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## ANOMALY IN GOETHE'S MORPHOLOGY

### 1. Goethean morphology as a phenomenological science of *Gestalt*

The term 'morphology' first appeared in Goethe's *Tagebuch* on the 25th of September 1796, and soon after, in a letter to Schiller dated November 12 of the same year. From that moment on, Goethe employed this term both to indicate the method implicitly used in his earlier studies – especially in his botanical and zoological works – and to delineate the research directions he intended to pursue in the years to come.

In the *Preliminary Notes for a Physiology of Plants* morphology is defined as the «consideration of form [*Gestalt*] both in its parts and as a whole, the conformities and deviations, apart from all other considerations» (HA 13, 123). The concept of *Gestalt* delineates the object of Goethean inquiry and specifies itself in the morphological field as a synthetic principle of organization of living beings, expressed in the relationship between the parts and the whole. Morphology differs from other natural sciences «not with respect to the familiar phenomenon itself, but to the theory and method which gives the science its characteristic form» (HA 13, 124). Aiming «merely to present and not to explain [*darstellen und nicht erklären*]» (HA 13, 124), it deals with what is visible and manifests itself, without resorting to physical laws, vital forces, or mechanisms abstracted by experiential reality. Goethe asserts morphology «may be regarded both as an independent science and as an auxiliary physiological science» (HA 13, 123) and further adds:

It justifies itself as a separate science by taking as its chief subject one that is treated only occasionally and incidentally by other sciences, by collecting data scattered in others, and by selecting a vantage point from which natural phenomena can readily and easily be observed. Morphology has a great advantage in concerning itself with generally recognized elements, in not being controversial and therefore not being forced to make a place for itself at the expense of another science, in occupying itself with phenomena of the utmost significance, in employing in its summaries intellectual operations so adapted and pleasing to human nature. (HA 13, 124)

Morphology is an auxiliary and borderline discipline in relation to other sciences because it operates at their edges without intervening in their content. At the same time, it is foundational because it provides an overarching perspective and allows their results to be connected. Thus, morphology is both scientific and meta-scientific, as it deals not only with nature, but also with the knowledge about nature, addressing its very phenomenal foundations – those phenomena ‘of the utmost significance’.

In this sense, Goethe can justifiably be considered a proto-phenomenologist or a phenomenologist *ante litteram*, whose purpose is to ‘return to the things themselves’ and to the a priori conditions of their manifestation: «For we are not seeking causes but the circumstances under which the phenomenon occurs» (HA 13, 25). In experiential reality, each phenomenon stands out against the backdrop of a natural world that is co-present, includes other phenomena, and constitutes the condition of possibility for their appearance. Within it, natural organisms are shown to be mutually dependent and interconnected: «Everything that exists is an analogue of all existing things; that is why existence always and at the same time looks to us both separate and interlocked» (HA 12, 368). The naturalist’s task is to identify the morphological connections – the homologies<sup>1</sup> – that point to an analogical principle running through the entirety of nature.

From this arises Goethe’s intuition of explaining natural phenomena starting from an archetypal form, an idea that

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<sup>1</sup> Goethe never used the term ‘homology’. It was not until 1848 when Richard Owen provided a clear definition of the concept, explicitly referring to Goethean morphology: ‘homology’ indicates the formal similarities between natural organisms that reveal a common ancestry, and it differs from ‘analogy’, which instead refers to the functional correspondences between parts of organisms.

accompanies him throughout his entire scientific activity and undergoes a series of conceptual adjustments and terminological variations: from the identification of the *Urgestein* in granite to the insight of the *Urpflanze* at the Botanical Garden of Padua (see HA 11, 60) and the definition of the *Urtier*, there is a shift toward the use of more general concepts such as those of *reine Phänomen* or *Urphänomen*<sup>2</sup>. In all its versions, this concept refers to the living and concrete universal that constitutes the principle of experiential structure through which phenomena appear in their connections, similarities and differences.

In the two essays *The Experiment as Mediator Between Object and Subject* and *Empirical Observation and Science*, Goethe provides us with programmatic guidelines on the morphological method. In the latter text, he outlines the scientist's cognitive process in three stages. Initially, the scientist engages with the empirical phenomenon that every common person is able to perceive in daily experience. However, this phenomenon must be observed scientifically, that is, by suspending the natural attitude where objects are considered in terms of utility or practical needs:

As the human being becomes aware of objects in his environment he will relate them to himself, and rightly so since his fate hinges on whether these objects please or displease him, attract or repel him, help or harm him. This natural way of seeing and judging things seems as easy as it is essential, although it can lead to a thousand errors, often the source of humiliation and bitterness in our life. (HA 13, 10)

However, this does not imply a mere rejection or disqualification of common sense as something inherently untrue. Rather, it is about questioning the apparent obviousness of things – as they habitually appear – in order to bring out the underlying, originary conditions implicit within them. The scientist must examine the object of study

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<sup>2</sup> The version preferred in this writing will be the latter, due to its lesser specificity compared to its variants and its greater pervasiveness compared to *Reine Phänomen*. In this list, one could also include the concept of *Typus* as a model serving as a criterion of comparison that allows for the identification of similarities and differences between species. However, in Goethe, the prototype is mostly of practical use and is merely a tool for the search for the *Urphänomen*: «Hence, an anatomical archetype [*Typus*] will be suggested here, a general picture containing the forms of all animals as potential, one which will guide us to an orderly description of each animal» (WA 13, 172).

without imposing personal interests, «as a neutral, seemingly godlike being he must seek out and examine what is, not what pleases» (HA 13, 10).

Subsequently, the progression from empirical phenomenon to scientific one occurs when the former is observed by different people and under various circumstances through experimentation. Thus, the value of experiment lies in its reproducibility, allowing it to be repeated, varied, and compared with others. Just as phenomena are internally structured and organically interconnected, experiences should not be considered separately, but in relation to one another. For this reason, the experiment always holds only mediated validity, as it constitutes a part of the broader process of scientific knowledge. Its multiplication, diversification and connection with other experiments are not intended to prove or falsify preconceived hypotheses, but rather to uncover natural laws underlying the phenomena.

Finally, the *reine Phänomen* emerges as the «result of all our observations and experiments» (HA 13, 25) functioning as an ideal structure that informs reality and ensures a general mutual coherence among its elements. Through iteration and combination of experiments, the scientist can identify what remains invariant despite changing external conditions, isolating the organizational principle of organisms from the contingent circumstances in which it is operative. Thus, the morphological method accomplishes an eidetic reduction that reveals the essence of natural phenomena<sup>3</sup>. As the presupposition and condition for the appearance of all objects of experience, *Urphänomen* is unobjectifiable and cannot be reduced to any single manifestation. This does not imply that it is the product of philosophical speculation or is separate from sensible phenomena; rather, it is glimpsed and intuited in their connection and serialization: «It can never be isolated, appearing as it does in a constant succession of forms. To depict it, the human

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<sup>3</sup> For this reason, some have associated Goethe's morphology more closely with existential phenomenology (see Seamon 1998, 9). The result of the *epoché*, for Goethe, is not so much constituted by consciousness as by the natural world, conceived as an original totality from which human subjectivity itself is derived. In numerous passages, Goethe expresses a polemical stance against philosophical anthropomorphism, which posits the subject and its faculties as an extra-worldly consciousness underlying the constitution of the world. These aspects will be partially clarified in the subsequent sections of the text.

mind gives definition to the empirically variable, excludes the accidental, sets aside the impure, untangles the complicated and even discovers the unknown» (HA 13, 25).

In this sense, morphology is a 'delicate empiricism' (*zarte Empirie*), a participatory form of knowledge based on the unity of the observer and the observed, which does not impose anything from the outside, but lets nature speak without indiscreetly interposing its own voice, «There is a delicate form of empiricism which enters into the closest union with its object and is therefore transformed into an actual theory» (HA 12, 435). By closely following nature in its variety and by immersing in its process, the morphologist enables the principle of order to emerge from it. Only in this way does morphology rise to the level of 'objective thought' (*gegenständliches Denken*) that means «that my thinking is not separate from objects; that the elements of the object, the perceptions of the object, flow into my thinking and are fully permeated by it; that my perception itself is a thinking, and my thinking a perception» (HA 13, 37). This represents a realistic epistemology – though not a naive one – in which Goethe, like Kant, is fully aware of the role of the subject in knowledge. However, unlike Kant and more in line with phenomenology, he believes it is possible to grasp the objective essence of the phenomenon through an a priori intentionality between subject and object<sup>4</sup>. In the light of this interpenetration between observation and theory, it can be understood Goethe's rejection of any technical instrument or artificial method that would alter the direct observation of phenomena:

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<sup>4</sup> Goethe feels the need to go beyond Kantian philosophy, and specifically beyond the dualism between the self and the external world: «Kant's *Critique of Pure Reason* had long since appeared, but it lay entirely beyond my ken. I heard a few discussions of the work, however, and I could see that an old issue was being revived: i.e., what role do we ourselves play in our intellectual life, and what part is played by the external world. I had never separated the two, and when I philosophized about things in my own way I did so with unconscious naiveté» (HA 13, 26).

The human being, insofar as he is using his healthy senses, is the greatest and most exact 'physical', i.e. scientific apparatus that can be imagined, and this, precisely, is the most disastrous aspect of modern physics: that experiments have been, as it were, segregated from the human being and that nature is to be recognized only by the evidence of artificial instruments and in this way limits what nature wants to achieve and prove. (HA 8, 473; trans. by the author)

There is no gap between human knowledge and nature that must be bridged through a *medium* extrinsic to the experience itself. Explicitly referring to Kant<sup>5</sup> – who denied the possibility of such knowledge for human beings – Goethe speaks of an intuitive judgment (*anschauende Urteilskraft*; see HA 13, 30) capable of seeing the *Urphänomen*. This is a faculty that requires not only the eyes of the body but also the eyes of the spirit (*Auge des Geistes*): «there is a difference between seeing and seeing; [...] intellectual eye [*Auge des Geistes*] must work in constant and spirited harmony with the bodily eye, for otherwise the scholar might run the risk of looking and yet overlooking» (WA II 6, 156). The eyes of the mind intuit the supersensible *eidos* in the sensible, or more precisely in the connections between phenomena (*Zusammenhang der Erscheinungen*). In other words, they make visible the experiential structure that already stands in view, that lies before our eyes in what we ordinarily see, yet often overlooked for its familiarity. The *Urphänomen* is that manifest secret (*offenbares Geheimnis*), invisible to the mere retinal gaze, which reveals itself to the attentive morphologist, who is capable of «listening to Nature to overhear the secret of her process, so that we neither frighten her

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<sup>5</sup> In this text, the confrontation between Goethe and Kant's *Critique of Judgment* takes place. Unlike his view of the *First Critique*, Goethe's relationship with the *Third Critique* is more complex: «Then the Critique of Judgment fell into my hands, and with this book a wonderful period arrived in, my life. Here I found my most disparate interests brought together; products of art and nature were dealt with alike, esthetic and teleological judgment illuminated one another. I did not always agree with the author's way of thinking, and occasionally something seemed to be missing, but the main ideas in the book were completely analogous to my earlier work and thought. The inner life of nature and art, their respective effects as they work from within all this came to clear expression in the book» (HA 13, 27). However, in the essay *Judgment through intuitive perception* Goethe is explicit in theorizing the possibility of an objective science of organic nature one that does not require a principle of purposiveness as a regulative guide for ordering nature, but is instead capable of proceeding from the synthetic universal from the intuition of the whole to the parts.

off with coercive imperatives, nor allow her whims to divert us from our goal» (HA 13, 37).

## 2. The *Bildung* of nature and scientific knowledge

Goethean morphology has thus far demonstrated its phenomenological nature, seeking to present itself as a rigorous science of the appearance of natural phenomena. Since its subject is living and in motion, any attempt to draw lines of demarcation, dissect organisms into parts or classify them into fixed species or genera may result a futile and even harmful exercise:

These [analytical] attempts at division also produce many adverse effects when carried to an extreme. To be sure, what is alive can be dissected into its component parts, but from these parts it will be impossible to restore it and bring it back to life. [...] The Germans have a word for the complex of existence presented by a physical organism: *Gestalt*. With this expression they exclude what is changeable and assume that an interrelated whole is identified, defined, and fixed in character. But if we look at all these *Gestalten*, especially the organic ones, we will discover that nothing in them is permanent, nothing is at rest or defined-everything is in a flux of continual motion. This is why German frequently and fittingly makes use of the word *Bildung* [formation] to describe the end product and what is in process of production as well. (HA 13, 55)

Goethe prefers the concept of *Bildung* over that of *Gestalt* because, in the continuous flow of nature, there are no discrete points or clear-cut determinations. Thus, morphology can be a «theory of form [*Gestalt*]» if and only if it is at the same time a «theory of formation [*Bildung*]» (HA, 13, 124), that is, of the process of formation and self-differentiation of the *Urphänomen* in the diversity of its manifestations. This formative movement is, therefore, essential and immanent to organisms and ontologically prior to the fixity of individual natural forms, in the sense that these forms appear as separate only when detached from the continuous becoming that constitutes them: the static image is always abstract, while only what is flowing and alive is concrete and real (see Brady 1977). This is, after all, the premise behind *The Metamorphosis of Plants*, where Goethe describes the different stages of a plant's development as homologous, meaning as variations of a dynamic and mobile structure identified in the leaf. The model is neither reducible to a single leaf nor identifiable as a general concept derived through generalization of common leaf properties; it is, instead, «the true Proteus who can hide or reveal himself in all

vegetal forms» (HA 11, 375) leading the poet to declare that «everything is leaf».

In the opening of *The Enterprise Justified*, Goethe uses the term *Bildung* in reference to man in his relationship with nature:

When in the exercise of his powers of observation man undertakes to confront the world of nature, he will at first experience a tremendous compulsion to bring what he finds there under his control. Before long, however, these objects will thrust themselves upon him with such force that he, in turn, must feel the obligation to acknowledge their power and pay homage to their effects. When this mutual interaction becomes evident he will make a discovery which, in a double sense, is limitless; among the objects he will find: many different forms of existence and modes of change, a variety of relationships livingly interwoven; in himself, on the other hand, a potential for infinite growth [*Bildung*] through constant adaptation of his sensibilities and judgment to new ways of acquiring knowledge, and responding with action. (HA 13, 53)

As much as the knowing subject tries to subordinate nature by imposing its own schemes, nature, in its overwhelming presence, compels man to be open to receiving and recognizing its laws. Thus, two infinite and mutually determined movements take shape: the first is that of nature in its ceaseless becoming and in the infinity of relations it weaves within itself; the second is that of human consciousness, in its *Bildung*, in its capacity to cultivate new ways of seeing and knowledge and to follow nature in its further developments, «the human being knows himself only insofar as he knows the world; he perceives the world only in himself, and himself only in the world. Every new object, clearly seen, opens up a new organ of perception in us» (HA 13, 38). Only by establishing this dynamic and metamorphic link with its object, does morphological knowledge prove adequate.

In this cognitive process, the *Urphänomen* and sensory experience establish a polarized relationship that translates into a bidirectional movement between the two terms. The *Urphänomen* expresses both the a priori structure through which phenomena manifest to human consciousness and the synthetic outcome of observing the reciprocal connections among the phenomena themselves:

We call these phenomena archetypal phenomena because nothing higher manifests itself in the world; such phenomena, on the other hand, make it possible for us to descend, just as we ascended, by



going step by step from the archetypal phenomena to the most mundane occurrence in our daily experience. (HA 13, 367)

The compossibility of an ascent from multiplicity to unity and a descent from unity to multiplicity indeed implies the correlation between the two terms, but not their fusion: they constitute two poles that define the two simultaneous<sup>6</sup>, complementary and inverse directions of metamorphosis. In the essay *Polarity*, Goethe writes: «And thus the particular always leads us to the general, the general to the particular. The two combine their effects in every observation, in every discourse» (WA II, 11, 164). The universal and the particular appear through one another, so that the *Urphänomen* is both an a priori condition and an a posteriori synthesis in an infinite process of singularisation and universalisation in which it must be grasped 'in' and 'from' sensory experience.

Some Goethean scholars have inferred from the open and never definitive nature of the *Urphänomen* its predominantly – if not exclusively – methodological character, excluding any ontological consistency<sup>7</sup>. In my opinion, this determination, far from proving

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<sup>6</sup>About simultaneity, in a fragmentary essay *On Organic Formation in General (Über organische Bildung überhaupt)*, Goethe describes these two movements in the following terms: «General simultaneous metamorphosis: the comparison of observed animal species. Special simultaneous metamorphosis: the foundation of a rational knowledge of more complete animals» (WA II 13, 215; trans. by the author). It is interesting that Goethe uses the seemingly paradoxical expression 'simultaneous metamorphosis'. This refers to a bidirectional movement that is both ideal and ontological and not ontic. It does not indicate either a chronological sequence – as if one term came before the other – or a spatial movement – from one point to another – but rather the correlative and dynamic relationship of reciprocal determination between *Urphänomen*-experience, and experience-*Urphänomen*.

<sup>7</sup> The *Urphänomen* has frequently been interpreted within the framework of conjectural or hypothetical knowledge. However, it is essential to address Goethe's stance on hypotheses. While he acknowledges the theoretical nature of observation, stating that «a false hypothesis is better than none at all» (HA 13, 51). Goethe does not consider the *Urphänomen* merely as one hypothesis among others. Rather, for him, hypotheses hold a primarily pragmatic and instrumental role, enabling the observation of phenomena from multiple perspectives. Nevertheless, their excessive or unconscious use can be misleading. In *The Experiment as Mediator Between Object and Subject*, Goethe cautions against the premature application of hypotheses to explain natural phenomena and the

the *Urphänomen's* purely hypothetical-heuristic validity, confirms the diachronic-temporal essence of the relationship between morphological knowledge and its object, ontology and epistemology: «we, if we wish to acquire a living perception of nature, must remain mobile and flexible, following the example that nature itself sets» (HA 13, 56). Morphology is both a descriptive and eidetic science and cannot achieve the exact results of mathematics or physics because it does not deal with purely ideal, timeless objects detached from concrete reality. Husserl makes similar observations regarding the status of transcendental phenomenology, comparing it to the descriptions of the naturalist morphologist:

The geometer is not interested in *de facto* sensuously intuitable shapes, as the descriptive natural scientist is. He does not, like the latter, fashion morphological concepts of vague configurational types which are directly seized upon sensuous intuition and which, in their vagueness, become conceptually and terminologically fixed. The vagueness of such concepts, the circumstance that their spheres of application are fluid, does not make them defective; for in the spheres of knowledge where they are the only legitimate concepts. If the aim is to give appropriate conceptual expression to the intuitionally given essential characteristics of intuitionally given physical things, that means precisely that the latter must be taken as they are given. And they are given precisely as fluid; and typical essences can become seized upon as exemplified in them only in immediately analytic eidetic intuition. (HUA III, 170)

The *Urphänomen* can be understood, in a Husserlian sense, as the fluent essence of natural phenomena, which cannot be determined unambiguously like mathematical idealities, but remains characterized by a certain degree of vagueness and indeterminateness.

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selective use of data to support them. By contrast, the *Urphänomen* represents a higher-order experience emerging directly from nature, transcending mere hypothesis: «It is likewise possible to support a hypothesis or theory by arranging individual experiments like arguments and offering proofs which bedazzle us to some degree. But those who wish to be honest with themselves and others will try by careful development of individual experiments to evolve empirical evidence of the higher sort. [...] The other method which tries to prove assertions by using isolated experiments like arguments often reaches its conclusions furtively or leaves them completely in doubt» (HA 13, 19-20).

### 3. The anomaly's *Umbildung*

The introduction of the theme of 'anomaly' might come as a surprise in the unfolding of the discourse. Yet, the unexpected nature of this thematic insertion is essential to turn the morphological method toward further implications and developments. In this regard, it is necessary to briefly mention the importance of the teratological subject, which recurs in the works of various naturalists between the 1700s and the mid-1800s – Bonnet, Diderot, Maupertuis, Buffon, Cuvier, Etienne Geoffroy Saint-Hilaire, and his son Isidore (see Mazzocut-Mis 2021). It was the Geoffroy Saint-Hilaires, in fact, who, by the mid-19th century, asserted that through the morphological method, the indefinite variety of animal forms, especially monstrous ones, could be explained in light of an ideal structure capable of accounting for any elementary morphological anomaly. Goethe expressed a similar view, particularly with respect to the famous quarrel between Cuvier and Etienne Geoffroy Saint-Hilaire, which took place at the Académie des Sciences in Paris in 1830:

It is worth noting here that the naturalists who have followed this path [of reintegrating presumed anomalies into the universality of the rule] are the first to have understood the power of law and rule. When one studies only the normal state of beings, one becomes convinced that they must be as they are, and that they have always been stationary and will remain so forever. But if we observe deviations, anomalies, monstrosities, we quickly recognize that the law is fixed and unchanging, yet also alive; that beings can transform [*umbilden*] to the point of deformity within the boundaries it has set, while still acknowledging the invincible power of the law, which holds them with a firm and steady hand. (HA 13, 233-234; trans. by the author)

The examination of deformed, monstrous, abnormal specimens is crucial to determining the boundaries of transformation (*Umbildung*) of the natural organism. Morphology fulfills its function «to include the principles of structured form and the formation and transformation of organic bodies» (HA 13, 124) by taking anomaly into account as a borderline case or an extreme expression of the natural law. Thus, in *The Metamorphosis of Plants*, Goethe distinguished between different types of metamorphosis:

Regular metamorphosis may also be called progressive metamorphosis: it can be seen to work step by step from the first seed leaves to the last formation of the fruit. [...] Irregular metamorphosis might also be called retrogressive metamorphosis.

In the previous case nature pressed forward to her great goal, but here it takes one or more steps backward. [...] We will, however, leave aside the third metamorphosis, caused accidentally and from without (especially by insects). It could divert us from the simple path we have to follow, and confuse our purpose. (HA 13, 64-65)

The first type of metamorphosis represents the regular and periodic development of the plant across six stages (cotyledons, leaf, sepals, corolla, stamens, and fruit). The second type of metamorphosis, which includes phenomena of regression and arrest, reveals how the morphological law does not mechanically determine the plant's development. Instead, it exhibits, in the reversible transition from one organ to another, the transformation of a single archetypal form that takes on different external appearances at each stage. Lastly, Goethe dismisses the discussion of accidental metamorphosis since – as it is produced by external agents such as insect pollination or weather conditions – it could detract from the original purpose of the treatise, which is to describe the natural metamorphosis of plant organisms, demonstrating how they contain within themselves the principle of movement and that this movement itself reveals their essence, namely the *Urphänomen*.

Goethe is not interested in anomalous cases for their curious or unusual nature, but they become relevant when examined in relation, even negatively, to the formative rule: «Our observations of this [irregular] metamorphosis will allow us to discover what is hidden in regular metamorphosis, to see clearly what we can only infer in regular metamorphosis» (HA 13, 64). Goethe asserts that irregular metamorphosis reveals what could only be supposed from the observation of regular metamorphosis. It has already been noted that the *Urphänomen* is characterized by a certain degree of fuzziness, such that it's never defined once for all and it's never fully manifested in the experience. Thus, while it informs the appearance of actual phenomena, it simultaneously exhibits the absence of purely possible phenomena that can be deduced from it, even if only in a simple assumption:

The archetypal plant shall be the most marvelous creature in the world, and nature herself shall envy me for it. With this model and the key to it one can then invent plants *ad infinitum* that must be consistent, i.e. that could exist even if they do not in fact, and are not just picturesque or fanciful shadows and shows, but have instead an inner truth and necessity. (HA XI, 323)

The possibilities prefigured are not mere empty possibilities but are in some way already shaped by the concrete investment of *Urphänomen* in actual experience. Husserl seems to draw from these ideas when he describes the horizons of our experience as a indeterminateness determinable:

The horizons are 'predelineated' potentialities. [...] The predelineation itself, to be sure, is at all times imperfect; yet, with its indeterminateness it has a determinate structure. For example: the die leaves open a great variety of things pertaining to the unseen faces; yet it is already 'construed' in advance as a die, in particular as colored, rough, and the like, though each of these determinations always leaves further particulars open. This leaving open, prior to further determining (which perhaps never takes place), is a moment included in given consciousness itself; it is precisely what makes up the 'horizon'. (HUA I, 82-83)

The phenomenal horizon never fully manifests itself to consciousness, leaving open to consciousness an unprogrammed future, prefiguring natural exemplars not yet in existence, but which, upon their appearance, can be traced back to the determining and determined structure of the horizon itself.

Thus, if the morphological rule already outlines the possibility of the other e new forms, what is the relationship between the regular and the irregular? What remains of the anomalous if the irregular itself is ultimately anticipated by the regular, even if not in a predetermined way? Does their profound difference not, in the final analysis, become lost? In his essay *Later studies and collections*, Goethe offers the following reflections:

In the plant world, what is completely normal is correctly called healthy and physiologically pure. But on the other hand, the abnormal should not necessarily be regarded as diseased or pathological. At the most, we might list the monstrous in that column. In many cases, therefore, we do ill to speak of 'failures' and 'deficiencies', which would indicate that something is missing, for it might just as well be a case of superfluity, or of development occurring without balance or contrary to it. [...] However, since both are closely related, and since the same spirit animates the regular and the irregular as well, an oscillation between the normal and the abnormal occurs, formation [*Bildung*] and transformation [*Umbildung*] forever alternating, so that the abnormal seems to become normal, and the normal abnormal. (HA II 6, 173-174)

Abnormal phenomena remain as much a natural product as normal specimens and are not merely natural errors to be regarded in the

same way as ‘diseased’ or ‘pathological’. Goethe here seems to simply suggest that, in the alternation between the formation and transformation of natural organisms, the distinction between the notions of normal and abnormal becomes blurred; but immediately after he adds:

[At the appearance of abnormal phenomena] Nature oversteps the boundary she has set, but attains thereby a different kind of perfection; thus we would do well to defer the use of negative terminology as long as possible. The ancients said *teras*, *prodigium*, *monstrum*, a miracle sign, fraught with meaning, worthy of all attention. (WA II 6, 174)

The anomalous phenomenon is neither a concrete instance of the rule nor a falsifier of it, rather, it constitutes a privileged glimpse through which the rule reveals itself more clearly. In its unexpected and unforeseen nature, it discloses natural potentialities that had, until that moment, remained unexpressed by *Urphänomen*, not anticipated within the horizon of experience. Goethe’s concept of anomaly can be reconsidered within the framework of a phenomenology of the event:

Literally eventum, that which comes about [advient], it presents something irreducibly excessive with respect to every factum, that is (etymologically), with respect to everything that is ‘already made [tout fait]’, brought about, and finished; this excess comes from the cargo of possibilities held in reserve by every genuine event and that makes these events something that upends the world by reconfiguring it. In this respect, an event does not belong to a fact’s actuality but to its possibility, or better, to the possibility of making possible, to possibilization. (Romano 1998, 61)

It is more than a mere possible fact, that is, something that could have happened as not. The monstrosity – in the Latin sense of *monstruum* – of anomalous cases resides in the reserve of possibilities that their emergence unleashes, which the observer must be able to perceive with wonder. Compared to mere facts, these phenomena carry an excess of meaning that illuminates the natural world rather than being illuminated by it, to the extent that upon their appearance «nature oversteps the boundary she has set, but attains thereby a different kind of perfection». Here it becomes clear that, like *Bildung*, *Umbildung* expresses an essential movement of transformation of the *Urphänomen* itself capable not only of self-differentiation into individual phenomena, but also of trans-differentiation into a new regularity.

This does not mean that nature embodies a mere hypothetical normativity that constantly calls contingency into question: «Nature operates with greatest freedom in this realm, she nevertheless may not depart from the fundamental laws of her being» (WA II 6, 174). An intangible normative core persists in nature, meaning that not everything is possible. However, the anomaly traces new paths, enriching the *Urphänomen* and revealing its essentially plastic nature. The term 'plasticity' (*Plastizität*), coined by Goethe<sup>8</sup>, indicates, on the one hand, nature's dual capacity – both active and passive – of receiving and giving form, and on the other, its ability to reverse course, that is, to deviate from the programmed path and to annul the initial determination without deflagrating,

the idea of metamorphosis deserves great reverence, but it is also a most dangerous gift from above. It leads to formlessness; it destroys knowledge, dissolves it. It is like the *vis centrifuga*, and would be lost in the infinite if it had no counterweight; here I mean the drive for specific character, the stubborn persistence of things which have finally attained reality. This is a *vis centripeta* which remains basically untouched by any external factor. (HA 13, 35)

Were it not counterbalanced by a force acting as a counterweight, namely the *vis centripeta* or *Bildung* – the instinct for specification that maintains a center of regularity and uniformity, untouched by any externality – the *vis centripeta* or *Umbildung*, would sweep away all persistent forms and obliterate knowledge. It is, after all, the reciprocal action of these two forces, formation and

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<sup>8</sup> The term *Plastizität* was introduced into the cultural debate by Goethe in the artistic realm, in relation to the plastic arts, which deal with the aesthetic shaping of matter. In contemporary philosophical context has been rescued by Catherine Malabou who distinguishes three different meanings of the term: «'Plastic', as an adjective, means two things: on the one hand, to be 'susceptible to changes of form' or malleable (clay is a 'plastic' material); and on the other hand, 'having the power to bestow form, the power to mould', as in the expressions, 'plastic surgeon' and 'plastic arts'. [...] Plasticity's range of meanings is not yet exhausted, and it continues to evolve with and in the language. Plastic material is a synthetic material which can take on different shapes and properties according to the functions intended. 'Plastic' on its own is an explosive material with a nitroglycerine and nitrocellulose base that can set off violent detonations. The plasticity of the word itself draws it to extremes, both to those concrete shapes in which form is crystallised (sculpture) and to the annihilation of all forms (the bomb)» (Malabou 1996, 19-21).

transformation, differentiation and trans-differentiation, inheritance and the creation of a new form, that the anomalous event holds together and makes flash simultaneously. Their alternation marks the temporality intrinsic to the *Urphänomen*: the coexistence of the instance of preservation, the retention of past form, and that of protension, of openness not only towards what is merely anticipated as possible, but also towards «a third thing, something new, higher, unexpected» (WA II, 11, 165).

However, the simultaneity of these two forces, of these two temporal instances, cannot be represented within any scientific system,

natural system: a contradictory expression. Nature has no system; she has – she is – life and development from an unknown center toward an unknowable periphery. Thus observation of nature is limitless, whether we make distinctions among the least particles or pursue the whole by following the trail far and wide[...]. Since both forces operate at the same time, any didactic description would have to show them simultaneously – which seems impossible. (HA 13, 35)

It is precisely these reflections that led Goethe, in the later years of his life, to increasingly emphasize the idea that nature is ultimately impenetrable (see Merzari 2024). While the shift is evident, it is not, however, a sudden reversal of perspective. Rather, the change should be understood as a greater emphasis on aspects already implicit in Goethe's morphological method, particularly the indeterminateness of the *Urphänomen* as the horizon of our experience, its temporality and its openness to the anomalous event. The natural world presents an excess of meaning and possibility that surpasses any present understanding by human beings, such that, at the very moment it appears, it conceals itself and withdraws into its own freedom: «Nature has managed to keep enough freedom so as to prevent us from getting at it radically with our knowledge and science or actually cornering it » (HA 12, 399).

In conclusion, the concept of 'anomaly' reveals a proper metamorphic dimension in Goethean morphology, transforming from a mere biological notion denoting irregular phenomena into a natural instance that renders compossible the centripetal and centrifugal forces, *Bildung* and *Umbildung*. In other words, it prevents the polar movement between *Urphänomen* and sensory experience from being a round trip that ends at the point where it began: its sensible occurrence modifies and complicates the



*Urphänomen*, eliciting still unexpressed possibilities and opening new horizons of experience. In other terms, anomaly introduces into this bidirectional relationship a non-dialectical element that prevents this movement from resolving itself, thus allowing nature and morphological knowledge to advance infinitely.

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