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# Traversing Life and Thought: Gilbert Simondon's Theory of Cyclic Imagination

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**Abstract:** Simondon's poorly examined theory of imagination reveals a number of interesting possibilities. On the one hand, by grounding the function of images within the idea of a cycle, it provides an attempt of reconciliation between the assumptions that privilege either reproduction or creativity. On the other hand, his view might also be conceived as a serious alternative to various theoretical stances that characterize the problem of imagination strictly within a dichotomy between individual subject and social imaginaries. The paper proposes a reading of Simondon's lectures given between 1965 and 1966 in Sorbonne in the broader context of his philosophy and outlines the role of imagination that exceeds imagining subject as well as establishing the mode of correlation with associated milieu, which performs the conditioning of its potentiality. Rejecting the primacy of representation, Simondon's take enables one to draw the conclusion that imagination can be attributed to all living beings and conceived as the function of life.

**Keywords:** imagination — milieu — potentiality — image — cycle — anticipation —symbolization — invention

## *Introduction: What Lies Between Reproduction and Creativity?*

In *Imagination and Invention* (2008, *Imagination et invention*), based on lectures given in Sorbonne between 1965 and 1966, Gilbert Simondon embarks on suggesting a new theory of imagination that had previously been very poorly analyzed. Right from the start, the text manifests his resolution to dismiss the arguments which characterize the problem of imagination strictly in terms of individual mind, theory of faculties or so-called problem of the subject. As we read in the very first lines of the introduction, Simondon (2008, p. 7) aims to oppose the views articulated by Jean Paul Sartre,

who, in his influential work *The Imaginary*, emphasized the hermetic role of consciousness and the 'irrealizing' function of imagination emerging in its plane. According to the latter text, there are four major features defining the particular status of an image: 1) image is a form of consciousness; 2) image is a quasi-observational phenomenon; 3) the consciousness of imagining posits its object as nothingness; 4) the consciousness of imagining is spontaneous (Sartre [1940] 2004, pp. 5–17). Imagining is conceived as intentional, nihilistic and spontaneous alienation, that is constituted on the basis of separate acts, in a way that imagination would not blend with perception like oil with water.

To think of imagination as determined in relation to and contrast with perception, means not only to reduce the problem of image to the field of individual consciousness; it also presupposes the intrinsic flaw of imagination as the function of insufficiency which appears in contradistinction with both more privileged epistemological or cognitive capacities (perception, intellection) and ontological status (the real, Being or truth). As Sartre famously noted, 'the object of perception constantly overflows consciousness; the object of an image is never anything more than the consciousness one has of it; it is defined by that consciousness: one can never learn from an image what one does not know already' (Sartre 2004, p. 10).

Conversely, it has been a frequent attempt to restore the value of imagination by relying on its creative potential. On this account, Immanuel Kant's concept of productive imagination became a turning point in the history of philosophy. By describing the role of *Einbildungskraft* through the function of transcendental schematism, which *a priori* delineates the trajectories of perception by sketching the sensory multitude into the models of synthesized unity, it also paved the way to the recognition of imagination as the capacity that precedes perception and consequently escapes the function of mere reproduction. Without going into the details of a variety of developments of this premise (from the understanding of 'primary agent' in Coleridge's writings to Cornelius Castoriadis' idea of radical imaginary), one might recall a particular case of creative imagination that gained considerable importance within the context of French philosophy and presumably influenced Simondon's thought. Although there are no clear references to Gaston Bachelard in *Imagination and Invention*, the commentator Jean-Yves Chateau (2008, p. XXI) claims that all Bachelard's works, with a certain emphasis on *The Psychoanalysis of Fire*, were included in the recommended bibliography of the course given at Sorbonne. Simondon might have been sympathetic with Bachelard's take on poetic and material imagination, as emerging out of fluidity and pliability of creative development, which counterbalances reproductive patterns of psychic behavior as well as the primacy of perceptual forms. As we read in

*Earth and Reveries of Will*, 'image may precede perception, initiating the adventure in perception' (Bachelard [1948] 2002, p. 3). Richard Kearney points out 'while Sartre often appears to regard imagination as one particular mode of intentionality which leads to the discovery of the fundamentally negating power of consciousness, Bachelard reverses the emphasis and regards negation as but one of the many powers of imagination' (Kearney 1998, p. 92). As it will be discussed further, it is namely the openness of mental structures articulated within imagination that constitutes the primary interest in Simondon's theory of image. If imaginative existence for Sartre is 'fundamentally ipsorelative', Bachelard proposes the modality of imagination which is 'aliorelative', meaning 'intentionally directed towards the other rather than the self' (Kearney 1998, p. 92). This tendency to conceive image as a mechanism to include otherness plays a pivotal role in *Imagination and Invention*.

Despite a possible interest in Bachelard's views, they certainly remained only partially sufficient in explaining the complexity of Simondon's theory of imagination. He was not satisfied with fully accepting either of the two perspectives that presume a pre-constituted polarity between imitation and novelty. The mission of *Imagination and Invention* consists of the efforts to wrestle against all theoretical views that single out only one prominent function of imagination—either that of reproduction or that of pure creativity. One could easily notice that his starting point lies in a genuine interest in the origin of invention. Invention, however, should not be thought of in a naïve manner, without taking into consideration its dialectical relationality with reproduction. The rejection of the latter dichotomy resonates with contemporary debates regarding an autonomous nature of images that are articulated by the proponents of what is called 'the theory of imaginal' as opposed to 'social imaginary' or 'subjective imagination'. Stemming mostly from Muslim Sufi philosophical tradition (Corbin 1979) 'the concept of the imaginal emphasizes the centrality of images, rather than the faculty or the context that produces them; therefore, it does not make any assumptions about the individual or social character of such a faculty' (Bottici 2014, p. 5). It is namely this 'tertiary' nature of imagination that is also seen by Simondon as offering a fundamental background that enables an escape from the vicious circle of repetition and innovation. In this sense, his take is even more radical, i.e. not limited only to the dialectics of the social and the individual. The first chapter of the introduction traces the status of image as an intermediary reality between 'object and subject', 'concrete and abstract', 'past and future' (Simondon 2008, pp. 7–17), leading, by the end of the book, to the recognition of imagination as fundamental and, most importantly, semi-autonomous relationality that defines a creative interaction between all living beings and their milieus. On

the other hand, it is precisely because of this latter tendency, as outlined by Daniela Voss, that while Simondon 'pays much attention to the internal logic of invention, he completely brackets off the socio-political and economic context' creating a 'quasi-biological conception of technical evolution' (Voss 2019, p. 1). It is true that Simondon does not consider economic drives and socio-political interests directly incite invention, limiting his analysis to an interpretation of what is outlined as milieu.

As for the use of terms, one important remark should be noted right from the outset. Although Simondon opens his analysis by introducing the polemics on the meaning of 'imagination', entrapped in the hermetic orbit of psychological function, he seldom uses this term throughout the text that follows; instead, the term 'image' can be found almost on every page of the book. Simondon does not provide a clear explanation for such a choice, his intention can be singled out from the engagement in the polemics with Sartrean stance. The text *Invention and Imagination* can be interpreted as an emancipatory attempt—to go beyond the 'conscience imageante' (Simondon 2008, p. 7), as famously formulated by Sartre. The emphasis is clear—the ambiguity of the word 'image' enables it to be conceived as both a mental and material entity, a truly transitory medium which can include the realms of both an individual and its milieu. It might be that, for Simondon, 'imagination' has too many connotations of subjective nature, whereas 'image', by performing the above-mentioned intermediary role, can be seen as being independent from individual, and hence acting as the mechanism of inclusion of otherness. However, 'the theory of images' can be seen as 'the theory of imagination' and that requires a refreshment of the very meaning of imagination itself.

On the other hand, this provokes a number of important consequences: he poses the question to understand in what sense image could have both mental and material ontology—a problem that has been studied in the context of visual studies. At the expense of a long tradition from Plato to W. J. T. Mitchell and Gottfried Boehm, the question is how to overcome the 'indicative' nature of images. As Emmanuel Alloa (2015, p. 19) points out, the indicative is 'certainly not the only modality of an image; it would appear that the subjunctive is one of its modalities as well: the image opens up a space of possibility between an 'it was this way' and an 'it will never be this way'. This concerns obviously the domain of artistic images in general, and especially of those of modernity, where values like ambiguity, indeterminacy and openness have become of utmost importance' (Alloa 2015, p. 19). As we shall see what follows the semi-determined character of images is also at the core of Simondon's theory, by bringing to this openness an almost biological background.

## *The Cycle of Images*

Even in his earlier works, Simondon noted that imagination could be conceived as the bridge that connects the realms of thought and matter. Instead of considering it in terms of dissociation, the power that shapes the entanglements between mind and its material milieu definitely merits more attention and detailed analysis that, among other things, regards the factor of associated milieu. There is a remarkable passage in *On the Mode of Existence of Technical Objects* ([1958], 2017) that draws a parallel with the link between imagination and life and an inner cooperation among the organs within a body:

> To date, the imagination has been poorly analyzed because forms have been invested with the privilege of being active and are thought to have the initiative in psychic life and in physical life. In reality there exists a great kinship between life and thought: within a living organism all living matter cooperates in life; it is not only the most apparent, or the clearest structures that have the initiative of life in the body; blood, lymph nodes, and conjunctive tissues partake in life; an individual is not only made up of a collection of organs combined with one another into systems; an individual is also made up of that which is neither organ nor structure of living matter, insofar as it constitutes an associated milieu for the organs; living matter is the ground of the organs; it is what allows them to relate to each other and become an organism; it is what maintains the fundamental thermal and chemical equilibriums upon which the organs deliver brisk, but limited variations; the organs participate in the body. (Simondon [1958], 2017, p. 62)

By picking up on the idea of this relationality, which discloses the kinship of mental images and matter, the text of lectures held between 1965 and 1966 is primarily analyzing the processes of the circulation of images and the resulting transformations. As it has been already emphasized, the role of imagination can be properly understood once those two functions—reproduction and creativity—are recognized as permanently interrelated. Therefore, both imitative and innovative actions undertaken by imagination should be thought of in terms of genetic unity, as parts that fold onto each other within the same process. The very fact that image can be interpreted as an organism endowed with genesis implies that its origin and evolution resist its reduction to a singular meaning, a singular role or a singular status. An image is an embryo that acquires different functions as it grows and mutates. This is why Simondon presents his work as a theory of the genetic cycle of images, consisting of four (or rather three plus one) key phases:

- Anticipation. An image functions as a mere vitalism, a bundle of motoric tendencies, or the anticipation of an experience of an object. It

is charged with the genetically pre-programmed behavior that gives spontaneous responses. The motricity that coordinates the orientation of experiences of all living beings depends on the 'cycle' and marks its formal beginning and end. However, it also signalizes an inventive mode of integration into milieu that goes beyond the function of mere responsivity. As will be shown further below, anticipation already appears as a creative proposal to interact with changing and not fully determined environmental conditions. It accumulates vital and unconscious knowledge that unexpectedness is to be taken into the dialectics exercised by imagination.

- Perception. An image is a way of accepting the milieu in the sense that information is received and signals are captured thanks to patterns that define responses to stimuli. The perception is thus dependent on the intra-perceptual images—the subsets that are formed by imagination. As Simondon puts it, mental images can be perceived as 'structural and functional subsets of this organized psychic activity' (Simondon 2008, p. 18) (*les images mentales sont comme des sous-ensembles structuraux et fonctionnels de cette activité organisée qu'est l'activité psychique*). Being lower level formations of consciousness, images perform a function which is similar to the one described by Kantian transcendental schematism: they should not be conceived in terms of visual expression, but rather provide a mode of reception of the signals of information coming from the environment, as well as a source of response to these stimulations.
- Recollection–symbolization. Images get organized and systematized in the mental realm, which is often strengthened with affective and emotional experiences. Under the influence of this resonance, a structural shift takes place in the order of images—this way a living being gains possession of an analogue version of the external environment. By way of forming another milieu, that is both similar, but also structurally different to an external milieu, symbolization paves the way for the invention to happen. However, this process must first pass through the phase of memory. In fact, this is also a moment that marks a break from motoric and responsive interaction with the surrounding environment and a transition to a truly 'mental space'. Paradoxically, this detachment from sensorial entrapment is absolutely necessary for a psyche in order to become reintegrated into milieu through newly reorganized orders of images. One could also claim that this process is based on an intrinsic awareness that symbolization is not a procedure of replication of shapes of objects, but rather a power to produce structural changes that open up new ways of relationalities with milieus. Moreover, this fact

links symbolization and technical invention as the function of the real, of realization. The analogue organization of symbols occurs under the condition of saturation, when a subject is 'no longer able to welcome new experience', and 'must modify its own structure in order to find larger, more powerful organizational dimensions capable of overcoming the experienced incompatibilities' (Simondon 2008, p. 21).

- Invention. This occurs primarily as a response to the problem of 'the interruption by an obstacle, a discontinuity' in the process of the realization of the project which makes a living being face the situation in which 'hiatus and incompatibility are the two fundamental problematic modes' (Simondon 2008, p. 139). However, the latter situation provokes a change within the organization of the system of images—a subject is able to face her environment with new anticipations. Hence, 'the invention is the appearance of the extrinsic compatibility between the milieu and the organism and the intrinsic compatibility between the subsets of the action' (Simondon 2008, p. 139). This 'restoration of outer and inner balance' is the end of an old cycle, and the beginning of a new one. This surplus—conceived also as *un changement d'ordre de grandeur*—engenders the novel regime of compatibility and enables a living being to re-connect with a milieu. It also occurs as an opening which allows an individual to transcend the systematic features of mental and psychic life. 'The invention differs from the images that precede it by the fact that it operates the change of the order of magnitude. It does not remain in the living being, like a part of mental equipment, but straddles the spatio-temporal limits of the living being in order to connect itself with the environment that it organizes' (Simondon 2008, p. 185-186). Invention actualizes an implicit drive to overcome an individual subject as contained within its own limits. However, this tendency is already traceable in the three previous stages of the image cycle as the movement of amplification. 'In none of the three stages of its genesis, the mental image is limited by the individual subject who bears it' (Simondon 2008, p. 186).

By emphasizing an interactive dynamic between anticipation, perception, memory and innovation, the practice of imagination is not directed towards irrealization—it remains in the situation of constant transition in respect of what could be called the real. Not only symbolizing function, but also future anticipations, empirical encounters and an ability to recall, contrary to popular belief, cannot be juxtaposed to imagination, as all of these functions remain the components of the same process. One should note a few innovative moments of this theory.

Firstly, according to Simondon, imagination is to be discovered within material and biological functions of every living being, not necessarily human.

Secondly, imagination can be understood as cyclical only insofar as it is thought of as a mode of interaction between the organism and its milieu. This amounts to say that, although we often tend to treat imagination as the most distancing and dissociative function of mind (the factor that induces us into illusions), for Simondon, it is what signals pre-individual creativity of the world that surpasses any individual mind, be it of human or of any other species, and thus functions as an intrusion of the novelty of the real into the mental.

Thirdly, although the intertwining between imagination and perception is emphasized by outlining the role of intra-perceptive images (which might be compared with Kant's assumptions on transcendental schemata), a truly novel insight is proposed by Simondon's fundamental reconsideration of the role of anticipation.

In this regard, Simondon advocates for a very subversive interpretation of vitalism. Since, in a biological sense, the role of imagination is already rooted in organism functions as senso-motoric anticipation that precedes adaptation, it can be also associated with a tendency of the matter to expand and amplify itself, a tendency that is enacted within a mind by producing inner tension. Simondon states a clear emphasis—the fact that motricity precedes the sensation implies that stimulus-response scheme cannot be thought of as primary (Simondon 2008, p. 29). The role of imagination should be primarily understood as a proliferating modification, its trajectory implies not only merging with the milieus, but also creative receptivity that is characterized as 'endogenous activity' (Simondon 2008, p. 4). Thus, for Simondon, anticipation addresses the challenge of adaptation by exercising a certain readiness for imaginative transformation, an *a priori* and unarticulated disposal not to comply, but to approach through mutation to changing conditions of the environment. This means that images 'precede the perception (reception of the signals coming from the milieu), they are motors, related to the simplest behaviors by which living being overtakes the possession of the milieu and proceeds to the first identification of objects (living or not) that it encounters' (Chateau 2008, p. XXII). Based on the ethological analysis of behavior found in different species, Simondon outlines the capacity of organisms to invent action as they perform it even without having sufficient amount of data. In essence, being in an environment implies the incompleteness of being, a constant state of semi-determination that requires creative integration and preliminary design. This is why, for instance, a beewolf (*phillanthus*) throws itself

at its prey—bees—even before it has gained all the necessary information (Simondon 2008, p. 65).

In the analysis of the first phase of the cycle of images one also finds a very interesting passage that links matter, anticipation and hallucination. Adaptation never ends up with the same results, but constantly produces deviations and bifurcations. The process of change, initiated before the reception of the sensorial data or what might be called the 'external stimulus', can turn into an incontrollable drive towards amplification that can be described as a tendency to produce hallucinations. The first phase—anticipation—appears as the least controllable phase of mind, since it barely 'correlates' with all the other psychic layers. To put it along the lines of Meillassoux's ([2006] 2008) thinking, imaginary anticipations enact the matter 'beyond correlation' within the realm of mind. Its tendency to distort and amplify consorts with never fully determined factors of changing environment. Imagery primarily stems from an unconscious, motoric and uncontrolled vitalism. Images appear as an uncontrollable force that 'dynamizes' psychism and constantly runs ahead of the mental structures. On this account, Simondon himself calls imaginary anticipation as the field that escapes subordination of mind:

> Being an embryo of motoric and perceptive activity, each image develops within itself and for itself, as an uncontrollable anticipation of the external references according to the experiences of milieus and their free states, in other words, without any close correlation to other substrates of psychic organization. It shows a pre-adaptation, rather than just adaptation. Then an image turns into a way in which information reaches us from a milieu, as well as a source of schemes that respond to these stimulations. In the perceptive-motoric experience, images become effectively and directly functional—they are organized and stabilized within the internal correlative groups according to the size of the relation between organisms and their milieus. (Simondon 2008, p. 19)

Images thus function as the components of material mind—the matter that shows resistance to comply with the structural setting of conscious mind. However, this doesn't determine that imagination, as the power of materiality, provides any sort of adequate representation. It is rather the opposite, its intrusive character functions as a modifying counteractivity to rational determination produced by so-called higher levels of psychic organization. Which is why, the phase of anticipation appears as being least coextensive with all the other mental structures. Once again, this is also what aligns anticipation most closely with hallucination. If left unchecked, the faculty to precede perception can turn into an uncontrollable delusion.

Simondon's version of the theory of images proposes to treat hallucination as the resistance through which matter escapes determination of the conscious mind. It can also be called a form of matter which disobeys thought. In the situation of disbalance, consciousness can be drawn to the complete distortion of boundaries which appears as the proclivity for the monstrous, so that natural objects are traced in a divergence and an excess. Contemporaneously, on the other hand, it is namely this power of amplification before experience (i.e. a priori hallucination) that allows individuals to embrace the mutability of environments.

## *Independence of Images*

By setting an objective to develop a new and complex ontology of imagination, Simondon grants image the role of an organism within organism, almost an independent 'entity' that could not be fully determined by the subjective functions of consciousness. '*L'image est un échantillon de vie*', points out Simondon (2008, p. 10). However, what does it mean for the image to be a 'sample of life'? According to Simondon, it is necessary to acknowledge a certain independence of images because it makes them appear as transitory entities that never fully belong to a subject. And although we aim to control them, conscious mind is capable of overtaking them only indirectly. Hence images are described as 'parasitic organisms, secondary monads' (Simondon 2008, p. 9) resisting the complete subordination and determination from the center of consciousness. To a certain extent, 'containing will, appetite and movement, they appear almost as secondary organisms within the thinking being' (Simondon 2008, p. 9). One can presume that 'both objective and subjective character of the images actually expresses the status of quasi-organism that the image possesses, inhabiting the subject and developing in it with relative independence from the unified and conscious activity' (Simondon 2008, p. 9).

It turns out that heterogeneity and autonomy should be taken as key factors that can help reinforce the sense of reverence towards the complex reality of images as well as facilitate its proper understanding, without inducing into reductive interpretations which privilege only one function among many. It also ensures the view of imagination as what always happens, at least in part, beyond imagining consciousness. Images end up between concreteness and abstraction, between the ego and the world, between subjectivity and objectivity. This intermediary dimension is also an arena of interaction, a point of tension devoid of neutrality. In fact, image is precisely what comes into direct contact with our mentality, but does not completely depend on its creative capacity. As long as we construct images, we cannot be properly creative. Both

by initiating its adventure and by integrating an image into its structures, mind is experiencing an encounter with otherness that is exercised through the resistance to comply with categorical laws of intellection or speculation. Moreover, this intrinsic heterogeneity produces an effect of unification: a synthesis that comes from outside. A well-known question regarding the liveliness of imagination could be formulated almost in symbiotic terms: how to co-exist with your inner otherness? 'In this sense, the image, as intermediary between the abstract and the concrete, synthesizes in a few lines the motor, cognitive, affective charges' (Simondon 2008, p. 10). The independence of images, paradoxically, conditions the systematic organization of mental life by instituting the dimension of compatibility and measurement: this is the way imagination, as the force of exteriority, enables the capacity to choose: 'since each image has a weight, even a certain strength, we can weigh and compare images, but not concepts or perceptions' (Simondon 2008, p. 10).

It the analysis that follows, Simondon aims to demonstrate that even since the very first phase of the cycle—i.e. anticipating motoric scheme—imagination is to be thought of neither as a result, nor as a separate act (in a sense of Sartre's phenomenology), but rather as a *germ* which maintains the genetic function of development. The dynamism of the images is related to their 'complex mode of existence' and inclination towards '*proliferation*' (Simondon 2008, p. 15), thus their essence emerges as a pure potentiality. In other words, images address us as the power to act, as the preparation of the human psyche for the processes of becoming real.

This brings about two important conclusions: firstly, image is to be thought outside its visual or even mental content; secondly, the otherness of image is to be associated with its character of potentiality. Both of these characteristics are concerned with a problem of representation or rather intrinsic and partial irrepresentability that is played out in the process of imagination. Mental images appear rather as by-products of imagination, providing important landmarks and facilitating imaginary navigation; however, they also signalize a certain surplus of potentiality which is never properly given in articulated terms. To put it otherwise, one must acknowledge that imagination opens up the fields of potentiality only insofar its character of semi-determination is recognized. As it was beautifully noted by Fichte, the envisioning and creative power can assume no stable position and thus itself is a subjected to permanent oscillation—this way imagination both strives to determination, and never achieves it:

> Imagination is a faculty that oscillates in the middle between determination and nondetermination, between finite and infinte; and hence it does indeed determine A + B, both through the determinate A, and also through the

> indeterminate B, which is that very synthesis of imagination of which we were speaking just now. (Fichte [1794/95] 1982, p. 194)

Along these lines, one might say that determination remains a phase, that functions as part of a formula, which constantly includes and legitimates its shadow of indetermination. The weakness of imagination—i.e. the failure to grasp adequately the forms of things through their clear and distinct determination—could be reformulated as the driving force that paves the way to legitimize its power as a strategy to approach the realities of things that cannot be fully determined. The logic of imagination defined as 'A + B' where determinate A is constantly played out through indeterminate B is the logic of the validity of contradictions, i.e. the logic that does not rely on the universal truth as instituted by the intellect of the thinking subject, but rather the logic assumes the possibility to be determined by the other kind of truths, existing outside human mind.

### *Imagination as Potentialization*

For Simondon, this means that image is always a mechanism of inclusion that creates bonds with its associate milieu through proliferation, i.e. by expanding the pre-set structural boundaries. For instance, he speaks of the importance of a DIY take, which appears as the attunement of the organization of a permanent operational availability of tools and materials for work with a potential openness for new ways of engagement with a given environment. He also provides a description of how these two aspects – the imaginary and the potential – interrelate:

> Imagination as anticipation is not any longer that function, which detaches from reality and emerges in irreality or fiction. It gives an impulse for the effective activity of realization, because the subject projecting the images is only a proprietor of the instruments of production and at the same time the holder of the necessary working matter. The modality of the imaginary is potential. It becomes irreal only when an individual is deprived of the access to the conditions of realization. (Simondon 2008, p. 56)

As we see, in this passage, Simondon tries to conceptualize the transitionary ontology of image, which functions almost as a technical procedure that both pre-conceives the transformation and prepares for the processes of becoming real by producing new models of connectivity. Most certainly, for humans, there is no creative opening outside imaginal articulations. Our intellectual and sensorial interface is profoundly grounded in visuality,

as creative practices usually require pictorial representations—we envision possibilities and see ideas; human potentiality tends to be articulated in visual terms. Image is the threshold of our imagination, limiting and opening the structure of human *umwelt*. However, outside visuality there is a form of imagination of potentiality that indicates the creativity that could not be necessarily entrapped in the regime of images. In this sense, not only humans, but all kinds of organisms, even without forming mental representations, can cultivate imagination as potentialization within their milieus. For Simondon, the potentiality of imagination marks the threshold between real and unreal, the boundary on which this distinction itself is, if not invalid, can at least be thought outside its visual definition. It is the field of imagination which aims to transform structures and institute new fields of possibilities that do not belong to any specific individual, but rather are exercised as a relationality with an associated milieu.

In Simondon's thinking, milieu is described as 'associated', since it accumulates the tensions and relations between living being (or technical object) and the field of potentiality they are surrounded by. The formula that is used frequently by Simondon tells us: milieu both conditions entity and is conditioned by it (Simondon [1958], 2017, p. 59). In this sense, milieu, as long as it is truly associated, is also fundamentally correlational; however, this correlation operates by including the levels of intensity, making the system of virtualities constantly present in the enactment of represented forms. Milieu is namely the potential of an individual that exceeds its individuality—the potential that does not belong to its essence or substance (in Aristotelian terms, meaning a famous passage from *dynamis* to *energeia*), but is constantly found 'outside the subject'. To put it otherwise, *dynamis* is not a constitutive part of the *hypokeimenon*, but rather the correlate of the latter, signalizing the creative entanglement with an environment. At the same time, milieu, as the conditioning factor, must remain in the closest proximity of living beings, namely to be the parts of them, as it always participates in the organization of their structural setting. If allowed to use an outdated vocabulary, the milieu is the exterior part of every interiority. Simondon also makes a remarkable observation which places the factor of milieu at the core of the problem of invention and imagination:

> The reason the living being can invent is because it is an individual being that carries its associated milieu with it; this capacity for conditioning itself lies at the root of the capacity to produce objects that condition themselves. What has escaped the attention of psychologists in their analysis of the inventive imagination aren't the schemas, forms, or operations that stand out as the spontaneously salient and striking elements, but rather the dynamic ground

> upon which these schemas confront each other and combine, and wherein they participate. (Simondon 2017, p. 60)

In this context, images appear at the very center of the interaction between the living being and its milieu. Along the lines of Gestalt psychology, Simondon draws further the analogy of form and background, regarding it as the relationship of tension between forces. If milieu could be interpreted as a background, it acquires the role of powerful dynamism that produces the emergence of represented forms: 'The relation of participation that links forms to ground is a relation that bestrides the present and diffuses an influence of the future onto the present, of the virtual onto the actual. For the ground is the system of virtualities, of potentials, forces that carve out their path, whereas forms are the system of actuality' (Simondon 2017, p. 61).

However, how is this link between living beings and their milieus exercised in the imagination? In the analysis of the third phase, Simondon claims that the emergence of the new is only possible when memory-images reach the state of supersaturation, described as a metastable condition. It means that the change that is conditioned by the milieu must resonate within the realm of mental organization, by producing a specific modality of tension within the structure of the mind and by signalizing the availability for transformation. 'Symbol images', in their own right, become possible only because of the structural change they induce in re-organizing contradictory components. The process of condensation, gaining actual power from pairing incompatible elements, establishes the imagination as a form of constantly renewable power of connectivity with environment. This is how a symbol could be described as 'the path to the object'—as a means to evoke and restore an object of its traces, without a pretense of correspondence to its integrity. 'This pair of incompatible and yet bound qualities expresses the state of supersaturation of the memory-image, a metastable state which is the necessary condition of the invention, that is to say of a change in structure, restoring compatibility in a new system' (Simondon 2008, p. 124). Simondon's theory of images enables one to say that the dialectics between the potentiality and the conditions of realization depend on the production of symbolic coordinates. And it is namely through the power to generate symbols—the fields of intensity where heterogeneities meet—the logic of imagination surpasses the logic of representation and reproduction.

Although the text of *Imagination and Invention* does not provide a broader elaboration of the concept of metastability, one must note that this notion—recurrent in Simondon's philosophy—is used primarily in thermodynamics, when attempting to define a state, which is neither stable nor entirely unstable. The tension between these two poles essentially marks the aforementioned

'supersaturated condition' in which the system is completely ready for change. Metastability points to the liminal moment in which the tension reaches a highest point—this is the condition of a system under which any input coming from outside can produce both internal and external transformation. It also expresses a certain moment of intensity of exchange between an individual and its milieu. This is the state, which has enough potential energy within for causing a sudden change in the whole system. According to Simondon, this term can be used to describe 'the reality of individual', meaning neither its substantial character, nor a mere field of relations. If real individuals exist, they must belong to 'the system where a metastable state is produced' (Simondon [1989] 2007, pp. 79-80). Under metastable conditions, complex systems maintain the kind of balance, which can be easily disrupted upon appearance of a single insignificant stimulus i.e. when energy or information enters the system. As Muriel Combes states:

> A physical system is said to be in metastable equilibrium (or false equilibrium) when the least modification of system parameters (pressure, temperature, etc.) suffices to break its equilibrium. Thus, in super-cooled water (i.e., water remaining liquid at a temperature below its freezing point), the least impurity with a structure isomorphic to that of ice plays the role of a seed for crystallization and suffices to turn the water to ice. Before all individuation, being can be understood as a system containing potential energy. Although this energy becomes active within the system, it is called potential because it requires a transformation of the system in order to be structured, that is, to be actualized in accordance with structures. Preindividual being, and in a general way, any system in a metastable state, harbors potentials that are incompatible because they belong to heterogeneous dimensions of being. (Combes 2012, pp. 3-4)

Along these lines one might claim—in the light of metastable conditions—associated milieu enacts the reality of the individual through imagination. Image is the locus of interaction between milieu and organism that produces deviations of the systematic teleology. Conceived as the field of intensities, milieu ascribes to imagination the role of connectivity through constant refabrication of existing borders and not exactly complying with rules of linear development. What remains of the utmost importance here is that organism-milieu correlation implies mutual determination without the model of subordination. The associated milieu can be described not only as a self-regulating environment that belongs to organism, but also as the factor that performs the role the modulator that facilitates individuation. Among other things, it primarily points out an intertwining of inherited and innovative elements.

On the other hand, the concept of milieu could be properly understood only by taking into consideration the moment of scale. Here the point of

departure is not a subject separate from the world, not the world independent of a subject, not an individual, society, consciousness, nor its cultural context, but a milieu that incorporates the forces of the correlated world. It is that minimal fragment of environment which includes the worldliness—i.e. the concrete set of tensions and relations of the environment—into living being.

Milieu encompasses the tensions of spatiotemporal relations that involve the exchanges between the living entities, its organic companion species and even non-organic matter. It also implies the supremacy of correlationality, which can be understood as a minimal level of a mutual engagement based on interdependency and creativity. Milieu could be described as an attempt to bridge the gap between the world and the individual, by pointing to a concrete space of mutual determination that occurs by engaging into an exchange between the two. It operates by pointing to the primacy of relationality, which could be scaled out as the minimal fragment of systematicity that is based on inter-dependency and co-creation.

## *Systems of compossibilities*

Here we might add to Simondon's analysis by offering the formula of the third perspective—i.e., by accepting the notion that the logic of imagination is based on one fundamental law: *Tertium est semper datur*. This way the strict alternative between right and wrong is substituted with the permanent possibility of a third option, which manifests in the imagination both as a common principle and as its energetic stimulus that makes it engaged. In Simondon's opinion, imagination can merge compatibility with compossibility (*compossibilité*). The anticipatory function of an image manifests as a special attentiveness and readiness to experience things, which then enables and grows into perception. However, the very image does not become an act of the realization of an experience, but rather functions as a specific condensation of tension—an approximation that aims to combine seemingly incompatible elements: 'this would explain the character of a broad compatibility of images without involving the logic of the excluded third: these are the principles of a logic of classes as a system of compossibility' (Simondon 2008, p. 72).

Perception involves a certain receptiveness that becomes possible when the 'law of the excluded third' is suspended. In this sense, imagination is always ready to look for a perspective that goes beyond the alternative of 'either/or'. This means that the work of imagination is most prominent precisely when the division into strict dichotomies is no longer valid. Consequently, the readiness of a live being to adjust to its environment manifests as a search of a compossibility. It was Leibnitz who brought the notion of compossibility

into the terminology of metaphysics, by considering the problem of an actual world being one of the many possible worlds. According to Leibnitz, not 'all possibles are compossible. Thus, the universe is only a certain collection of compossibles, and the actual universe is the collection of all existing possibles, that is to say, those which form the richest composite. And since there are different combinations of possibilities, some of them better than others, there are many possible universes, each collection of compossibles making up one of them' (Leibnitz [1875-90] 1960, III, p. 573)

Leibnitz notes that not all possibilities can be treated as actual because they are not compossible with the actually existing substances. Any of the possible worlds unites within itself interrelated compossibilities. This notion becomes very important to Simondon because of the notion of relatedness: in a defined world the possibilities do not remain individual, independent and detached, but rather connect, ground and define each other. Moreover, it is precisely the possibility as a compossibility that essentially characterizes the co-relation. That which is commonly possible is already tied in through the relations of mutual coexistence. Therefore, immersion into the world becomes possible as a definition of a mutual combination of possibilities.

Here it is important to mention two things: first, Simondon substitutes Leibnitz's world of substances with the relations between the living beings and objects that are already embedded into their living milieus—i.e., relations that manifest all the compossibilities; second, the relation with the realm of compossibilities is established by imagination, which once again means that the function of imagination is relational rather than dissociative. This leads us to another important observation: the imagery of imagination—rather than the perceptional, cognitive or speculative functions of mind—is responsible for opening up the realms where the neutral spaces or fields of action become associated milieus. In other words, the realm of imagination appears not only as productive and projective, but also as capable of receiving, recognizing and integrating the compossibilities—i.e., it appears as a power that surpasses an individual itself because, by circumscribing the common fields of potentiality, it constantly enriches the existence of an individual with 'alien possibilities'.

We might even be more radical and claim that the compatibility that Simondon proposes is the basic condition of autoplasticity (in Catherine Malabou's sense)—i.e., the preliminary necessity to change in order to enable the integration into the experiential milieu. It means that any organism, including humans, must change, even if partially, in order to understand its environment. This also means that the milieu has to transform itself in order to be comprehended. This notion of imagination is based on an idea that no entities have their potentialities fully determined—i.e., fully present—they

rather have to be constantly adjusted via the inclusion of the fields of possibilities entities encounter in their milieus. Thus, the theme of compossibility transposes the question of perception from a purely empirical ground to a level where fields of potentialities meet and expand. In this sense, the imagination of milieus is a constant creation of the field of compossibilities, as well as the verification and search of new possibilities, while the compossibility itself is a certain call to act and get involved into a relation—it corrects and binds its own possibilities with those of others. This connection is trying to embrace and legitimize the inconsistencies, while strict disjunction would allow no such chance. Being a power of compossibility, imagination is the relation of incompatible possibilities. It comes into being as a realization of mutual determination, however this process can never lead to a complete determination.

In the context of this process imagination can be seen as a coordinator of the compossibility systems—it involves living beings being designed only through the initiation of tense relations with the possibilities already existing in their milieus. Thanks to these overlapping potentialities imagination is liberated from a purely subjective logic. This work with the entity-free potentiality allows imagination to be understood as that which surpasses the entirety of individual capacities. Imagination includes any living organism into the logic of semi-determination according to which individual limits are determined only through mutual interrelation. By constantly including the fields of possibilities that exceed the limitations of an individual, imagination renders the relation between the mind and the world as no longer subordinated to human thought. In this sense, we start imagining things only when we stop designing and constructing the world—i.e., when we become susceptible to the encounters of possibilities. The imagination of milieus implies a constant reflection on the possibilities that we neither own nor create.

A milieu is the zone where possibilities encounter each other—i.e., a place where individual possibilities become compossibilities. However, mastering the system of compossible conditions leads to the enhancement of individual perception. Simondon gives an example of a mother who is able to tell if her child is sick sooner than the doctors do, because she has at her disposal 'a rich image of the compossible states of her child, the kind that only a mother can have' (Simondon 2008, p. 78). Such receptiveness and sensitivity towards the compossibilities can only be called intuition. An image becomes rich when it involves the maximum variety of compossible states. Simondon uses examples from medicine, for example, when, in clinical care, it becomes important to see a patient's individual state as a dimension of a system of compossibilities.

## *Conclusion*

Simondon's thinking shows that the dimension of life is never restricted to the receptive apprehension of environments, but also must be granted the power to mutate and innovate within the systems of shared creativity. The reason why any living being is capable of invention lies in the recognition of the agency of associated milieu. Organisms are open to the forces that intervene from the background, they are ready to respond to the dynamic proposals that reach from the closest environment.

Imagination precedes the function of image formation conceived strictly in human terms; these creatures do not produce mental representations sensu stricto. Image is not the field of representation, but rather of connectivity. Image is rather a mechanism of inclusion, as described by Simondon, that signals the intensity of engagement within an associate milieu.

That is why imagination, for Simondon, rather than being associated with mental representations, is primarily the realm of intermediation and transition, which, by operating in cycles, produces the surplus. Moreover, it exercises the moment of tension between mind and its environment, thus fulfilling the systematic opening of the living being, allowing the information to circulate without falling into referential regime.

Biologically, imagination foreruns the dimension of mind as embedded in the brain and signalizes the potential to correlate creatively with viable environments. The system of vision is rather a byproduct of creative anticipation. The potentiality of living organisms is never fully determined, but rather semi-determined. This is how the imagination operates as a technique of opening towards the singularity of the unknown and uncertain. It allows alterities to meet and to traffic abstract knowledge we collect on the modes of conviviality into the field of sensory horizons.

Simondon's thinking also provides an attempt to think of imagination as a unique power to produce symbolic images that allow individuals to think contradictions, not by reducing antagonisms, but namely by welcoming divergences in energetically charged metastabilities. It means that living beings are predisposed to evolution through the tension of contradictions that is exercised and condensed in imagination.

Finally, Imagination and Invention, shows that organism-milieu correlation, in the light of notions of metastability and compossibility, implies mutual determination without the model of subordination. The associated milieu can be described not only as a self-regulating environment that belongs to organism, but should be conceived within the potentiality of inventive imagination. Imagination is a function of life.

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