

What Is Plant-Thinking?

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“Plant-thinking” refers, in the same breath, to (1) the non-cognitive, non-ideational, and non-imagistic mode of thinking proper to plants (hence, what I call “thinking without the head”); (2) our thinking about plants; (3) how human thinking is, to some extent, de-humanized and rendered plant-like, altered by its encounter with the vegetal world; and finally, (4) the ongoing symbiotic relation between this transfigured thinking and the existence of plants. A sound philosophy of vegetal life must rely on the combination of these four senses of “plant-thinking,” so as not to dominate (and in dominating, distort) the target of its investigations. In this article, I will touch upon all four senses of plant-thinking, putting particular accent on its first and last modalities. Upon investigating the non-conscious intentionality of plants and how it resonates with the human thinking of non-identity, I will draft the image of Western philosophy as a sublimated and idealized plant-thinking.

I. Non-Conscious Intentionality

“Non-conscious intentionality” inverts the Levinasian notion of “non-intentional consciousness,” the concept that encapsulates much of the immanent critique the French philosopher directed against Husserl’s phenomenology. At first blush, the term Levinas has introduced into phenomenological vocabulary appears to be an oxymoron, given that for Husserl, intentionality is precisely the being of consciousness, its directedness-toward something outside of itself in a constant process of self-transcendence that, in thematizing itself, in becoming conscious of itself, never leaves itself behind (this is the source of Husserl’s theoreticism). Non-intentional consciousness, on the other hand, would be one that lacks directionality, and so it would not be a consciousness, let alone self-consciousness, at all. The seemingly impossible “reduction” of intentionality nevertheless suits Levinas’s philosophical project, to the extent that it undoes the ontological and totalizing construal of the human and affords us access to alterity, the ethical realm “otherwise than being”

that predates ontology itself. “It is not illegitimate,” Levinas defensively notes, “to ask ourselves whether, beneath the gaze of reflective consciousness understood as self-consciousness, the non-intentional, lived contrapuntally to the intentional, retains and renders up its true meaning.”¹

Above all, the non-intentional is not directed to itself, eschewing the reflux movement of all conscious and critical-theoretical activity that attends to itself while attending to the other. Something of this non-intentionality is present in the plant, which boasts neither a self to which it could return, nor a fixed, determinate goal or purpose that it should fulfill. Although not synonymous with the collapse of meaning, the breakdown of intentionality is a harbinger of the dissolution of the Aristotelian teleology that governed everything Husserl had to say on the subject of the relation between the intending (*noesis*) and the intended (*noema*). Instead of pursuing a single target, non-intentional consciousness uncontrollably splits and spills out of itself, tending in various directions at once, but always excessively striving toward the other. The plant, on its part, is a living attestation to the crisis of teleology and to the exuberant excess of the living and its meanings, which accords with and perhaps feeds, without ever satisfying, the ethical excess.

Regardless of all the resemblances between the two, the plant’s non-intentionality crucially differs from that of ethical subjectivity. Rather than furnishing a true image of transcendence, the uncontrollable tending of vegetal life corresponds to Bataille’s depiction of animal experience as pure immanence (the animal moves like “water in water”²), as immersion in its milieu, with which it fuses. It would be more accurate, consequently, to conceive of plant-thinking in terms of a “non-conscious intentionality,” where meanings proliferate without the intervention of conscious representations. In what ways, then, is vegetal intentionality “non-conscious”? And what gives us the right, despite everything, to designate it as “intentional”?

If intentionality does not belong exclusively to consciousness, one could conjecture that it equally pertains to vitality itself, to the contingent itineraries and detours life takes in its active unfolding, or—if one were to resort to ancient Greek philosophy—to the vegetal soul, which not only unites in itself the reproductive and the nourishing capacities but also subsequently engenders the other psychic strata, such as the sensorium.

¹ E. Levinas, *Entre Nous: Thinking-of-the-Other*. Trans. M. B. Smith and B. Harshav (New York: Columbia University Press, 1998), 128.

² G. Bataille, *Theory of Religion*. Trans. R. Hurley (New York: Zone Books, 1992), 19.

Since life and consciousness are subsets of invention or creative activity,³ the non-conscious life of plants is a kind of “thinking before thinking,” an inventiveness independent from instinctual adaptation and from formal intelligence alike.

Consciousness appears to be a puzzling exception when it is judged against the backdrop of the sheer nullity of consciousness (*conscience nulle*) peculiar, for instance, to the stone, not when it is contemplated in the context of the relative non-consciousness of a plant, in which, as Bergson notes, “consciousness is nullified” (*conscience annulée*).⁴ A consciousness nullified (literally, “annulled”) maintains the possibility of a sudden awakening, of passing from a dormant potentiality into an actional mode. But it does not need to connote an epistemological flaw, a deficiency that would be remedied if only plants were to make an evolutionary transition, in Bergsonian terms, from material knowledge to the formal knowledge of intelligence. Rather, it should be studied on its own terms, forgoing teleological references to the “higher order” apparatuses of knowing that presumably distinguish animals and human beings. In refusing to treat intelligence as an exception in the order of life and in the evolutionary process, will we gain admission into the yet-uncharted terrain of plant-thinking.

Just as psychoanalysis confirms that memory-fragments are often unavailable to the human psyche in the shape of conscious representations due to the fact that in infancy, traces of situations of trauma and extreme repression are imprinted directly on the unconscious, so plant-thinking attests to the existence of a non-conscious, involuntary memory in plants. To say that vegetal beings possess memory is to claim that they have a past, which they bear in their extended being and which they may access at any given moment, or more simply, it is to assert that they are temporal beings through and through. Their memory is, in Nietzsche’s estimation, imageless and non-representational: “E.g. in the mimosa we find memory, but no consciousness. Memory of course involves no image in the plant... Memory has nothing to do with nerves or brain. It is a primal quality.”⁵ Vegetal memory arises at the site of material inscription on the body of the plant and contributes to the register of physical stimuli (touch, exposure to light or darkness, etc.) that, having already affected the plant, may be retrieved after a delay, when the actual stimulus is no longer present.

³ “Can we go further and say that life, like conscious activity, is invention, is unceasing creation?” (H. Bergson, *Creative Evolution* (New York: Barnes & Noble Books, 2005), 19).

⁴ Bergson, *Creative Evolution*, 117.

⁵ F. Nietzsche, *Writings from the Early Notebooks*. Ed. R. Geuss and A. Nehamas (Cambridge: Cambridge University Press, 2009), 139, 140.

Contemporary cell and molecular biology abounds in examples of “information retrieval” by plants; it will suffice to mention two of the most emblematic. Barley leaves unroll if they are exposed to red light, as long as they contain calcium. If, however, calcium is removed from the plant at the moment of exposure and added up to four hours after the exposure, the same effect (the unrolling of the leaves) takes place without the reintroduction of red light.⁶ The plantlets of flax respond to various stressful stimuli, such as drought, wind, or even physical manipulation, with a depletion of calcium from their cells in a process that takes approximately one day. Yet it was found that the morphogenic signal regulating calcium levels does not diminish in intensity for up to eight days after the end of the “traumatic” event.⁷

These examples demonstrate that what Nietzsche chanced upon in his reflection on the mimosa—the sensitive plant par excellence, one that closes its leaves in response to touch or absence of light—is in fact a more general tendency of vegetal beings to store imageless and non-representational material memories in their cells, and so to retain a trace of the remembered thing itself, in place of its idealized projection. Whereas humans remember whatever has phenomenally appeared in the light, plants keep the memory of light itself. Conceived in a non-anthropocentric fashion as a “primal quality,” memory, inherent in plants at the cellular and molecular levels, comes to describe any network of traces, of which consciousness is a highly circumscribed instance. It is the very fact or facticity of impression, of an imprint, or better, an ex-print, that forms the register of what a living being has undergone in its lifetime.

Non-conscious memory is but one constituent of the vibrant and multidimensional intelligence of plants, which falls under the rubric of what Schelling, in his *First Outline*, calls “sensibility,” or the “universal cause of life” that, in his words, “must also belong to plants.”⁸ Schelling believes that sensibility is not only the cause of life but also, along with its opposite (irritability), the quantum of force permeating every living entity. It is therefore possible, following his hypothesis, to map living intelligence, if not the intelligence of life, on the ever-shifting continuum of sensibility–irritability.

⁶ Cf. N. Viner, G. Whitlam & H. Smith, “Ca²⁺ and Phytochrome Control of Leaf Unrolling in Dark-Grown Barley Seedlings”, in *Planta* 175 (1988): 209–213.

⁷ Cf. M. C. Verdus, M. Thellier & C. Ripoll, “Storage of Environmental Signals in Flax: Their Morphogenetic Effects as Enabled by a Transient Depletion of Calcium”, in *Plant Journal* 12 (1997): 1399–1410.

⁸ F. W. J. Schelling, *First Outline of a System of the Philosophy of Nature*. Trans. K. Peterson (Albany: SUNY Press, 2004), 146.

While sensibility in plants approaches zero-degree, the minimum of irritability in them ensures their survival and endows them with a certain non-conscious thinking: “Magnetism is as universal in universal Nature as sensibility is in organic nature, which also belongs to plants. . . . Sensibility [in them] passes into irritability. . . . Where the higher factor of sensibility (the brain) gradually disappears and the lower gradually attains preponderance, sensibility also begins to fade into irritability.”⁹ If irritability defines a passive and non-conscious thinking, then to live is already to think, and the life of plants is co-extensive with the mode of thinking appropriate to them. The brain and the central nervous system do not invent a new function but offer a novel solution to the old problem of life, which had been already raised, differently, in the very ontology of plants.

More generally put, the non-conscious intentionality of plants finds two outlets, which jibe with the Aristotelian capacities of the vegetal soul to seek nourishment and to reproduce itself. The turning and striving of a plant toward the sun is perhaps the most iconic illustration of its non-conscious *noesis*, or act of intending, which, in the words of Gustav Fechner, supplies the evidence of the plants’ “soul-life” (*Seelenleben der Pflanzen*),¹⁰ animating vegetal bodies. Thus, citing potatoes sprouting in the cellar, Hegel marvels at how the sprouts “climb up the wall as if they knew the way, in order to reach the opening where they could enjoy the light.”¹¹ But what is even more remarkable, first and foremost in the Hegelian philosophy of nature proper, is that the intentionality of nourishment parallels the intentionality of perception, willing, judging, etc., *as if*, along with these exemplary processes, it were a modality of knowledge, “as if [*als ob*] they knew the way.” The theoretical fiction of *als ob* brings home the classical phenomenological point that across the spectrum of intentionalities, the intended singularizes the intending: the consciousness—as much as the non-consciousness—of something becomes itself thanks to that of which it is conscious (or not conscious). “It is from light that plants first get their sap,” Hegel states, “and in general, a vigorous individualization; without light they can, indeed, grow bigger, but they remain without taste, color, and smell.”¹² The growing acquires both its quantitative and qualitative determinations from that toward which it grows,

⁹ Schelling, *First Outline*, 182–183.

¹⁰ “In the ray of the sun [the plant] could still gain a feeling that it is elevated above its former sphere as we are by receiving the divine in our souls.” G. T. Fechner, *Nanna, oder, Über das Seelenleben der Pflanzen*. 5th ed. (Leipzig: Leopold Voß, 1921), 53.

¹¹ G. W. F. Hegel, *Hegel’s Philosophy of Nature: Encyclopaedia of the Philosophical Sciences (1830), Part II*. Trans. A. V. Miller (Oxford: Oxford University Press, 2004), 306, emphasis added.

¹² Hegel, *Philosophy of Nature*, 306.

i.e., from light, a non-ideal *noema*, unavailable for the acts of appropriation and domination. Similarly, the judging consciousness is convoked by that which is judged, the willing by the willed, and so on. In German panpsychism as much as in dialectics, non-conscious vegetal striving toward the sun is the prototype of conscious life.

But the analogy also has its inherent limits. The intentionality of the plant is not unidirectional, given that the roots, too, seek nutrients, navigating a veritable environmental maze, sensing humidity gradients of the soil,¹³ and avoiding movement in the direction of other nearby roots.¹⁴ A combination of passive growth and what appears to be an active “foraging” for resources positions this intentionality on the hither side of the distinction between passivity and activity. Plant-thinking neither grasps its object—it has none!—nor impassively freezes in sheer inaction but instead operates by the multiplication of extensions, by contiguity with and by a meticulously adumbrated exposure to that which is materially thought in it. It matters little that vegetal life does not objectify what it strives toward, or that it “is related to light as well, but . . . is not open to light as light,”¹⁵ because it does not at the same time relate to itself. *Contra* Heidegger, the plant has a world (if not worlds) of its own, if in this “having” we manage to discern the overtones of a non-appropriative relation to the environment, with, in, and as which vegetal beings grow.

If dynamic extension is at the core of vegetal intentionality (growth being understood as extended intentionality), then recent philosophies of the body should resonate with plant-thinking. And indeed, Maurice Merleau-Ponty’s pre-reflective intentionality of corporeity, or “the language of the body,” shares various features with that of plants. Located in a determinate context, the body exhibits a non-conscious intentionality in its very motility—for instance, in the minute movements of muscles, restricted to the peripheral nervous system, that make up the act of raising one’s hand. For the corporeal and the vegetal intentionalities, the subject/object dichotomy is irrelevant; their acts of living do not “objectivate” that toward which they orient themselves and therefore do not obey a strict ideal separation of noesis from noema in the expectation of a pre-delineated “fulfillment” of the intending in the intended. (Even assuming such fulfillment were plausible, it would have been fleeting and would not have

¹³ Cf. H. Takahashi & T. K. Scott, “Intensity of Hydrostimulation for the Induction of Root Hydrotropism and Its Sensing by the Root Cap”, in *Plant, Cell, and Environment* 16 (1993): 99–103.

¹⁴ Cf. P. J. Aphalo & C. L. Ballare, “On the Importance of Information-Acquiring Systems in Plant–Plant Interactions”, in *Functional Ecology* 9 (1995): 5–14.

¹⁵ M. Heidegger, *Zollikon Seminars: Protocols–Conversations–Letters*. Ed. M. Boss (Evanston, IL: Northwestern University Press, 2001), 217.

exhausted the “empty” intentionality of growth in the presence of its nebulous *noema*, the light.) We are akin to plants in that, like them, we most often act without our heads, without irradiating commands from the central point of consciousness or the brain—and it is by no means evident that the brain itself is subject to this hierarchical centralization—all the while upholding a certain non-conscious logic and consistency in our acts of living. During a great portion of our lives, the vegetal *pas de tête* dictates the rhythm of human existence.

The intentionality of human pre-reflective acts is not automatic but rather existential, or, as Merleau-Ponty unambiguously states in a footnote to *Phenomenology of Perception*: “In our opinion Husserl’s originality lies beyond the notion of intentionality; it is to be found in the elaboration of this notion and in the discovery, beneath the intentionality of representations, of a deeper intentionality, which others have called existence.”¹⁶ Does the existential character of human pre-reflective intentionality set it apart from that of plants? Not if we go a little further in the direction of phenomenological anti-humanism by contending that non-human existences also have their corresponding intentionalities, in some cases intersecting with or underlying the non-conscious comportment of other living bodies. And so the intentionality of plants, similar to the pre-reflective comportment of the human, is seamlessly connected to its spatial, physical milieu, so much so that the abstraction of both from the environmental context, wherein they are embedded, risks irreparably disturbing and losing sight of them *qua* intentionalities.

While the intentionality of nourishment is easily demonstrable, in the case of reproduction the matter is more complicated and requires a further theoretical elaboration. Aristotle implicitly schematizes this part of vegetal intentionality in *De anima*, where reproduction is not an automatic “function,” as the English translation of W. S. Hett makes us believe, but the “work” of vegetal soul, a vigorous and energetic *ergon* (415a26) setting its sights on multiple noematic targets. The reproductive intentionality of the plant is of course to “reproduce its kind” not for itself but for the species it belongs to. “That for the sake of which” such work is performed, the beneficiary of reproduction identified in proto-phenomenological terms prefiguring Husserl’s philosophical project, is the genus that continually renews itself thanks to the production (*poiesis*) of new individuals.

¹⁶ M. Merleau-Ponty, *Phenomenology of Perception*. Trans. Colin Smith (London: Routledge, 2002), 140, n. 54.

But, Aristotle reminds us, “that for the sake of which” can also describe “that for the purpose of which,” a deeper source of motivation and meaning approximating the final purpose “for the sake of which” everything is enacted, i.e., the Good that, in the last instance, inspires all living and thinking. The plant’s reproduction does not culminate in that which is reproduced, be it a particular offspring—irrespective of how well it may fulfill the generative *telos* of the mother-plant, as Plato observes with regard to the first shoot that always sprouts with “excellence” (*Laws* 6.765e)—or an entire species; reproductive intentionality becomes interminable when it directs itself toward its ultimate target, viz. the immortal and the divine (*tou aei kai tou theiou*), in which it can participate in the only way it can, by giving rise to another like it (415a27–b9). The plant’s destination, if it has one, is ethical; the Good is the ultimate form of its life.

So conceived, the “intended” instigates reproductive intentionality to carry on its work *ad infinitum*, because no instantiation of a particular plant or species is able to lay claim to the immortal and the divine as such. Our human soul also partakes of the immortal through reproduction, thereby sharing in the intentional activity of plants, though this is not the only possible route we might take toward immortality and divinity (for Aristotle, *theoreia*, or “thought thinking itself,” is of course a surer path, leading toward the same destination). That the reproductive intentionality of plants is the material precursor to the purely theoretical acts of thinking becomes evident already in the Socratic analogy between bodily generation and the birthing of ideas, grounded, in more or less sublimated ways, on the generative function of the vegetal soul. In light of this common root, the material reproduction of the body turns into a prototype of thought, while the plant’s intentionality comes to denote the most concrete mode of thinking imaginable. Pursuing this line of reasoning, the consciousness-centered intentionality that preoccupies traditional phenomenologists will find a broader application, if it surpasses the narrow parameters of anthropocentrism and embraces a multiplicity of non-conscious existences, including that of plants.

II. Non-Identity Thinking

The most obvious symptom of the plant’s non-identity is its unrest, reflecting the plasticity and restlessness of life itself: its ceaseless striving toward the other and in becoming-other in growth and reproduction, as well as in the metamorphosis of these vegetal qualities into human and animal potentialities. To attribute static identity to the plants’ way of being and

thinking is therefore to disregard their very vivacity. But this is exactly what seems to be going on in the correlation Nietzsche draws between the plants' repose, which he assumes to be exhaustive of their mode of being, and an identitarian thinking inspired by them and said to presage the formal logical approach to the world.

In a fragment from *Human, All Too Human*, titled "Fundamental Concepts of Metaphysics," Nietzsche writes: "To the plants all things are usually in repose, eternal, every thing identical with itself. It is from the period of the lower organisms that man has inherited the belief that there are identical things. . . . It may even be that the original belief of everything organic was from the very beginning that all the rest of the world is one and unmoving."¹⁷ This assertion, most likely meant to scandalize logicians by conjecturing that they are the direct legatees of beliefs prevalent in "the lower organisms," hinges on a double repression of vegetal temporality: besides imputing to plants an incapability to experience the passage of time, Nietzsche proves to be impervious to their constant alterability, which Goethe and Hegel emphasized before him. On Nietzsche's view, then, humans in the state of repose and non-sensation are temporarily indifferent to the world and "notice no alteration in it," but the plants are permanently unperturbed, existing as if their environment were unaltered and "eternal."¹⁸

In this regard, an empirical question we could pose to Nietzsche is whether the plant still notices no alteration in the world when its biosphere is drastically changed, for instance as a result of drought, toxic pollution of the soil in which it is rooted, a plague of insects, or other catalysts. The creative mutual interaction of any living being and its environment, on the one hand, rules out such absolute insensitivity and, on the other, substantiates vegetal thinking devoid of identity and encompassing the plant along with its biosphere. If the logical belief in identical or self-identical things really stems from the prehistory of the human, then one must search for its source in what preceded vegetation, that is, in the inflexible, inorganic world of minerals, where, too, this belief would not be entirely justified.

We may excuse or, at the very least, explain Nietzsche's theoretical violence against plants with recourse to the nineteenth-century thesis, characteristic of Hegel's philosophy as well, that plants are living beings that remain under the spell of the inorganic realm. This ontological approximation to the world of minerals cannot help but have a significant

¹⁷ F. Nietzsche, *Human, All Too Human: A Book for Free Spirits*. Trans. R. J. Hollingdale (Cambridge: Cambridge University Press, 1986), 21.

¹⁸ Nietzsche, *Human, All Too Human*, 21.

impact on the epistemic milieu of plant life. To appreciate the complexity of the Nietzschean “biology of the drive to knowledge,” then, a brief fragment from *The Will to Power* must supplement the one I have extracted from *Human, All Too Human*. In 1885 Nietzsche writes in a shorthand: “‘Thinking’ in primitive conditions (pre-organic) is the crystallization of forms, as in the case of crystal.—In our thought, the essential feature is fitting new material into old schemas (= Procrustes’ bed), making equal what is new.”¹⁹ The stability and identity previously pinned on plant-thinking are here unequivocally relegated to the pre-organic “crystallization of forms” that survive in human thought in the shape of Kantian immutable categories and forms of intuition to which all novel experiences must in one way or another conform.

If the plant is a kind of “living crystal,” then in its being, as well as in its thinking, it enlivens this pre-organic heritage, putting in motion—which is to say, de-formalizing, undoing, or de-constituting—the inflexible “old schemas.” The event of what is new, what is irreducible either to previous experiences or to the empty transcendental molds for processing them, is first intimated in plant-thinking, which destroys the Procrustean bed of formal logic and transcendental a priori structures—those ideal standards to which no living being can measure up fully. Although it hovers between pre-organic proto-thinking and “our thought” (which has imbibed the anachronistic methods, if not the conclusions, of the latter), plant-thinking supersedes subsequent cognitive-evolutionary developments, to the extent that, instead of “making equal what is new” and what is old, it facilitates the coming to pass of the event, of that which is unforeseeable, because irreducible to the schemas of the past. It stands for a thinking that admits difference into its midst and operates by means of this very difference, consonant with the ontology of plants.

The non-anthropocentric thinking of difference no longer fitting into the schemas of identitarian thought may not be recognized for what it is; it may lose the familiar outlines of epistemic systems as they have been theorized in the history of philosophy. This non- or mis-recognition is not an accident. While the plant is wholly dependent on something other than itself, such as the light, plant-thinking is so closely entwined with its other (i.e., with non-thinking) that it does not maintain an identity as thinking. It rejects the principle of non-contradiction in its content and in its form, in that, at once thinking and not thinking, it is not at all opposed to its “other.”

¹⁹ F. Nietzsche, *The Will to Power*. Trans. W. Kaufman and R. J. Hollingdale (New York: Vintage Books, 1968), 273.

Aristotle chanced upon this same insight in *Metaphysics* (1008b10–11)—“If one has no belief of anything, but is equally [*homoiōs*] thinking and not thinking, how would one differ from a plant?”—where he reiterated the insulting comparison of someone who does not respect the tenets of formal logic made earlier in the text (1006a12–15). In Aristotle’s view, a human being equal (*homoiōs*) to a plant is one who is equally (*homoiōs*) thinking and not thinking; the erasure of the difference between “A” and “not-A,” which is a *de facto* violation of the principle of non-contradiction, cancels out the onto-metaphysical difference between the human and the vegetal being. Epistemic reality defines ontological existence, so that manners of thinking determine modes of being well before the advent of German idealism. When certain ways of thinking happen to be inappropriate to the being that employs them, they interfere with the ontological makeup of this very being, introducing a correction and making who or what we are fit the way we think. The human who thinks like a plant literally becomes a plant, since the destruction of classical logos annihilates the thing that distinguishes us from other living beings. In response to Deleuze and Guattari’s injunction, “Follow the plants!”²⁰ we will engage in irreverent plant-thinking, which will set us on the path of becoming-plant.²¹

To be fair, a vegetable-like person is not one who no longer thinks but, in a more nuanced formulation, one who thinks without following the prescriptions of formal logic and therefore, in some sense, without thinking. Let us then try to get accustomed to the idea that thinking is not the sole prerogative of the subject, or of the human being, and that, aside from altering the form of thought (which becomes inseparable from its opposite, the non-thought) and changing its content (which includes contradictions), “non-identical thinking” indicates freedom from the substantive and self-enclosed identity of the thinkers themselves. In place of the Kantian transcendental synthesis of *I think* that supposedly, accompanies all my representations plant-thinking posits it thinks, a much more impersonal, non-subjective, and non-anthropomorphic agency. But who or what is the “it” that thinks? In what follows, I would like to glean three modalities of the vegetal “*it thinks*” from twentieth-century philosophers Bergson, Bateson, and Deleuze.

²⁰ G. Deleuze and F. Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*. Trans. B. Massumi (Minneapolis: University of Minnesota Press, 1987), 11.

²¹ Karen Houle has taken some of the first steps along this path in her recent article, “Animal, Vegetable, Mineral: Ethics as Extension or Becoming? The Case of Becoming-Plant”, in *Journal for Critical Animal Studies* 9 (2011): 89–116.

Bergson's *Creative Evolution* as a whole broadens the sphere of intellect, redirecting it from the self-identical "facts" it seeks toward life processes, and simultaneously restricts this sphere to one among many instances of active evolutionary inventiveness. As in the rest of his philosophy, Bergson encourages the kind of thinking that thinks with life, not against it. Whether it has to do with the plant or the human, *it thinks* points toward the thinking of life itself, a de-formalizing activity that when inserted into the categories of conceptual thought, implodes them from within: "In vain we force the living into this or that one of our molds. All the molds crack. They are too narrow, above all too rigid, for what we try to put into them."²² Stretched on the Procrustean bed of logic, the living cannot be made equal to the form and content of our cognitive molds; the thinking of life is in and of itself a thinking of non-identity, unsettling the human intellect, which, left to its own devices, "feels at home among inanimate objects, more especially among solids," so that "our concepts have been formed on the model of solids" and "our logic is, pre-eminently, the logic of solids."²³ Bergson finds himself in a tacit agreement with Nietzsche: the intellect's crystalline, crystalized structure, having congealed at the pinnacle of modern philosophy into the Kantian *I think*, is dead thought, but this thought will be de-solidified, enlivened, and transformed into *it thinks* as soon as it endeavors to "digest" the life processes that do not rest in a final identity with themselves.

The life that thinks, be it through us or through the plant, is a far cry from an undifferentiated flux of becoming, a vortex of immanence sweeping everything into its homogeneous mix. The living-thinking of life is appropriate, in each case, to the relation of a given organism to its milieu. The role of our intellect, enunciated in this way, is to "secure the perfect fitting of our body to its environment,"²⁴ not by indulging in egoistic adaptation at any cost but by creating a unified ensemble of this body and its world. The philosophical sense of the Bergsonian "fitting" is unmistakable, for rather than repeating the traditional evolutionary mantra of the "survival of the fittest," it harkens back to the ancient Greek notion of the "fit" as a matter of appropriateness, adjustment, and ultimately justice.

What befits the life of a plant in its environment and what shapes plant-thinking, exercised by the plant and its other (that is to say, its milieu) as a single unit, is not the same thing that is appropriate to the integrated thinking of the human being and its life-world, though, due to the role of

²² Bergson, *Creative Evolution*, xx.

²³ Bergson, *Creative Evolution*, xix.

²⁴ Bergson, *Creative Evolution*, xix.

plant-soul in making a shared life possible, one may expect certain overlaps between the two kinds of intellection. It is the exigency of life in the midst of organic nature that such a fit be continually reconfigured, fine-tuned, and readjusted, because immutable and solidified concepts are useful only for orienting us in an environment made entirely of steel and blocks of concrete. Plant-thinking performs this function for the plant, suiting it to its milieu. The issue of environmental justice, conceived in the ancient sense of *dikē* (which, as Heidegger reveals in his reading of Anaximander, names in the same breath a jointure or a juncture²⁵), thus delineates the horizons of this thinking, conjoining the plant and its other.

In a programmatic text, titled “Steps to an Ecology of Mind,” Bateson underscores the epistemic consequences of this jointure, which, if thought through to its logical conclusion, implies that the “unit of survival is organism plus environment.”²⁶ The “it” that thinks is both more and less than the “I.” More, because it is incapable of thinking by means of a mere “I” divorced from the environmental component of the unit of survival. Less, because this unit is neither as individuated nor as autonomously separate as the subject of thought. Whereas the plant is fully embedded within the holistic mode of thinking and being invoked by Bateson, the human sets itself over and against its environment, driving a wedge in the unit of survival, wherein it participates. The ensuing disjointure or disadjustment heralds, in addition to the calamitous environmental injustice (*adikia*), the impossibility of the organism’s continued existence; in the very moment of asserting and celebrating its unique power and autonomy, it undermines itself in virtue of persecuting and destroying the other within and outside of itself. This is what in modern philosophical parlance is called “alienation”: an ontological condition replete with detrimental epistemological effects, including insanity. If the environment, along with which you form a unit of survival, is Lake Erie and if “you decide that you want to get rid of the by-products of human life and that Lake Erie will be a good place to put them,” “Lake Erie is driven insane [and] its insanity is incorporated in the larger system of your thought and experience.”²⁷

In the face of the insanity of transcendent thought, plant-thinking, immanent to the milieu wherein it thrives, will be the signpost of, or a concrete normative ideal for, the Batesonian version of *it thinks*. It will permit us, among other things, to read with fresh eyes the famous quip of

²⁵ M. Heidegger, “The Anaximander Fragment.” In *Early Greek Thinking*, 13–58. Trans. D. Farrell Krell and F. A. Capuzzi (New York: Harper and Row, 1984), 42.

²⁶ G. Bateson, *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology* (Chicago: University of Chicago Press, 2000), 491.

²⁷ Bateson, *Steps to an Ecology of Mind*, 492.

Pascal, “Man is a reed, the weakest in nature, but he is a thinking reed.”²⁸ The thinking of this reed is precisely what makes it weak, emasculates its integral connection to the environment, prompts it to harm itself and the surrounding world. We might, however, imagine a different kind of weakness that would be associated with the thinking of the human reed and would come about as a result of realizing its frailty, the fragility of its milieu and of the conjunction (the “plus”) at the heart of Bateson’s “unit of survival.” This realization takes us a step closer to post-metaphysical thought. Mitigating the excessive separation of the human mind from the context of its embeddedness, non-oppositional plant-thinking will therefore be entrusted with guarding the sanity of our thought and with maintaining it adjusted to our life-world. A guarantor of environmental justice, the vegetal *it thinks* will moderate the lethal tendencies of the human *I think*, neglectful of the non-individuated foundations of thought and of the context integral to its formalization. In a paraphrase of Heidegger, it is not a god but a plant that can save us.

Deleuze and Guattari, who have relied extensively on the philosophies of both Bergson and Bateson, similarly privilege vegetal non-oppositionality in plant-thinking. They write: “The wisdom of plants: even when they have roots, there is always an outside where they form a rhizome with something else—with the wind, an animal, human beings (and there is also an aspect under which animals themselves form rhizomes, as do people, etc.).”²⁹ The third instantiation of the *it thinks* is the rhizome, which, instead of opposing, supplements its other, traversing, among other things, metaphysical distinctions between plants, animals, and human beings. Rhizomatic thinking is the thinking of exteriority in and as exteriority, the inextricable relation to “an outside,” to something other, including parts of inorganic nature, other living beings, and the products of human activity. Its non-identity, in the writings of Deleuze and Guattari, reproduces the relational character of Bateson’s eco-mental systems and of Bergson’s “fitting” of the body to its environment, so that the organism and elements of the biosphere to which it belongs form nodes within the forever-unfinished mesh of the rhizome. Rhizomatic thought—or plant-thinking proper—takes place in the interconnections between the nodes, in the “lines of flight” across which differences are communicated and shared, the lines leading these nodal points out of themselves, beyond the fictitious enclosure of a reified and self-sufficient identity. The vegetal *it thinks* does not answer the question, “Who or what does the thinking?” but, “When and where does

²⁸ Pascal, *Pensées*. Trans. A. J. Krailsheimer (London: Penguin, 1995), 66.

²⁹ Deleuze and Guattari, *A Thousand Plateaus*, 11.

thinking happen?” because this thinking, inseparable from the place of its germination, arises from and returns to the plant’s embeddedness in its environment. All radically contextual thought is a worthy inheritor of vegetal life, which continues to thrive, proliferating, among other places, in those texts that lay bare and reveal their own margins; hermeneutics, historicism, immanent criticism, and deconstruction are the methodological names for this inheritance.

A preliminary response to the question of the lived spatio-temporal conditions of thought is that plant-thinking happens (1) when the presumed self-identity of “subjects” and “objects” that populate a given milieu recedes, allowing the rhizomatic assemblage to surge up to the foreground, to be activated by sharing difference among its various nodes, and (2) where the spacings and connections, communication lines and gaps between the participants in this assemblage prevail over what is delimited within them. If this image of thought is evocative of the synapses, whose firing accounts for the brain’s neural activity, then we must conclude that the brain is a neurological elaboration on the de-centered vegetal it thinks: “The discontinuity between cells, the role of the axons, the functioning of the synapses, the existence of synaptic microfissures, the leap each message makes across such fissures, make the brain a multiplicity immersed in its plane of consistence or neuroglia. . . . Many people have a tree growing in their heads, but the brain itself is much more a grass than a tree.”³⁰ When *it thinks*, it does so non-hierarchically and, like the growing grass, keeps close to the ground, to existence, to the immanence of what is “here below.” The competing vegetal modulations of the brain, mapping either a top–down tree structure or a horizontal grass layout onto neural organization, are in any event beholden to plant-thinking, which induces the non-identity of human thought, prompted to mold itself in the likeness of what it is not, namely the plant and its thinking. At the core of the subject, who proclaims: “*I think*,” lies the subjectless vegetal *it thinks*, at once shoring up and destabilizing the thinking of this “I.”

III. Philosophy as Sublimated Plant-Thinking

Between the eighteenth and the twentieth centuries, the Aristotelian capacities of the vegetal soul—to obtain nourishment and to reproduce—received a new lease on life. The significance of this revival can be hardly overestimated, since it has culminated in a discovery of the direct involvement of vegetal intentionality in sensation and cogitation, i.e., those

³⁰ Deleuze and Guattari, *A Thousand Plateaus*, 15.

parts of the psyche that, according to *De anima*, pertain to the souls of animals and humans, respectively.

We are familiar with the importance of digestion for Nietzsche, who is a veritable physiologist of thought, acutely aware of the way the “lower” functions of the body bear upon the highest expressions of spirit. Not only are diets, linked to the nutritive function of plant-soul, responsible for the style and content of our thought, but also the climate in which we live is determinative for the development of culture, or the sum total of Spirit (tropical climate, for instance, gives rise to “violent antitheses, the abrupt transition of day to night and night to day, heat and vivid color, reverence for everything sudden, mysterious, terrible”, etc.³¹). Setting aside the issue of whether Nietzsche is sufficiently careful in his deduction of causal relations binding food and climate, on the one hand, and cognitive and cultural orientations, on the other, the effort at re-embedding thought and culture in their material conditions is a nod of acknowledgment to vegetal life, heteronomously regulated by elements in its own milieu.

Despite the compelling nature of Nietzsche’s contribution, it is Novalis who is, perhaps, the most explicit plant-thinker in modern philosophy. In his exposition of sense, Novalis purposefully deploys vegetal imagery and language—“Sense in general eats, digests or fecunds, conceives—is fecundated by light”³²—at the point of convergence of the nourishing and reproductive capacities of plant-soul (“digests or fecunds”). It is as though, in sensation, these capacities are elevated to a higher spiritual sphere, sublimated, and idealized, notwithstanding their being tethered to the vegetal source. The most ideal and luminous of the senses—vision—finally gets in touch with that to which the plants tend as well: it “fecunds” and “is fecundated” by light, without which it could not fulfill its function. Despite the celebrated ideality of vision, it, like all the other senses, is engrossed in the materiality of digestion, in nutritive activity that does not spare materiality as a whole, digested into the world of Spirit.

Nor is sensuousness, or enjoyment, spared the logic of digestive assimilation, given that “all enjoyment, all taking in and assimilation, is eating, or rather: eating is nothing other than assimilation. All spiritual pleasure can be expressed through eating. In friendship, one really eats of the friend, or feeds on him.”³³ There is but one crucial difference between vegetal assimilation and its spiritual permutation: in the absence of interiority, the former assimilates the plant to its other, whereas the latter

³¹ Nietzsche, *Human, All Too Human*, 113.

³² Novalis, *Fragmentos de Novalis*. Ed. Rui Chafes (Lisbon: Assirio and Alvim, 1992), 79.

³³ Novalis, *Philosophical Writings*. Ed. and trans. M. Mahoney Stoljar (Albany: SUNY Press, 1997), 102–103.

appropriates the other to itself. Imagine then a way of thinking where thoughts or discernments are not stored in the interiority of consciousness—or else, a sublimated stomach—but circulate on the surface and keep close to the phenomenal appearances of things. This image of thought will not sound bizarre to those familiar with the basic insights of phenomenology, which, in addition to denying the existence of noumenal reality behind the curtain of appearances, lambastes the view of consciousness as an interior drawer for the storage of thoughts and for the memories of past experiences. Jointly, the privileging of light in its account of knowledge and the essential superficiality of phenomena put phenomenology on the side of plant-thinking.

Hegel concedes that the act of devouring a thing is “the most elementary school of wisdom [*die unterste Schule der Weisheit*],” from which the animals are not excluded³⁴ and which, we should add, is predicated upon the nutritive capacity of plants. But it is by no means certain that the German philosopher himself has ever graduated from what he disparagingly calls “elementary school.” At every stage of the dialectic, the assimilation of the object, devoured by Spirit, signals the resolution of a particular standoff and instigates a gradual progression of Spirit from implicit consciousness to absolute knowing. Of course, dialectic-generating resistance may emanate from an external object, or it may derive from the I as an object related to itself in self-consciousness. But, whatever its precipitating factor, each transition to a higher stage is inconceivable without a more effective assimilation, consumption, and consummation of the obstacle in the actualized interiority of Spirit. There are no qualitative discontinuities between acts of eating and thinking, between successfully accomplished mediations of the subjects of need, desire, understanding, self-consciousness, and so on with their corresponding objects, because all these acts belong under the common spiritual aegis of assimilation. Everything Real becomes Rational, as a result of the Rational swallowing up, digesting, and manifesting again, in a regurgitated form, the previously unmediated Real.

On the path toward absolute knowing, whereby Spirit will have recognized itself as Spirit, plant-thinking both orchestrates and delimits the process of assimilation; although various parts of plants are easily turned into food, the vegetal principle of nourishment, presiding, in a disguised form, over the dialectical process as a whole, is indigestible and

³⁴ “Despairing of the reality of those things, and completely assured of their nothingness, [the animals] fall to without ceremony [*sic*] and eat them up” (G. W. F. Hegel, *Phenomenology of Spirit*. Trans. A. V. Miller (Oxford: Oxford University Press, 1979), 65).

inassimilable. Deconstructive reminders concerning that which cannot be consumed, digested, or indeed deconstructed—reminders that, in the last instance, put the subject face to face with the question of justice—are signs of respect to the absolute material resistance inherent in vegetal life. Barely recognizable, sublimated and sublime, *to threptikon*, the Aristotelian vegetal soul, regulates all nutritive processes, so that to consume or to digest it would be, still, to follow its precepts.

When in a 1990 interview Daniel Birnbaum and Anders Olsson raised the question of the parallels between deconstructive reading and a certain style or a manner of eating, Derrida responded, “[A deconstructive reading] would mean respect for that which cannot be eaten—respect for that in a text which cannot be assimilated. My thoughts on the limits of eating follow in their entirety the same schema as my theories on the indeterminate or untranslatable in a text. There is always a remainder that cannot be read, that must always remain alien.”³⁵ This remainder is what, approximately twenty years earlier, in *Glas*, Derrida had designated as “morsels,” those obstinate leftovers that could not find their proper place within the scope of Hegel’s system and that stand for material obstacles to the routines of idealization, rational comprehension, and conceptualization. Differently put, plant-thinking preserves the unthinkable in its midst: it insists, in Hegelian terms, on the imperviousness of a sizeable portion of “unconscious Spirit” to Spirit conscious of itself. Like the plant, it is only partly exposed to light, since its roots are immersed in the moist darkness of the earth, in non-comprehensible materiality, and in subject-less, object-less intimacy tending toward the abolition of distance.

In Western philosophy, the transition from ignorance of the unconscious to conscious existence has been portrayed as an emergence from darkness into the light of knowledge.³⁶ In the seedling’s sprouting from the soil and striving to the light of the sun, philosophers as diverse as Plato and Hegel saw the natural precursor to human education, while eighteenth- and nineteenth-century German thinkers detected what

³⁵ J. Derrida, D. Birnbaum, & A. Olsson, “An Interview with Jacques Derrida on the Limits of Digestion”, in *E-Flux Journal* 2, Jan. 2009. http://worker01.e-flux.com/pdf/article_33.pdf (accessed May 30, 2012), 4. A century before Derrida, Friedrich Nietzsche had observed: “Modern man understands how to digest many things, indeed almost everything—it is his kind of ambition” (*Daybreak: Thoughts on the Prejudices of Morality*. Trans. M. Clark and B. Leiter (Cambridge: Cambridge University Press, 1997), 170, emphasis added). This “almost everything” constitutes the material limit to digestive assimilation, the indigestible deconstructive remainder invoked by Derrida.

³⁶ For an outstanding theoretical account of this transition, see Patricia Vieira, *Seeing Politics Otherwise: Vision in Latin American and Iberian Fiction* (Toronto: University of Toronto Press, 2011).

Meyer H. Abrams would later term the “vegetable genius.”³⁷ Nietzsche brands metaphysical philosophers “rare plants”—and it is desirable, he notes, that they keep it that way³⁸—not only because of the empirical paucity of their numbers throughout history but also because, in contrast to all other plants, they seem to evade that radiance which emanates both from the literal sunlight and, in the case of human beings, from the alluring fluorescence of myth. Both vision and mythical thinking are points of access to an illusory reality, from which the philosopher wishes to flee: “Now, the Greek philosophers deprived themselves of precisely this myth: is it not as if they wanted to move out of the sunshine into shadow and gloom?” “But,” Nietzsche continues, “no plant avoids the light; fundamentally these philosophers were only seeking a brighter sun, the myth was not pure, not lucid enough for them.”³⁹

The light of Ideas, toward which the philosophical soul grows as though it were an ethereal plant striving toward the sun, supersedes in its clarity and brilliance physical light, with the principle of “spiritual” growth not diverging from but rather modifying vegetal proliferation. In Platonism, the “brighter sun” is also all the warmer, in that its eidetic luminosity is still related to the kind of warmth that is generative and creative, allowing beings to spring into being. Needless to say, this life-giving heat of philosophical heliocentrism is absent from the thinking of the Enlightenment, which analogizes reason to neutral light, capable of coldly and dispassionately illuminating everything, and from twentieth-century phenomenology, preoccupied with the infinitely varying modes of appearing, with how things come to be, come into the light, are illuminated with meaning. Nevertheless, what unites the three milestones of Western thought is the way they put vegetal movement toward light in the service of our thinking about thinking, a meta-theorizing about human knowledge.

The relation of plant-thinking to Platonism, the Enlightenment, and classical phenomenology is ambiguous, to say the least. Above all we must be cognizant of the possibility that the search for a brighter sun would threaten, at any moment and right in the midst of this marvelous luminosity, to devolve into the new “Dark Ages,” where the fully conscious and self-conscious existence brutally represses the unconscious remainder it cannot do away with; where vegetal life—and, along with it, everything belonging in the sphere of immanence—undergoes a thorough enucleation both within and outside the human subject; and where such repression of darkness

³⁷ M. H. Abrams, *The Mirror and the Lamp: Romantic Theory and the Critical Tradition* (Oxford: Oxford University Press, 1971), 201ff.

³⁸ Nietzsche, *Will to Power*, 226.

³⁹ Nietzsche, *Human, All Too Human*, 122.

severs the intellect, seeking pure light, from its roots swathed in obscurity. The limit to the kinship of traditional thought with vegetal proliferation is precisely this: the metaphysical project bent on leaving the darkness of mere life behind undercuts the conditions of its own existence (or of any existence, for that matter). Incapable of acknowledging the thinking coextensive with the variegated acts of living, metaphysics wields the power of negativity and death even when it seems to be growing toward another kind of light and to affirm the quasi-divine life of the mind. An excrescence of plant-thinking, it nonetheless risks turning into a cancerous growth, suffocating the very entity from which it draws its vitality.

If plant-thinking is to avoid being caught in the trap of the preceding metaphysical strategies that selectively inherited and at the same time violated vegetal life, it must be receptive to and appreciative of this life's other pole, the pole of darkness with the possibilities proper to it. In the words of Lev Shestov, "It seems that, very soon, human beings will feel that the same little-understood but caring force, which has thrown us into this world and taught us, like the plants, to tend toward the light, gradually readying us for a free life, is prodding us toward a new sphere, where a new life with its own riches awaits us. And, perhaps, in the not-so-distant future, an inspired poet . . . will courageously and joyfully exclaim: 'Let the sun disappear, and let there be darkness!'"⁴⁰ Plant-thinking is obliged to undersign the desire of Shestov's "inspired poet," to the extent that it reconnects with its unconscious roots, all the while refraining from the indiscriminate repudiation of light. To live and to think in and from the middle, like a plant partaking of light and of darkness, is not to be confined to the dialectical twilight, where philosophy paints "its grey on grey." It is, rather, to refashion oneself—one's thought and one's existence—into a bridge between divergent elements: to become a place where the sky communes with the earth and light encounters but does not dispel darkness.

⁴⁰ Lev Shestov, *Apofeoz bezpochvennosti/The Apotheosis of Groundlessness* (Moscow: ACT, 2004), 119, my translation.