THE PSYCHIC PLANT
For a Biosemiotics of Expressive Psychicity From the Perspective of Max Scheler

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Abstract

The aim of this article is to propose a new perspective on plants based on the concept of expression. Research in recent decades has profoundly changed the way we view plants, revealing how they are able to position themselves in the environment and communicate with other living beings. However, two key aspects have been overlooked in research: 1) the ability to position themselves implies some elementary form of adopting a "yes" or "no" position with respect to environmental stimuli; and 2) the language that regulates the communication of plants with other living beings presupposes a grammar of expression that has remained largely unexplored. In order to deal with two questions, I develop from a biosemiotic perspective the theories of the philosopher Max Scheler (1874-1928) on primordial feeling (*Gefühlsdrang*), value perception (*Wertnehmung*) and the universal grammar of expressivity (*universelle Grammatik des Ausdrucks*). I then analyze the logic of expressive processes of plants. Finally, I argue that plants are an "expressive psychicity" that is actively and directly constituted through the expressive movement of its own body through a constant interaction with the expressive level of life.

Keywords: Expressive Physicity; Primordial Feeling; Biosemiotics; Valueception; Universal Grammar of Expression.

1. *Rereading the plant revolution in light of the concept of expressivity*

In early March 1926, Max Scheler and his friend Max Wertheimer went to see Max Reichmann's film The Miracle of Flowers. Immediately afterwards, on March 3, 1926, Scheler wrote a letter to his ex-wife, Märit Furtwängler, in which he described the dramatic impact this film had had on him:

> You can see plants breathing, growing and dying. The natural impression that plants are inanimate disappears completely. You see the whole drama

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> of life, the unprecedented effort […]. It moved me so much that I had to fight back tears.[1]

Short time-lapse documentaries on plant growth had already existed for some time. What is new about this film, which lasts about an hour, is that it offers a genuine artistic exaltation of the expressivity of plants (Vollgraff 2018). In fact, the film is not a simple documentary: the director Reichmann intersperses the time-lapse sequences with dance scenes that mimic the expressive movements of plants. The artists involved belonged to the Berlin State Ballet under the direction of Max Terpin, who was inspired by the guiding principles of *Ausdruckstanz*, formulated by his teacher Rudolf von Laban in his book *Die Welt des Tänzers (1920).* Rudolf von Laban – one of the greatest choreographers and dance theorists of the 20th century, as well as an exponent of theosophy and animator of the "Monte Verità Center" in Ascona – saw the expressivity of plants as the very archetype of dance.

Time-lapse scenes of plant movements threw the image of a plant as a purely passive being, devoid of any psychicity, into crisis. However, such an image continued to remain quite widespread until the end of the last century. It is only in recent decades – thanks to the work of Anthony Trewavas, Stefano Mancuso, Michael Marder, Daniel Chamovitz, Monica Gagliano, Peter Wohlleben, Emanuele Coccia, Umberto Castiello, Fabrizio Baldassari and Paco Calvo, to name but a few – that our perception of plants has changed radically, so much so that we now openly discuss plants as sentient beings, capable of developing evolutionary solutions distinct from those of animals, and endowed with the abilities to learn and memorise.

The aim of this contribution is to present a new perspective on plants, starting out from its expressive ability. The thesis I argue is that a plant is a special kind of psychicity, constituted by a direct interaction with the expressive level of life. This interaction is made possible by a "primordial feeling" (*Gefühlsdrang*) that, according to Scheler, represents a form of elementary sensibility capable of grasping the vital relevance of the expressivity of something already at the biosemiotic level and which characterizes every living being, including plants.

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1 The letter from Max Scheler to Märit Furtwängler, in Max Scheler's Nachlaß, Bayerische Staatsbibliothek München, Ana 385, E11, 267. Quoted by Mader 1980, pp. 117-118. All translations of Scheler from German into English are my own work.

2. *Phenomenology of living beings in Scheler*

It is usually thought that Scheler's book *The Position of Man in the Cosmos* (1928) is dedicated to a philosophical anthropology that places the human being at the apex of the cosmos. A reading of the other texts of the latter period corrects this interpretation and reveals that Scheler's ultimate intent is to inaugurate a meta-anthropology in which the anthropocentric perspective is overcome: indeed, the subject of philosophical anthropology is not *Anthropos*, but *Allmensch*, that is, whatever form an X capable of openness to the world (*Weltoffenheit*) may assume in the course of cosmic evolution.[2] At the center of this meta-anthropology of the *Allmensch* is therefore not *Homo Sapiens*, the bipedal mammal with an opposable thumb that currently populates planet Earth, but the X, whatever form it may assume, capable of *Weltoffenheit*.

The context that frames this meta-anthropology is that of a new philosophy of nature elaborated from 1922 onward under the decisive influence of the figures of St. Francis and Schelling. In this conception, set out in the *Sympathiebuch* (1923), the human being is no longer placed

> *above* animals and plants – neither as Plato and Aristotle place her at the luminous pinnacle of the aristocracy of nature, nor as the Hebrew vision places man as the 'lord' of nature and its 'king' made in the image of God (the thought of creation), in whose God-willed *service* all the rest of life, indeed of existence lies (Scheler 1923, p. 90).

At the core of this turning point in Scheler is the awareness that, in order to grasp the vital phenomenon, one can no longer use the conceptual categories of traditional metaphysics – being, identity, substance – which are tailor-made for reflecting on a static, ideal, non-living being, nor those of a philosophy based on the primacy of the subject and consciousness. Conceptual categories, capable of grasping the vital phenomenon, are identified by Scheler by directly drawing on Schelling's philosophy of nature: they are the categories of "self-organization", "self-referentiality", "retroactivity", "centricity", and "ex-centricity." To these Scheler adds those imported from the biology of Jacob von Uexküll, which focus on the interaction between organism and environment from a biosemiotic perspective.

In order to explain its ability to interact with the expressive level of life, to orient itself, and to position itself in its environment, Scheler attributes to a plant an elementary form of feeling, primordial feeling (*Gefühlsdrang*),

2 On the concept of *Allmensch* see Scheler 1924, 146; 1928, 150ff.

and, in addition, a pre-representational form of "perception" of the value of vital relevance, the so-called value perception (*Wertnehmung*).

To understand this positioning of plants, Scheler first questions the Husserlian concept of the "psychical" by detaching it from the concept of "consciousness." In his 1925 *Lectures on Philosophical Anthropology*, Scheler no longer defines the psychic in reference to consciousness or the ego, but in a self-referential sense: "To be psychic does not mean to be in reference to the ego, but to be in reference to oneself (*Fürsichsein*)" (Scheler 1987, 177). This is a characteristic that Scheler also attributes to plants, which thus become psychic beings. In developing a philosophy of nature and a philosophical anthropology, Scheler replaces large parts of the conceptual categories of Husserl with those of Schelling.

3. *Schelling: organism and freedom*

Schelling's philosophy of nature is based on a reinterpretation of the Kantian concept of self-organization as exposed in the *Critique of Judgment* (Heuser 1989; Cusinato 2002). What defines an organism and differentiates it from a mechanism is not the way its parts are put together, but the way it self-organizes.

One might think, with Kant, that the self-organizing characteristics of the organism are not *ontogenetic*, but only *heuristic.* On this point Schelling brings about a radical change of perspective, in that he introduces the profoundly anti-Kantian thesis that nature is apt to give itself an order and self-organization independent of the legislation of the intellect. Hence, there is the recognition of a *material* legislation independent of *intellectual* legislation: only in this way is it possible to conceive of the organism as a concrete phenomenon, as a *given* structure that can be phenomenologically described and not merely *thought of*.

Schelling justifies this shift by identifying a new form of causality in the organism, in which the temporal relationship between cause and effect is no longer in terms of succession, but in terms of simultaneity. This confers upon organic causality a circular, retroactive character. By retroacting, the effect acts upon the cause, but for this to be possible, the cause must somehow "advance" into the present and not be swallowed up at some point of the past. In this way, cause and effect come to form an original identity in which there is no longer *succession*, but *simultaneity*. Thanks to this temporal "distortion", which breaks the link between cause and effect in terms of before and after, an original form of freedom manifests itself:

"This causality is called life: life is the autonomy that manifests itself, it is the schema of freedom, insofar as this is revealed in nature" (*Schelling* 1799, p. 249). We therefore do not need to wait for Hans Jonas to identify a connection between organism and freedom.

4. *The discovery of organic subjectivity and the "hunger for light" of plants*

The application of the concept of *simultaneity* to organic causality allows Schelling to anticipate not only Hans Jonas' concept of organism as freedom, but also some of the themes at the center of Maturana and Varela's autopoietic theory (Heuser 1990; Cusinato 2018). Schelling makes the idea of the organism as a closed system distinct from the environment explicit through the example of a line and a circle: mechanism interprets life as a linear series of causes and effects, but if we unify the two extremes of this series, "nature becomes a circular line that falls back upon itself, nature becomes a system that is closed in itself" (Schelling 1800, 54)[3].

By forming a closed figure, the organism gains inner space and becomes capable of expressing its own point of view in its interaction with the environment. By closing the line and producing a distinction between inside and outside, it will be able to act on the relations of the whole to the parts and to express its own freedom and autonomy in the way it reorganizes these relations. In this way, Schelling makes explicit the concept of "organic subjectivity": any living being, even if it cannot say "I", is nevertheless a subject (a "*Selbst*") that orients its interaction with the environment through its own point of view.

The organism becomes the schema of freedom through a progressive self-referential withdrawal, understood as a recursive operation of a continuous return to itself ("*in sich selbst zurückkehren*"), in a continuous effort to maintain itself as a closed system distinct from the environment and not to disintegrate into a straight line, that is, into inorganic matter. The curvature of the line of life does not end with the formation of a closed

3 This new conception of the organism is not interpreted by Schelling in the sense of a new form of teleologism, but in the sense of a new theory of complexity. As I have already shown in my previous works, what Schelling proposes as an alternative to Kantian heuristic teleologism in the *Darstellung des Naturprocesses* is not a new version of biological teleologism, but a theory of the *Stufenfolge* of the self-organization of life. The concept of a *Stufenfolge of self-organization* is therefore not only Schelling's response to Kant, but also Schelling's response to the attempt to re-propose teleologism in nature (Cusinato 2018, pp. 33-35).

circular figure but continues in a progressive internalization (*Verinnerlichung*) at increasingly complex levels of self-referentiality, traversing the entire organic world, until it reaches consciousness as the form of the complete "return *(Zurückwendun*g) *to itself*".

Schelling identifies in nature a successive series (*Stufenfolge*) of increasingly higher degrees of self-organization, to which a "*Stufenfolge* of centricity" corresponds (Schelling 1809, p. 236). At the first level of such self-referentiality are plants, which represent the first form in which the line closes in a circle, bringing about a difference between organism and environment. In fact, a plant is an organism with its own subjectivity and a first level of sensibility (*Sensibilität*) (Schelling 1797, p. 165), which is expressed in a "hunger for light" (*Lichthunger*) (Schelling 1842, p. 206).

It is noteworthy that by attributing an elementary form of sensibility to plants, Schelling definitively moves away from the distinction that Aristotle had drawn between the vegetative soul of plants, which is incapable of sensibility, and the sensitive soul of animals. Indeed, one of the ideas at the center of Schelling's *Philosophy of Nature* is that the plant world represents an "allegory" (*Allegories*) of the animal world. For Schelling, nature is a living and dynamic organism in which every part is interconnected and reflects a more profound principle. In this context, plants represent a form of life that, although less complex than animal life, prefigures the life processes that underlie animal life. This holistic view of nature, which unifies nature and spirit, also re-emerges later in Scheler's reflection.

5. *The position of plants in Scheler's philosophical anthropology*

Scheler uses the schema of the *Stufenfolge* of self-organization proposed by Schelling to classify various living systems. This Schellingian schema forms the backbone of *Die Stellung*. It is through the Schellingian re-elaboration of the concept of self-organization that the definition of the psychic proposed by Scheler in 1925 also becomes comprehensible. Within this perspective, indeed, consciousness becomes a particularly complex case of the self-organization of life, and not the watershed between the physical and the psychic, as in Cartesian dualism, which in fact Scheler explicitly contests (Scheler 1928, pp. 56-59). In fact, terms such as consciousness, the psychic and the physical are broken down by Scheler and traced back to the most elementary concept of self-referentiality: "psychic is every finite real as 'being-for-itself', physical is every real as 'being-for-another'"

(Scheler 1987, p. 177). Once the psychic phenomenon is definitively separated from a psychologism related to consciousness and the self, Scheler identifies the psychic and life: psychic is everything that possesses an inner side (*Innesein)*, that is, a being-for-itself (*Fürsichsein)* understood in a self-referential sense (Scheler 1987, pp. 156-160).

Scheler here re-reads Schelling's concept of the self-referentiality of life in the sense of the theory of environment *(Umwelt)* by Jacob von Uexküll. The living being *qua* a centralized being has its environment, the inorganic being does not: "Life necessarily has two poles: the organism (centralized being) and the environment, with which the centralized being is in a relationship of reception and action. The organism and its environment are so intimately related and co-determined that that one constant alone brings about both the organization of the organism and the articulation of its environment" (Scheler 1979, p. 164).

This is what traces the difference between the organic and the inorganic. According to Scheler, inorganic forms are devoid of any form of an inner and referential being. They have no center that belongs to them ontologically as a consequence they do not even have its environment. The inorganic world is a set of centers of force whose dynamics turns out to be chaotic and analysable only in a *statistical* sense (as developments in quantum mechanics were bringing to light); thus, it appears as an enormous plexus of energies condensed around rather elementary structures whose characteristic feature is that they are devoid of interiority, and of self-limitation.

In *Die Stellung* Scheler identifies the most elementary form of centralization, that which distinguishes the kingdom Plantae, in "primordial feeling" (*Gefühlsdrang*):

> The primordial feeling is already clearly distinguished from […] inorganic objects, to which no inner being can be attributed. This first level of the psychic process, as manifested in the primordial feeling, can and must already be attributed to plants (Scheler 1928, p. 13).

Through primordial feeling (*Gefühlsdrang*) a plant expresses the "physiognomy of its inner states: weak, vigorous, luxuriant, deficient, etc." (Scheler 1928, p. 15). Upon closer inspection, it is the primordial feeling of plants that grounds animal sensation, and not vice versa. From this point of view, the text *Die Stellung* constantly oscillates between the attraction to a hierarchical view of living beings – although what is placed at the summit is not the human being as such, but the X capable of *Weltoffenheit* – and, at the same time, the attempt to base the entire philosophical anthropology on the primordial feeling of plants.

6. *The distinction between primordial feeling and sensation and the interpretation of plant tropism*

The first version of *Die Stellung* was published as an article in 1927, thus one year after he saw the film *The Miracle of Flowers*. Echoes of the impression made by Reichmann's film can be found in several passages of the text. For example, when it is asserted that "We must and may already attribute to plants the first stage of the development of the soul, as it appears in the primordial feeling", only to add in the footnote: "The impression that plants lack an inner state arises only from the slowness of their life processes. This impression disappears when viewed in slow motion (*Zeitlupe*)[4]. To sum up, a plant is a psychic subjectivity capable of feeling, and its expressive movements are not visible to us only because of the slowness of its life processes.

Alongside the undoubted insights into the plant world, however, reservations and cautions also shine through. It is as if Scheler suddenly felt the danger of being accused of vitalism and thus felt the need to distance himself from the more radical views. Indeed, a few lines later, Scheler points out: "But it is by no means acceptable to attribute sensation and consciousness to plants, as Fechner did".

Of course, plants belong to the first level of psychic life of a psychicity that has an interiority and is endowed with a feeling. However, it is an interiority and a feeling without a neuronal center: "What we face in plants is the complete absence of any feedback (*Rückmeldung*) of life upon itself, the complete absence of a primitive re-flexio, of a consciousness, however weak, of inner states" (Scheler 1928, p. 15).

Indeed, if the animal possesses a "distinctive directionality and its own orientativity 'toward' something specific, e.g., toward nourishment and sexual satisfaction, etc.", the only two states of primordial feeling present in plants "consist solely in a simple 'moving toward something', e.g., toward the light, or in 'moving away from something'; that is, they consist in a pleasure (*Lust*) or a suffering (*Leiden*) without a specific object" (Scheler 1928, p. 13). From this Scheler deduces that as shown by the

4 Scheler uses the term 'slow motion' (*Zeitlupe)*. This is probably an oversight, since this term refers to a technique in which a scene is filmed at a higher speed than it is projected, creating the effect of slowed movement when it is played back. Here, however, Scheler is not referring to a slowed-down, but an accelerated view of the life processes of a plant, which is exactly what is present in time-lapse footage.

> most recent and thorough research of the Dutch botanist Blaauw, we *cannot* attribute either any specific tropism or sensation to plants, […] thus none of those 'sensory organs' that Haberlandt had attempted to circumscribe in his detailed research (1928, p. 18).

At first glance, it would appear Scheler denies the existence of tropism in plants based on the research by Blaauw. This is clearly a misunderstanding or a poorly expressed concept since Blaauw, even in Scheler's time, was instead known for his studies on plant tropism. In any case, the real target of Scheler's criticism is the thesis that tropism can be traced back to a "sense organ" capable of sensation (*Empfingung*), a thesis that Scheler attributes to Haberlandt.

The reason is obvious. In *Die Stellung* Scheler analyzes plants in relation to Schelling's *Stufenfolge* of self-organization. In this sense, the primary concern becomes the distinction between *primordial feeling*, which belongs to all living beings, including plants, and *sensation*, which belongs only to animal organisms. Indeed, sensation represents a further level of the self-organization of life in that it implies the concept of feedback (*Rückmeldung*) (The Position p. 19) and thus the ability to refer to a center understood as a body schema (*Leibschema*).

It is in this sense that Scheler's criticism of the biologist Gottlieb Haberlandt's theses on the existence of sensory organs (*Sinnesorgane*) in plants should be interpreted. In fact, Scheler does not deny plants' ability to feel and interact with light, rather he refuses to interpret plants' way of feeling through that of animals: "it is clear that a plant can do without sensation (*Empfindung*) precisely because, as the greatest chemist among all living things, it processes its constituent organic material directly from organic substances" (Scheler 1928, p. 15).

An animal obtains its nourishment through its autonomous movement, which is why it needs more complex forms of feeling: it needs e-motions to motivate and orient its movement. In contrast, a plant does not need sensation, the nervous system, and autonomous movement to feed itself; hence primordial feeling, which corresponds to the first level of self-organization, is sufficient for it.

Scheler's limits regarding the concept of a plant are not so much about feeling as they are about denying a plant any form of intelligence. In this way, Scheler remains a prisoner of a "neurocentric" conception of the concept of intelligence. Plants are indeed intelligent beings, even if their form of intelligence is different from that of animals (Castiello 2023).

7. *The concept of valuceptione in a biosemiotic perspective*

A plant responds to light by producing auxin, a plant hormone responsible for growth, which accumulates on one side of the plant and promotes the curvature of the shoot toward the light stimulus. The problem is how to interpret this process. A widespread argument is that these are chemical and physiological processes that do not involve the ability on the part of plants to decode a stimulus as positive or negative.

This is where we touch on the central question: do the physiological and biochemical processes of plants have meaning only at the physical and chemical level, or have plants invented a way through them to decode, process, and communicate information already at the biosemiotic level?

The latest research confirms that plants are intelligent beings capable of perceiving not only light but also temperature, electricity, magnetic fields, and humidity; that plants are capable of communicating not only through chemical signals, but also through visual signals, for example with pollinating insects through the shape and color of flowers; and that they are able to make decisions that are critical to their existence, such as when to flower and when to sprout (Castiello 2019). However, this is only a first step, since once these faculties are recognized in plants, two questions remain unexplored:

1) If a plant is capable of intelligent behavior, this in turn presupposes some ability to decode stimuli and evaluate their vital relevance. Of course, such an ability must be thought of independently of concepts such as consciousness, body schema, sensation, representation, and judgment. That is, it should not be thought of by starting out from the solution invented by the animal world; if anything, the opposite may be true.

2) The ability to communicate presupposes the existence of a language. Therefore, the problem raised in this case is to decipher the grammar of the expressive language used by plants to interact and communicate with other living beings.

These are two decisive questions for the very legitimacy of the new image of plant life that has been asserted in recent decades. And yet these questions have remained on the margins even in the most recent research. To explore these questions, I propose to develop the proposal by Scheler from a biosemiotic perspective.

According to Scheler, the "primordial feeling" (*Gefühlsdrang*) of plants is oriented through an elementary form of "valueception" (*Wertnehmung*). In fact, the first thing an organism perceives is the value of the vital relevance of its expression: "valueception (*Wertnehmung*) always precedes perception (*Wahrhnemung*)" (Scheler 1924, p. 110).

It should be made clear that Scheler has in mind here the biosemiotics of Jacob von Uexküll, and that by "value" he understands something similar to what Uexküll indicated with relevance signal (*Merkzeichen*). In other words, Scheler applies *Wertnehmung* to the interaction between organism and environment (*Umwelt*) and to the organism's ability to perceive the vital relevance of that which surrounds it. Scheler's entire theory of perception is an attempt to reread Kant's *transcendental aesthetics* through Uexküll.

Valueception is not *evaluation*. In valueception, value is grasped at a pre-representational level through the biosemiotic mediation of primordial feeling; it is not intuited but bypasses the mediation of representation (*Vorstellung*) and judgment (*Urteil*). Several studies on plant biosemiotics have shown that veritable sign processes already exist at the biosemiotic level in the kingdom Plantae (Krampen 1981; Kull 2000; Baluška *et al.* 2006). These studies reveal that what at first glance appear to be simple chemical processes turn out to be biosemiotic processes through which plants have found an original way to decode, process, and communicate information without the need for a nervous system.

8. *Primordial feeling and universal grammar of expressivity*

Scheler's analyses of plants exposed in *Die Stellung* gain greater depth when integrated with those of the relationship between life and expressivity that are already present in the *Sympathiebuch*. At the core of the *Sympathiebuch* is the intuition that all living beings are rooted in a single cosmic life (*Alleben*) through an original form of sharing of primordial feeling: unipathy (*Einsfühlen*). Each organism is able to live to the extent that it dialogues with other living beings through the universal language of expression. And, according to Scheler, at the basis of this language there is a veritable "universal grammar of expression" that allows every living being to interact with the expressive level through primordial feeling at the unipathic level:

> The relationships between expression and experience have a fundamental basis of connection, which is independent of our specifically human expressive gestures. What we have here is, so to speak, a universal grammar, valid for all languages of expression, and the ultimate basis of understanding for all forms of mime and pantomime among living creatures (Scheler 1923, 22)

Interaction with expression becomes the engine of life. Indeed, everything is given to us primarily as the "expressive field of that which

lives" (Scheler 1928, p. 376). Consequently, the primary task of an organism is to decode the value and vital relevance of the expressive movements that surround it.

In this way, Scheler overcomes the dualistic opposition between the internal and the external through a theory of expression (*Ausdruck*) developed under the influence of Dilthey: expression does not represent the exteriorization of an interior being that existed before and independently of expression. When Scheler defines expression as the "protophenomenon of life" (Scheler 1928, p. 15), he emphasizes the fact that "the sphere of inner being (*Innesein*) and that of expression form an essential connection that is valid for every living being" (Scheler 1987, p. 156).

The fact that primal feeling orients the interaction with the expressive level sheds light on how primordial feeling becomes the bridge that connects the "internal" im-pression (*Ein-druck*) and the "external" ex-pression (*Aus-druck*) in a biological individuality. The theme of expression cannot be reduced to the expression of the interiority of a single organism but becomes the great theme of the interaction of the organism with the expressive level of life.

9. *Scheler and Portmann: the expressive level of life and self-presentation*

One of the primary characteristics of the expressive level of life is its superabundance. The variety of flower colors and leaf forms or the quantity of pollen production testifies to a logic of excess with respect to utilitarianism and the principle of economy. Already the biologist Raoul Francé (1874-1943) spoke of an involuntary and unconscious expressive activity (*Ausdruckstätigkeit)* of plants, and to describe these expressive movements of plants he used the term "luxury movements" (*Luxusbewegungen*) (Francé 1906-1913).

On these themes, Scheler came into epistolary contact with the Dutch zoologist Frederik Jacobus Johannes Buytendijk while writing the *Sympathiebuch*[5]. Both identified at the basis of the expressivity of life a principle that exceeds the principle of utility and economy. According to Scheler

5 The *Sympathiebuch* by Scheler gave an important impulse to philosophical reflection on the concept of expressivity of life. There was a close friendship between Scheler and Buytendijk, also confirmed by mutual invitations to give several lectures in Cologne and Amsterdam between 1920 and 1928. It was also Scheler who mediated the meeting between Buytendijk and Plessner (Struyker Boudier *et al.* 1985). Regarding Scheler's influence on Buytendijk, Dehue observes that Buy-

> The principle of utility […] fails to explain either the variety of plant forms or plants' way of living. The forms of the leaves reveal, even more clearly than the richness of the forms and colors of the animal world already suggests, how the mysterious source of life conceals within itself a regulatory principle that is ludic, full of fantasy, and purely aesthetic (Scheler, *Die Stellung* 2009, p. 98).

In this way, Scheler hypothesizes that at the basis of the expressive movements of life is a proto-fantasy drive aimed at the ludic production of a superabundance and richness of expressive forms (Scheler 1979, pp. 42; 264). For his part, Buytendijk asserts that "the organic is a vehicle for an exhibition of the value of being, and its essence consists in *richness*, in *luxury.* (…) In this optics, the organic (…) brings its essence to fruition *by exhibiting its richness*" (Buytendijk 2013, p. 121). This is a theme that also particularly matters to Portmann, who interprets the expressive morphology of living beings through the concept of "organic self-representation". Life expends considerable energy in the development and maintenance of functions related to organic self-representation, and these cannot be traced back to a simple principle of utility but should rather be interpreted in the sense of semantic morphology (Portmann 2013).

Portmann points out that such a superabundance of expressive forms certainly poses the problem of an "observer". At the origin of biological evolution, however, when the eye of an observer did not yet exist to see them, what was the point of the richness and superabundance of these expressive forms? How was the development of any interaction between these expressive forms possible if it was not yet possible to represent and observe them? Today we can understand the richness of the expressive forms of flowers by observing their interaction with bees and other insects, but what sense did this richness make before the development of the organs of vision? It is therefore necessary to identify a pre-representational faculty capable of coming into contact and interacting with the expressive forms of life long before the organ of sight developed.

To solve this theme, Portmann recovers the term *Selbstdarstellung* (*self-presentation*) (Wild 2021; Klouda 2021). According to Portmann, the characteristics of self-presentation go beyond the functions of preservation, selection, and immediate utility, and present themselves to us as a primary fact of every living being (Portmann 2013).

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tendijk "was profoundly impressed by the person and the work of Scheler, large parts of which were literally adopted in his own work" (Dehue 1995, p. 73). A development of this perspective on expressivity can be found in both Buytendijk and Plessner 1925 and Weizsäcker 1926.

Portmann conceives of morphology as a science of the self-presentation of organisms. With this morphological turn, Portmann points out that until now it has been largely underestimated that the organism spends a large part of its energy to build structures that serve to express itself.

With respect to this proposal by Portmann, it can be observed that since its origin, life has always been able to interact in some way with the level of expression, even in pre-visual and pre-representational modes, precisely because it is constitutively linked to the ability to interact with expression. After all, it has been shown that such interaction already occurs in the plant world (Chamovitz 2013). In this sense, the thesis of Portmann can be made more radical. If, as Scheler asserts, expression is the protophenomenon of life, then life is the ability to interact with the expressive level, and this becomes the defining characteristic of every living being. In this sense, the organ of self-presentation is life itself, of which the eye is but a late expression. In such self-presentation, therefore, an original unity between life, expressivity, and feeling manifests itself.

10. *Inorganic "expressivity" and "expressive movement" of life*

Yet this does not mean establishing an exclusive relationship between life and expressivity. Expressivity also belongs to the intense color of a rock, the profile of a mountain, or the force of the waves of a stormy sea. The expressivity of a canyon also strikes us because it tells the millennial story of the struggle between wind, water, and rock. A substantial difference must be recognized, however, between the expressivity of the inorganic world and the "expressive movement" of life. The expressivity of Mt. Matterhorn does not interact with or have any effect on the physical and chemical processes affecting Mt. Matterhorn; the expressivity of a crystal does not have any retroactive effect on the crystallization process. In all these cases, expressivity disseminates information, but that information does not interact in any way with inorganic processes.

Of course, the way a sheet of paper crumples and changes color as it burns can turn out to be extremely expressive, but such expressivity is only a side effect of a chemical process. What makes a sheet of paper contort is not the expressivity of the fire, but the chemical reaction between the paper and the oxygen at a certain temperature. By contrast, a deer immediately flees from areas that emit smells or visual signals that can be associated with the expressivity of fire. To move it does not need to realize the heat of the fire, it does not need to interact with the fire on a chemical level;

it is enough for it to interact with its expressivity on a biosemiotic level. Similarly, what motivates it to approach a stream of water to drink is not water as a chemical element, but the "*affordance*" of water that says to its thirst, "Drink me!"

Biosemiotic laws orient the ability to interact with the expressions and signals that living organisms use to communicate. Thanks to expressive interaction, information is communicated through a logic different from the one present in physical or chemical processes. What biosemiotic laws offer the organism more than laws of physics and chemistry is the ability to interact with the expressive level through primordial feeling. In this way, an organism interprets and communicates information through expressive movement that involves behavioral, physiological, and potentially epigenetic changes.

This results in a retroactive effect in expressive movement that is completely lacking in inorganic expression. The desert rose is an aggregate of chalk crystals that is extremely expressive, so much so that it resembles a flower. But this expressivity is only the contingent effect induced by the laws of physics and chemistry, not the result of interaction with the expressive level. In contrast, the colors and forms with which a flower expresses itself are the result of millions of years of evolution and represent expressive movements used by plants to interact with pollinating insects through biosemiotic language.

11. *Is the flower or the eye born first?*

A plant not only perceives expression, but also expresses itself, and is morphologically constituted by the expressive movement that is determined by the interaction with the expressive level of life through primordial feeling. Between the way a plant expresses itself and the way its expressive movement is perceived by the animal world, an interaction is established that influences the course of plant evolution itself in an epigenetic sense. The existence of primordial feeling allows us to conceive of an interaction of nature with the expressive level even before the appearance of the organ of vision. This means that the interaction with the expressive level influenced epigenetic evolution well before the appearance of the animal eye.

There is no doubt, however, that the birth of the visual organ represented a true revolution. Thanks to the eye, the interaction with the expressive level of life enormously increases its potential, making the whole palette of colors and the whole variety of forms available to the creativity

of life. Once the eye appears, it changes not only the way expressivity is perceived, but also the way life expresses itself, thus including the expressive movements of plants.

This is attested to by the explosion of life in the Cambrian, which coincides with the appearance of the first "eye" (Parker 2009).

At this point, one might ask whether it was the eye that brought about the evolutionary success of flowers, or rather the flowers that brought about the success of the eye. The earliest flower specimens for which there is documentation were identified in angiosperm fossils dating back about 130 million years (Dilcher *et al.* 2023)[6], while the oldest eye found to date belongs to a trilobite fossil discovered in Estonia dating back about 530 million years (Schoenemann *et al.* 2017). Thus, the eye appeared long before flowers. The development of flowers represented, in a sense, the response of plants to the fact that there was an organ capable of seeing their expressive movement. Like the appearance of the eye, this response of plants represented one of the greatest transformations in the course of evolution: the appearance of flowers led to a rapid diversification of flowering plants (angiosperms) and an explosion of terrestrial biodiversity, facilitating new forms of plant-animal interactions, such as pollination by insects, so much so that it is referred to as the "Angiosperm Terrestrial Revolution" (Benton *et al.* 2021).

12. *Plants as "direct" expressive psychicity*

It has been seen that there is an expressive surplus in plants with respect to the logic of economy, which proves to be evident in the diversity of forms, colors, and scents of flowers, leaves, and pollen. This expressive surplus has a communicative function and allows a plant to express morphological adaptations in response to environmental stimuli. The way a plant feels, perceives, and reacts to various environmental stimuli – such as light, scents, and chemicals – affects its morphology, allowing it to optimize its environmental adaptation. The ability of plants to communicate, such as to solve problems and invent new solutions – think, for example, of the development of flowers – represents the way plants interact with the expressive level of life.

6 The studies of Dilcher are based on the finding of fossils, such as those of *Montsechia vidalii*, which are about 130 million years old. However, using molecular dating techniques and genetic analysis, other studies have gone so far as to push back the origin of angiosperms, suggesting that the first flowers may have appeared in the Jurassic, about 180 million years ago (Fu *et al.* 2018).

In this way, a plant proves to be a particularly successful type of "expressive psychicity". It is an expressive psychicity that does not need a central nervous system or a body schema to communicate and interact, since its feeling is directly identified with its expressive movement. A plant is still so fused with the expressive level of life that its communication is not *indirect*, it does not need words, verses, body gestures. Its form of communication coincides with its interaction with the expressive level. Therefore, it is *direct* and makes itself explicit through the expression of the scents, colors, and forms of its body. The language of a plant is its own body: the signs of its language coincide with the scents, colors and forms of its leaves, flowers, branches, and roots.

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