension of existence--which is that of the technical object's relation to its own autonomy. The snapping into operative solidarity of the coupled multifunctionalities of the formerly disparate energetic fields of the oil and the water *is* the schema of concretization. The instant of the schema of concretization's entering holistically into effect *is* the absolute origin of the technical object. It is not a cognitive form imposed from outside. It is flush with matter. It's the taking-effect of a new order of relation *of* matter. The taking-effect reenergizes matter, across the diversity of present elements and the disparity of their fields, propelling it onto a new emergent plane of operational solidarity, a new level of material existence. The schema of concretization *is immanent to matter's becoming*.

P So how does Simondon's thought on technology depend on his theory of individuation? It seems that we still haven't quite addressed this point, which you insisted on at the beginning of our conversation.

BM Although Simondon never defines the term technical mentality in *Du mode d'existence des objets techniques*, and in fact doesn't use it in any of his published books, it is not hard to give it a meaning in keeping with his overall philosophical system--which is to say a definition that is fundamentally *non-cognitive*, flush with matter, for which human cognition would be a special case. Given the lack of explicit development of the concept in Simondon's own work, it is perhaps not out of order to turn to another thinker to lend a hand. For Whitehead, each taking-form involves "the swing over from reenaction to anticipation" due to an "intervening touch of mentality". He speaks of the reenaction in terms very similar Simondon, as an "energizing" of a given set of conditions inherited from the past. The swing-over to anticipation introduces novelty into the world. A taking-form "arises as an effect facing its past", no sooner to turn away from its past to become "a cause facing its future": a future cause.† The snapping-to exemplified in the taking-effect of the operational solidarity (the "subjective form" in Whitehead's vocabulary) of this new existence *is* the "touch of mentality". Whitehead also talks about this

in terms of the passing of a quantum threshold consisting in the becoming of a qualitatively new existence. Saying that the becoming ends as a future cause does not mean that the invention, once it arises, takes its place in a linear chain of causality, as the historical origin of a reproductive series. The causation is always indirect, passing through an interval of immanence: a moment of concretization whose schema is immanent to active matter. Each subsequent exemplification of the mode of existence must return to the “absolute origin”, to come back to Simondon’s vocabulary.

Technically speaking, it is this return event of formation--and not the form--that repeats itself. It is less that a form is reproduced, than that an invention repeats itself. If the repeat inventions fall into a strict pattern of conformity with each other, it is necessary to explain the serial production of this resemblance-effect. The collective conformity of a population of serially produced technical objects to the cognitive schema in the mind of the designer does not explain anything. It skips over all the “intermediaries”--the chain of past actions bringing the elements to the threshold where they holistically take effect facing their future. It skips over the diversity of the elements. It skips over the disparity of their resident fields. It skips over the quantum leap of becoming that crosses the disparity, in the coming to effective existence of a new level. It skips over the touch of mentality. It forgets the action of the future. It forgets just about everything that is effectively ingredient of the event of invention. Far from explaining anything, the reproduction of resembling forms exemplifying an invention is precisely what is in need of explanation. The inheritance of the past conditions must have built-in constraints similarly limiting the degree of novelty of each retaking effect of the invention. Simondon accounts for these limiting conditions that serially restrict exemplifications of an invention to a formal resemblance to each other in terms of *standardization*. The technical object is an individuation--an event of taking-form--whose past conditioning pre-contains the coming potential of its functional autonomy within certain parameters. The parameters are homeostatic, or equilibrium-tending. The technical object has only the margin of functional autonomy allowing it to maintain itself homeostatically. The key point is that the moment of technical mentality--the *technicity* of the technical object--is always immanent to a material event of taking-form. This event occurs at a critical point where the past effectively swings over into a futurity of functioning. The event of self-futurizing serially repeats itself. The potentialization in which it consists repeats, with a past-conditioned latitude of becoming. The difference between the technical object and the living thing is a question of how great a latitude of becoming their past conditioning will permit. There is life when taking-form maintains itself at the brink. Life lives on a moving threshold of metastability, of fragile, provisional equilibrium that is subject to constant perturbation, from whose jaws it must repeatedly snatch its homeostasis. The living thing is an individuation that has no choice but to *continue* its invention, or face dissolution. Its homeostatic equilibrium is not a simple self-maintenance, but an ever-renewed achievement.

P Do you see a connection here with Simondon’s theory of physical, vital, and psychic (and collective) individuation?

BM Psychic individuation is a further continuation of the achievement of vital individuation that widens its latitude of becoming. Psychic individuation is when vital individuation continues across a quantum leap that brings into existence a new level of operation on which homeostasis does not necessarily have to be maintained, or even renewed. Of course, a homeostatic equilibrium must continue to be renewed on the vital level, to which psychic individuation remains coupled as a necessary condition of its taking effect. Its quantum leaping to its own level moves with life’s moving equilibrium. But it takes effect with a qualitative difference. It has the latitude to continue its invention across changes in operational parameters. It can continue inventing itself in such a way as to continue becoming *different*. Maturation is the lowest degree of the psychic individuation of life. The invention of cognitive schema exemplifies a higher degree. The invention of axiomatics--schema for the translation of cognitive schema into each and out of each other--is a still higher degree. Allagmatics, the meta-schematizing of axiomatics, is the highest degree, corresponding to what Deleuze and Guattari call conceptual invention, and Guattari in his solo work “meta-modelization”.

The crucial point is that all of these are *individuations* in their own right. There is an individuation of modes of thought, by the same token by which there is an individuation of modes of physical, technical, and vital individuation. There is no linear causality between any of them. Each is an effective invention bringing into existence an autonomous level of operational solidarity. None can be adequately explainable without reference to an absolute origin. Each must return in its own way, at every iteration, to the absolute origin: an interval of immanence where taking-effect is flush with a self-formative activity of matter as immanent cause. Their coming to existence cannot be explained without eventfully factoring in this immanent cause.

All of the key terms of Simondon's philosophy revolve around the moment of inventive, eventive, taking new effect. In *L'individu et sa genèse physico-biologique*, Simondon calls the holism-effect that clicks in at this point a *resonance*. Then he defines *matter* as this very resonance. Matter is thus defined in terms of a *form-taking activity* immanent to the event of taking-form. Nothing could be further from the form-receiving passivity of matter according to the hylomorphic model. *Nature* is then the universality of this immanent form-taking activity that is matter: that is, its immanence to each event of form-taking, as the principle of individuation animating every coming into existence. The disparity between energetic fields, from the point of view of the potential that their synergistic taking-effect brings into the present from the future, Simondon names the *preindividual*. The disparity itself is *information*. Then there is a specific term for the clinching into synergistic relation of a diversity of elements, across the disparity of information and toward the emergence of a new level of functioning realizing the potential of the preindividual. That term is *mediation*.

The definitions could go on indefinitely to cover the entire Simondonian repertory, all revolving around the same critical point of absolute origination. All of the familiar words that come back around that point take on startlingly new meanings which it is crucial to hang onto if one is to follow Simondon's thinking. Simondon's "mediation", for example, has nothing to do with the meaning of that term in communication studies, media studies, or cultural studies. In Simondon, the term carries ontogenetic force, referring to a snapping into relation effecting a self-inventive passing to a new level of existence. Information, for its part, pertains to the "preindividual" preparatory to that passage. Information--Simondon is unambiguous about this--has no content, no structure, and no meaning. In itself, it is but disparity. Its *meaning* is the coming into existence of the new level that effectively takes off from the disparity and resolves the discontinuity it exhibits into a continuity of operation. Information is redefined in terms of this *event*. As for Gregory Bateson, information is a "difference that makes a difference": a disparity that actively yields a new quantum of effect, and whose meaning is the novelty-value of that effect. What differentiates Simondon in general from the cybernetic and information-theory traditions out of which Bateson was working (in particular, what differentiates him from Wiener and Shannon/Weaver) is that for Simondon this differencing process can in no way be understood in quantitative terms, and is not susceptible to any kind of stable formalization. The differencing process is not describable in quantitative terms because although a quantum leap does coincide with the discharge of a measurable amount of energy, it also coincides with a passing of a threshold to a qualitatively new level of existence. That qualitative crossing is the crucial point for Simondon. It requires for its understanding the mobilization of a whole stable of concepts beyond the pale of quantitative method. The process is not susceptible to any stable formalization because it is continually giving rise to new operational solidarities that did not exist before, and therefore exceed all prior formalization. The "mentality" of the process always avails itself of a *potential energy* of invention, in relation which quantification and formalization are constantly playing a perpetual game of catch-up. Neither ever catches up. Quantification is always laboring under a deficit of potential, and formalization under an energy deficit. Even working together, they can only get so far as the possible--according to Bergson nothing more than an anemic, back-cast shadow of potential.

P Could you talk a bit more about the significance of "potential energy" in Simondon's thought?

BM It is Simondon's insistence on the centrality of the concept of potential energy that makes his philosophy a "realist idealism". It is what he himself points to as differentiating his thought from information theory and cybernetics. The potential of the energetic taking-form that is Simondon's individuation is *real* in the sense that

it always comes to pass in the material clinching of an effective event. It is *ideal* in the sense that it comes into the effective present of that energetic event as the action of its future. The real and ideal are two facets of the same event. Together they make the event of individuation more resonantly material than any mere formalization, and give it more of a mental “touch” than any set of quantities could ever have. What differentiates Simondon from Bateson himself is that Simondon never lets the touch of mentality hypostasize into a “Mind” that is one with Nature. There is no “Mind” immanent to Simondon’s Nature--only form-taking informational *activity* (with as yet--that is to say until its own future occurs to it--no content, no structure, no meaning). There is no “one” but always a one *moreness*: a “more-than-one”, everywhere energetically in potential.

Returning to the question of technical mentality in Simondon’s article, the relation between the cognitive schema and the schema of concretization can now be better understood. The cognitive schema resembles the schema of concretization that is the effective invention of the technical object not because it effectively moulds it, but in the sense that it underwent an individuation that is *operatively analogous* to it. It also took emergent effect, from a preindividual field of thought (consisting in an unresolved disparity between perceptions, some present, some appearing only possible). It also passed a quantum threshold across which its operational solidarity came newly into existence (inventing the emergent meaning--the cognitive schema itself--capable of resolving the preindividual perceptual disparity into a well-formed anticipation energetically facing its own effective future). Thus effectively formed, the cognitive schema was able to follow the recursive traces of its anticipatory emergence back to the future from which it came, strategically guiding the setting in place of elements piece by piece, progressing step by step to the very brink of invention. But not beyond. At that point, it can do no more. It has prepared the preindividual field. But it can not take the ultimate step. Because that step involves the arising from the preindividual of a new autonomy: the coming into self-maintaining existence of a brand new mode of functioning. Only the technical object can clinch that for itself. The cognitive schema must pass on the baton of invention to the schema of concretization, and step back. For the next step is the point of absolute origination at which the technical object, formatively touched by its own mentality, emerges onto its own level of reality. It is the point at which the technicity of the object takes effect. It taking-effect takes a whole new form, through which it effectively declares its ontogenetic independence from the cognitive schema. It snaps-to its own effect, immanent cause of its technical future.

The cognitive schema and the schema of concretization are in operative analogy with one another in the sense that it is this form-taking *process* that is repeated between them. It is not, strictly speaking, a form, or even a structure, that is reproduced by one for the other. A thought does not resemble a turbine. A disparity between perceptions present and possible is not structured like a disparity between water and oil. But the taking-effect of the operational solidarity of the cognitive schema in thought, and the taking-effect of the operational solidarity of a schema of concretization in turbine-technicity, do “resemble” each other in the sense that they exemplify the same ontogenetic process. Their comings-to-be follow the same principle of individuation. In addition, one coming-to-be ends up passing the processual baton to the next, ending as future-facing as it began at the point of its own absolute origin. The two individuations are not only in operative analogy. They form between themselves a *transductive* series (a forwarding of futurity down the processual line of absolute originations relaying each other, in operatively analogous takings-form).

When this transductive process is taken into account, what Simondon means by the cognitive schema “harnessing nature” takes on a completely new meaning. It carries an inventive connotation that distances “technical mentality” from any technocratic vision of rationality. The “recognized, measured, normalized” thresholds of functioning he invokes at the end refer specifically to the standardization that past-conditions the serial emergence of the technical object. His point is that when the technical object under consideration takes the form of the postindustrial *network*, the standardization is actually the past-condition for an *opening* of the technical process to an unheard-of future latitude of becoming. Through network standardization the technical object in fact accedes to some of the same natural potentials “harnessed” by psychic individuation. It “maintains itself” not in a homeostatic equilibrium, but in a “perpetual actuality”, wherein its inventive individuation is “eminently apt to be continued”. More and more, it comes to “carry its own line of prolongation on its own

plane” of operational solidarity, in operative analogy with psychic individuation. The “touch of mentality” that constitutes its technicity intensifies and expands. Technical mentality ideally-realizes itself more fully. It is “augmented, continued, amplified”.

As this happens, technical individuation and psychic individuation come to the very brink of each other. They enter into a relation of transduction. In concert, they rejoin Nature, without “disfiguring” it the way that Simondon considers that the opposition between the “affective modalities” of the artisanal and the industrial has done. These technicities were in affective disparity. They were antipathic. Which made their disparity ineffective. Instead of clinching forward over a threshold to a qualitatively new level of existence, they stubbornly clung to their antipathy for one another, prolonging their disparity. They remained in “inessential”, that is to say ontogenetically ineffectual, naturally uninventive, preindividual tension. This locked out any resolution of their disparity through a quantum leap of future-facing potential snapping-to, to newly individuating effect. The lock-in was to a relative level of collective ontogenetic stupidity.

If the stubborn disparity between artisanal and industrial technicity can be said to have defined post-Enlightenment humanity, it was as its own perpetual crisis. The period was locked in an ineffectual dialectic between nostalgia for the simpler, more bucolic “humanness” of artisanal production and the “progress” of the human bought at the price of its own fragmentation at the mercy of the manic Taylorist drive for industrial efficiency. Does the “amplified” technical mentality of the “postindustrial” network presage a more intelligent taking-form *beyond* the human? Do technical individuation and psychic individuation not only brink upon each other, but transductively merge into a single lineage? In postindustrial technicity, will the cognitive schema and the schema of concretization finally converge? Simondon doesn’t explicitly pose this question, much less answer it. But it is a measure of the effective potential of his own conceptual inventiveness that he came to *its* brink, so far ahead in anticipation, and in a way that furnishes us today with future-facing resources apt to assist us in coming to our own response, as an expression of an ethics of becoming.

Personally, I shy away from posthumanist discourse. For me, a Simondonian ethics of becoming is best to be found not in a next “posthuman” phase, but in the *nonhuman* at the “dephased” heart of every individuation, human and otherwise. What I mean by the nonhuman is the ontogenetic clinching of the preindividual that catapults it over the threshold of becoming. I mean the individual—that nondecomposable solidarity of occurrent existence—at the brink. Just coming eventfully to be what it will always have been, at a level where it has, as yet, no content, no meaning, no structure, only past-conditioning future-facing. The really-ideal “absolute origin”, as a function of which every quantum of individuation effectively ends where it causally begins, so as to emergently interlink all individuations in that vast network of transductive more-than-oneness that is the process of Nature.

P Thank you very much for this interview ■

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† Whitehead, A.N. *Adventure of Ideas*. New York: Free Press, 1933. 192-94.

THE THEATER OF INDIVIDUATION: PHASE-SHIFT AND RESOLUTION IN SIMONDON AND HEIDEGGER¹

Bernard Stiegler, translated by Kristina Lebedeva²

We know very well that where Heidegger says that time is the veritable principle of individuation, Simondon responds that there is no principle of individuation, but the process of individuation. Since the reading that I proposed of *Being and Time*, I have maintained that one of the major concepts that has allowed for the philosophical advances of the twentieth century—as much neglected and misunderstood as it has remained, also in Heidegger—is the concept of primary retention discovered by Husserl in 1905. I will not explain again here the reasons that led me to claim that even if I share with Husserl the point of view that absolutely distinguishes primary retention, which is the “big now” of perception, to speak like Gérard Granel,³ from secondary retention, which is, like the second synthesis of the *Critique of Pure Reason*, the result of reproduction and imagination in memory and thus as past,⁴ I no longer agree at all with Husserl when he claims that primary retention owes *nothing at all* to secondary retention. I have tried to show that primary retention is always a primary *selection* and that this selection is always brought out in function of secondary retentions that anticipate the primary retention in the form of *secondary protentions* (with the primary protentions being carried by the temporal object that supports the phenomenon) and that as such filter it. Furthermore and above all, I have attempted to show that the conditions under which secondary retentions perforate primary retentions, which are thus primary selections, are overdetermined by the factual and prosthetic conditions under which the now can have access to its already-there that is past and secondary, namely through the artifacts in which what I call “*tertiary retentions*” consist, which is to say, the supports of what we are about to examine as a process of individuation.

My thesis about the primary philosophical sense of *Being and Time* is that Heidegger attempts to free himself there from the Husserlian thought of time by introducing the already-there of historicity—which is very close to Simondonian preindividuality. However, he does not truly succeed in breaking with Husserl precisely because, like Husserl, he still wants to exclude tertiary retentions—which constitute for him the realm of *Weltgeschichtlichkeit*—from the *originary* realm of *Eigentlichkeit*. Finally, Simondon’s relation to the question of time is too inhabited by its intimate penetration of Bergsonian thought in order for it to be able to escape both the metaphysics of vitalism that denounces the geometrization of time, which is to say, its spatialization, which is

precisely that in which every tertiary retention consists, and the Bergsonian ignorance of the crucial difference brought about by Husserl between primary and secondary retention. That is why psycho-social individuation is essentially—although perhaps unwittingly—thought with the cone of *Matter and Memory*.

After these elaborations, let me introduce my subject by telling you that, on the one hand, I have always been struck by the *resonance* of Simondon with Heidegger or of Heidegger with Simondon, and that, on the other hand, I have just as much been struck by the immense distance separating the two. And it is in this proximity of distance that joins them that I am going to see today a kind of *transductive relation*, a transduction as Simondon defines it, namely as that which opens up possibilities of internal resonances in a process of psychic and collective individuation, and that thus (re)constitutes its terms.⁵ We, who still attempt to do philosophy, belong to this process that would open us up to the possibility of effecting a *leap* in individuation and thus to realize a transindividuation by one of these leaps of which Heidegger also often speaks.

But as for the *manner* of leaping and what *to leap* means, that would perhaps be a question precisely of *leaping beyond the Heideggerian sense of leaping*. It would thus be a question of transindividuating the potential of philosophical individuation in which the preindividual reserve [*fonds*] of the Heideggerian text consists, insofar as it expands and supersaturates the question of leaping by pushing the “question of being” or the “question of the history of being” to the extreme. And for this Simondon would be, if I dare say so, at the same time a catalyst and a springboard in some way, in that he is the thinker of the quantum leap as the full [*plénière*] modality of individuation. It is, of course, necessary to underscore here that Heidegger will have shared with Simondon the philosophical attention to the quantum question. Recall here, also, the reference to Heisenberg in *Being and Time*.

Finally, the leap to be carried out in this transduction is that which proceeds, for me, from a *reading* in which the *terms of the reading*, which is to say, the texts of Heidegger and Simondon—*Being and Time* and *Psychic and Collective Individuation* in particular—constitute themselves and each other in the proximity of their distance in such a way that, individuated on the basis of the preindividuality that they constitute for us, they lead to a reading of the ensemble that joins the terms of their relation *by default*: as a relation that is thus dynamic because it is a *phase-shift* [*déphasage*] and that calls forth a *resolution*. This resolution is not a *solution*, but a *decision*. For my part, this decision—which is to say, this reading, insofar as it joins the two texts in their immense distance, but at the same time asks them a common question starting from their very resources—this decision of reading consisted in positing the necessity of situating, as a *transductive* and thus also individuating *element*, that which I have called “tertiary retention.” That is to say, just as well, *facticity*, but conceived here as prostheticity and as that which then constitutes the *Wirklichkeit* of the mark of origin’s originary default, the accidentality from which time proceeds and where—as in the case of *Entschlossenheit* and thus in a *quantum leap*—it is a question of *differentiating becoming as future* [*avenir*], which is also to say, this time in a more Simondonian language, of *negentropizing the entropic becoming* that is constituted by accidental chance.

Such questions do not only have a political interest, or an interest beyond the political, in an *apoliticity* on the basis of which I sometimes attempt to think the future and the beyond of *polis*, in the sense that Bataille spoke of an atheological thought, engendered from the theological itself, from its individuation, or as I myself have said sometimes—even in this very place, a little more than fifteen years ago, at the invitation of Gérard Granel—in the name of a thought that I qualify as *atranscendental*, but coming from the transcendental, from its individuation. I explain all of this in the last volume of *Technics and Time*. By “political” or “apolitical,” I mean: in or from the process of psychic and collective individuation that has opened up history as individuation of the West, in the possible *after* of such a Western process if it is true that it is rather a question of thinking how that which—having begun and thus necessarily also having an end—we would essentially be in charge of individuating today, in and as the end of the individuation of the West, namely, the nascent figure of another time, the accidental and yet necessary conditions of a renewed individuation – stating precisely the necessity of such an accident, as “resolution,” but a resolution insofar as it has the capacity to affirm a reinvented phase-shift in the face of an entropic and increasingly hegemonic tendency.

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In any case, it is within such perspective that I situate my intervention: just as Foucault and Deleuze speak of the end of a Greco-Judeo-Christian apparatus [*dispositif*] (we who are no longer Greeks, not even Christians, as they say),⁶ I put forth my capacity for individuation—psychic in the sense of Simondon, existential ipseity in the sense of Heidegger—insofar as it is inscribed at the heart of a *process* that invents itself and in which I attempt to *participate* as an inventor. Whether this process is a “history of being” or an *ontogenesis* in the sense of Simondon is a big part of the question, but it is not the only one: the *real* question is situated in a *beyond* of this alternative, which is to say, precisely in its surpassing [*dépassement*] as a leap into a new process of individuation. That is how I think of philosophy today: as the experience of this *kata-strophe* (that is also a cata-lysis) of what will have been the process of psychic and collective individuation that began from two sources. Of these two, today, the Greek source is, if not accomplished, then at the very least exhausted: it has *exhausted the resources of its initial conditions* and today it is a question of reinitializing this source (in a hypomnesiac and technical sense, the way one “initializes” a system) and reinitiating it (in a logical, which is to say, anamnestic sense, the way a master initiates) or rather reindividuating it from a reinitialization that escapes all decision and all “resolution,” and, a fortiori, all solution and all mastery.

The question is then to agree on this point: what are these *resources*? Or rather, what will these resources have been and to what type of new initial resources, constituted quantically [*quantiquement*] by a leap, can they give rise? Such a reinitialization can only yield an individuation as a quantum leap and it is in the worry [*inquiétude*] attentive to the necessity of *this* leap that I attempt the transductive relation of the Simondonian phase-shift and the Heideggerian resolution, constructing, in one way or another, the new theater of individuation—understanding that here *to construct* means *to individuate* what is already there as preindividual potential.

The *relation* is established first of all through the striking fact of the proximity of the *already-there* of the historical past of Dasein, a past “which is not something that follows along after [Dasein], but something which already goes ahead of it” (§ 6)⁷ and the *preindividuality* from which proceeds the individuation of the Simondonian psychic and collective individual. There are indeed other considerations that are common to the two thinkers. Most notably, there is the consideration—one that perhaps was not reflected upon enough—of the system of objects that, as that which constitutes what I myself called the *whats* [*les quois*], opens up the horizon of a world within which leaps must occur, and which is also what Simondon thinks as *milieu*. The Heideggerian thought of being-in-the-world resonates with the Simondonian *individual-milieu couple*.

Certainly, the conditions of leaps in which individuation from a world or from a milieu consists, as *Entschlossenheit* or as quantum leap, and as the result of the already immense difference between world and milieu are very distant from one another. But I think that this is the case *first of all* because that which is posed in one as an evident *bipolarity that is constitutive of individuation* is in the other the *originary and tragic question of a fall* [*déchéance*] of the individual in the course of the individuation. I mean that the first difference between Simondon and Heidegger, which in truth is constituted as an immense distance, and which all of a sudden puts them into the transductive relation of a *very distant mutuality*, if not of a veritable separation, of a disjunction that could never again return to the conjugation of a conjunction, is that the one speaks of the *we* and the other of the *they*, the *we* of the one lacking the *they* of the other and vice versa. In this regard, Marc Crépon shows in his recent book *Terreur et Poésie* how Hölderlin is in Heidegger the support of a discourse not on the *we*, but on the *people*,⁸ and, in this case, not on the proletariat, the Third State, or the *demos*, but indeed on the *German people*—which constitutes, I believe, the price to pay for the nonthought of the *we* in its originary relation to the *I*, the unthought that is concealed by the question of the fall which, however, correctly claims to be its thought.

In Heidegger, there is neither difference nor the tension in *Dasein* between the *I* and the *we*: Dasein is not an *I*. It is neither, properly speaking, a *we*: it is prior to this kind of distinction, but it does not contain this distinction either. And this is a problem, I think: for it does not allow us to fully interrogate the tension and the dynamic phase-shift that is, by contrast, constitutive in Simondon and allows us to think individuation as process, a process that does not denigrate the collective and that also avoids thinking *Entschlossenheit* as a decision limited by being-towards-death. The stakes—but I will not have time to develop it here—are *overmortality* [*surmortalité*],

which is to say, that which, when it is thought starting from being-towards-death, nevertheless allows to account for the fact that psychic individuation always carries itself forward, as originally collective in this sense, going beyond itself, into a future that exceeds *its own disappearance* and to which it delivers its inadequation as phase-shift because that is the question in the preindividual which it is, from that moment, called upon to constitute in its turn, and in relation to which it is entirely traversed. It is thus that the constitution of a transindividual is possible. But this overmortality is that which presupposes what I call tertiary retentions insofar as they support this transindividual.

Certainly, I use here personal pronouns that are in principle proscribed by everything that *Being and Time* puts in place: it is certainly not a question of making *Dasein* collapse into an *I*. Nor is it a question of reducing it to a *we* that quickly becomes unthinkable, at least by itself—if not precisely as people. Yet it seems to me that *Dasein* oscillates in a permanent denial between the *I* (this is what authorizes a certain interpretation of *Dasein* as ego, as in the work of Jean-Luc Marion, for example: the voice of conscience of being-at-fault, of *Schuldichkeit*, is indeed that of an *I*, as Heidegger says explicitly—and the whole question is then to translate *Schuld* not so much as *guilt* or even *debt* but as *default*⁷ and to translate-by-default is what every translation is); thus, in a permanent denial between the *I* and the *historical people* (as heir of the “Greek *Dasein*,” the people of the Hymns).

It is here that a transduction between Heidegger’s existential analytic and Simondon’s processuality of individuation must be carried out. Rethinking existentiality in the way *Being and Time* attempts to designate it analytically as dimension of a *Da-sein* and as being-towards... is properly that which—joining if not an *I* to a *we*, then at least a “psychic” individuation to a “collective” one—all of a sudden gives *Being and Time* a renewed individuating efficacy, as both reinitialized and reinitiated. But this is only the case insofar as this transindividuating transduction happens, and this is my own contribution, through the affirmation of a dimension of individuation that is found *neither* in Heidegger *nor* in Simondon and which is what I have called the “retentional apparatuses,” which are constituted by tertiary retentions.

I owe much, if not everything, to the preindividual potential that *Being and Time* will have been for me. But this will only have been truly the case, this will only be individuated, as that which characterizes what I believe I think today, when I am able to mobilize the Simondonian question of the process of psychic and collective individuation in my reception of *Being and Time*.⁸ Many years after these connections, after *Le temps du cinéma*,⁹ I ended up telling myself that, contrary to the absence of the difference of the psychic and collective poles in Heidegger—which inevitably leads the latter to confuse the question of the *we* with that of the *they*, which is to say, of the fall—there is no question of the *they* in Simondon. The possible annulment of the *we* in the *they*, the possibility of the annihilation of the difference between the psychic and the collective, of the *I* and of the *we*, in their confusion does not seem to enter Simondon’s thought.

What Heidegger posits as a point of departure, namely *facticity*, *such* that it always results in the ultimately *inevitable* character of the *temptation to determine the undetermined*, which is to say, to flee the necessity of the resolution contained in the solitude that the *singularity* of *Dasein* necessarily is, that individuates itself only at this price, this *solitude in facticity*—is not really a *question* in Simondon. However, this does not mean that it is not addressed [*abordée*] at all. On the contrary: this question of the tension between psychic and collective, of the necessary opposition of the individual to the group, this question that is the dynamic constraint of transindividuation, of internal resonance as effectivity of the theater of individuation permanently addresses [*borde*] us. But it is not treated *as such*, and consequently, it does not allow us to pose the question of the *flight* before the necessity of the quantum leap in which effective individuation necessarily consists. That which, in a language too Aristotelian for Simondon, I call its passage into act.

However, I maintain this question as that of a passage into act not only because this expression intimately concerns me and initially allowed me to think philosophy, but because I think that Aristotle in this regard raised a specific question that concerns precisely the conditions of psycho-collective transindividuation insofar as it is not the gregariousness of collective psychology of that which Freud thought he could call the horde, which he

hastily assimilated to the crowd.

Sensibility, which was thought as such for the first time by Aristotle, characterizes two different types of “souls”: the sensitive, supposedly animal soul and the noetic, supposedly human soul. The sensibility that is supposedly human is also and in some of its parts noetic, which is to say, inscribed into *logic*. It is in this that the noetic sensible opens up to sense. “Logic” does not mean here to conform to the rules of rationality, but to be inscribed in a *becoming-symbolic*. For a noetic soul, everything sensible that is in act becomes the support of an *expression*. This expression (which is also, Aristotle says, a discernment, a *krinein*, a judging, a *making-a-difference*)¹⁰ is a *logos*—as speech [*parole*], as gesture: narration, poem, music, engraving, *mimesis* in all of its forms... I call it an “exclamation”: the noetic experience of the sensible is *exclamatory*. It exclaims before the sensible insofar as it is *sensational*, that is to say, the experience of an *incommensurable* singularity. The sensitive soul neither exclaims nor expresses itself in this sense, it does not experiment with the sensational singularity of its world, it does not *make* world (*kosmos*), which is to say that it does not expand its sense in exclaiming it symbolically. This noetic expansion of sense is what Simondon calls psychic and collective individuation. It is this process.

The sensational is the intellectual sensible. But the passage from the regime of the sensible into the regime of the sensational needs support because, as Aristotle writes in his *On the Soul*, the noetic (sensationally intellectual) soul is only *sometimes* noetic, namely in those moments when it experiences the extra-ordinary: that which comes from another plane. Ordinarily, it is sensitive, which is to say that it lives not in the mode of its animality but of what is to be called its *stupidity* [*bêtise*]—its regression to the sensitive stage.¹¹ Ordinarily, I plunge into the ordinary because I submit myself to the *stupid* [*bête*] *tendency* which makes that *I can participate in the divine only discontinuously*, as Aristotle says. It is this tendency of which, in any case, I would not know how to free myself (this dream of purity is what best accomplishes the tendency that it believes to fight: it is the stupidest [*bête*] and laziest expression of stupidity), which makes that, in general, which is to say, ordinarily, in this generality of the genre where I am in the perception without exception, in the non-sensational sensibility, I am in the realm of regression.

Heidegger, referring at the same time to Book A of *Metaphysics* and to *The Nicomachean Ethics*, formulates it as follows: “The human cannot constantly dwell among the *timiôtata*; for the human, this autonomous mode of being, forever attending to the *timiôtata*, is unthinkable.”¹² And Aristotle cites Simonides along the same lines: “God alone can have this privilege.”¹³ The stupid tendency that is thought already in Aristotle as the regression of the intellectual-sensational soul to the sensitive stage is what contemporary industrial entropy exploits as it exploits the projective and fascinator capacity of the cinema of consciousness (something Adorno did not understand).¹⁴ It exploits it through the exploitation of the pulsational depth [*fond*] of the body, which is to say, of the unconscious. It is necessary to critique not only reason, but indeed also stupidity [*bêtise*], which is not simply a critique of unreason, but, above all and primarily, a critique of laziness. This critique of stupidity [*bêtise*] can be constituted only by rules, ethical maxims, and a praxis that are essentially an ethics and a praxis against laziness, an ethics and a praxis of courage.

Such courage is a sensible way to behave, an affirmation of the sensible as sensational and against the becoming-pigsty of the sensational through what I analyzed some time ago as a sensationalist press [*une press à sensations*], a sense-printing machine that has become aesthetic, and that is pursuing the mnemotechniques that forge the collective retentions that the second essay in *On the Genealogy of Morals* contemplates, precisely at the moment when these mnemotechniques, having become mnemotechnologies, are functionally integrated in the system of global production, and with them *all aesthetic* and *symbolic* life in general: such is the society of control that Deleuze speaks of as what succeeds the disciplinary societies of Foucault and Marx.

These mnemotechniques and their efficiency are what neither Heidegger nor Simondon allow us to think, even though both call for this thought; and in any case, for me, the transductive relation that is established between them and that establishes them as the preindividual reserve of the philosophy most necessary and capable of a quantum leap is what leads to the thought of this very mnemotechnicity as what I call “tertiary retention.” But

in order to explicate this point by way of conclusion, let us first return to Simondon and Heidegger.

What Simondon privileges is *transindividuation* as the reality of individuation in general, that is to say as what accomplishes transindividuation while inscribing it in the essential incompleteness of an eternal return. I am currently attempting to show elsewhere (in *De la misère symbolique*) that it is a question here of the circuit of desire as such. This transindividuation as circuit is not truly thinkable on the basis of and with *Being and Time*—unless as what will later become a “history of being”... *Later*, which is to say, *after* that which constitutes the *evidence of a failure of the existential analytic*.

Yet it is a question of *reciprocally critiquing the two gestures* at the same time: the one that proceeds from the *fact of the fall* without positing by way of an equally initial point the *primordial conjunction* of the psychic and the collective, and here I am speaking of Heidegger; and the one that, if not denies, at least occludes or underestimates the *necessity of Verfallen*, which is to say, the *essential fragility* of individuation—the gesture of Simondon. But it is only at the price of this possibility of fall inscribed in facticity that the *primordial conjunction is equally a primordial disjunction*. In neglecting it, Simondon does not see that it is a question of struggling, *between* these two tendencies, *for* their articulation and *against* their decomposition, which is the fact of disindividuation. In other words, individuation is essentially the com-position of forces that bind it and that turn it into a process, which is to say, a dynamic. There is no dynamic without the duality of forces that attempt to annul each other. But that is what Heidegger just as well as Simondon ignore—the one by denigrating the psychic-collective duality by collapsing into the fall; the other by ignoring the fall as the tendency to confuse the two poles in the *they*.

That is what remains of the *metaphysics of mastery* in Simondon (and in his mecanological project as foundation of the control of the technical cybernetic ensemble for mecanological power) which has as its political price its inattention to the question of the confusion of the *I* and the *we* and to the *becoming-they* of individuation, which is to say, *deindividuation* in its own right. The latter constitutes a tendency to a *regression toward the sensitive soul*, which is to say, *the generalization of the gregarious mode*—which is the psycho-social form of entropy. It is what I would like to introduce here first of all by way of a digression on the question of technics in Simondon. There one sees that even if he does not allow one to think directly what I just called “deindividuation,” he nonetheless thinks the machine precisely as a loss of individuation. But he does not see coming the question of deindividuation proper to the hyperindustrial cybernetic machine, that which indifferently logic and technics, producing a logistics where calculation is put in service of deindividuation as desingularization, with singularity being that which must be reduced to particularity in order for the circulation of merchandises be able to impose itself without frontiers or limits, at the price of destroying the circulation of desire, which is to say, *libidinal energy*.

Simondon thinks the nineteenth century as a loss of individuation where the worker cedes to the machine the status of technical individual. This analysis is obviously very close to that of Marx. However, it is also quite different precisely in that it rests on the concept of individuation that escaped Marx (even though the latter justly underscored against Hegel, in his *Critique of Hegel's Philosophy of Right*, the irreducibility of singularity to particularity as the incommensurability of the *living* in the process of production): an automatic system of machinery—moved by an automaton, the moving force that moves itself—consisting in a large number of mechanical and intellectual organs such that the workers themselves are nothing but conscious articulations of it. The machine that possesses the ability and the force in place of the worker is itself a virtuoso endowed with a soul represented by the mechanical laws which are acting in it and that, in order to maintain its constant auto-movement, consumes coal, oil, etc., just as the worker consumes nourishment (instrumental materials).

Here it is Marx who is speaking. But in Simondon, form does not precede matter, nor the other way around; he is not a “materialist.” The process of individuation in which technical evolution as differentiation consists must be inscribed into a different categorization: the technical *industrial* object concretizes this dynamic *in itself*, without the intervention of that by which, for instance, Leroi-Gourhan, in his analysis of the realization of technical tendencies, calls the “interior social milieu.” In Simondon, technical evolution as the dynamic of evolutive tendencies tends towards techno-logical perfection through the integration and overdetermination

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of functions, which is in itself a process of individuation—but *very paradoxically*, *Simondon does not assign any role to it in psychic and collective individuation*. As for the articulation between this becoming-machinic and the becoming-social, which is, by the way, also a becoming-symbol, as the support of the transindividuation, even though it is not thought, it is historicized as follows—I recapitulate here the summary that I have proposed of its position in *The Fault of Epimetheus*: “Industrial technics is characterized by a transformation of technical individuals, which allows for the comprehension of the genesis and breaking down of the present-day relation of the human to the machine. The dramaturgy of modern technics begins in the eighteenth century with a phase of optimism. A crisis ensues with the advent of industrial technics exploiting the resources of the thermodynamic machine. The machine does not replace the human: the latter supplements, up to the Industrial Revolution, the absence of machines. The appearance of the tool-equipped machine, *qua* a new technical individual, however, strips the human of its role as technical individual as well as of its employment.” The machine takes the place of the human because the human fulfilled the function of machine—carrying tools. “However, a new optimism is ushered in during the twentieth century with the cybernetic machine capable of producing negentropy. More profoundly than the relinquishment of the human’s place as technical individual beside the machine, the threat of entropy makes possible the anguish in which the human experiences technical evolution. Against this, optimism is justified through reference to a thought of life, because technical evolution appears as a process of differentiation, creation of order, struggle against death.”¹⁵

However, I attempt to show in *De la misère symbolique 1. L’épochhyperindustrielle* that for the time being, which is to say, in the hyperindustrial *hegemony*, the cybernetic machine, far from being negentropic, is archi-entropic: as the hyper-reactive system that tends to real time, it also tends to a synchronization that constitutes a new stage in the history of the loss of individuation and a fusion in what eventually leads to the hegemony of the *they*.

Dasein always lives in a difference in relation to others—in order to even it out or to accentuate it: this is its “distantiality.” But this means that *Dasein* from the beginning stands in subjection to others and that it is not itself. This *who* that *is*, is the *they*, “the *who* is the neuter.” This *who* entails an *essential tendency* (essential to Dasein) to the mediocre leveling down of all possibilities of being (differences): it is the publicness (or the “public opinion”) that controls *prima facie* “every way in which world and Dasein get interpreted,” disburdening “*Dasein* of its everydayness.” “In one’s concern [*Besorgen*] with what one has taken hold of, whether with, for, or against, the others, there is constant care as to the way one differs from them, whether that difference is merely one that is to be evened out, whether one’s own *Dasein* has lagged behind the others and wants to catch up in relationship to them, or whether one’s *Dasein* already has some priority over them and sets out to keep them suppressed. The care about this distance between them is disturbing to being-with-one-another, though this disturbance is one that is hidden from it. If we may express this existentially, such being-with-one-another has the character of distantiality. The more inconspicuous this kind of being is to everyday *Dasein* itself, all the more stubbornly and primordially does it work itself out.”

“But this distantiality which belongs to being-with, implies that *Dasein*, as everyday being-with-one-another, stands in subjection to others. It itself is not; its being has been taken away by the others. *Dasein*’s everyday possibilities of being are for the others to dispose of as they please.” “The ‘who’ is not this one, not that one, not oneself, not some people, and not the sum of them all. The *who* is the neuter, the *they*.” “In this averageness with which it prescribes what can and may be ventured, it keeps watch over everything exceptional that thrusts itself to the fore. Every kind of priority gets silently suppressed. Overnight, everything that is primordial gets glossed over as something that has long been well known. Everything gained by a struggle becomes just something to be manipulated. Every secret loses its force. This care of averageness reveals in turn an essential tendency of *Dasein* which we call the ‘levelling down’ of all possibilities of being.”

“Distantiality, averageness, and levelling down, as ways of being for the *they*, constitute what we know as ‘publicness.’” “Publicness proximally controls every way in which the world and *Dasein* get interpreted, and it is always right.” “Thus the particular *Dasein* in its everydayness is *disburdened* by the ‘they.’”¹⁶ As neuter, would the *they* thus be Blanchot’s “they die,” which is to say, the impersonal that is equally concealed by being-towards-

death as undetermined, but whose indeterminacy would thus equally be the neutrality of the impersonal? This very difficult question which joins the *they* to death, but not to being-towards-death in an “attempt to determine the undetermined” by calculation (in *Besorgen*), is also the question of what links *the* death to the dead [*la mort au mort*], to what, as *what, is not living*, to what I call “the dead” in the sense of the reign of what is not alive [*vivant*] and yet essential to what is living in life [*au vif de la vie*] and that is constituted by the existence of the *who*: technics, and more precisely, technics insofar as it constitutes tertiary retention, in fact concealing the dead [*le mort*] in the living, in its very intimacy and as *ex-sistence*,¹⁷ in its intimacy always already ex-claimed as being-in-the-world.

Thus, there are several dimensions of the *they*, which can also be understood as the *one*[*il*], as the impersonal, which is the condition of what Heidegger himself calls the *They*, but which could not be reduced to it. I have attempted elsewhere¹⁸ to characterize this one as what I call here “the dead,” which is to say, also as the impersonal and equally as the condition of the *One*[*II*], which is to say, of the (mono)theological. But it is also the impersonal as what Blanchot calls “the impersonal knowledge of the book” in *The Beast of Lascaux*¹⁹ and in this very aspect already the preindividual. And it is indeed thus that Deleuze understands the *they* of Blanchot: “Every event is like death, double and impersonal in its double.”²⁰ “It is the abyss of the present, the time without present with which I have no relation, toward which I am unable to project myself. For in it *I* do not die. I forfeit the power of dying. In this abyss *they* (*on*) die—they never cease to die, and they never succeed in dying.”²¹ It is in this multidimensionality that the *they* is the neuter as this other plane of “they die,” *as if here dying were the return of the living to the dead*, which is to say, to the preindividual reserve—the *they* of mortality where the *stupidity* [*bêtise*] of death supports as its point of flight and collapse the *idiocy of life*, which is to say, the singularity of the idiom.

However, Simondon’s inattention to the entropic tendency of digital technology – not only to cybernetic technology, by the way, but also to digital technology that is the expansion into all the domains of logistical and computational technology, that thus imposes calculation on everything that constitutes the movement of life, that is also the development of technologies of the society of control as mnemotechnologies; that is thus also the absorption of the symbolic into the sphere of production and merchandise and the liquidation of the difference that Marx thought he could make between infrastructure and superstructure—this inattention and naiveté, which in fact strongly resembles a discourse of mastery, is an avatar of metaphysics in its modern version. It is the fact of *forgetting the question of support* and of *the question of forgetting support*: of the question of support insofar as it is what always forgets itself, just like a fish forgets the water.

Certainly, Simondon asserts that there can only be transindividuation on the condition of a material and artefactual conservation of its trace: “Through the intermediary of the technical object is created... an interhuman relation that is the model of transindividuality. [This relation puts individuals into a relation with one another] by means of this charge of preindividual reality, this charge of nature that is conserved with the individual being and that contains potentials and virtuality. The object that comes out of technical invention carries with it something of the being that produced it.”²²

But at the same time he argues that information must be thought regardless of its supports; in order to oppose himself to Shannon, he turns to the illusions of Turing, Wiener, and many others—including contemporary cognitivists: “The notion of information should never be brought back to the signals, supports, or vehicles of information in a message, *as the technological theory of information, drawn by abstraction from the technology of transmissions, tends to do*.”²³ In other words, *like Heidegger and yet entirely otherwise*, and against all expectations, Simondon does not see that the informational and computational support cannot be reduced by a mastery because it cannot be limited to a technicity that would only be *Besorgen* and non-originary, derivative facticity. He does not see, *like Heidegger and yet entirely otherwise*, that technicity, being constitutive and, in particular, constituting the condition of access to the past as preindividuality is what opens up temporality as such, the capacity for projecting the future, and it is also what opens up individuation to the question of death, in other words, of incompleteness—being, after all, that which constitutes the very process of the phase-shift, as originary default of origin whose

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thanatological version is existential solitude. I will not develop these points, elaborated in *The Fault of Epimetheus*, any further.

Thus, this blindness will also have been that of Heidegger. But the same forgetting, as wavering in the one as in the other—since, just as Simondon underscores the place of prosthetic support, which is to say, of what I call tertiary retention in transindividuation, Heidegger dedicates long analyses to *Weltgeschichtlichkeit*—the same forgetting has as its consequences two different and even opposing types of forgetting in each of them: one forgets the *we*—this is Heidegger—and the other forgets the *they*—this is Simondon. This is also what renders impossible in both of them a thought of what I called overmortality: it is the history of being that is substituted for it in Heidegger—and as the abandonment of the initial ambition of the existential analytic. This is also what leads to the politics of the “historical people.” The question of a possible completion of the process of Western psychic and collective individuation as the end of the history of being, the end of metaphysics, and the becoming of the *Gestell* in this sense, will appear later. But it is no longer as an *analytical* and *critical* question that this end presents itself, but as *Gelassenheit* in waiting for a god. Thus, the question of the loss of individuation becomes unthinkable both politically and apolitically (in the sense defined above).

The loss of individuation as the *possibility of a blockage of the process of Western psychic and collective individuation* is an eventuality that Simondon does not even envision and that he even rejects, adopting a discourse of mastery of a rather classical kind—the vocation of mecanology being to situate the human as the conductor of an orchestra of cybernetic machines. Simondon sees in the hylomorphic model the error of the techno-logical model of the artisan that one finds in Plato and Aristotle. As a result, it seems to me he loses, in turn, the question of technics as the process of the individuation of the *what*, conditioning the individuation of the *who* as the *we* in a transductive maieutic. Thus, one will not be surprised to see him caught up in the illusion of the abstract machine, or, more precisely, of information without support, rendered possible by maintaining a certain dependence of the lived—a dependence he inherits from Bergson. Undoubtedly, Simondon stands *on the edge* of the question of the non-lived, he even addresses it thematically and recognizes it as an original fact. But he does not put it at the heart of the transduction of the psycho-collective and in this regard he still opposes the living [*le vital*] and the geometric.

Nevertheless, Simondon thinks signification starting with a concept of information that is neither that of Turing—even though he shares with the latter the forgetting of the support—nor that of the theory of information, of computer technology and sciences of information: Simondonian information is *improbabilistic*.²⁴ It is in this sense that his concept of information sustains a concept of *sense* that I will present in the last volume of *Technics and Time as the process of individuation of signification* concretizing itself as the *deposit* of the transindividual: the transindividual is thus a process of concretion and concretization (it makes a system). In other words, *sense* is essentially a process, movement, *e-motion* (as an *act* of individuation, it moves [*é-meut*] individuation as the primary impassable motor, to be precise, of the sensible agent of the noetic soul). But it is necessary to appeal to the undetermined in the Heideggerian sense and to *différance* in the Derridean sense in order to “bring a non-probabilistic term to the theory of information.” On the condition that it be thought as tension, information in the Simondonian sense functions as the textuality of a pro-gram that, in disseminating itself, catalyzes the improbable, as the germ of sea water or mother water [*l’eau-mère*] triggers the process of individuation of a crystal: “The hylomorphic schema or the notion of archetype possess a high tension of information because they have elicited structures of significations over twenty-four centuries of very different cultures. The tension of information would be the property possessed by a schema of structuring a domain, of *propagating* itself through it, of *organizing* it.”²⁵ And information gives concretions because it is functional integration and concretization: “The relation can never be conceived as a relation among preexisting terms, but rather as a reciprocal regime of the exchange of information and of causality in a system that individuates itself. The relation exists physically, biologically, psychologically, collectively as internal resonance of the individuated being; the relation expresses individuation and is at the heart of being. However, the *support* of the relation is missing here, the support that exists only technically and of which *On the Mode of Existence of Technical Objects* said that it was the *condition* of transindividuation, that precisely is described here.”²⁶

Of course, it is on the basis of the central concept of “metastability,” which I did not have time to analyze here, that the sense of these advances must be evaluated, just as the sense of these forgettings or of these retreats. And when it concerns *psychic and collective* individuation, it is necessary to think metastability that is equilibrium at the limit of disequilibrium and disequilibrium at the limit of equilibrium, and that precisely as such is the *mode of existence of the system’s dynamic that is constituted by the process of individuation*, on the basis of *prostheticity as default of origin*. Which is to say, as *originary disequilibrium* in which prostheses consist, which is to say, as tertiary retentions supporting transindividuation as its crutches.

A translation of the question of metastability in the context of *Being and Time* would be possible as unstable equilibrium between *Besorgen*, understood as determination of the undetermined, and *Sorgen*, as the trial of the undetermined. The ipseity of Dasein would then become psycho-social individuation as unstable equilibrium of *Besorgen* and *Sorgen*. I tried to show that it is in fact the fixation and with that the determination of the already-there (which is to say, of that which in Simondon is called the preindividual), constituted by *Weltgeschichtlichkeit* as well as by the hypomnesiac discretization of *logos* that form the condition of *différance* where sense individuates itself—the sense that intensifies individuation—which is to say, the quantum leap of *Entschlossenheit* that I analyzed as differing identification.²⁷ In other words, the determined and the undetermined are not opposed: it is a matter of tendencies that compose and this composition constitutes the metastable equilibrium of a process of individuation. Which is to say, the individuation of an *I* in *awe* that the *they* endlessly threatens with decomposition.

This double economy constitutes being-towards-death in the Heideggerian sense as well as the structural incompleteness of individuation in Simondon. Death itself is such an incompleteness. But it is also a knowledge that forgets itself. Metastability is a *différance* in the sense that, incomplete by nature, it maintains itself only by composition. The determined and the undetermined are its strictly tied tendencies as the cross of Dasein and form its edges as well as its contradictory tendencies—which are at the same time its dynamic power and its possible fall, its movement as possibility always exposed to what I called a regression, thinking of Aristotle and Freud, rather than a fall or a collapse. However, it is as the weakness of the thinking of the economy of tendencies in which this dynamic consists that the thinking of Heidegger and the thinking of Simondon neglect—both of them and each respectively—the questions of the *we* and the *They*. I, however, believe that their conjunction renders thinkable a disjunction as a possibility of the opening of a new theater of individuation: the conjunction between the Heideggerian question of the *They* and the Simondonian question of the *we* would be this composition that disjoins ■

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NOTES

1. This essay first appeared as “Le théâtre de l’individuation. Déphasage et résolution chez Simondon et Heidegger” in *Technique, monde, individuation: Heidegger, Simondon, Deleuze*. Ed. Jean-Marie Vaysse. Hildesheim: Georg Olms Verlag, 2006.
2. TN: The translator would like to thank the Melbourne School of Continental Philosophy for helping *Parrhesia* acquire the rights to this translation.
3. Gérard Granel. *Le sens du temps et de la perception chez Edmond Husserl*. Paris: Gallimard, 1968.
I have developed this question in *La technique et le temps 3. Le temps du cinéma et la question du mal-être* (Paris: Galilée, 2001).
4. This is certainly not the strict definition of the transductive relation according to Simondon: the latter *constitutes* its own terms, fully and entirely. However, internal resonance, as the progressive structuration of a milieu of individuation, is indeed a relation that *re-constitutes* its terms: in joining them, structuration transforms them. The terms, that here are texts, find themselves reinvented in this way.
5. See, for instance, Gilles Deleuze, *Pourparlers* (Paris: Minuit, 2003), 145: “It’s not the Greeks or Christians who are going to experience things for us these days.” *Negotiations, 1972-1990*. Trans. Martin Joughin. New York: Columbia University Press, 1995, 106.
6. Martin Heidegger. *Sein und Zeit*. Tübingen, Niemeyer, 2006. (*Being and Time*. Trans. John Macquarrie and Edward Robinson. San Francisco: Harper San Francisco, 1962, 41).
7. Marc Crépon. *Terreur et poésie*. Paris: Galilée, 2003.
I have defended this point of view in Bernard Stiegler, *La technique et le temps 1. La faute d’Épiméthée* (Paris: Galilée, 1994). *Technics and Time 1: The Fault of Epimetheus*. Trans. Richard Beardsworth and George Collins. Palo Alto: Stanford University Press, 1998.
8. And I owe much to François Laruelle who showed me the necessity of reading Simondon when, around 1984, I presented him a draft of what I call an “idiotext.”
9. Bernard Stiegler. *La technique et le temps 3. Le temps du cinéma et la question du mal-être*. Paris: Galilée, 2001.
10. Aristotle. *De Anima (On the Soul)*. Trans. Richard McKeon in *The Basic Works of Aristotle*. New York: Random House, 1941, 426b.
11. See Bernard Stiegler. *Passer à l’acte*. Paris: Galilée, 2003, 31.
12. Martin Heidegger. *Plato’s Sophist*. Trans. Richard Rojcewicz and André Schuwer. Bloomington: Indiana University Press, 2003, 92. Translation modified.
13. Aristotle. *Metaphysics*, Bk. A in *The Basic Works of Aristotle*, 982b 31.
14. Stiegler, *Le temps du cinéma*, Ch. 1, 2, and 3.
15. Stiegler, *La faute d’Épiméthée*, 82-3. *Technics and Time 1: The Fault of Epimetheus*, 68-9.
16. Heidegger, *Being and Time*, 165. Translation modified.

17. In primordial relation with what I call consistence and subsistence in Bernard Stiegler, *Mécréance et discrédit 1. La décadence des démocraties industrielles* (Paris: Galilée, 2004).
18. Bernard Stiegler. *Aimer, s'aimer, nous aimer. Du 11 septembre au 21 avril*. Paris: Galilée, 2003.
19. Maurice Blanchot. "The Beast of Lascaux." Trans. Leslie Hill. Oxford. *Literary Review*, 22 (2000), 9–18 (15).
20. Gilles Deleuze. *Logique du sens*. Paris: Minuit, 1969, 206. (*The Logic of Sense*. Trans. Mark Lester and Charles Stivale. Columbia: Columbia University Press, 1990, 152.) In *Foucault*, Deleuze also writes: "But all these positions are not the various forms of a primordial 'I' from which a statement stems: on the contrary, these positions stem from the statement itself and consequently become the categories of 'non-person,' 'he,' 'one,' 'He speaks' or 'One speaks,' which are defined by the family of statements. Here Foucault echoes Blanchot in denouncing all linguistic personology and seeing the different positions for the speaking subject as located within a deep anonymous murmur. It is within this murmur without beginning or end that Foucault would like to be situated, in the place assigned to him by statements." Gilles Deleuze. *Foucault*. Paris: Minuit, 2006. Trans. Sean Hand. (Minneapolis: University of Minnesota Press, 1988), 7.
21. Maurice Blanchot, *L'Espacelittéraire*.(Paris: Gallimard, 1965), 160.
22. Gilbert Simondon. *Du mode d'existence des objets techniques*. Paris: Éditions Aubier Montaigne, 1969, 248. Gilbert Simondon. *L'individuation psychique et collective*. Paris: Éditions Aubier, 1989, 29.
23. Ibid., 51-2.
24. Ibid., 54.
25. Ibid.
26. Bernard Stiegler. *La technique et le temps 2. La désorientation*. Paris: Galilée, 1996.

ANGELS AND THE GENERAL INTELLECT: INDIVIDUATION IN DUNS SCOTUS AND GILBERT SIMONDON

Paolo Virno, translated by Nick Heron

Today, anyone who wants to seize their own time with thought (rather than lose time in refined or inflated, in any case innocuous, thoughts), must pause for a long time over the relationship between that which is maximally *common* and that which is maximally *singular*. This particular speaker, whose statements have provoked either our approval or irritation during a political assembly, differs from all those who have taken the floor before or after him. But he differs from the other speakers in constituting a singular entity precisely and solely because he shares a 'common nature' with them – the faculty of language. The capacity for articulating signifying sounds – biological prerequisite of the species *Homo sapiens* – cannot manifest itself other than by being individuated in a plurality of speakers; inversely, such a plurality of speakers would be inconceivable without the preliminary participation of each and every one of them in that preindividual reality which is, precisely, the capacity for articulating signifying sounds. Should the linguistic example be repulsive to the Bergsonian palate of a large portion of post-structuralist philosophy because it is too 'naturalistic', we could also consider, as an alternative, the condition of migrants or the supple inventiveness mass intellectual labour requires. In both cases, what is at issue (mobility and the force of invention) is a historically determined preindividual reality, which nonetheless gives rise to an extraordinary process of diversification of experience and practice. And vice-versa: individuated in all their haecceity, *this* migrant and *that* intellectual labourer nonetheless ceaselessly attest to the existence of an undifferentiated ground. Far from cancelling each other out, the Common and the Singular refer back to one another in a kind of vicious circle.

Everything hinges on the comprehension of precisely what this reciprocal reference consists in. It is here that the compasses spin and the paths branch off. Is the Common perhaps the result of a mental abstraction, which isolates and condenses certain features present in many individuals? Or, conversely, is it something entirely real in itself and for itself, independent of our representations? And finally and above all: is the individual speaker distinguished from others because, *beside* the common faculty of language, he asserts additional characteristics,

themselves unique and unrepeatable (for example, a desire or a passion)? Or rather, to the contrary, is this speaker distinguished from the others solely because he represents a particular modulation *of* the common faculty of language? Does individuation come about on account of something that is added to the Common or does it take place in the midst of it? These are some of the dilemmas which, today more than ever, plague discussion concerning the *principium individuationis*. It is almost superfluous to note that the stakes in this discussion are at once logical, metaphysical and political. *Logical*: in order to adequately think the ‘common (or preindividual) nature’ from which the individuated individual descends, it is perhaps necessary to abandon the principles of identity and the excluded middle. *Metaphysical*: in the light of the Common-Singular nexus, it is legitimate to postulate the existence of a preliminary intersubjectivity, anterior to the very formation of distinct subjects; the human mind, contrary to what the methodological solipsism of the cognitive sciences suggests, is originally public or collective. *Political*: to a large extent, the consistency of the concept of ‘multitude’ depends upon the manner in which we understand the process of individuation. The multitude is a network of singularities that, instead of merging into the false unity of the State, persist as such, precisely because they always assert anew, in the forms of life and in the space-time of social production, the preindividual reality behind them, that is, the Common from which they come.

To my knowledge, there are two thinkers who, while preferring the theme of individuation, ended up dealing above all with ‘common nature’, with its characteristics and with its status: Duns Scotus and Gilbert Simondon. In their drift – seeking the Indies, coming upon the Americas – there is a kind of instructive necessity. To justify the rapprochement it would suffice to say: both philosophers contested the usual way of understanding the *principium individuationis* and above all its reduction to a localised question without true consequences for general ontology. And we could add: like every movement of thought which brings about an original situation, Simondon’s reflection on ‘preindividual reality’ permits reading certain authors of the past differently, that is, it creates its own predecessors. However, were we to limit ourselves to this, it would merely be a question of an erudite game; and I confess that I lack the will to play that erudition. To register some decisive assonances between the theses of Simondon and those of Scotus is, rather, to attempt to pin down a *theoretical* model – neither strictly ‘Simondonian’, nor strictly ‘Scotian’ – in order to decipher the Common-Singular relationship and, thereby, the mode of being of the contemporary multitude.

These notes (they are, in truth, nothing other than this) concern the following themes: 1) the critique which Scotus and Simondon address to those who think that the matter-form double – that is, hylomorphism – can explain the process of individuation; 2) the gap which separates the notion of the ‘universal’ from that of the ‘common’, and the consequent exigency of specifying the logical and ontological status of the ‘common’ without using underhand categories correlative to the ‘universal’; 3) the paradoxical relationship, because at once additional and defective, which the individuated individual has with ‘common nature’; 4) the angelic question (are they individuals or not?), which guaranteed Scotus a folkloristic fame in school textbooks, re-examined in the light of Simondon’s concepts of ‘transindividuality’ and ‘collective individuation’. I limit the bibliographical sources to the minimum. For those that concern Simondon, I make use here of *L’individuation psychique et collective* and Muriel Combes’s monograph *Simondon. Individu et collectivité*. Of Duns Scotus, I consider here only the *Ordinatio* II, Distinction 3, first part, in the French version edited by Gérard Sondag under the title *Le principe d’individuation*. Sondag is also the author of an admirable introductory essay, which I shall certainly draw upon.¹

1. SPLENDORS AND MISERIES OF THE MATTER/FORM DOUBLE

Although at times they cannot avoid using it, both Duns Scotus and Gilbert Simondon express strong distrust for the expression ‘principle of individuation’. It is deceptive, in their opinion, because it leads one to believe that individuation is indebted to a particular factor (the fateful ‘principle’, precisely), isolable and extricable as such. But this is not the case.

Scotus dedicates the greater part of *Ordinatio* II, 3, 1 to weighing up and then discarding, one after the other, the possible candidates for the rank of ‘principle’: quantity, quality, space, time, etc. It would be useless to look for an aspect of reality in itself capable of guaranteeing the singularity of an entity. All aspects of reality, including the most short-lived and random accidents, are always *common*: each and every one of them is subject to individuation; none of them alone can produce it. It is completely illusory, for example, to suppose that singularity derives from existence or indivisibility: that which exists (or ends up indivisible) is a singular being, but it is certainly not the existence (or the indivisibility) that makes the singular what it is.

For Simondon, “it is a postulate in the research on the principle of individuation that individuation has a principle”.² The capital error of this postulate consists in assigning the constituted individual an ontological primacy, then proceeding backwards in search of its purported germinal element. In this way, rather than explaining the individual starting from the Common, the Common is explained starting from the individual. In order to correct this fallacious tendency, it is necessary to place the preindividual being, deprived of numeric unity and therefore never reducible to a defined element, at the centre of the investigation: “The individual would then be grasped as a relative reality, as a certain phase of being which – like it – presupposes a preindividual reality and which, even after individuation, does not exist entirely alone, for individuation does not exhaust in a single blow the potentials of preindividual reality”.³

To critique the idea that individuation has a ‘principle’ means to settle accounts with the matter/form double. Indeed, what has been charged to it above all is the burden of transforming a common nature into a singular entity (‘humanity’ into ‘this man’, for example). For Simondon, hylomorphism is a network of too large a mesh; at best it indicates some background conditions for individuation, yet without providing any explanation of the operation in which it consists: “one is not present during ontogenesis because one is always situated before that assumption of form which ontogenesis is; the principle of individuation is not therefore to be grasped in individuation itself as an operation, but in what this operation needs in order to be able to exist, namely, a matter and a form”.⁴ For Scotus, neither matter nor form (nor even their composite) individuate; rather, they constitute the sphere in which individuation must take place: “the ‘individual entity’ is neither form nor matter nor composition, since each of these is a [common] nature. It is the ultimate reality of the being that is matter, or that is form, or that is composition, so that everything that is common and yet determinable can always be distinguished.”⁵

Scotus sets out in particular to refute the Aristotelian-Thomist thesis, according to which the task of individuation would fall to matter alone, while the exclusive monopoly of ‘common nature’ would be reserved for form. The refutation takes place through a celebrated thought experiment: are angels – who by definition lack a material body – distinct singularities, or do they coincide without residue with the species? First of all, Scotus reminds us that, contrary to what his detractors maintain, even matter is common, that is, even it has a “*quidditas*”: its presence, therefore, does not guarantee individuation, nor does its absence compromise it. Secondly, he observes that form, like every other ‘common nature’, is already in itself subject, even in the absence of external factors, to that process of actualisation which gives rise to a plurality of unmistakable individuals: “I therefore affirm that in relation to the reality through which it is a nature, every nature [...] is potential with respect to the reality through which it is ‘this nature’ and through which, consequently, it can be ‘this.’”⁶ The angelic multitude is a multitude of individuated individuals: each and every one of them is an ‘ultimate determination’ of the Common; none of them alone encompasses it entirely.

Scotus’s thought experiment (comparable perhaps, in Simondon’s terms, to the defence of an additional and peculiar ‘psychic individuation’ with respect to ‘physical individuation’) can be reformulated with the greatest seriousness in reference to the contemporary situation. Post-Fordist living labour has verbal thought, the capacity to learn and communicate, and the imagination – in short, the distinctive faculties of the human mind – as its raw material and instrument of production. Living labour therefore incarnates the ‘general intellect’ or ‘social brain’, which Marx spoke of as the “principal pillar of production and wealth”. Today, the general intellect no longer coincides with fixed capital – that is, with the knowledge congealed in the system of machines – but with

the linguistic cooperation of a multitude of living subjects. All this is by now obvious enough. Less obvious, yet equally legitimate, would be echoing the Scotian question here: are the cognitive labourers sharing in that ‘common nature’ which is the general intellect absolutely distinct individuals, or, as far as their ‘cognitive’ and ‘immaterial’ being is concerned, is there no difference between the individual and the species? Some maintain that the Post-Fordist multitude is constituted by unrepeatable individuals, solely and precisely because each of them has a material body. In this way, however, they remain much too faithful to the criterion proposed by Thomas Aquinas in *De ente et essentia*: that of matter as the unique *principium individuationis*. A solution of this kind is full of drawbacks. Indeed, it assumes that the Common is situated at antipodes to individuation, rather than being its propitious ground. Cognitive labourers would not be individual *insofar as* they are cognitive, but in addition to and independently of this fact. Such that, strictly speaking, there would not be *many* cognitive labourers, but a *single* cognitive/species labourer, exemplified by numerous beings in themselves identical. There are good logical and political reasons for hypothesising instead that “it is perfectly possible that there should be a plurality of angels in the same species”,⁷ that is, it is perfectly possible that ‘common nature’ – in our case, the being-all-expressions of the general intellect – should have its ‘ultimate actuality’ in a multitude of distinct singularities.

2. THE COMMON/UNIVERSAL OPPOSITION

Anyone who wants to think the Singular seriously must set up camp near the Common: that Common which Scotus calls ‘nature’ and Simondon ‘preindividual’. Individuality as such is an extremely general and indeterminate category, the exact opposite of individuation. If we consider two individuals without making reference to the Common, we are forced to conclude that both are a ‘one’, a ‘this’, an ‘I’ – indeed, that they are indistinguishable, as voting citizens are. Outside the Common, there is *identity*, not *singularity*. Identity is reflexive (A is A) and solipsistic (A is unrelated to B): every being is and remains itself, without entertaining any relations whatsoever with any other being. Wholly to the contrary, singularity emerges from the preliminary sharing of a preindividual reality: X and Y are individuated individuals only because they display what they have in common differently.

To understand the close link between the Singular and the Common, we must nonetheless register the hiatus that divides the Common from the Universal. The inclination to use the two terms as almost equivalent synonyms ensures that the game of individuation is lost even before beginning. The Common is opposed to the Universal both from the logical and from the ontological point of view. To carefully define this double distinction is, perhaps, an eminent task for the coming philosophy (as well as the point of honour of the most radical political movements of the present). Here I limit myself to jotting down shorthand the arguments of Scotus and Simondon that appear to justify the at first glance bizarre inference: ‘if Common, then not Universal’. Instead of the relation of the *inclusion* of the already constituted individual in the Universal, the two authors place the emphasis on the relation of preliminary *belonging* of the individual undergoing individuation to the Common.

For Scotus, the Common is “inferior to numerical unity”;⁸ for Simondon, “preindividual being is [...] more than a unity”.⁹ Now, only that which lies outside numerical unity “is compatible without contradiction with multiplicity”; it alone, Scotus says, is shareable and communicable – that is, “can be found in another subject in addition to that in which it is.”¹⁰ Muriel Combes observes that, for Simondon, “it is only on account of a preindividual being understood as ‘more than one’, that is, as a metastable system charged with potentials, that it becomes possible to think the formation of individuated beings.”¹¹ Note the plural: ‘individuated beings’. If it were not ‘more than one’, the Common could not simultaneously inhere in *many* individuals: but since the individuation of one individual alone is inconceivable (in which case, how to distinguish the exemplary individual from the species?), there would be no process of individuation at all and not even strictly anything common. This is the first fundamental point of divergence with respect to the Universal: the Universal is, in effect, always endowed with a numerical unity. Or better, the Universal is the manner in which the mind surreptitiously assigns a numerical unity to the Common. The concepts of the ‘beautiful’, of the ‘intelligent’,

of ‘man’ and so on, introduce the preindividual into the sphere of individuated reality. Universal predicates do not give an account of the ‘common nature’ which precedes and which makes individuation possible, but are limited to abstracting certain characteristics that uniformly recur in the already individuated entities.

The Common is a reality independent of the intellect: it exists even when it is not represented. The Universal, on the other hand, is a product of verbal thought, an *ens rationis* whose unique dwelling place is the intellect. Scotus: “I even assert that [...] there is in things, independently of every operation of the intellect, a unity which is inferior to numerical unity, that is, to the unity proper to the singular and which is no less real; this ‘unity’ is the unity proper to a [common] nature”.¹² In the same way, for Simondon, the preindividual – far from being a mental construction – is the reality from which the mind itself descends and depends: “the individual is aware of the fact of being bound to a reality which exceeds it as an individuated being”.¹³

From the gnoseological point of view, we must therefore speak of a *realism of the Common* and a *nominalism of the Universal*. The Common, inferior to numerical unity, is present in itself and for itself in a multiplicity of singular subjects. The Universal, on the other hand, subsisting only in the intellect, is unavailable in any of the subjects to which it can be attributed. The Common – ‘human nature’ or the ‘general intellect’, for example – is not a predicate of the individuals Giacomo, Luisa, etc., but that from which the very individuation of Giacomo, Luisa, etc., as distinct beings in whom the most diverse predicates meet, proceeds. Conversely, the Universal – the concepts of ‘man’ or ‘intelligence’, for example – is a predicate that is added to already individuated individuals, but without enjoying a reality of its own in any of them. The Common is *in re*, the Universal *de re*. Or, as Sondag elegantly writes, “a [common] nature is indivisible and non-predicable, a concept is predicable and non-indivisible.”¹⁴ It is the *realism of the Common* that leads Simondon to provocatively hypothesise a ‘precritical ontology’ – which is to say, an ontology that, in considering the Kantian transcendental categories themselves a late result of the process of individuation, maintains the actual existence of a preindividual (and ante-predicative) reality: “We must integrate ontogenesis into the domain of philosophical examination, instead of considering the individuated being as absolutely primary. Such an integration would permit [...] refusing a classification of beings into kinds, which does not correspond to their genesis, but to a knowledge attained after genesis.”¹⁵ The Common, within which it is not yet permitted to distinguish between subjects and predicates, is, so to speak, the extra-mental condition of possibility for the *a priori* categories which the mind makes use of. Because it is predicable and endowed with a numerical unity, the Universal is subject to the principles of identity and the excluded middle: Giovanni either is or is not a man, no other possibility is available. To the extent that it lacks numerical unity and is not predicable, the Common is subject neither to the principle of identity nor to that of the excluded middle: ‘human nature’ is and is not the individuated individual Giovanni; the general intellect is and is not a certain singular cognitive labourer. Scotus writes: “if it is true that the nature of x, which is really present in x, can very well be present in another individual, one cannot truly say that ‘x is the nature of x.’”¹⁶ And Simondon:

In order to think individuation, it is necessary to consider being neither as substance, nor as matter, nor as form, but as a tight, supersaturated system, above the level of unity, inconsistent solely in itself and not adequately thinkable by means of the excluded middle; the concrete and complete being – that is, the preindividual being – is a being that is more than a unity. Unity, characteristic of the individuated being, and identity, which authorises the use of the principle of the excluded middle, do not apply to preindividual being [...]; unity and identity apply only to one of the phases of the being, posterior to the operation of individuation.¹⁷

The logical and ontological heterogeneity that separates the Common from the Universal appears today as a political alternative between Multitude and State. The individuals who compose the Post-Fordist multitude exhibit a ‘common nature’ as their real (and inseparable) presupposition: they therefore exhibit, in its entirety, the process of individuation of which they are the extreme outcome. Whether we call it general intellect or linguistic cooperation, this common presupposition is poised to emerge as a new constitutional principle – a soviet of cognitive labour, non-representative democracy. The State, which is opposed to the multitude, does

nothing but transpose the Common into a set of universal qualifications of which it alone is the legitimate holder. The Post-Fordist State ensures a kind of surreptitious politico-military reality for that *ens rationis* which the Universal – as such – is. Representative democracy and administrative apparatuses effect the systematic substitution of the indivisible but not predicable Common for the predicable but not indivisible Universal.

3. INDIVIDUATION: SURPLUS AND DEFICIT

The difference between Common and Singular can be compared with good reason to the difference between potentiality and actuality. Scotus writes: “the reality of the individual is [...], so to speak, an actuality which determines the reality of the species, which is, so to speak, possible and potential.”¹⁸ The Singular is not distinguished from the Common for possessing some supplementary quality, but because it determines in a contingent and unrepeatable manner all the qualities already included in it. The Singular is the ‘ultimate reality’ of the Common, just as actuality is the ultimate reality of potentiality. The analogy between the potentiality/actuality double and the preindividual/individual double often emerges in Simondon as well: “We could call *nature* this preindividual reality which the individual brings with him, while seeking to rediscover in the word ‘nature’ the significance that the Pre-Socratic philosophers attributed to it: nature is the *reality of the possible*, in the form of that *apeirion* from which Anaximander had every individuated form spring.”¹⁹ And Muriel Combes specifies: “Before every individuation, being can be understood as a system which contains a potential energy. Although actually existing within the system, this energy is called potential because, in order to be structured – that is, in order to be actualised in structures – it requires a transformation of the system.”²⁰ Not depending on any particular factor or ‘principle’, individuation is, for both Scotus and Simondon, a *modal* individuation: it consists solely, that is to say, in the passage from one mode of being to another.

The modal understanding of individuation, on the basis of which the Common is Singularity-in-potentiality and Singularity is the Common-in-actuality, makes possible two assertions which, at first glance, could seem jarring or even contradictory. Namely: (a) *the individual adds something positive to common nature*; (b) *the individual does not in itself exhaust the perfection of common nature*. Taken together, the two assertions say: an individual is, at one and the same time, more and less than the species (while never comparable to it). How is an excess possible which constitutes a deficiency from another direction? The apparent incompatibility of the two assertions collapses as soon as we consider that the ‘more’ and the ‘less’ have a single and identical root: the Singular as actuality. The individual adds to ‘common nature’ (general intellect, faculty of language, mobility of migrants and so on) the mode of being of the ‘ultimate actuality’. Different from form or from matter, this mode of being manifests itself only in a distinct singularity: such that we must conclude that ‘this (contingent) man’ is more than ‘human nature’. But the Singular, each and every time for the fact of being an ‘ultimate actuality’, also remains within the Common. The individuated individual does not in itself encapsulate the perfection inherent to ‘common nature’ because it is but one of its many possible determinations. No single individual can exhibit the Common as such, since the Common includes, as its essential feature, communicability or shareability – which is to say, the relation between *many* individuals. Every cognitive labourer adds something to the ‘general intellect’, but does not wholly represent its potentiality – that potentiality which instead appears in the acting-in-concert of a multitude.

A brief outline of a few corollaries deducible from the two fundamental assertions. Let us repeat the first: *the individual adds something to common nature*. This means that singularity is not the mere residue of an infinite sequence of oppositions and delimitations. According to Scotus, ‘this man’ is not singular because he is distinct from all other individuals, but is distinct from all other individuals “because of something positive in him.”²¹ Whether we call it ‘ultimate actuality’ (with Scotus) or ‘resolution of a metastable state charged with potentials’ (with Simondon), this *positivity* of the Singular contrasts with the negative-differential model of individuation predominant in the human sciences influenced by structuralism. Gérard Sondag observes that Scotus’s position provides some good reasons for calling into doubt Ferdinand de Saussure’s celebrated thesis according to which, in language, every single element is defined only by its non-coincidence with the rest:

[O]ne cannot maintain that within a constituted system its elements are defined only by their mutual differences, or that these reciprocal differences are the sufficient condition of their individuality – a theory which had nonetheless been able to pass for convincing for dozens of years in a great number of studies in the sciences of man and in those of language (the former often modelling themselves on the latter).²²

The second fundamental assertion reads: *the individual does not in itself exhaust the perfection of common nature*. As a corollary, we could say: the process of individuation, which makes a human animal an unrepeatable singularity, is always circumscribed and partial – indeed, unfinishable by definition. For Simondon, the ‘subject’ goes beyond the limits of the ‘individual’, insofar as it includes within itself, as its ineliminable element, a share of preindividual reality, rich in potentials, unstable. This preindividual reality permanently coexists with the singular I, yet without ever allowing itself to be assimilated by it. It therefore has its own autonomous expressions at its disposal. From the preindividual the collective arises: for Simondon, this does not consist in a convergence between many individuated individuals, but in the different ways in which that which, in every mind, is not subject to individuation manifests itself: “It is truly not as individuals that beings are united with one another in a collective, but as subjects, that is to say, as beings that contain the preindividual.”²³ As we have said, the perfection of common nature appears only in the interaction *between* individuals, without belonging to any of them in particular. The preposition ‘between’, usually employed carelessly, is the best that ordinary language provides to indicate that which, while really existing outside the mind, is nonetheless ‘inferior to numerical unity’. The ‘between’ designates the sphere of productive cooperation and political conflict. In the ‘between’, the Common shows its second face: besides being pre-individual, it is *trans-individual*; it is not only the undifferentiated backdrop, but also the public sphere of the multitude.

4. THE ANGEL AND THE COGNITIVE LABOURER AS ‘GROUP INDIVIDUALS’

Let us turn, finally, to the angels. For Scotus, despite lacking a material body, angels are distinct singularities. Otherwise, he says, it would be necessary to conclude that “due to the single fact of being deprived of matter, any individual whatsoever would wholly contain within itself the perfection of the species”²⁴ – which, we have seen, is a glaring error. An analogous discourse holds for the cognitive labourers whose ‘common nature’ is the general intellect. As the ‘ultimate actuality’ of the social brain, they are individuated individuals. But they are so – let us stress – even without considering the desiring bodies that they, not being angels, certainly possess. The individuation of cognitive labourers must primarily concern their cognitive being. Any other hypothesis is tiresome chatter.

That being said and repeated, let us nonetheless ask whether the ‘angelic question’ (and the parallel question of the general intellect-multitude relationship) does not also lend itself to a different interpretation. Once we freely acknowledge that the absence of matter does not prevent individuation, the impression nonetheless remains irrepressible that, in the case of the angels, there is an anomalous proximity between the Singular and the Common. It is just about impossible to think *this* particular angel outside the cohesive set of which it is a part: flights, thrones, dominations and so on. The single cherubim, while doubtless blessed with a numerical unity, seems not to be leaving behind the preindividual being – “inferior to numerical unity” – which links it to the others of its kind. It is, to be sure, an ‘ultimate actuality’, but – we must add – an actuality that, with a reflexive movement, in itself exhibits the potentiality-actuality relationship itself; it is, to be sure, a singularity, but a singularity that openly displays the passage from the Common to the Singular. The Thomist thesis, according to which the angels would not be subject to individuation, is but one erroneous way of registering this paradoxical situation. To refute this error does not exempt one from reckoning with the paradox.

Both Scotus’s angels and today’s cognitive labourers – they, too, being characterised by a kind of bizarre juxtaposition of the Singular and the Common – appear illuminating for Simondon’s reflections on ‘collective individuation’. What is at stake in this? The share of preindividual reality, which inexplicably persists with every single subject, demands a further process of individuation, which – and this is the essential – nonetheless cannot take place *in interiore homine*, within the mind, but only in the relation *between* many minds. This second

individuation gives rise precisely to the collective. In opposition to a good number of philosophico-political superstitions, Simondon maintains that the collective does not attenuate singularity, but sharpens and strengthens it. The collective is the sphere in which the *pre*-individual becomes the *trans*-individual. And in which the psychic individual, being individuated anew in the transindividual collective, becomes a ‘group individual’. Simondon writes:

It is therefore incorrect to speak of the group’s influence over the individual; in fact, the group is not composed of individuals joined together by certain ties, but of grouped individuals: *group individuals*. Individuals are group individuals, just as the group is a group of individuals. [...] the group is no longer an inter-individual reality, but a complement of individuation on a vast scale joining together a plurality of individuals.²⁴

It is in the light of these considerations that we must reformulate the ‘angelic question’. Angels and cognitive labourers both appear as *group individuals*. In both instances, that is to say, we have the concomitance and inextricable interlacing of two individuations: ‘psychic’ and ‘collective’. The anomalous proximity of the Singular and the Common is explained by the primacy of transindividual experience in the life of every individuated individual. The cognitive labourer, the ‘ultimate actuality’ of the general intellect, mirrors in its contingent singularity the ‘between’ in which the relations *between* many cognitive labourers take place. Like the angel, the cognitive labourer is a positively distinct individual who nonetheless cannot be thought outside the set to which he belongs. Let us stress: it is precisely the positive distinction of *this* cognitive labourer which will remain neglected if we do not direct our gaze toward the acting-in-concert in which he participates, toward the productive and political cooperation which comprises him, toward the transindividual reality which befits him (and which, in him, acquires an intimate and unmistakable tonality) ■

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NOTES

1. Gilbert Simondon, *L'individuation psychique et collective* (Paris: Aubier, 2007); Muriel Combes, *Simondon Individu et collectivité* (Paris: Presses Universitaires de France, 1999); Duns Scot, *Le principe d'individuation*, introduction, traduction et notes par Gérard Sondag (Paris: Vrin, 1992). [TN—all of the author's sources have been directly translated from the French editions: from the French originals in the case of Simondon, Combes and Sondag; from the French edition employed by the author in the case of Duns Scotus.]
2. Gilbert Simondon, *L'individuation psychique et collective*, 10.
3. Gilbert Simondon, *L'individuation psychique et collective*, 12.
4. Gilbert Simondon, *L'individuation psychique et collective*, 11.
5. *Ordinatio* II, 3 § 188; *Le principe d'individuation*, 176.
6. *Ordinatio* II, 3 § 237; *Le principe d'individuation*, 196.
7. *Ordinatio* II, 3 § 227; *Le principe d'individuation*, 193.
8. *Ordinatio* II, 3 § 8; *Le principe d'individuation*, 89.
9. Gilbert Simondon, *L'individuation psychique et collective*, 13.
10. *Ordinatio* II, 3 § 9; *Le principe d'individuation*, 90.
11. Muriel Combes, *Simondon. Individu et collectivité*, 13.
12. *Ordinatio* II, 3 § 30; *Le principe d'individuation*, 98.
13. Gilbert Simondon, *L'individuation psychique et collective*, 194.
14. Gérard Sondag, 'Introduction', in *Le principe d'individuation*, 36.
15. Gilbert Simondon, *L'individuation psychique et collective*, 206.
16. *Ordinatio* II, 3 § 37; *Le principe d'individuation*, 102.
17. Gilbert Simondon, *L'individuation psychique et collective*, 13-14.
18. *Ordinatio* II, 3 § 180; *Le principe d'individuation*, 172.
19. Gilbert Simondon, *L'individuation psychique et collective*, 196.
20. Muriel Combes, *Simondon. Individu et collectivité*, 11.
21. *Ordinatio* II, 3 § 49; *Le principe d'individuation*, 109.
22. Gérard Sondag, 'Introduction', 43.
23. Gilbert Simondon, *L'individuation psychique et collective*, 205.

24. *Ordatio* II, 3 § 180; *Le principe d'individuation*, 172.

25. Gilbert Simondon, *L'individuation psychique et collective*, 184-185.

THE QUESTION OF ANXIETY IN GILBERT SIMONDON

Igor Krtolica, translated by Jon Roffe¹

The question of anxiety occupies a singular position in the process of psycho-collective individuation in three regards.² It marks, first of all, the threshold of this process, designating the problematic moment at which the subject feels the necessity to pursue its individuation without yet becoming its operator. Anxiety constitutes here a state of blockage for the individual, who is invaded by the charge of pre-individual nature but who is rendered incapable of being individuated in the collective: conscious of being more than an individual, the anxious being has nonetheless not yet become a transindividual personality. As is the case with every threshold phenomenon, anxiety provides a particularly incisive point of view on the two aspects that it separates and articulates – the psychic subject and the transindividual dimension – and simultaneously casts light on the logic of psychic and collective individuation.

For the same reasons, the question of anxiety signals, secondly, the constitutive ambiguity of the concept of the transindividual in Simondon.³ Indeed, the transindividual is at once immanent and transcendent to the individual, the condition of the individuation of the subject and the accomplishment of a spirituality, both a given and a result. The decisive concept of the second part of Simondon's main thesis (that is, of *L'individuation psychique et collective*) – the transindividual – is confronted there with certain major difficulties: far from being a contradiction or an incoherence in Simondon's thought, we will see that this ambiguity is in fact of central interest.

Finally, the question of anxiety leads us to take stock of the limits and stakes of the theory of emotion in the logic of psychic and collective individuation, where it constitutes, in a certain way, the heart of the theory. A sign that all is not given, emotion implies a seemingly teleological vocabulary with respect to the relation between the subject and the collective in Simondon's work: "*incomplete and unachieved* insofar as it is not accomplished in the individuation of the collective", "*initiation* of a new structure", "it manifests in the individuated being the continued presence of the pre-individual; it is this real potential that, at the heart of what is naturally indeterminate, incites in the subject the relation at the heart of the collective that it institutes; there is a collective to the extent that an emotion is structured; [...] it *prefigures* the discovery of the collective."⁴ The examination of the question of anxiety demonstrates, as we will see, that, in the final instance, Simondon's thought (concerning psycho-collective individuation, the transindividual, and emotion) is heterogeneous to every teleological perspective, a thought in which teleology is only the inversed reflection of the constitutive paradox of the transindividual.

 ANXIETY AND THE PROBLEM OF ITS GENESIS

Anxiety as the impossible attempt to resolve the problem of subjectivity

What does Simondon claim about anxiety? In anxiety, he writes, “the subject feels existence as a problem posed to itself, i.e. to the subject” (ILFI 255): taking account of the definition according to which the subject is the being who “bears within itself, more than individuated reality, an unindividuated aspect, pre-individual but also natural” (ILFI 310), we must say that “the problem of the subject is that of the heterogeneity between the perceptible and affective worlds, between the individual and the pre-individual; this problem is the problem of the subject *qua* subject: the subject is individual and other than individual; it is incompatible with itself.” (ILFI 253) The problem of the subject, which is to say the incompatibility between the constituted individual and the pre-individual, is however insufficient to define anxiety. This problematic connection is not only between the individual and the pre-individual, but concerns the subject *as it searches in vain for resolution within itself*. This is why, in itself, the subjective experience of the preindividual does not lead to anxiety; on the other hand, when the subject fails to resolve *within itself* the tension between the constituted part of the individual itself and the preindividual part which must give way to a new individuation, when the problem does not find the adequate dimension for its resolution, then – and only then – is there anxiety.

Anxiety therefore does not reside in the problematic insistence of the pre-individual within us, but in the experience presented by the impossibility of actualising this pre-individual *in us*. Certainly, the individual “does not feel itself to be limited as an individual to a reality entirely its own” (ILFI 304), “the individual is not only an individual, but also the reserve of being that remains neutral, available, in waiting” (ILFI 303). And yet, it is in this individuality that the anxious individual searches for a means of effectuating this pre-individual reality. The apparent contradiction lies precisely in the fact that the constituted individual must be able to be undone [*destitué*] in order for the unindividuated to emerge in the individual. In other words, it would be necessary for the individual to disappear in order for it to arrive. It is therefore insufficient to say that anxiety is the problem of the *subject*, since the contradiction resides in the impossible attempt to make the subject of individuation the pre-individual in its individual being. In anxiety, the subject is engaged in a relation with itself as if to an individual:⁵ *anxiety is an experience of the subject, but the subject as an individual.*

Intending to individuate the entire preindividual that affects it internally, the anxious being is submitted to an intense expansion, whose description occupies half of the paragraph on anxiety. Anxious subjectivity, grasped in a movement of unlimited expansion, attempts to coincide with the dimensions of the universe: “The anxious being dissolves into the universe in order to find another subjectivity; it is exchanged for the universe, submerged in its dimensions.” (ILFI 256) Now such an expansion, the fusion of the individual being and the charge of nature associated with it, provokes a decline in the structures and functions of the individual. “The individual is invaded by the preindividual: all of its structures are attacked, its functions animated by a new force which renders them incoherent.” (ILFI 256) The expansion of subjectivity in anxiety envelops, as a result, two profoundly contradictory perspectives, to the extent that the ‘new birth’ of the individual can only come about at the price of its annihilation. The subject is carried to a point of self-contradiction or auto-abolition: “Anxiety is the renunciation of the individuated being and that being agrees to traverse the destruction of individuality in order to pass to another unknown individuation.” (ILFI 257) In a sense, the anxious being desires its own dissolution, its own death, but in order to arise better from its ashes: “anxiety already bears the presentiment of this new birth of the individuated being on the basis of the chaos with which it is in accord; [...] but in order for this new birth to be possible, the dissolution of the previous structures and their reduction in potential must be complete, in an acquiescence to the annihilation of the individuated being.” (ILFI 256) In anxiety, the redeployment of the potential of individual structures and functions operates in a contrary fashion to ontogenesis, moving along the inverse path. Thus, with respect to anxiety as the expansion of the subject – the invasion of the individuated by the preindividual, the impossible attempt to make room for a wholly other subjectivity – Simondon can affirm without contradiction that it is at once the greatest accomplishment of a *solitary* subject and a tragic attempt on the part of this subject to the extent that, deprived of the collective, it

fails to produce a new individuation:

Anxiety translates the condition of the solitary subject; it goes as far as this solitary being; it is a kind of attempt to replace transindividual individuation with the individual non-being that the absence of other subjects renders impossible. Anxiety realises the highest accomplishment of what the solitary being is capable of as a subject; but this realisation appears in fact to only remain a state, not leading to a new individuation, because it is deprived of the collective. (ILFI 256)

In sum, if we attempt to reconstruct the logic which belongs to the phenomenon of anxiety, we obtain the following series: vital individuation is not achieved, but bears a charge of the preindividual reality associated with the individual; the connection between this preindividual part and the constituted part of the individual poses a problem to the subject that calls for resolution; anxiety occurs when the isolated subject engages in a contradictory attempt to resolve this problem *in itself* and to live this impossibility. According to a tragic logic, the subjective problem cannot find its creative solution in the dimension of individuated being alone:

psychism cannot be resolved solely at the level of the individuated being; it is the foundation of the participation in a much vaster, collective individuation; the solitary individual being, putting itself in question, cannot go beyond the limits of anxiety – an operation without action, a permanent emotion that cannot resolve affectivity, proof that the experience through which the individuated being explores the dimensions of its being is without the capacity to exceed them. (ILFI 31).

The paradox of the transindividual

That such a route appears catastrophic to Simondon, that it is unavoidably bound to fail, is rendered comprehensible by the situation of the anxious and isolated being, deprived of this greater context to which the problem of the subject must lead. This object that the anxious being lacks, or rather the dimension which is lacking, is the collective. We have seen that, for Simondon, if the anxious being is anxious, it is due to the tension between the preindividual and the part of the constituted individual whose field of resolution is limited to that of the individual. The subject ‘lacks’ something; it is ‘deprived’ of a supplementary dimension. On many occasions, Simondon employs this vocabulary of deprivation and lack, of *the negative* or *the incomplete*. In what sense, though, can the subject be said to *lack* the collective? It seems to us that this vocabulary of the negative is provisory or partial, and that it reveals only one aspect of Simondon’s thought, which is so foreign to the negative.⁶ In a general fashion, we know that the use of the vocabulary of the negative returns us to Simondon’s pre-Socratic inspiration, according to which Nature is defined as unlimited totality, the infinite-indefinite (*apeiron*); however, it seems here that such terminology reveals a *prima facie* difficulty in Simondon’s thought. A difficulty, to be more precise, which is not an incoherence but rather an objective paradox – not a difficulty in affirming, but a difficult affirmation.

The paradox is due to the fact that if the subject lacks the collective, if it is deprived of it, this is only the case from the point of view of the collective, that of the transindividual dimension. The paradox can thus be summarily posed by asking: *why does the collective appear simultaneously as that which precedes the anxious subject and that which the subject lacks; both as the condition and the horizon of anxiety?* This paradox requires elaboration. On the one hand, when Simondon adopts the vocabulary of privation, he occupies the point of view of a subject who will have already conquered the collective and would be in a position to prescribe the path to follow in order to resolve the subjective problem. And yet a problem, in the strict sense, can never be posed under the mode of privation: it is positively determined. In virtue of the ontogenetic perspective advocated in the Simondonian project, it seems that the question would be posed less in terms of knowing what the anxious subject *lacks* than what carries it in a positive mode towards trying to resolve in itself the problem posed to it. If the subject ‘lacks’ the collective, would this not be the case if it does not perceive its existence, or rather if it perceives something entirely different? And yet, if we maintain this, we would be faced less with paradox than with incoherence. It

is therefore the case that, on the other hand, the collective precedes the subject in a certain sense, while *at the same time failing it* – but in what sense?

To understand this paradox, it is necessary first of all to explain one of the reasons (we will see that there is another more profound reason, which bears on the constitutive ambiguity of the transindividual) why Simondon seems at times to employ a negative or retrospective point of view: the statement of the general thesis of his work is inscribed in the first instance in the form of a refutation. As the first lines of the Introduction to *L'individu à la lumière des notions de forme et d'information* already show, Simondon positions himself in an explicitly critical position, distancing himself at the outset from two apparently opposed and concurrent approaches, substantialism and hylomorphism. These approaches are in fact tributaries of a common presupposition. Certainly, “the monism centred on itself found in substantialist thought is opposed to the bipolarity of the hylomorphic scheme” (ILFI 23); however, these two paths proceed from a single postulate: “that a principle of individuation exists, anterior to individuation itself, which is susceptible to being explained, produced and guided” (ILFI 23), and that this principle is named *human being, psychic individual or social group*. To anthropology as a metaphysical mode of thinking, Simondon objects that it presupposes through abstraction an essence of human being, whether individual or social, which is at the root of two difficulties: it separates the unity of the Human Being from the vital, becoming incapable of thinking the connection between the two, and it renders incomprehensible the relational zone between the individual and the social, a zone undermined and obscured through its operation of abstraction.⁷ Now, psychology and sociology both adopt an anthropological point of view on the human being.⁸ Simondon opposes to both a formally identical objection: if psychology presents the individual as a primitive fact and the fact of the group as the result of their association, sociology presents in a symmetrical fashion the existence of the group as a brute fact from which individuals are derived. In short, their common error for Simondon concerns the fact that in each case they evacuate the problem of the *operation* of individuation of the group, which is relegated to an “obscure zone” – in psychology by treating this operation as prior to the individuation of the group, and by sociology as consequent, but neither the fact of the already constituted individual nor that of the existence of the group are able to account for the *simultaneous genesis* of the psychic and the collective.⁹

The perspective of a critique of the presuppositions of the human sciences¹⁰ and the promotion of the transindividual dimension misrecognised by them does not limit the envisioning of the subjective problem to the point of view of this dimension. From this, there follows a torsion in Simondon’s argument, to the extent that the transindividual appears to precede the subject itself, while at the same time dissimulating the *positivity of the process* which brings about anxiety. Thus, the critical approach would tend to obscure an underlying ontogenetic logic, which alone is able to retrace the advent of anxious and its effective resolution. In short, in place of the process that leads to anxious (which the subject lives while looking within itself for a solution to the subjective problem), Simondon provides a negative point of view on this process (that which the subject lacks in order to succeed; the fault which explains its failure). But in reality the transindividual is also the *condition* of the individuation of the subject in psychic life – and not only its *accomplishment* – and it is in this sense that what is paradoxical is not incoherent. It must be affirmed that this paradox is not a contradiction: *the anxious subject is deprived of the collective precisely because it is not entirely deprived of it*. Such would be another way of expressing the ambiguity of the transindividual, simultaneously immanent and transcendent to the subject.

To say that there is an ambiguity here is to say that there are two paradoxically coexisting aspects of the subjective problem: the absence and the presence of the collective, even in anxiety. This is why it can be conceived at the same time as positive (in itself) and negatively (with respect to the collective). We have seen the second aspect of this, namely that the anxious being is deprived of the collective – but what is its first aspect? What process leads to anxiety (which drives the individual to be able to resolve in itself the subjective problem) and what event (which drives it to actualise this tension in a domain which is no longer individual but rather transindividual) arouses it?

THE DISCOVERY OF THE TRANSINDIVIDUAL: ZARATHUSTRA AND THE TIGHT-ROPE WALKER

Interindividual connections and transindividual relations

By virtue of Simondon's pre-Socratic inspiration, the ensemble of the vocabulary of the negative (incompleteness, hollow, reserve, delay, lack, privation, etc.) has only a functional meaning, and does not imply a teleological understanding of the constitution of the transindividual, but rather insists on the *a fortiori* vital excess that is manifested at the heart of all individuation. The negative is nothing other than the irreducible power [*puissance*] of the unlimited (*apeiron*) of the charge of preindividual nature that insists within all individual and social structures, and that prevents these structures from finding their proper end within themselves. These social structures are what Simondon names interindividual reality, a reality that would certainly merit an equally central place in the analysis, alongside the entry into the collective (*qua* transindividual objective) with which it is concurrently achieved. We find a differential analysis of the interindividual connections and transindividual relations in the passage entitled "The Problematic of Reflexivity in Individuation", in which Simondon confronts the problem of the consistency of the psychological world in relation to the physical and biological domains. In this text, he affirms the non-autonomy of the psychological world, the non-independence of psychological individualisation in relation to vital individuation. He motivates this thesis with reference to the dialectical character of psychological individualisation: psychology is not a separate order but a mediation between the physical and the biological, between the world and the self, which instantiates a dialectic between the exterior and the interior that, although it is not independent, possesses an ontological value, that of transduction. By virtue of the dialectical nature of psychological individualisation, Simondon consequently refuses to grant the domain of psychological individuality its "own space":

The domain of psychological individuality is at the limit of physical reality and biological reality, between the natural and nature, as an ambivalent relation having the value of being. Thus the domain of psychological individuality does not have its own space; it exists as a superimposition in relation to the physical and biological domains; it is not properly speaking inserted between the two, but reunites and partially comprehends them, by being situated in them [...] The psychological detour does not abandon life, but is an act through which psychological reality is excentred with respect to biological reality, in order to be able to grasp the relation between the self and the world, the physical and the vital, according to its own problematic; psychological reality is deployed as a transductive relation to the world and the self [*moi*] (ILFI 278)

For Simondon, the importance of such a thesis is threefold. In the first instance, it founds the critique of substantialism by rendering impossible the idealist operation consisting in the abstraction of the psychological world from its physical and biological underpinnings – according to which substantialism takes the form of a substantialist dualism (Descartes) or that of an idealist monism (Bergson), which is for Simondon in reality an asymmetrical dualism. The latter accounts for the relation between vital individuation and psychological individualisation by placing the model of the living (individuation) on the side of psychosomatic unity. In the former, the relation is asserted between body and soul, as the result of a continued division (individualisation) at the heart of which the psychic and the somatic appear not as real entities but as limited-cases "never present in a pure state" (ILFI 271). Finally, it nonetheless permits us to confer upon psychology an ontological tenor, which is not that of substance but of the transductive relation: "the dialectical relation of the individual to the world is transductive, because it deploys an homogenous and heterogeneous world, consistent and continuous but diversified, a world which belongs to neither physical nature nor life, but to this universe in the process of constitution that we can call mind." (ILFI 278)

It is certainly the case that the psychological world is not substantially separate, but an *operation* of transduction between the vital and the physical; likewise, there is certainly no purely psychological world but only the *process* of psychologisation. And yet, the regime of the psychological is objectified in a certain sense, precipitated into a world, since it is effectuated in things, in habitual comportment, mental schemata and works. Simondon calls this objective mind *culture*, the concrete existence of the psychological in the world: “The psychological world exists to the extent that each individual finds before them a series of mental schemata and modes of conduct already incorporated in a culture, and which incites them to pose their particular problems according to a normativity already elaborated by other individuals.” (ILFI 279) To the precise extent that the connections between individuals at the heart of the world of culture come about on the basis of these values, schemata and modes of conduct, Simondon qualifies these as interindividual connections, thereby designating a specific mode of social linkage which is effectuated at the level of constituted individuals and not that of their preindividual zone. In interindividual connection, the individual enters into relations with others through their individuated self [*moi*] and appears to itself as the sum of social images which issue from “a pre-valorisation of the self [*moi*] grasped as a personality through the functional representation made of it by others.” (ILFI 279-80) Interindividual connections mark the utilitarian aspect of social relations, *qua* the simple functional mediation between individuals. It is these connections that the descriptions of psychology and sociology concern themselves with, thereby limiting their perspectives to the constituted individual or social group.

In reality, the interindividual connections are defined less by the constituted individuals (their formed selves, their social functions) or by the socially instituted group (the ensemble of exchanges between individuals), than by *the element of preindividual nature which persists, not yet effectuated in them*. Interindividual connections are the sediment in social objectivity of transindividual nature that constitutes its ground. Just as we must refer the substantialist perspectives of the human sciences back to the operations of individuation that underlie them, we must also return the interindividual to the transindividual domain that is its condition. Thus, in the final instance, interindividual connections and culture derive their sense from the transindividual reality that they bring about, a reality which nonetheless exceeds and neutralises them.

The psychological individual has a choice to operate amidst the values and modes of conduct present to it as examples: but *not everything is given* in culture; we must distinguish between culture and transindividual reality; culture is in a certain sense neutral; it needs to be polarised by the subject putting itself into question; on the contrary, there is in the transindividual relation an imperative for the subject to put itself in question, because this putting in question of the subject has already been begun by the other. The decentralisation of the subject in relation to itself is effectuated in part by the other [*autrui*] in the interindividual relation. Nonetheless, we must note that the interindividual relation can mask the transindividual relation, to the extent that a purely functional mediation appears as a means to avoid the true position of the problem of the individual by the individual itself. The interindividual relation can remain a simple connection and avoid reflexivity. (ILFI 279)¹¹

That not everything is given¹² is the index of the necessary excess of the transindividual over the interindividual, of a preindividual nature always swarming beneath individuals and constituted groups: this charge of preindividual reality possesses a potential of individuation capable of carrying individuals and groups towards new becomings. It is fundamental to perceive the asymmetry of the distinction between transindividual relations and interindividual connections, the latter being only the objective sediment of the former, their stabilisation in a culture. Culture *qua* the mundane objective existence of the psychological, and interindividual connection *qua* functional sociality have an entirely relative existence. Just as Simondon brings out the operation of individuation from beneath the constituted individual, he also reveals the transindividual reality beneath culture, which conceals more than it reveals.

Nonetheless, the primacy of the transindividual domain with respect to the interindividual given does not efface the consistency proper to interindividual connections. That the distinction is asymmetrical does not mean that we can do without the subordinate term. On the contrary, it is necessary to simultaneously maintain two theses (the primacy of the transindividual over the interindividual and the co-existence of the two) in order to be able to comprehend the *genesis* of the transindividual relation and the dislocating effect it produces. The question of knowing what it is that the individual perceives as constraining its attempt to resolve the subjective problem (anxiety) in itself, rather than engaging the dimension of the collective, can now receive a precise response: the individual evolves through interindividual connections with personalities (constituted individuals), grasped with respect to their functional distributions (the utilitarian division of society), that lead it to misrecognise the dimension of the transindividual. Now misrecognition is not ignorance, but rather not knowing how to know [*ne pas savoir connaître*], not knowing that one knows. As a result, we would have been wrong to say that interindividual connections are the first stage in the experience of the transindividual, that they are merely a prelude, destined to self-destruction for the good of the collective. And this is so for two reasons: because they produce an effect of *blockage* in the transindividual – they mask it and make its discovery difficult (as the previous citation stated, “the interindividual relation can mask the transindividual relation, to the extent that a purely functional mediation appears as a means to avoid the true position of the problem of the individual by the individual itself”); and, because even if the transindividual persists beneath these connections, its effective constitution depends on an event likely to suspend them, unravel their fabric and reveal their relativity.

The reference to Nietzsche, and more specifically to the Prologue of *Thus Spoke Zarathustra*, occurs at this crucial moment of Simondon’s argument, in which he describes the effective constitution of the transindividual (this time as the accomplishment of psychic life rather than as its condition) on the basis of interindividual relations, in favour of an “exceptional event”. “A first encounter between the individual and transindividual reality is required, and this encounter is perhaps only an exceptional situation which presents in an external fashion the aspects of a revelation.” (ILFI 280) This event will be constituted by the encounter between Zarathustra and the dying tight-rope walker, an encounter which will provoke a destitution of the functional relation and will bring about in Zarathustra a painful disindividuation. Such a disindividuation is however profoundly different from that of anxiety, that is, with respect to the expansion to which the anxiety subject is submitted. Anxiety tends towards an annihilation of all the structures and functions of the individual without permitting a new individuation, due to the solitude of the subject.¹³ On the contrary, rather than being solely concerned with the annihilation of the individual, the disindividuation implicated in the encounter with the transindividual is only provisional and constitutes the condition of a new individuation in the collective.¹⁴

The rent veil

We have seen that the interindividual connections function as a veil that blocks the discovery and effectuation of a preindividual reality in the transindividual: the interindividual as a function of misrecognition. Now, only the event of an *encounter* can tear this veil by suspending “the functional modality of the relation with the other [*autrui*], and in which an other subject, deprived of its social function, can appear to us in its more-than-individuality.”¹⁵ Simondon sees such an event in the accidental death of the tight-rope walker at Zarathustra’s feet in the Prologue of *Thus Spoke Zarathustra*. *Contingent*, insofar as it is unpredictable and impossible to guarantee, this encounter nonetheless constitutes the *necessary* condition for the discovery of the dimension adequate to collective individuation. The realisation of the reality of the transindividual thus rests on the contingency of an event, of which we can determine three principal characteristics: it is involuntary, disindividuating, and isolating.

In so far as it is contingent, it can never be the object of a subjective decision, will or choice, but it is always an encounter, an external constraint, a violence exercised from the outside on the subject. The event is necessarily *involuntary*. Involuntary, it is at once contingent and necessary. Contingent-necessary: this double aspect of the event refers in reality to the exteriority of the forces that are manifest in the encounter and which take hold of the subject. Insofar as it is involuntary, it seems that the transindividual is transcendent rather than immanent

to the subject, and, as the forces external to it, overcomes it (we will see nonetheless that the self-constitutive character of the transindividual will provoke a more detailed assessment of this idea). Zarathustra left his mountain and decided to descend towards the people in order to speak to them of the overman. After holding forth, affirming that man – a rope tied between animal and overman – must be overcome, he is forced to admit his incapacity to address the people as a being understood by them.¹⁶ Incapable of being alone, having left his mountain to teach of the overman, he yet proves incapable of addressing his peers. It is in this way that the scene with the rope-walker begins: “But then something happened that silenced every mouth and fixed every eye. In the meantime, of course, the tight-rope walker had begun his work [...]”¹⁷ Dancing on a rope stretched between two towers, he suddenly falls to earth, suffering at Zarathustra’s feet while the crowd scatters and turns away.¹⁸

Faced with the suffering of the tight-rope walker, Zarathustra discovers a relation to an other profoundly different from that which bound him to the people, and which bears on a movement of *disindividuation*. Moribund, the rope walker is dispossessed of his social character: Zarathustra can now befriend this man lying at death’s door, since the interindividual relations in which they were previously held have disappeared.¹⁹ The suffering tight-rope walker no longer appears according to his social function, but belongs to another order.

The transindividual relation is that of Zarathustra and his disciples, or that of Zarathustra and the tight-rope walker who is broken on the earth before him and abandoned by the crowd; the crowd only considered the rope walker with respect to his function; they abandon him when, dead, he ceases to exercise this function; in contrast, Zarathustra feels this man to be his brother, and carries his body to burial; it is with solitude, in Zarathustra’s presence to this dead friend abandoned by the crowd, that the experience of transindividuality commences. (ILFI 280)

The second determination of the event is related to the first: the encounter can only be voluntary because it is a break from the link instituted between the individual and others. The event occurs as an event insofar as it breaks with the interindividual mode of existence, a break that the disindividuation of anxiety fails to accomplish: insofar as the disindividuation of anxiety is catastrophic, what takes place thanks to the event of the encounter permits the pursuit of individuation. Nonetheless, if disindividuation is the necessary condition for a new psycho-collective individuation, it is not yet a sufficient one. New individuation is never guaranteed by disindividuation, even if it necessarily passes through it: in order to not degenerate into anxiety but rather consist in a positive emotion which assures the passage to the transindividual, disindividuation must only be *provisional*. Zarathustra is not yet sheltered from the catastrophe of anxiety.

The *solitude* that Zarathustra is necessarily subject to must be traversed in order for the dimension of the collective to be entered into. Beyond the interindividual, solitude; beyond solitude, the collective. And yet the transindividual as task is never constituted, it is never entirely given, but remains to be done: this is why Zarathustra has need of neither other individuals nor the people in their entirety (neither believers nor herds), but of co-creators, those capable of producing a new individuation called forth by solitude. In other words, the solution to the problem of the subject resides in neither the individual nor the social dimension, but rather in the collective dimension.

The creator seeks companions, not corpses or herds or believers. The creator seeks fellow-creators, those who inscribe new values on new tables. The creator seeks companions and fellow harvesters: for with him everything is ripe for harvesting [...] Zarathustra seeks fellow creators [...]²⁰

The ambiguity of the transindividual and emotion

The need to make the discovery of the transindividual depend upon the event of an encounter, to relate the possibility of psychic and collective individuation to the requirement of any necessary condition however contingent in its appearance, underlines another difficulty. Simondon insists less on the necessity of such an encounter for collective individuation than on the *self-constitutive* character of the transindividual. Insofar as the idea of encounter could allow us to think that the transindividual is a dimension which comes to supplement the vital individual in favour of the event in question, Simondon, to the contrary, puts the accent on what he calls the “fundamental ambiguity” of the transindividual: this is not immanent to the individual, but neither is it transcendent, able to survive external to it. It is rather both at once, profoundly interior and more external than every exterior. Sometimes conceived as the profound interiority of the self [*soi*] (that it will be a matter of rejoining), and sometimes as divine transcendent exteriority (from which revelation is awaited):

If we admit that the transindividual is self-constitutive, we will see that the two schemata of transcendence and immanence only take account of this self-constitution from the point of view of their simultaneous and reciprocal positions: indeed, it is at each moment of this self-constitution that the connection between individual and transindividual is defined as that which *exceeds the individual in prolonging it*. The transindividual is not external to the individual, and yet it is detached to a certain degree from it; furthermore, this transcendence which takes root in interiority, or rather at the limit between the exterior and the interior, does not belong to an exteriority, but to the movement which exceeds the dimension of the individual. (IFLI 281)

Consequently, a certain tension between the idea of the event and that of the self-constitution of the transindividual subsists. This paradox is in reality easily resolved, if the conception of the event as an encounter with the arrival of a pure transcendence, and the conception of self-constitution as the simple pursuit of vital individuation are rejected – in virtue of what Simondon calls a “postulate of discontinuity” over the course of successive individuations. (ILFI 317) The self-constitutive character of the transindividual is not opposed to the effect of discontinuity produced by its constitution, just as, symmetrically, the idea of the event does not exclude a certain immanence of the transindividual in the subject, since the transindividual is already present as pre-individual in the subject even before it is individuated in the collective. What then happens between the preindividual and the transindividual? The pre-individual returns to being insofar as it is monophased, returns to its being prior to any individuation:²¹ the concepts of preindividual and transindividual are both certainly returned to the charge of nature, but to a monophased charge in the first case, and a polyphased charge in the second. Nevertheless, “it is preindividual reality which can be considered as the reality which grounds transindividuality.” (ILFI 317)²²

The event of the encounter is double (whence its paradoxical character): neither immanent nor transcendent, it occurs as a rupture while already being there as ground rather than structure. The transindividual never will be given, never is: it must provide to the contrary the object of a creative effectuation, a neotenic amplification of the preindividual which is never achieved before being pursued, each time the object of a recommencement. The stakes of psycho-collective individuation and the risk of a fall into anxiety are to be found, concentrated, in the theory of emotion, which designates the link between the pre-individual with the transindividual (and which precedes the general conclusion of Simondon’s principal thesis):

The essential instant of emotion is the individuation of the collective; both before and after this instant, a true and complete emotion cannot be discovered. Emotive latency, the non-adequation of the subject to itself, the incompatibility between its charge of nature and its individuated reality, indicates to the subject that it is more than an individuated being, and that it conceals within itself the energy for an ulterior individuation; but this ulterior individuation can only take place in the being of the subject; it can only take place through this being of the subject, and through other beings in a transindividual collective. (ILFI 315)

The *beginning* of an other individuation, a *sign* that not everything is given, an incomplete and unachieved manifestation insofar as it is not structured in the collective, emotion opens onto a field without yet being equal to it. No teleology is at work here: emotion is an *opening of possibilities*. In order to give these possibilities to the body, instead of activating the catastrophe of anxiety, it is necessary to discover the transindividual collective anew each time – today for tomorrow, in order that these possibilities remain open ■

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THE QUESTION OF ANXIETY IN GILBERT SIMONDON

NOTES

1. TN. The translator would like to thank Arne de Boever and Ashley Woodward for their comments on a draft of this translation.

2. TN. Throughout, the word ‘anxiety’ and its cognates translate the various forms of the French *angoisse*. This word has a complex place in twentieth century French thought, playing an important role in both psychoanalysis and existentialism. We should note, then, that it bears an analogous range to the German *Angst*, which is of course at the root of both the Sartrean use of *angoisse* (whose heritage is Heidegger’s *Angst*) and the Lacanian deployment of Freudian concepts (to recall the title of a famous text, the 1926 “Hemmung, Symptom und Angst” is translated as “Inhibitions, Symptoms and Anxiety”). Unfortunately, as these examples illustrate, there is no single word in English to convey the full scope of the French. Furthermore, Simondon’s interest in *angoisse* cannot be reduced to either of these two earlier bodies of work, both of which he reserves critical remarks for. In addition to these concerns, the choice of ‘anxiety’ is meant to avoid the maudlin connotations of the English ‘anguish’, and to keep in line with the forthcoming translations of Simondon’s work. At the very least, we should be wary of reducing ‘anxiety’ as it is treated here in terms of any superficial or secondary affect, a point amply attested to by the author in this piece.

3. Cf. J.-H. Barthélémy, *Simondon ou l’encyclopédisme génétique*, Paris, PUF, 2008, p. 111-112 ; M. Combes, *Simondon. Individu et collectivité*, Paris, PUF, 1999, p. 84-85.

4. G. Simondon, *L’individu à la lumière des notions de forme et d’information* (1964), Grenoble, Jérôme Million, 2005, p. 314-315, emphasis added; hereafter this work will be cited in text as ILFI, followed by the relevant page number.

5. This is what Muriel Combes sees so well when she remarks in a note on Simondon’s work that “It is true that anxiety, as an experience of a preindividuality, is not an *individual* experience, but already *subjective*. And yet, in the measure to which the subject endeavours to resolve the whole of the preindividual submerged within it in its individuality, we cannot say that it accepts itself as a subject: anxiety is rather the experience in which a subject – *at the same time* as it discovers in itself a dimension irreducible to that of simple constituted individuality – endeavors to reabsorb it into the interiority of its individual being.” (M. Combes, *op. cit.*, 67) On this point, see also M. Combes and B. Aspe, “L’acte fou” in *Multitudes*, no. 18, Sept 2004.

6. Recall the celebrated passage found in the Introduction of his thesis where Simondon demarcates ontogenesis from every dialectic grounded in the substance of the negative: “the study of the operation of individuation does not seem to correspond to the manifestation of the negative as a second stage, but to an immanence of the negative in the first condition in the ambivalent form of tension *and* incompatibility; there is something more positive in the state of preindividual being, namely, the existence of potentials, which is also the cause of the incompatibility and non-stability of this state; the negative is in the first instance ontogenetic incompatibility, but it is the other face of a richness of potentials; it is not therefore a substantial negative; it is never a stage or phase, and individuation is not synthesis or a return to unity, but the dephasing of the being beginning with its preindividual centre of potentialised incompatibility.” (ILFI 34) In place of the metaphysical vocabulary of the negative, Simondon proposes a physical-problematic conception of potentials and of metastability that he sees at work in pre-Socratic thought, but which finds its epistemological model in the Bachelardian interpretation of contemporary physics. (cf. J.-H. Barthélémy, *op. cit.*, chap. I : “Le réalisme des relations: un préalable épistémologique”)

7. Cf. ILFI 297: “Anthropological investigation would thereby presuppose a prior abstraction, such as a division between the individual and society, and a principle of prior abstractions. Anthropology cannot be the principle of the study of Humanity; to the contrary, it is human relational activities, such as that which constitutes work, which can be taken as primary for any anthropology to explain. It is this being as relation which is primary and must be taken as a principle; the human is social, psycho-social, psychic, somatic, without any one of these aspects being taken as fundamental, at the cost of rendering the others as mere accessories.”

8. On anthropology, see ILFI IV, 1.4: “The insufficiency of the notion of the essence of human being and of anthropology.”

9. Cf. ILFI 312-3: “By taking the reality of groups as a fact, in the manner of sociological objectivity, one situates them as prior to grounding the collective. Correlatively, if one begins with the postulates of an interpsychology, one locates the tendencies or social needs of the individual as prior to the group, and consequently accounts for this group in terms of the psychic dynamisms internal to individuals. Now, the true collective is a contemporary of the operation of individuation, and can only be known as a relation between the extreme terms of the purely social and the purely psychic. Being is deployed across the entire spectrum, in a movement from social exteriority to psychic interiority. The social and the psychic are only limit-cases

and not the foundations of reality, the true terms in the relation. They only exist as extreme terms from the point of view of knowledge, because knowledge needs to apply a hylomorphic scheme, using two clear ideas to mask an obscure relation.”

10. On this perspective, see the beginning of the text “Form, information, potentia[ls]”, (presented at the conference held at the Société Française de Philosophie on 27 February 1960), in ILFI 531-51. Simondon here regrets the absence of a general theory of the human sciences, which he sees as the index of a task for reflective thought, a task he explain in detail in this text: “The absence of a general theory of the human sciences and psychology incites reflexive thought to search for the conditions of a possible axiomatisation [...] We would be able to show that an outline of an axiomatics of the human sciences – or at least of psychology – is possible if we try to grasp the three notions of form, information and potential together, provided that we also consider the definition, required to link them together and internally organize them, of a type of operation that appears whenever we find form, information and potential: the transductive relation.” Cf. J.-H Barthélémy, Simondon ou l’encyclopédisme génétique (Paris: PUF, 2008), 95-101.

11. Simondon illustrates this distinction and the effect of the dissimulation produced by interindividual connections through by reference to the Pascalian antagonism between distraction and reflexive consciousness: if we assess this according to the conceptual influence of distraction in Pascal – that is, if we take seriously the role of this mask-effect in the constitution of the transindividual – we will see it is of extreme importance. Recourse to the Prologue of Nietzsche’s *Thus Spoke Zarathustra* will confirm this.

12. “Everything is given” is a recurrent Bergsonian formulation in *Creative Evolution* (it appears seven times), serving to qualify the monist position criticized by Bergson.

13. Let’s recall the strange reservation that Simondon appends to this thesis: “Nevertheless, there is no absolute certainty to be had on this point: this transformation of the subject-being towards which anxiety tends is perhaps only possible in very rare cases.” (ILFI 256) Is he thinking of the triad of specific figures that he will mention later as effectuations of the transindividual, the sage, the hero and the saint? (ILFI 282)

14. On this point, Barthélémy clearly demonstrates the difference between anxiety as failure on the one hand, and emotion as the success of the passage to the transindividual on the other; due not to the disindividuating effect (present in both cases) but rather to “the provisory character of the disindividuation provoked by positive emotion.” (J.-H Barthélémy, *op cit.* 88-90)

15. M. Combes, *op cit.*, p. 66

16. “They do not understand me, I am not the mouth for these ears [...] Unmoved is my soul and bright as the mountains in the morning. But they think me cold and a mocker with fearful jokes. And now they look at me and laugh: and laughing, they still hate me. There is ice in their laughter.” Nietzsche, *Thus Spoke Zarathustra*, Trans. RJ Hollingdale (London: Penguin Books, 1986) ‘Zarathustra’s Prologue’, §5, p.47 [TN: The author refers throughout to the French translation by G. Bianquis, *Ainsi parlait Zarathoustra* (Paris: Aubier, 1969).]

17. Nietzsche, *Zarathustra*, §6, p. 47.

18. Nietzsche, *Zarathustra*, §6, p. 48: the tight-rope walker “lost his head and the rope; he threw away his pole and fell, faster even than it, like a vortex of legs and arms. The market square and the people were like a sea in a storm: they flew apart in disorder, especially where the body would come crashing down. But Zarathustra remained still and the body fell quite close to him, badly injured and broken but not yet dead.”

19. On agony as the revelation of singularities, cf. Gilles Deleuze, “Immanence: a life”, in *Pure Immanence: Essays on a Life* (New York: Zone Books, 2001), trans. Anne Boyman, 25-33: “Between his life and his death, there is a moment that is only that of a life playing with death. The life of the individual gives way to an impersonal and yet singular life that releases a pure event freed from the accidents of internal and external life, that is, from the subjectivity and objectivity of what happens.” (28)

20. Nietzsche, *Zarathustra*, ‘Zarathustra’s Prologue’, §9, p. 52.

21. Cf. ILFI 320: “only the preindividual phase can be properly called monophased: at the level of the individuated being, being is necessarily already polyphased, since the preindividual past survives alongside the existence of the individuated being and remains the germ of new amplifying operations.”

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22. In this sense, we can affirm that the connection between preindividual and transindividual concentrates the problem of the self-constitution of the transindividual. On this connection between preindividual and transindividual, and the constitutive ambiguity of the concept of the transindividual, cf. J.-H. Barthélémy, *op. cit.*, IV “La question du transindividuel”; see also M. Combes *op. cit.*, 84-5.

REVIEW ARTICLE

Bernard Stiegler, *Technics and Time, 2: Disorientation*
Stanford University Press, 2008

Kristina Lebedeva

Bernard Stiegler's writing can be situated within a well-established tradition of philosophical works that question the ever-increasing role of technology in the world. Insofar as technology has not only become entangled with, but also become profoundly transformative of a vast number of human activities, including perception itself, there are a host of questions that arise today, perhaps with greater persistence than ever: what is the relationship between the animate and the inanimate? Are human beings in control of their technological creations, or is it the other way around and does technology have a claim on their experience that is perhaps more powerful than they imagine? In the final analysis, such questions have to do with an evaluation of the technologically induced changes that humanity is witnessing--in other words: with an evaluation of the possibilities that technology has both created and foreclosed.

Stiegler's multi-volume work *Technics and Time* can be summed up in the following way: technics and humanity, the artificial and the human, are inseparable and fundamentally co-dependent. This seemingly harmless claim in fact problematizes the entire Western philosophical tradition, which asserts the unambiguous priority of humanity over its inventions. In other words, Stiegler's claim forces into crisis the traditional, hierarchical structures of anthropocentrism and anthropomorphism that subordinate the inorganic to the organic. Such a claim participates in a dialogue with prominent philosophers such as Edmund Husserl, Martin Heidegger, and Jacques Derrida (who was Stiegler's teacher); it also creatively engages with Gilbert Simondon and André Leroi-Gourhan's work on the technical and the human.

The stakes of such a project are multiple. They have to do, on the one hand, with disrupting various illusions and theoretical phantasms, such as the illusion of the sovereign self, of the subject's seeming control over that which it creates, as well as philosophies of vitalism. On the other hand, Stiegler aims to uncover the unthought within thought and thus to pave the way for the new possibilities of human existence. This double gesture of disrupting and unveiling possibilities is accomplished by Stiegler's uncovering of the fundamental co-dependency of the human and the non-human (more specifically, the inorganic) or--to put it in slightly more

technical terms--with the way in which “techno-genesis structurally precedes socio-genesis” (2). Stiegler initially follows Heidegger here in that he sees time as the definitive and theoretically eloquent feature of human life. In this context, he can be said to focus on the aspects of what Heidegger calls originary time (the purely human, finite time) in order to show that originary time is always already infected with and sustained by *artificial time*. In this sense, although Stiegler might follow Heidegger initially, his work also clearly goes beyond Heidegger in that it insists on the infection of the originary by the artificial.

While the first volume of *Technics and Time* offered a nuanced account of the human being’s unique relationship with the tradition that he or she inhabits, more specifically: of the ways in which the human being lives in the world through the *technical* acts of memory--a memory that is spilled over and sustained by the organized, inorganic matter--the second volume describes not the *why*, but the *how* of this process of a living that is enabled by technics (cf. 1). The task of the first volume was thus to demonstrate the ontological insufficiency of the human being, an insufficiency that he or she perpetually tries to compensate for by technical know-how. It was to demonstrate how mortal time is necessarily also the artificial one. The present volume, in its turn, enumerates and interrogates the instances of the conflict between the originary and artificial time--the conflict that ultimately becomes the occlusion of the former by the latter--throughout modern history. It is this conflict that is termed *disorientation*.

However, *Technics and Time 2* goes beyond a merely descriptive account by alerting the reader to the dangers inherent in what could be called the colonization of human time by the technically created or industrial one. To understand these dangers, one needs to go back to Stiegler’s crucial thesis that human beings inhabit the world by externalized memory, by the memory converted into matter. Since the modern age is first of all characterized by the acceleration of matter or, more precisely, by a technical splintering of the world into an infinity of tiny events, the properly political question becomes, “What *don’t* we remember?” The dangers stemming from the age of speed are that one’s memories are open to pre-selection and pre-judgment, which is to say that the time of memory is being radically altered. The question, “What *don’t* we remember?” translates into, “What is *left out* from our memory?” Indeed, “today more than ever the political question is memory” (9).

Stiegler begins his discussion of the externalization of time, memory, or historical continuity by explaining how orthographic writing constitutes collective beliefs and how it is indeed a crucial aspect of “collective individuation” as such. If one were to ask, “What does the orthographic *do*?”, the answer would be that it enables one’s certainty about the past, which means that it secures one’s connection to that very past. When one reads a philosophical text from the philosophical tradition, one does not slip into the paralyzing uncertainty about the accuracy of the words that one is reading. One does not doubt that it is Plato’s thoughts represented on the page and not someone else’s.² Furthermore, rationality and monotheism, nourished by the religions of the Book, have for a long time been the ground of belief and of societies in general (cf. 8). In short, societies have been sustained by the know-how of writing, i.e., by certain ways of retaining and recording events. But why is this the case? The answer is that collective memory is first of all marked by *retentional finitude*--which is to say, by the fundamental inability of memory to contain itself. All memory needs supplements; without these supplements, it would topple over into oblivion. In Stiegler’s language, the *who* is thus radically finite, or more precisely: forgetful, and it is for this reason that it requires the *what*. Because it extends into the future, orthographic writing decontextualizes human beings: it *disorients* them by undermining the singularity of their here and now while simultaneously endowing them with a different kind of existence. As paradoxical as it may seem, disorientation thus lands human beings in a new place. It spatializes them in accordance with disorientation’s own coordinates.

Stiegler proceeds to analyze this process of spatialization or giving place by looking at the ways in which the programming--which is to say, the management or conquest--of rhythms, memories, styles, and idiomatic differentiations occurs. The question here is thus ultimately about the technically orchestrated territorialization of the pulsation of human life itself. Even more importantly, it is about showing that all territorialization is always already conditioned by *deterritorialization*. Stiegler’s aim is to demonstrate that technical control,

technical means of containment and regulation, are necessarily preceded by a technical rupture--the rupture that is also known as innovation or the emergence of the new.

At this point in the argument, Stiegler furthers the discussion by focusing on what he calls the “industrial synthesis of retentive finitude” (97). This is where the political dimension of memory comes to the fore. Analogic, numeric, and biologic technologies industrialize memory not in ways that allows it to retain the real, in other words: to distinguish the fact from the memory of the fact, but rather in such a way that its object is created, performed, and multiplied. The more advanced the technology, the more spectacularly and successfully the memory’s object is engineered. The final claim here is that the cognitive sciences themselves have both forgotten the finitude that lies at the root of memory and misinterpreted the Husserlian intentionality that they imply.³ This intentionality presents itself only in the examination of the temporal object--of a dynamic object such as a melody that is itself technologically recorded and echoed. This is why Stiegler concludes his book by discussing the link between technical or tertiary memory and temporalization. In this case also, there is no “pure” temporal event. Instead, the event is always already artificially retained.

The final chapter of *Technics and Time 2* is animated by two interrelated arguments. Stiegler begins by reiterating the claim (well familiar to the readers of the first volume of *Technics and Time*) that even though Heidegger departed from the Husserlian privileging of the living present, he was unable to adequately conceptualize the nature of technics. Simply put, Heidegger was wrong to place the human being on the side of finitude, and technics on the side of ill-fated infinity. In this view, the human tends towards the technical in order to forget its finitude, and this drive towards forgetting is dangerous precisely because technics is structurally unlimited and thus infinite. For Stiegler, however, the human being can never escape his or her mortality through technics, for finitude itself appears when the *who* and the *what* ontologically intersect. Given this co-dependence, the technical, just like the human, is stricken with discontinuity.

This then leads to Stiegler’s second claim: thought or the Husserlian transcendental consciousness itself is enabled by technological memory. This means that thought, insofar as it is reflexive or able to return to itself, is grounded in the worldly materiality around it, in the sense that it recoils from something other than itself, and it is in this recoil that it is constituted as what it is. Stiegler can thus be said to uncover here the technological foundation of thought, which is also the impossibility of any kind of purely human time.

When consciousness and technics become too intertwined, there is too much artificial time, an excess that manifests itself as “eventization” (100). This artificial time cascades and singles out, a process that results in an endless and ultimately meaningless chain of events. The late twentieth and twenty-first century are the age of an artificial time whose absolutely unique temporal objects, i.e., technologically created events, have become identical with the flux of consciousness they produce. This, thorough temporalization of consciousness, leads, as Stiegler writes, to the occultation of *différance*, the suppression of the here and now--which is to say, to the in-*différance* of a non-place. Indeed, “no future” does not mean “nothing *happens* anymore” (241). The problem is, rather, that the proliferation of events is anonymous, de-singularized, performatively de-rooted from any spatial specificity. Time belongs to no one and is nowhere in particular. It is unable to capture the fact that consciousness and temporal objects are always “awhirl” (243)--the fact that there is an irreducibly spatial dynamism at work here.

There are, of course, various problems associated with Stiegler’s theoretical binding of the technical and the human. One way to reference them is to ask: in affirming the co-dependence of the organic and the inorganic, has Stiegler not re-embraced the framework of intelligibility that he set up to destabilize? In other words, has he not done a disservice to the very materiality of technics--its very difference from thought--by placing it in the necessary conjunction with the human? While Stiegler maintains that “technics thinks” (32), one wonders whether the very irreducibility of matter to thought has not been theoretically muted. Another question that comes to mind has to do with the possible identity of suppression or occultation and erasure of temporal *différance*. If the time of *différance*, as Stiegler says, has been occluded, does this mean that it can still re-appear?

What is meant by this question is the possibility or impossibility of re-joining time and space in new ways, i.e., a kind of hope for the unexpected that stems from the idea that the possibility of such a re-joining has not been radically erased. Rather, what has been invalidated are the old, familiar ways of spatio-temporal confluence. But what warrants Stiegler to think this way? How does one go beyond the potentially unproductive gesture of pointing to the unexpected and the unthinkable? Perhaps what the contemporary world calls for is that the conceptual vocabularies of space and time be replaced with a more direct inquiry into history and materiality. Finally, Stiegler's alignment of critical thought with the specifically Western technical development merits additional questioning. Is it possible to sustain such an alignment without taking into account non-Western formative forces, i.e., the interplay of the Western and the non-Western, the coexistence of the orthographic and the pictorial in a language?⁴ Furthermore, does the conflation of thought and the development of Western technics not foreclose any dialogue with non-Western thinking? ■

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NOTES

1. This is the term that Gilbert Simondon uses to designate individuating processes productive of groups larger than the single individual. In the case of collective individuation, the individual subject, psychic unit, or organism are seen as an effect of a greater interplay of historical, social, and technical tendencies rather than their origin.
2. It is interesting that Stiegler does not problematize the status of Plato's writings in this context. Plato is a key example of someone who always speaks through someone else, of someone whose voice reaches the reader indirectly, through a practice of "imitation" that his own work in fact condemns. In speaking through Socrates, Plato seems to undermine performatively the very exactitude that Stiegler sees as definitional of linear and phonologic writing.
3. Thus, according to Stiegler, the emergent logics of consciousness and cognition do not see time as an issue, let alone as something foundational. They treat it, rather, as one element among others (cf. 97-8).
4. See, for instance, on page 59 where Stiegler unequivocally equates critical thought with memory inaugurated by linear writing.

REVIEW ARTICLE

Alberto Toscano, *The Theatre of Production: Philosophy and Individuation between Kant and Deleuze*

Palgrave Macmillan, 2006

Eugene Thacker

1. THE BLACK BOX OF TERATOLOGY

Now a stock figure of genre horror and science fiction, the “mad scientist” is most commonly regarded as a figure of moral caution. In its early instantiations (*The Island of Dr. Moreau*) the mad scientist is at once a scientific and theological figure, rationalizing method by referencing science (e.g. animal physiology, Darwinian evolution) and, at the same time, occupying the role of Divine Creator (a role that is also a Divine Sovereign). We are readily familiar with the stock elements of the mad scientist story in popular film – the crazed, disheveled appearance of the mad scientist himself (most often a “him”), the bells-and-whistles of the high-tech laboratory (usually in a tower or basement, and replete with Tesla coils), and of course the aberrant creature that is the result of the mad scientist’s extremist theological-scientific vision.

But aside from the kitschy set design or the highbrow ideologies represented in such stories, we should also pay attention to the materiality of the mad scientist, to what the mad scientist actually does. For instance, there is always a black box in the laboratory, one that the mad scientist has created. This black box may be an operation table (e.g. the classic Universal Pictures version of *Frankenstein*), a submersion tank (the Hammer Studios version of *Frankenstein*), or an isolation chamber (e.g. *Altered States*). This black box serves a number of functions. It is literally a point of mediation between the natural world and the unnatural or post-natural world of the monster that is created within it. While the black box is visually and conceptually saturated in science and technology, it is also the liminal space where something mysterious and unknown happens – the production of previously unseen forms of life, the ontogenesis of “life itself.” This fuzzy notion of life itself is that which remains forever beyond the pale of human understanding, but what can only be intuited via the individuated – and anomalous – form of life produced in the black box. One is almost tempted to say that, within the mad scientist’s black box, a new type of negative theology is produced, one built upon and reliant on a techno-scientific rationality. A case in point is the two film versions of *The Fly*, the first from 1958 (directed by Kurt Neumann), and the

second version from 1986 (directed by David Cronenberg). In both versions, enclosed “pods” serve as the black box. Something natural and familiar goes in, and something unnatural and unfamiliar comes out. The story of *The Fly* is also interesting because it introduces chance and the accident into the creation of the monster – that is, the monster is created not through the hubris of the mad scientist, but through the anomalous event, the aberration that comes of chance and the anonymity of the chance encounter. What goes in the black box – a human being, a fly – is quite different from what comes out. In the 1958 version we see a sort of mereological assemblage: human body with an insectoid claw and massive “bug eyes.” In the 1986 version something more amorphous is presented in stages, almost like a clinical case study: useless body parts slough off while new structures emerge. In both versions, however, the black box serves as a kind of allegory of individuation. At once engineered and yet completely mysterious, the black box of individuation functions as a crucial link between the life that is already known and the life that is unknown (or not-yet-known).

2. THE TRAGEDY OF THE INDIVIDUAL

These sorts of issues – individuation, morphology, and the ontogenesis of life – are at the heart of Alberto Toscano’s *The Theatre of Production*. Arguably, Toscano’s book is part of an emerging *naturphilosophie* that brings together the approaches of speculative philosophy, contemporary science studies, and a range of political issues broadly included under the rubric of biopolitics. At the core of *The Theatre of Production* is the concept of individuation, and in particular the ways that individuation cannot be separated from a critical interrogation of the concept of life. As Toscano notes, this biophilosophical concern not only bears upon the life sciences proper, but it also raises a host of questions that are political-ontological questions: questions of production, of materiality, of norms and the anomalous.

The Theatre of Production is broadly organized in three parts. The first part deals with the traditional or classical concept of individuation from Aristotle up to Kant. Here the key conceptual lens is that of Being and Becoming. In the second part of the book, Toscano focuses on the problematic of individuation in Kant, as well as its critique in the work of Schelling and Nietzsche, with a look ahead to autopoiesis. This is what Toscano calls the “genetic modality of individuation,” where the primary concern is the distinction between autonomous (self-causing) and heteronomous (other-causing) modes of individuation. This paves the way for the book’s third and final section, which examines the work of a number of thinkers, including James, Pierce, Ravaisson, and Whitehead, with a nod to recent developmental systems theory. However its main focus is on the development of individuation in the thought of Simondon and Deleuze. This culminates in what Toscano terms an “ontology of anomalous individuation,” a concept of individuation that does not proceed from pre-established principles, but that itself conditions of the autonomous-heteronomous split. This is, in short, the development of an unconditioned individuation, an “anarchic” mode of individuation. Here Toscano paraphrases Simondon: to understand individuals through individuation, rather than understanding individuation through individuals.

In its most abbreviated form, the problem of individuation poses the question: how is it that this entity exists, and not any other kind of entity? Note that this is different from the purely ontological, Leibnizian question (“why is there something and not nothing?”). In its very formulation, the question of individuation bypasses the metaphysical question and shifts its terms: the issue is not why there is existence, but rather how something exists. The problem, as Toscano notes, is that this must then presume something non-individuated that pre-exists, as well as some resultant individual that is a product, and produced from the pre-existent.

Hence the primary conceptual challenge that runs through *The Theatre of Production*: is it possible to think the genesis of the new without recourse to either pre-existing principles or pre-determined ends? Put another way: what would be required of thought in order to think ontogenesis without falling back onto either mysticism (an unknowable, pre-existent, background) or naïve empiricism (the strictly observable, evidential proof of hindsight)? As Toscano notes, this dilemma is expressed in embryonic form in Aristotle, who splits the problem of individuation along “genetic” and “epistemic” lines, the former dealing with natural philosophy and generation, and the latter dealing with logic and the analytic of concepts. While Scholasticism will further

refine this split (for instance, in Duns Scotus' notion of *haecceitas*), it will be to Kant to crystallize the problem of individuation as it is manifest in the "paradoxical object" of the living organism.

Toscano's elaboration of the Kantian problematic of individuation stands as one of the strongest parts of his book. Though Toscano spends equal time on thinkers such as Simondon and Deleuze, I would like to spend some time going over these sections on Kant. This is, in part, because in Toscano's genealogy it is Kant who establishes the horizon for thinking individuation. It is also because both Simondon and Deleuze reconstitute the problematic in new, post-Kantian ways – never fully doing away with the remnants of Kantianism in their thinking. Additionally, it is with Kant that the concept of individuation comes to be intimately tied with the philosophy of nature and in particular the organism as living being. In the *Critique of Judgment*, as in his lectures on natural philosophy, Kant meditates at length of the paradoxical status of the organism. For Kant, organisms bear a problematic relation to teleology: on the one hand, they are organized in ways that evidence a drive towards particular ends, but, on the other hand, such ends are neither apparent in the organism itself nor in any external cause. Kant takes it for granted that neither mechanism nor vitalism is adequate to explain this propensity of organisms. While mechanism offers a system and set of causal relations, it cannot account for the generation and adaptation of the living as such. Conversely, while vitalism does focus on the processes of life, it offers little in the way of causal explanation, except by resource of a quasi-mystical life force. In these views, individuation is structured along fairly traditional lines: there is some non-individuated state or substance, an activity of individuation, and the individual that is the product of that activity. The individual is the foreground, while the non-individuated is the background, with the activity of individuation asymmetrically mediating between background and foreground. Both mechanism and vitalism are united, then, in ultimately requiring some immaterial principle of individuation (efficient causality in mechanism, final causality in vitalism).

The interesting, albeit brief, move that Kant makes is to consider a synthesis between the two views. What if the apparent teleology of the organism is also its system of causal relations? One would then have to shift from a view of external, heteronomous causality to an internal, autonomous causality; that is, towards a *self-organization* of the organism. But, as Toscano notes, just as quickly as Kant puts forth this idea, he withdraws it, in part because such a concept can only be evidentiary: it can only be given in the evidence of singular experience, apart from an *a priori* given that would condition and ground all possible experience of the world. Hence the problem is that individuation – the individuation of individuals – seems to require a minimal distinction between a sort of background chaos that is the reservoir of all individuation (and individuals), and some causal principle by which the individual emerges as an individual. As Toscano observes, the idea of self-organization disrupts this paradigm:

The concept of self-organization is rendered unintelligible once the organizing and the organized, the individuating and the individuated, are separated by the disjunction between formative life, a mysterious force working by analogy with the power of desire, and inert matter, which receives its systemic structure from the activity of what Kant will refer to as an immaterial principle (48).

In the Kantian framework, one is caught between a necessary disjunction between individuation and the individual, and an equally necessary conjunction. The key element here is, of course, that of the process or the mediation of individuation itself. Interestingly, Toscano notes that in the *Opus Postumum*, Kant will infrequently call this process or mediation *Lebenskraft*.

As Kant's exemplar of the individual, the organism and its organization are at once manifest in itself and yet can only ever be the product of experience. As Toscano notes, "[i]ndividuals, considered here under the heading of 'evidence,' thereby constitute what can be given in experience alone...The paradox, of course, is that one is *forced* to think the organism, insofar as its evidence is such as to show up the lack and limitation of an *a priori* legislation. The latter is not simply incapable of anticipating the form of the organism...but cannot even formulate its *possibility*" (31). As Toscano concludes, in the Kantian framework "[t]here is nothing in the conditions for the possibility of experience...that is capable of providing a proper foundation for the

appearance of self-organizing individuals” (30; italics removed).

With this in mind, Toscano sets out to delineate different attempts to resolve the Kantian challenge. At the outset Toscano lays bare his ontological commitments: a “thesis of ontological excess” (Being is both more than and less than One; it is preindividual and problematic); a “thesis of asymmetry” (an ontology of individuation is an ontology of production); and a “thesis of anomalous or an-archic individuation” (individuation is ontologically prior to individuals). With these broadly Deleuzian theses in mind, Toscano goes on to show how a range of thinkers after Kant attempt to move beyond the Kantian stalemate. In Nietzsche’s early writings, Toscano detects an interest in a nonhuman, materialist mode of individuation (“materiality without matter”) that leads him to break from Schopenhauer, and post a generative and infinitely productive *Wille*. With Whitehead, Toscano highlights a thoroughly relational and “interactionist” mode of individuation, poised almost point-for-point against Kant. Such views lead Toscano to articulate one type of post-Kantian individuation, one that inverts Kant and leads to the idea of generative multiplicities – each multiplicity is an individual for another multiplicity, and so on, “all the way down.”

Another set of thinkers provides Toscano with a further stage in the post-Kantian theory of individuation. The concept of “habit” stresses the distinction between habit as repetition and habit as clarification or crystallization. Whereas the former notion implies that habit prevents individuation, the latter notion suggests the reverse. With Ravaisson habit is the psycho-biological interplay between repetition and spontaneity. With James the individual is constituted as a psycho-social “bundle of habits.” And with Pierce habit enters a more cosmogonic domain, in which habit is the canalization that produces new regularities. All of these point to a new approach to individuation. Whereas the prior examples (Nietzsche, Whitehead) operate an inversion of the Kantian paradigm, the examples of habit question the constitution of the very split between non-individuated and individuated. This paves the way for an engagement with the concept of the *preindividual*, a central concern for both Simondon and Deleuze.

For Toscano, it is with Simondon that the idea of the preindividual comes to the fore. This is, in part, due to Simondon’s approach (to know the individual through individuation, rather than knowing individuation through the individual). In this Nietzschean approach, Simondon will begin to understand relation itself not as a relation between pre-established (pre-individuated) terms, but as the constitution of individuation itself. Simondon’s preindividual is difficult to articulate. It is metastable, a non-state irreducible to individuality. It is also fragile, formed of incompatible tensions and potentialities (“disparation”). Finally, it is deeply processual, such that modifications on one side of any relation effectuate modifications on the other (“transduction”). Toscano shows how there are a number of resonances between Simondon’s theories and current developmental systems theory, based primarily on their use of the term “information.” However, as Toscano notes, for Simondon information is a tricky concept. It is certainly different from its usage in cybernetics and information theory, where it functions as a discrete entity carried along a channel. For Simondon, this is to be distinguished from a notion of information that itself constitutes the entire system of sender, receiver, message, and channel (this is what Simondon calls “first information”). In short, information is the ontogenic production of the system itself, rather than that which is produced within that system.

Such ideas lead Toscano to an engagement with Deleuze. Here Toscano introduces the concept of “anomalous individuation,” paying close attention to the way that Deleuze’s most central concepts – difference and difference/individuation, multiplicity, and haecceity – inform his approach to individuation. For Toscano, Deleuze’s primary challenge is not so different from that encountered by Kant: how to think a mode of internal differentiation that is neither a mystical, undifferentiated non-individual, nor a set of preconstituted principles of individuals? Toscano notes a shift within Deleuze’s attempt to answer this question. There is, first, an emphasis on structure, which Toscano encapsulates with the phrase “static genesis.” Here Deleuze posits a preindividual field that is at once material and transcendental, the being specific to a “non-empirical real.” But this encounters some obstacles, as the preindividual seems caught between being predetermined and undetermined (what Toscano calls the “sufficiency of the virtual”). This leads to a second approach Deleuze makes, which deals with

temporality and rhythm. Here Deleuze's emphasis on haecceity (the longitudinal axis of speed and slowness, the latitudinal axis of affecting and affected), derived as much from Spinoza as from Duns Scotus, comes in to oppose any theory of essences whatsoever. Toscano sees this not as the establishment of a system, but as a "dramatization of ideas" (hence his title of the book). In this drama of individuation, Toscano's notes a shift in Deleuze's work from a minimal distinction within individuation (actual/virtual; haecceity/univocity) to an affirmation of an ontological flattening of such terms. And, while Toscano spends time discussing diversions from Deleuze's work (the "functionalism" of Delanda, the erasure of individuation in Badiou's critique), the emphasis remains on the shift Deleuze effects from the Kantian preoccupation with organization (individuals over individuation), to the Deleuzian concern with composition (individuation over individuals).

3. THE LIFECRAFT OF HETEROGENESIS

The Theatre of Production offers a conceptual genealogy of the concept of individuation, both in its traditional and Kantian guises, as well as in the various post-Kantian attempts to rethink it. It is also unique in that it specifies what is at issue in the cluster of thinkers and texts that are often vaguely termed biophilosophy. While it is no surprise to find Kant at the center of this debate, Toscano also encourages a wider reading beyond natural philosophy or the philosophy of biology. This is perhaps the strongest line that runs throughout *The Theatre of Production*: that the "bio" of biophilosophy has little to do with biology per se, and equally little to do with time and temporality (a preoccupation with much biopolitical thinking today). Instead, the "bio" of biophilosophy deals with the paradoxical object of the living being that Kant describes early on.

By way of extending Toscano's study, we can briefly lay out some of the key elements for any biophilosophy today. There is, first, the issue of genesis, or the passage from non-being into being (autogenesis, the self-creating of the self, and heterogenesis, the differential creation of the different). This leads to the issue of emergence, or the distinction between foreground and background (emergence of a foreground as discrete or continuous, as determinable or spontaneous). This in turn leads to the issue of morphology, the forming and deforming that characterizes individuation as a process (from one metastability to another, from form as crystallization to form as diversion or disaggregation). Finally, this opens onto the issue of scaling, or the shifts between the terms of the One, the Multiple, and multiplicity (individuation as the middle term between multiplicities; the problem of causality in a multiplicity of individuations).

Given the genealogy laid out by Toscano, there are a number of issues to further consider. I will mention just one, and that is the concept of the preindividual. This concept already seemed necessary for Kant (though Kant is reluctant to posit it), and it leads to the Kantian question: what are the criteria for the individuation of individuals? Kant seems to be stuck having to posit a background of preindividual flux (which in the later lectures come to be called "the ether"), against which the foregrounding of individuals occurs. At this point, however, the individuation of individuals tends to recede behind a mystical fog of blind chance (mechanism) or divine gift (vitalism). The only way out of this is to entertain the idea of autonomous individuation (what Toscano calls "anomalous"). But such a concept of self-organization ends up throwing out some of the basic elements of Kant's edifice: the *a priori* and the *a posteriori*, efficient and final causality, organization and teleology, and so forth.

As Toscano paraphrases it, Simondon's version of the preindividual is not simply something that one back-poses from an already-individuated case. "Unlike a structured grid of possibilities...prefiguring or determining the individuations that draw their norm from it, a preindividual field is constituted as a *determinable* domain, in which differences and incompatibilities function as the potentials that a germ of information can resolve and modulate" (155). But at the same time that the preindividual is not totally determined or totalized, neither is it simply a kind of Neoplatonic flux and flow: "A preindividual field is thus not to be considered as a creative reservoir of phenomena or an unlimited source of givenness but as a *real* condition of individuation" (ibid.). In thinking the preindividual, one ceaselessly toggles back and forth between poles – determinable but not determined, productive but not creative, univocal but not One. Toscano, via Deleuze, attempts to massage

this back-and-forth quality by suggesting that there is not simply one preindividual field, but a plurality of preindividual fields – “determinable energetic and material conditions modulated by events of information” (ibid.). Despite this, it is sometimes difficult to see how the preindividual could be anything but a kind of metonym for a notion of life as pure generosity, gift, and flowing-forth. Certainly, in the hands of Simondon and Deleuze, one “subtracts” the divine, transcendent source or center from this generosity, but this then leaves us with the immanent generosity of the field itself – an empty gift. But even if one grants the more articulate, systems-based language of Simondon (and Delanda), individuation still presupposes this shift from an ontological question (“why is there something and not nothing?”) to an ontogenetic question (“why is there this thing and not some other thing?”; “why is there always something new?”). Individuation – along with the preindividual field – seems to necessitate some sort of principle of generosity, life viewed as germinal and creative. There is always more, and it is always different – more to come, more on its way, more than you realize. Perhaps it is this last type of generosity – more than you realize, the “weird” given – that best describes the limits of biophilosophy thinking today. In a way, we return to the question of the monster and the mad scientist’s black box. This is the question of teratology, or the anonymous, unforeseen individuation. Perhaps ironically, we would have to think of individuation, and life-as-individuation, in terms of natural theology, though of the “negative” sort... ■

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