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Gilles Châtelet, 'Gilbert Simondon (1924-1989)', in
L'Enchantement du Virtuel: Mathématique, Physique, Philosophie
(Paris: Éditions Rue d'Ulm/Presses de L'École Normale Supérieure, 2010, 210-214).
Translated by Dan Mellamphy (online c/o [http://www.academia.edu/4189277/
Gilles_Chatelet_Gilbert_Simondon_1924-1989_academia.edu](http://www.academia.edu/4189277/Gilles_Chatelet_Gilbert_Simondon_1924-1989_academia.edu)).

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GILBERT SIMONDON (1924-1989)

A philosopher notable for the profundity of his reflections on technics, individuation and culture, Gilbert Simondon—who taught at the universities of Poitiers and then Paris V—completed his doctorate in 1958 with a major study that appeared the same year under the title: *On the Mode of Existence of Technical Objects*. In 1964 he published *The Individual and its Bio-Physical Genesis*. His last work would have been *Psychic and Collective Individuation*.

According to Simondon, philosophy can overcome old dualisms such as those of *humanism versus technicism, individuality versus community, element versus totality, et cetera*, only through an elaboration of the concrete dynamic inherent to the problem of individuation. Philosophy has always accorded an ontological privilege to the constituted individual: *substantialism*, which considers being in terms of its constitutive unity, and *hylomorphism*, which understands the individual as engendered by form and matter, have a shared postulate upon which they accord: namely, a principle of individuation [that is] anterior to individuation. According to *atomism*, individuation is an established fact *{un fait donné: a 'given'}*[...]; according to the *hylomorphic* schema, there are indeed conditions for individuation—the conjunction of form and matter—but the operation of individuation is incapable of

bringing into play any principle which would remain exterior [to this binarism]. These shortcomings are those of thoughts that can't wait to burn through every step *{pensées impatientes de brûler les étapes}* to account for the constituted individual. According to Simondon, one must 'understand the individual through individuation rather than individuation on the basis of the individual'.

It is therefore a matter of rethinking that shadowy zone which covers-over the operation of individuation, and to detect [within it] an articulation between form and matter [that is] neglected by the hylemorphic schema. The example of making bricks out of clay clearly shows that they do not result from the conjunction of a quarry's raw *material* and of a parallelepiped *form*. The artisan stuffs the *kneaded* clay into a *constructed* mold. The operation is thus [both] a *production* and a *mediation* of quasi-homogeneous 'congruent' domains: a *prepared* matter vehiculates potentials the actualization of which are limited by a certain mold—one which has been adapted to this or that kind of clay. There is thus [what could be called] a[n] *artisan-mold-clay* system *{un système moule-main-argile: a system of mold, hand and clay}*. The pure form thus contains gestures that meet and that modify the primary matter. The technical operation constitutes two semi-sequences [or chains of events] which, starting from the raw material and from the pure form, make their way toward each other, thereby manifesting a continuity of gesture[s]. It is Simondon's great merit to have grasped the whole force of this schema and, based upon it, to have elaborated a theory of individuation from the latter—a theory remarkable for its originality and profundity.

Another example, that of the gradual propagation of crystalline structure in a supersaturated liquid, gives him the opportunity to unlock the fundamental notions of *pre-individual reality*, *modulating form* and *transductive operation*. The limit between seed-crystal (*i.e.* 'form') and liquid plays the role of [an] amplifying relay, of [a] *modulator* that captures a metastable potential [in order] to actualize a structure. Supercooling and supersaturation are particular cases [or kinds] of resolution, resolving the

tensions of a 'pre-individual reality' constituted by a metastable system in an amorphous condition.

The transductive operation is a physical, biological, psychic and social operation by which an activity gradually propagates itself within the domain of a 'pre-individual reality'. It structures itself from place to place and 'each region of constituted structure serves as basis and model for the following region'. Transduction is that by which a structure appears, bringing [a certain] resolution to problems posed in a dilemmatic domain. It is neither a *deduction* ([since] it does not search elsewhere for a principle that would resolve the problem) nor an *induction* ([since] it does not generalize on the basis of common characteristics); it is the operation of a *division* {*dédoublement*} and *dephasing* {dephasing: *déphasage*}, by way of an other, of a being in a state of pre-individual tension. The extreme terms of the hylemorphic schema do not pre-exist this operation: the latter *produces* them. Transduction presupposes a kind of creative homogeneity, an *internal resonance*, characteristic of matter in formation. In the pre-individual condition, the fate of each point relies {*retentit*: 'resounds', hence resonates} on all the others. The pre-individual condition is the promise of every becoming.

Transduction gives rise to a resolving structure {*une structure résolutive*} by leveraging the tensions of this domain, just as depth-of-vision {*la visio- en-relief*} permits an integration-with-depth-effect of non-coincident images given by the right and left eyes—this through the operation of disparity. One could add that the information is never put in a pre-packaged/pre-given form (a fact that underscores the insufficiency of purely cybernetic theories of information); it is a 'tension between two disparate realities' {or disparate 'reals': *réels disparates*}, and can be defined as 'the signification which arises whenever an operation of individuation discovers the dimension in which two disparate realities {or disparate 'reals': *réels disparates*} can become a system.

Transduction and pre-individual reality are present wherever domains are the seat of structuring activities that condense or amplify themselves. The transductive operation is an

individualization in progress. In the *physical* domain, it is simply a progressive iteration limited solely by its modulation. The *vital*, the *psychic* and the *social* emerge, on the contrary, from a pre-individual reality that is not [and cannot be] exhausted by a single individuation. The living being possesses a volume and can also construct an *interiority* which houses a neutral center (the heart of individuation), multiplying the internal resonances and thereby giving access to a *series* of individuations. This *maintained metastability* makes the living being a veritable agent and theatre of individuations; it enters into mediation with itself, and this problematic interior permits its integration with a more vast problematic: namely the psychic, where it intervenes as the element of a problem and thus as a subject. The individuation therefore continues within the mode of the collective and psycho-social—modes which do not reduce themselves to the merely social or inter-individual. In this sense, the notion of pre-individual reality permits a powerful subversion of the interior/exterior opposition and overcomes the dualism of the single individual facing a world with respect to which it is estranged. The individual *becomes*, and its relation to the collective is a *dimension* of individuation.

For Gilbert Simondon, the mode of existence of *objects*, of *networks* and of technical *assemblages* is directly associated with notions of pre-individual reality and transductive activity. The technical object undergoes a process of concretization. One should indeed speak of a technical *lineage* which constitutes a veritable sequence of artificial [*i.e.* technical] individuation leading from the abstract technical object (a structure filled with only one function) to the concrete object (where multiple functions are associated to synergetic structures). The functions progressively reduce the incompatibilities and tend to incarnate a concrete schema of invention in the form of a technical object that no longer struggles [or is incompatible] with itself; there is thus [both] a convergence and ameliorating self-adaptation (*cf.* the remarkable analyses of triode lineages on page 46 of [the original French publication] *On the Mode of Existence of Technical Objects*).

A technical lineage progresses not by an exterior adjunction of structures but by the discovery of functional synergies and the multiplication of internal resonances.

Whereas classical humanism, which considers the technical object only in its isolation, can only oppose technics and culture in a sterile manner, a philosophy that would concretely come-to-terms with its time must, according to Simondon, take into account the transductive activities that swarm within networks and technical assemblages; it is through them that [philosophical thought] will be able to encounter technicity while [also] respecting its totality. Moreover, technics and religion derive from the division {*dédoublement*} of primitive magical unity: whereas the cultivated man 'can only perceive the precariousness of the contract between a technicity that analyzes and fragments, that produces objects and figures, and a religion devoted to subjectivity and foundational realities', the philosopher must absolutely surpass such subject/object, figure/ground oppositions, making subjective knowledge *converge with and in* a knowledge *mediated by and at* the neutral point, via *intuition*. Philosophy can thus define itself as the *intuitive capacity* {*capacité d'intuition*} of the interval that separates a technical orchestration and a religious ordeal {or a technical constitution and a religious tribulation}. This 'philosophical intuition of the real' cannot be reduced to a concept (which grasps being on the basis of [its] figural elements) nor to an idea (which refers to the background totality of the real taken in its unity); it presents itself instead as an *analogical encounter* between two becomings {*deux devenirs*}: that of the known being and that of the knowing subject. 'Beings can be known by subjective knowledge, but the individuation of beings cannot be grasped by the individuation of subjective knowledge', [writes Simondon]. Individuation intervenes wherever there is a genesis of structures; it feeds on the disparity of technical and religious poles while remaining at the neutral point of becoming.

Pre-individual reality and transductive operation also allow an overcoming of the opposition between pragmatism and contemplation *{i.e. theory and practice[?]}* by proposing an ethic. A free and moral act is one which, through the discovery of internal resonances, has enough consistency to overstep itself and encounter other actions. The value of an act is measured by its amplitude, 'its capacity for transductive expansion'; it is indeed, here, a matter of an ethic entailed by the era of technical ensembles and their networks. Such an ethic permits the thought of a noble relation between man and machine since it degrades neither of these two terms. In contradistinction to the abstractions of classical humanism, it understands that man is not subservient to the machine 'when the machine itself is already subservient to the community *[i.e. the collective]*'. In addition, what one could call a machinic transduction allows the bounded individual to be surpassed without annihilating it before the community: 'between the community and the individual isolated by itself there is the machine—and this machine opens onto the world'.

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