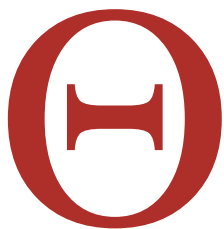


8, 2020

ISSN 2284-2918



Thaumàzein

Θαυμάζειν

RIVISTA DI FILOSOFIA

**MORPHOLOGY, PLASTICITY, AND
TRANSFORMATION BETWEEN
PHILOSOPHY AND BIOLOGY**



***Thaumàzein* – Rivista di Filosofia**

ISSN: 2284-2918

Thaumàzein is an open-access journal of philosophy and uses **double-blind peer review** in order to ensure and to improve the quality of philosophical discussion. Thaumàzein promotes special issues on topics of particular relevance in the philosophical debates. Founded in 2012, it is an international journal of annual publication.

DOI® NUMBER

Each paper published in *Thaumàzein* is assigned a DOI® number.

Cover image: Photo by William Warby on Unsplash

COMITATO SCIENTIFICO

DAMIR BARBARIĆ – SVEUČILIŠTE U ZAGREBU (UNIVERSITY OF ZAGREB)
MIRKO DI BERNARDO – UNIVERSITÀ “TOR VERGATA”, ROMA
MARCELO BOERI – PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE, SANTIAGO
JOHN CUTTING – INSTITUTE OF PSYCHIATRY, LONDON
ANTONIO DA RE – UNIVERSITÀ DI PADOVA
ROBERTA DE MONTICELLI – UNIVERSITÀ S. RAFFAELE, MILANO
ANNA DONISE – UNIVERSITÀ DI NAPOLI
ARIANNA FERMANI – UNIVERSITÀ DI MACERATA
CINZIA FERRINI – UNIVERSITÀ DI TRIESTE
ELIO FRANZINI – UNIVERSITÀ DEGLI STUDI DI MILANO
ALESSANDRA FUSSI – UNIVERSITÀ DI FIRENZE
SHAUN GALLAGHER – UNIVERSITY OF MEMPHIS, USA
ROBERTA GUCCINELLI – UNIVERSITÀ S. RAFFAELE, MILANO
CHRISTOPH HORN – UNIVERSITÄT BONN
JOEL KRUEGER – UNIVERSITY OF EXETER
ROBERTA LANFREDINI – UNIVERSITÀ DI FIRENZE
FEDERICO LEONI – UNIVERSITÀ DI VERONA
ENRICA LISCIANI PETRINI – UNIVERSITÀ DI SALERNO
MAURO MAGATTI – UNIVERSITÀ CATTOLICA, MILANO
PAOLO AUGUSTO MASULLO – UNIVERSITÀ DELLA BASILICATA, POTENZA
MAURIZIO MIGLIORI – UNIVERSITÀ DI MACERATA
LUIGINA MORTARI – UNIVERSITÀ DI VERONA
LINDA NAPOLITANO – UNIVERSITÀ DI VERONA
RICCARDO PANATTONI – UNIVERSITÀ DI VERONA
CLAUDIO PAOLUCCI – UNIVERSITÀ DI BOLOGNA
ELENA PULCINI – UNIVERSITÀ DI FIRENZE
MASSIMO RECALCATI – UNIVERSITÀ DI PAVIA
ROCCO RONCHI – UNIVERSITÀ DELL’AQUILA
ALESSANDRO STAVRU – UNIVERSITÀ DI VERONA
HOLMER STEINFATH – UNIVERSITÄT GÖTTINGEN
SALVATORE TEDESCO – UNIVERSITÀ DI PALERMO
ÍNGRID VENDRELL FERRAN – FREIE UNIVERSITÄT, BERLIN
DAN ZAHAVI – KØBENHAVNS UNIVERSITET (UNIVERSITY OF COPENHAGEN)
WEI ZHANG – 中山大学 (SUN YAT-SEN UNIVERSITY, GUANGZHOU, CHINA)

Thaumàzein – 8, 2020

**Morphology, Plasticity, and Transformation
between Philosophy and Biology**

*Edited by
Guido Cusinato, Rosa Maria Lupo,
Alessandro Minelli, Salvatore Tedesco*

© 2020 *Thaumàzein*
10.13136/thau.vi8i



[Creative Commons 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/)

CONTENTS

Editors' Introduction: Morphology, Organism, Evolution 7

PART I

THE NEXUS BETWEEN MORPHOLOGY AND EVOLUTION

ALESSANDRO MINELLI

*Living Forms in Becoming Between Old Constraints and
Unexpected Opportunities of Change* 22

VALERIA MAGGIORE

*Fantastic Morphologies:
Animal form between Mythology and Evo-Devo* 39

GREGORIO TENTI

*The Living Difference.
Morphological Issues in Ruyer, Simondon and Deleuze* 59

MATHILDE TAHAR

*The "History" of Biodiversity.
A Bergsonian Look at the Theory of Evolution* 89

PART II

MORPHOLOGY, PLASTICITY, CONTINGENCY, AND FREEDOM

PIER ALBERTO PORCEDDU CILIONE

Beyond the arché. Aristotle, Goethe, Heidegger, Schürmann 107

MARKUS OPHÄLDERS

Geniale Übersetzungen. Goethe – Benjamin – Spengler 127

ROSA MARIA LUPO <i>Beyond the Eidetics of Living Beings: Contingency, Plasticity, Individuality</i>	145
SALVATORE TEDESCO <i>Meta-Identität / Unstable identities: Towards a Plastic Morphology</i>	172
ANDREA ZHOK <i>Identity, Freedom, Emergence. A Reflection on the Meaning of Action.</i>	188
MIRKO DI BERNARDO <i>Form, Function and Value in the Emerging and Self-Organizing Processes of the Natural Evolution</i>	204
PART III	
UEXKÜLL'S CONCEPTS OF ORGANISM AND <i>UMWELT</i>	
GUIDO CUSINATO <i>Body Enactivism and Primordial Affectivity. Max Scheler and Jakob von Uexküll's Aporia</i>	226
CARLO BRENTARI <i>Kantian Monads in a Platonic World. Some Remarks on the Philosophical Background of Jakob von Uexküll's Umweltlehre</i>	246
SPYRIDON A. KOUTROUFINIS <i>Organism, Self, Umwelt: A New Approach to Organismic Individuality</i>	260

PIER ALBERTO PORCEDDU CILIONE

BEYOND THE *ARCHÉ*. ARISTOTLE,
GOETHE, HEIDEGGER, SCHÜRMAN

When, in 2013, Andrea Pinotti and Salvatore Tedesco published the volume *Estetica e Scienze della vita* [*Aesthetics and Life Sciences*], they contributed to revitalizing, within the Italian philosophical debate, the link that binds aesthetic reflection to some of the most debated issues of contemporary theoretical biology. What is the central theme of this disciplinary intertwining? Why, in general, is it possible to imagine a connection between these two disciplines? At the heart of this project is the possibility of rethinking the concept of nature – and our relationship with it –, trying to measure in what way biological reflection on life may integrate useful categories elaborated by aesthetics. Intertwining aesthetic reflection and theoretical biology means attempting to think of “nature” beyond the project of its integral quantification, mathematization and computability, typical of modern and contemporary sciences, but it is also a question of rejoining the phenomenological approach, through which it is possible to maintain the connection with the specific qualities of its phenomena. Only in this way can one attempt to understand nature “from within”, “*desde dentro*”, avoiding forcing the pragmatic and technologically oriented needs of our cognitive relationship with nature, typical of this epistemic phase of the hard sciences.

However, the contribution of aesthetics should not be thought of as the bearer of a mere “contemplative” and “living” sense of natural “beauty” but must be thought of in the name of the dialectical relationship between “nature” and “art”, between *physis* and *techne* – according to Goethe’s teaching –, and also as a trace of the metaphysical premises that gave rise to the possibility of that relationship. As Pinotti and Tedesco write, «Goethe was ready to see at work in the world of phenomena (which would then rigidly divide the sciences of nature and those of the spirit) a unitary game of forces» [Pinotti & Tedesco 2013,

9].¹ Goethe becomes the indispensable author for this recognition, insofar as he has seen, in the world's phenomena, a plan of creation, transformation, translation, immanent in a "*physis*" conceived as totality, within which the difference between "natural" and "artistic", between "biological" and "historical" dimensions, becomes problematic or, at least, no longer relevant, in order to think of the metamorphic generativity of Totality.

What, then, is morphology? How should it be thought of, with respect to this conceptual background?² «Born in the biological field with Goethe's studies on the metamorphosis of plants, morphology, more than a discipline is a field of knowledge in which areas of study gravitate ranging from the morphogenesis of the cell to the evolution of living forms; from atomic forms visualization to the form of the elements, to the fields of forces, to the shape of galaxies and of the entire universe» [Di Napoli 2011, xiii].³ It is therefore the universe, Nature, Totality, *physis* – and not merely the form –, the true object of morphology. Morphology describes nature *as* form, as *becoming* of forms. Since *physis*, from a Goethian point of view, is a creating totality, quivering with life, incessantly crossed by processes of *Bildung*, *Gestaltung*, *Umgestaltung*, the theory of this *physis*, that is a Goethian *physiká*, will be a theory of how – and possibly why – this «unitary play of forces» produces forms. It is in this strong sense that Goethe's morphological project must be understood. A poetically relevant example of this incessantly creating and

¹ «Goethe si disponeva a vedere all'opera nel mondo dei fenomeni (che si sarebbero poi rigidamente spartite le scienze della natura e quelle dello spirito) un gioco unitario di forze».

² For a general overview on the problem of form and morphology, see also Mazzocut-Mis [1995], Mazzocut-Mis [1997], Tedesco [2010] and Vercellone & Tedesco [2020].

³ «Nata in ambito biologico con gli studi di Goethe sulla metamorfosi delle piante, la morfologia più che una disciplina è un campo del sapere in cui gravitano ambiti di studio che vanno dalla morfogenesi della cellula all'evoluzione delle forme viventi; dalla visualizzazione della forma dell'atomo, alla forma degli elementi, ai campi di forze, alla forma delle galassie e dell'universo intero».

transforming totality is represented by the poem *Eins und Alles*, where *physis* is crossed by an eternally operating “doing” (*Tun*), and this – in the strict sense – is “life”, *Leben*:

*Und umzuschaffen das Geschaffne,
Damit sich's nicht zum Starren waffne,
Wirkt ewiges, lebendiges Tun.
Und was nicht war, nun will es werden,
Zu reinen Sonnen, farbigen Erden,
In keinem Falle darf es ruhn.*

*Es soll sich regen, schaffend handeln,
Erst sich gestalten, dann verwandeln;
Nur scheinbar steht's Momente still.
Das Ewige regt sich fort in allen:
Denn alles muß in Nichts zerfallen,
Wenn es im Sein beharren will.
[Goethe 2000a, 368, vv. 13-24]*

Here nature has been thought of as a totality in an eternal creative motion, where what has a “figure” is nothing but the “moment” of an apparent stasis. An invisible and eternal *arché* (*Das Ewige*) exists – and expresses itself – in all that exists. We do not understand much about Goethe’s morphological project, if we do not think about it in the context of this theory of wholeness. The form is not only valid as a metamorphic profile to be read within a simple biological transformation of the entity or of the species, but it must be understood as a moment of quiescence, a resting point, of a totality that incessantly reshapes itself. The secret of Goethian morphology is to pose the problem of the relationship between the form of the entity (the “foreground” form) and the total and eternal morphological matrix of Being (the “background” form). As Giuseppe Di Napoli writes in an exemplary way, «the form is what allows the distinction and therefore also the separation of being from nothing, from the isotropic background, from an extension of intangible space: it is the interface between being and the indistinct background of non-being» [Di Napoli 2011, 3].⁴

⁴ «La forma è ciò che consente la distinzione e quindi anche la separazione dell’ente dal niente, dallo sfondo isotropo, da un’estensione di spazio intangibile: è l’interfac-

In this sense, Goethean morphology should not be read as a mere descriptive apparatus of the “nature” of form but as a theory of the genetic processes inscribed in the totality of *physis*, the formal “detachment” of the single entity from the continuity of an indistinct background. The «unitary play of forces» which are at work in the quivering totality of nature’s life produces forms, but this production of forms coincides with the very life of the eternally creating Totality. Life produces form, and form produces life. As Di Napoli points out, «only what has a form lives. The form, therefore, is itself alive, as it is what allows life» [Di Napoli 2011, xvi].⁵ Therefore, it is starting from the forms that human intelligence can understand how, in general, “harmony” of forms, morphological connection and morphogenetic translation within nature is given. What is the fundamental place where the human being handles, understands, studies the form as such?

There is no doubt that for Goethe, and for the tradition that starts from his aesthetic teaching, this place is art, *Kunst*. Referring to Paul Klee, by the way a very attentive reader of Goethe’s writings, Di Napoli writes that «the artist, states Klee, must place himself in the point where things originate, where the *genesis* takes place as *creation*, where the whirling forces generate the original forms and primordial elements common to all beings, men, plants, minerals and all elements» [Di Napoli 2011, xvi].⁶ In a perfectly Aristotelian-Goethean spirit, according to Di Napoli, «the artist does not imitate the forms produced by nature but the genetic process of formation, the morphogenetic principle from which they descend; it does not imitate nature as created, but as *naturans*, as a process of creation» [Di Napoli 2011, xvi].⁷ The Goethean morphological tradition here illustrates how faithful it is to a certain Ar-

cia tra l’essere e l’indistinto sfondo del non-essere».

⁵ «Solo ciò che ha una forma vive. La forma, dunque, è essa stessa viva, in quanto è ciò che consente la vita».

⁶ «L’artista, dice Klee, deve porsi nel punto in cui hanno origine le cose, là dove ha luogo la *genesi* come *creazione*, dove le forze vorticoso generano le forme originarie e primigenie comuni a tutti gli esseri, agli uomini, ai vegetali, ai minerali e a tutti gli elementi».

⁷ «L’artista non imita le forme prodotte dalla natura ma il processo genetico di formazione, il principio morfogenetico da cui discendono; non imita la natura in quanto creato, ma in quanto *naturans*, in quanto processo di creazione».

istotelian suggestion: *physis* – and the “form” of *physis* – can certainly have an *ontological* primacy, but art, technology, has a *gnoseological* primacy. It is *Kunst* that makes us draw on what Karl Blossfeldt (also carefully observed by the “Goethian” Walter Benjamin) would have called the *Urformen der Kunst* – which are nothing more than “close-ups” of natural morphological details.⁸

It is therefore misleading to think of Goethian morphology as a mere theory of form, as a mere contribution to a doctrine of metamorphosis, or as an opportunity for an “aesthetical” re-formulation of biological topics. In Goethe, morphology is given, because the form, the *morphé*, functions as a conceptual *medium* between “nature” and “art”, between *physis* and *téchne*, and only in this connection can we understand what “life”, *Leben*, and form-of-life is.⁹ The dialectical correspondence between nature and artifice, between *physis* and *téchne*, between biological life and form-of-life, between nature and art, represents one of the fundamental oppositions within our philosophical tradition. However, Goethe receives and transforms this “doctrine”, thinking of it as an internal correlative of the eternally working life of Totality. This ambivalence is well described in the quatrain of one of his famous sonnets, with a vaguely autobiographical character:

*Natur und Kunst, sie scheinen sich zu fliehen,
Und haben sich, eh' man es denkt, gefunden;
Der Widerwille ist auch mir verschwunden,
Und beide scheinen gleich mich anzuziehen.*
[Goethe 2000a, 245, vv. 1-4]

It is in this specific context that it is necessary to think about the morphological link between nature and art. Goethean morphology, in the strict sense, is the metamorphic theory of this indistinct totality, where

⁸ See K. Blossfeldt [1928]; W. Benjamin [1929/1972]. See also E. Haeckel [1904].

⁹ For the concept of “form-of-life”, see Agamben [1998]. For these themes, see also Agamben [2003].

the very distinction between nature and art becomes problematic, to the point that it can be eventually suspended or erased. It is from this relationship that the metaphysical basis of morphology must be conceived, since form is the place where the connection between *Natur* and *Kunst*, between *physis* and *téchne* is “decided”, and where their *indistinction* is decided, by reason of a higher Wholeness, whose “life” and whose “forms” demand a higher “theory”. It is in this sense that morphology, by crossing the two domains transversally, is configured as the theoretical place where reflection on art and reflection on biology find their common ground.

Therefore, one of the conceptually most productive intersections between aesthetics and life sciences is that of *form*. Form is the place of Being, in which something acquires the eidetic clipping of its presence and its individuality. The form is therefore an “object” of aesthetics, because it is through the perception and understanding of what has form that the “beautiful connection” between the *body* and the *psyche* is realized. Yet, form is also the place where the living is *realized*, and in the generative space of nature it becomes concretely present. It is to the *morphé* that the possibility for human intelligence to essentially know a “thing” is ascribed, and to understand the meaning of its genesis. Morphology, here, should be understood not only as a general theory of form but also, in a specifically Goethian sense, as a “knowledge” which, problematically suspending the difference between the realm of *physis* and that of *téchne*, opens up the possibility of the enigmatic indistinction between the two realms. The form-of-life and the form-of-art are regional specifications of an absolute morphological knowledge, in which the very distinction between nature and art, between the biological form and the artistic form, between life and the technical object becomes elusive.

In this sense, it can be said that the entire Goethean morphology is deeply indebted to an Aristotelian background. The idea that nature is the “space” of the becoming of form, that a well-formed thing is the place where organic matter assumes the teleologically ordered perspec-

tive of form, and that art represents a sort of “technical” fulfillment of nature are all ideas already traceable in Aristotelian physics. On closer inspection, Aristotelian physics represents neither a theory of matter (*hylologia*) nor an abstract theory of form (*morphologia*): it appears as a theory of the universal transformation, as a theory of the *kinesis* of Being, under an absolute metamorphic perspective, at the heart of which lies the problem of “justification” (*lógon didónai*) and of the “sense” of the transformation of every being. Goethe receives this idea, thinking of morphology not so much as a “static” theory of form, or as a “phenomenology” of natural forms – directly given to the eye of the observer – but rather as a theory of the genetic and formative process of all entities. It is therefore not a *Bild* theory but a *Bildung* theory, it is not a *Gestalt* theory but a *Gestaltung* theory.

The problem is therefore to think of the intrinsically formative and forming dynamics of nature and art, attempting to justify the absolute origin of form, and the teleological culmination that it represents for the entity. The problem that often haunts morphology is not being able to think originally about its connection with ontology and metaphysics. The problem is not to establish descriptively the morphological contour of the forms but rather to establish the “absolute cause” of their presence and configuration. The problem, both Aristotelian and Goethian, is establishing the *kinesis* of the form, its *arché* and its specific becoming. The ontological and metaphysical enigma of form is constituted by its very “presence”, by its very “realization”. The knowledge that metamorphosis needs is therefore an “*archeology*” of form. A question that runs through the entire history of Western philosophical civilization is whether there is a link, in general, between *arché* and *morphé*, how the form should be thought of *as arché* and the *arché as form*. What continues to create problems about form is the difficulty to see it simply from a scientific, descriptive, empirical, experimental point of view. Under this respect, scientific understanding of nature seems unable to *justify* the “absolute why” of the very *presence* of form and its *realization*. By slightly modifying the fundamental metaphysical question, one can ask: *why* is form *given* – in general? *Why* form – and not rather, the shapeless? What the science of life and the sciences of nature hardly manage to deal with is precisely the absolute point of onset of form: one

can describe the structure of a rose from a genetic and informational point of view, but no theory of matter seems to be able to explain why roses exist, and why roses have *that* shape and not another. Any purely deterministic-mechanistic, flat evolutionary or teleological-functionalistic explanation runs the risk of not grasping the “free” character of the form, its “*gift*” character, the inexplicable dehiscence of the form in the heart of the entity.¹⁰ It is in this sense that the connection between morphology and metaphysics must be understood, triangulating it with the indispensable presence of a “pragmatics” and a “poietics” of form, that is the specific “form of doing” (*poiesis*, *Tun*) that art represents. What must be thought of in a theory of transformation, or in Goethian morphology, is the problem of establishing the “absolute beginning” of the form, or rather the absolute *arché* of its genesis.

Why, then, does morphology represent a fundamental knowledge for a “theory” of the entity and its transformative dynamics? The human being seems endowed with the strange ability to intuit the kinetic *arché* of being starting from its form, and therefore go back, with an imaginative effort, to the absolute origin of its transformation. The Aristotelian distinction between “nature” and “art” is based on the connection between *arché*, *kinesis* and *morphé*. But if the difference between *physis* and *téchne* is based on the concept of *arché kinéseos*, we must ask ourselves how well founded is the possibility of distinguishing the two domains, taking literally the Goethian hypothesis that this distinction is neither desirable nor possible.

Aristotle, in the book A of *Physics* reminds us that all entities are *kinoumena*, that is, entities crossed by a transformative principle. All entities are in transformation, and this transformation is *kinesis*, the true object of both *Physics* and *Metaphysics*. In a famous passage from Book B, Aristotle recalls that in the whole circle of beings, it is possible to group things into two realms: on one hand, the φύσει ὄντα, the entities which are determined by φύσις, which are such “by nature”, “by virtue of

¹⁰ In this perspective see also Caillois [1960] and Leghissa [1998].

φύσις”; on the other hand, the “artificial” entities, made “by art”, “ἀπὸ τέχνης”, products of human action, effects of ποιήσις, “ποιούμενα”. At the beginning of Book B, Aristotle makes clear that «τῶν ὄντων τὰ μὲν ἐστὶ φύσει, τὰ δὲ δι’ ἄλλας αἰτίας», («of beings in general, some are “by nature”, others through other causes») [Arist., *Ph.*, B, 1, 192b8]. According to Aristotle, the question of “technicality” or “artificiality” is to be considered immediately in connection with a theory of Nature (it is only with respect to a “natural” generation that one can speak of an “artificial” genesis/production). *Physics*, as the episteme that presides over the conceptualization of the production of Being as such, is at the same time *Metaphysics*. In his analysis of these Aristotelian topics, Heidegger points out that the *physiká* is the supreme thought of the Western world, «wherein Western historical humanity preserves the truth of its relations to beings as a whole and the truth about those beings themselves. In a quite essential sense, meta-physics is “physics”, i.e. knowledge of φύσις (ἐπιστήμη φυσική)» [Heidegger 1939/1998, 185].

How does one distinguish the products of nature from those of art? This is the decisive passage of the Aristotelian argument: «τούτων μὲν γὰρ ἕκαστον ἐν ἑαυτῷ ἀρχὴν ἔχει κινήσεως» («each of them has in itself the *arché* of the *kinesis*») [Arist., *Ph.*, B, 2, 192b13-14]. It is easy to understand that the essential determination of a natural entity must have *within itself* the principle, the command, of its own transformation, the origin and the code of its metamorphic development. An “original command” (*arché*) is embedded in the essence of the natural entity, a point of kinetic insurgency which presides over its “animation”. In this sense, Heidegger writes that «φύσις is the ἀρχή, it is the beginning and disposition of motility and stillness, and precisely of something ‘moved’ that has in itself this ἀρχή» [Heidegger 1939/1998, 191]. He goes on to underline that the «φύσις is ἀρχὴ κινήσεως – the provision that initiates change, in the sense that everything that changes has this provision within it» [Heidegger 1939/1998, 192].

It can therefore be said that the distinction between *physei onta* and *téchne onta* rests on the recognition that the first have *within themselves* the principle, the code, the command, the *incipit* (all senses inscribed in the term *arché*) of their genetic, morphogenetic, metamorphic process; the second, on the other hand, have *outside their essence* the princi-

ple, the code, the command, the *incipit* of their genetic, morphogenetic, metamorphic process. The distinction seems to be close to common sense. But how does human intelligence manage to guess if an entity possesses or does not possess within itself the principle, the morphogenetic and metamorphic command of its *kinesis*, of its transformation? The decisive answer is that that device is constituted by the form. It is through *morphé* that human psyche is able to retrace the genetic, kinetic and metamorphic principle of everything that exists. Not only is there a gnoseological connection between *psyché* and *morphé*, but this connection must also be related to the relationship between *arché* and *kinesis*. *Psyché, morphé, kinesis, arché*: the link between physics/metaphysics and morphology passes through these four terms. Oddly enough, human mind is able to discern the kinetic difference between *physei onta* and *téchne onta* by virtue of form. According to this determination, *physis* is nothing more than the place of an absolute *genesis*, the place where the purity of the *arché* is preserved. As Günter Figal writes in his fundamental text,

The originariness of life first becomes conspicuous in regard to movement. Although what is alive is also moved by something else, the essential thing is that it moves itself. This is reversible; what moves itself appears to be alive, say, the play of the clouds that reconfigures itself into ever new figures, the surge of the sea on the shore, the light on the surface of the water. But this liveliness is borrowed; it remains hidden that the movement derives from something else. The moving force, for example, the wind that drives the clouds on and thereby forms them into figures, recedes with the impression of liveliness. By contrast, something is genuinely alive when it actually moves on its own [*von sich aus*], *from itself* [*von selbst*]. For this “from itself” there is a Greek word: φύσις. One could translate the word with “nature” if the moment of significance that matters here were not precisely lost therein. φύσις indicates an occurrence; translated literally, φύσις is “growth.” Growth occurs always on its own, from itself. It is the essence of what one calls “natural” without hesitation. As this essence, it shows itself in natural things, and, conversely, it is the observation of natural things that discloses the essence that φύσις is [Figal 2010, 308].

The great problem of Aristotelian metaphysics is therefore that of justifying – giving reason – of this “changing” of being, of this transformation of being, in its totality. Form becomes the place where you decide on the “meaning” of universal *kinesis* and its beginning, its origin and its *end*. As Reiner Schürmann points out,

As we have seen, what strikes the mind in the Greek classical age is that there is becoming, and first of all a becoming of which man is the author and master. Both metaphysics and logic derive from the astonishment before what our hands can make out of some material. In Heidegger’s view the guiding meaning in Aristotle’s concept of origin results neither from speculation about being nor from the logic of knowledge, but from the analysis of becoming that affects material things [Schürmann 1987, 99].

The *kinesis* of the entity, the need for changing inscribed in the entity, is empirically revealed by the observation of the entity’s metamorphic “behavior”. (Does the morphological conformation of the species “change”? It is on this point that ancient and modern physics/biology diverge). Yet, the problem of the *arché* of form, its point of onset, its “sense” and its “meaning” remain intact.

That the φύσει ὄντα have an “urge to change” in themselves does not mean that they are grasped in perpetual change. The change to which they have an inborn urge goes back to them, that is, they can be described as changes of *this* φύσει ὄν. The change has its origin in this φύσει ὄν and is also in its course *its* change. Aristotle intends this – as Plato also already does – with the word ἀρχή. ἀρχή is a beginning that remains essential for what begins in it; ἀρχή is a governing beginning that never remains behind, and, in this, is *origin*. For something that moves itself and changes itself the beginning is originary, such that it is itself determined through originariness. φύσις is originariness; everything originary has the essence of φύσις. Change is always movement. As soon as something rests, it does not change but rather remains as it is. Yet, for φύσει ὄντα the “inborn” urge to change remains essential even when they are not in movement [Figal 2010, 309].

What connection is there then between *physis* and *arché*? How is the idea that nature is always the place where the “absolute beginning” of every *kinesis* and every morphogenesis is decided? How should the absolute beginning of form be thought, if form, *physis* and life, thought of at this metaphysical height, do they say “the same”? What exactly does it mean that, as Figal states, «φύσις is originariness»?

Insofar as φύσις is grasped as the determinative beginning of change, it has to do either with material or with form. The former is disregarded; φύσις is not the primary material which underlies everything that has the determinative beginning of movement and change. [...] Something does not count as an artifact when it exists solely in possibility but rather only when it is present in completion (ἐντελέχεια), that is, in its form, and has the εἶδος, that is, the figure or the look, of what it is supposed to be. This is also how it is for what is composed by φύσις: Flesh or also bone does not have its φύσις before it has taken on its identifiable look that helps us determinatively say what flesh and bone is [Figal 2010, 312].

Specifically,

[t]he idea outlined here can only serve to confirm Heidegger’s thesis, according to which Aristotle understands being as “being produced.” What is problematic about this understanding, however, may therefore be shown especially well with reference to it. It is by no means the case that the “on its own” is best disclosed on the basis of production. [...] The first thing to stand out is that in the Aristotelian considerations, the talk is no longer of φύσις as of a beginning or origin inherent in a living being; φύσις is here no longer life that is perceptible as independent rest and movement, but, rather, an instance of production understood in analogy to craft work. The idea is one in orientation from the ability of living beings to propagate, which Aristotle then understands based on craftsmanly production. That this is not unproblematic is revealed in the very talk of the “what is composed by φύσις” itself: A living being is not composed like a bedstead, but, rather, grows. Accordingly, understanding flesh and bone

in the sense of material is also not illuminating; the two are not present like tree trunks that may be cut and then, as wood, fashioned into a bedstead [Figal 2010, 312].

Once again, the destiny of philosophy is at stake, regarding the question of *arché*, and its connection with the kinetic explanation of form and being. The kinetic distinction between *physei onta* and *téchne onta* is therefore entirely inscribed in the problem of *arché*. To distinguish a “living” physical-natural entity from an artificial/technical one, there is no other way than tracing the kinetic *arché* of its genesis. *Arché* is *origin, beginning, command, code, point of onset*. *Physis*, precisely because it is the place of absolute *arché*, is also an unavoidable origin, absolute archaism. Every natural, living, biological being is “archaic”, because it has the original genetic command of *physis* in it. Each *physei on* is archaic, insofar as it is anchored to the absolute generativity of *physis*. It has in itself the archaic principle of an absolute origin that is both ontogenetic and phylogenetic: *morphé* names exactly the point of indistinction between the two planes. The technical-artistic thing, on the other hand, is different from the *physei on*, because it camouflages, simulates, disguises the originality/originariness of its genesis. What, in this theoretical framework, does not seem possible to dispute is that *physis* is the realm of *arché*, of absolute originality and originariness. Where there is *arché*, where there is originariness, there is *physis*. Yet something is not convincing. Putting the question in these terms, the connection between *physis*, *arché* and *morphé* risks being only partially clarified. First of all: how should the term ἀρχή be thought of?

The word ἀρχή seems to have entered philosophical language only with Plato and Aristotle. Aristotle is the one who explicitly joins the more ancient sense of inception with that of domination. From the time of Homer, the common meaning of the verb ἀρχή had been “to lead,” “to come first,” “to open,” for instance, a battle or a discourse. In the epic tradition, ἀρχή designates what is at the beginning, either in an order of succession in time, like childhood, or in an order of constitutive elements, as flour is the basis of dough or as the organs are the elementary parts of the body. The other meaning, that of command, of power, of

domination, although absent from Homer, is found in Herodotus and Pindar. Aristotle also uses the word in this sense. But the Aristotelian innovation consists in uniting the two senses, inception and domination, in the same abstract concept. Until the end of antiquity ἀρχή remains a technical term for designating the constitutive, abstract, and irreducible elements in being, becoming, and knowing. The metaphysical concept of ἀρχή expresses that abstract structural element in entities which, in their analysis, is *unhintergebar*, insurpassable. It is a concept thoroughly linked to the metaphysics of sensible substance and its “theory” [Schürmann 1987, 97].

Reiner Schürmann’s reception of these Aristotelian-Heideggerian themes opens up new perspectives. As is well known, Schürmann’s philosophical project is mainly aimed at continuing the deconstruction of metaphysics on the trail opened by Heidegger but going even further. It is no longer just a matter of rethinking the metaphysical lexicon and re-dyeing it to a more original lexicon but rather trying to challenge the very notion of originality/originariness, which for Schürmann is deeply linked to the conceptual value of “domination/power/command” inscribed in the term *arché*. According to the title of his masterpiece, Schürmann points out that it is a question of making the metaphysical lexicon, already examined by Heidegger’s critical analysis, pass from “principles” to “anarchy”. The question of universal *kinesis*, of its *arché*, and of the connection it has with the conceptual constellation *morphé/eidos/télos* becomes problematic, insofar as, as recalled by Figal, the Aristotelian approach looks at morphogenesis, the point of kinetic insurgence of the entity, within the productive, poietic paradigm, typical of art/technology: «In Heidegger’s view, the guiding meaning in Aristotle’s concept of origin results neither from speculation about being nor from the logic of knowledge, but from the analysis of becoming that affects material things» [Schürmann 1987, 99]. *Physis*, therefore, produces the *physei onta*, exactly through a poietic scheme that is that of *téchne*, of “art”.¹¹

¹¹ On this point, see also Agamben [1999], Blumenberg [2013] and Blumenberg [2015].

According to Aristotle's *Physics*, material things in becoming are of two species: those that bear the origin of their movement in themselves and those that are moved by another. The former are "natural" in the strict sense, the latter are man-made. But where does such a distinction come from? What is the disjunctive factor between "moved by themselves – moved by man"? The *tertium comparationis* is movement, change, as such. As such? Is it some ideal representation that has made the quest for origin into a quest for causes? Or is it rather one very precise experience, namely, that of the movement and change initiated by us, which switched classical thought onto the track of causal explanations? In that case, it is only because man first grasps himself as architect, as initiator of fabrication, that nature can in turn appear to him as moved by the mechanisms of cause and effect. Growth, too, "begins" and "makes". Because the artisan experiences the origin of production as indigenous to himself, he finds another such origin in nature, concordant with although allogeneous to his own. The experience that guides the comprehension of origin as it is operative in the "philosophy of nature" is paradoxically the experience of fabricating tools and works of art, the experience of handiwork. In this way the Aristotelian tradition divides the totality of things into those moved by human hands and those moved by themselves [Schürmann 1987, 100-101].

But is this conceptual scheme always valid? The answer that Heidegger and Schürmann give to this question is negative. There is another way of thinking about the paradoxical "production" of the natural entity, of the living being, that is to listen, in the term *physis*, to its original "timbre", that of *birth, growth, manifestation, appearing, arising, "oriri"*. It is in this determination of *physis* (in which it is possible to hear the original "pre-Socratic" vibration), that the problem of birth/growth acquires its most explanatory value. It is therefore a question of proceeding with a deconstruction of that first sense of *physis*:

The most viable way of conducting the deconstruction of Aristotle's physics so as to return back beyond his concept of *arché* is to examine the scope of his "kinetic" understanding of nature. It does not appear to be coextensive with his concept of *physis*. A

residual factor remains once natural things are opposed to man-made things, and once these two species are combined under the common genus “moved things”. The specific differences, “physical” and “technical” movement, do not exhaust the phenomena that Aristotle calls natural. What is that residual factor that makes *physis* in the strict sense – as complementary to *techné* – remain a derivative notion in Aristotle? He owes this residual factor, Heidegger says, to his speaking Greek: in spite of the predominance of manipulable and manufactured objects in his understanding of being, he occasionally still takes *physis* in the sense of its verbal root as coming forth, presencing. In those cases the fabricative viewpoint of “making present” recedes behind emergence into presence – behind the presencing of plants as well as of handiwork. In such texts the distinction between two types of *arché* disappears because the kinetic pre-understanding of nature disappears. The word *arché* does not occur in the passages where *physis* recalls the verb *phyein*, “presencing” or “coming to presence” [Schürmann 1987, 101].

It is at this point that the decisive step is taken: *physis*, then, is by no means the place of a kinetic *arché*, because, conceived in this way, the latter becomes explicable only in contrast to the poietic process of the *téchne ontá*. What needs to be deconstructed is the idea that nature has to do with “origin”, that *physis* constitutes the absolute plane of the *arché*. What we have to do is to deconstruct the conceptual connection between *nature* and *originariness*. What comes to mind here is the idea of an “*an-archy*” of nature, the possibility of a radical contestation of the idea that *physis* has, in general, to do with *arché*. The appearance of the entity cannot be described as a “being manufactured” by *physis*: that emergence from the «isotropic background of non-being» must be thought of as a mild appearance, a rising, a silent and mysterious *dehiscence*. A more essential determination of the genesis of the entity – and its form – therefore passes through the radical contestation that there is in *physis* any point of “dominance”, of principle, of command, of beginning. From a morphological point of view, there are no beginnings in nature. The *kinesis* of Being, the installation of matter in the shape of form, has no other aspect than that of a self-unfolding, of a mild and solitary ontological dawn:

For the pre-Attic mode of thinking, it seems, the origin appeared as simple presencing, as coming to presence, and in that sense as an-archic. If “presencing,” “coming about,” “emerging” (*genesis*) are the words that best describe the origin in its pre-metaphysical sense, it can only elude all representations connected with the *arché* of things in motion. It is dislodged from the site of maneuverable objects. Regarding its two classical features, inception and domination, the first can be seen as an echo of presencing; but with Heidegger’s return to pre-classical thinking, the notion of domination loses its central place in philosophy [Schürmann 1987, 104].

What, then, is nature without command? What, then, is *physis*, deprived of its essential connection with *arché*? In short, how should the idea of an *anarchic nature* be understood? What then is the relevance of this theme for a metaphysical foundation of morphology? Morphology, we have said, is that discipline of form that can ignore the difference between nature and art, because it studies the pure articulation of the *morphé*, regardless of whether it is “embodied” in a natural entity or in an artistic/artificial one. This is where, in some way, the initial hypothesis is verified. Morphology is a “science” that studies the form, regardless of the fundamental difference inscribed in the *kinesis* of the entity or abolishing the relevance of the distinction between *physei onta* and *téchne onta*. But this “abolition” is not a mere theoretical move: it is the new *anarchic* determination of *physis* that undermines the legitimacy of a natural discourse on *arché*. If *physis* is already “anarchic”, therefore not essentially graspable as a pure “archaic” matrix of universal becoming and transformation, morphology will no longer be just a mere theory of form, a mere phenomenology of forms and their metamorphoses. Here, morphology is the supreme science, which captures the link between life and art through the cognitive crystal of form, regardless of the kinetic archeology of universal becoming. It is therefore clearer now, in what sense morphology, far from being a mere descriptive science of the formal configuration of entities, becomes the knowledge of absolute *kinesis*. However, in this sense, it becomes the science of an “anarchic” *kinesis*, of a *kinesis* no longer indebted – and eternally insolvent – to a “principle” that “commands” its genesis and its form.

Morphology is the science that gives reason to the pure configuration of everything that exists, to the phenomenal carving out of everything that is “detached” from the depths of the indistinct. Morphology is the science of a life crossed by the pure need for form. This need cannot be explained by any other “theory”, if not as an inexplicable dehiscence of form, as an infinite “artistic” gift that nature gives to itself.

References

- Agamben, G. [1998], *Homo sacer*, transl. D. Heller-Roazen, Stanford (CA), Stanford University Press.
- Agamben, G. [1999], *The Man without Content*, transl. G. Albert, Stanford (CA), Stanford University Press.
- Agamben, G. [2003], *The Open. Man and Animal*, transl. K. Attell, Stanford (CA), Stanford University Press.
- Aristotle [1908-1952], *Physics*, in: *The Works of Aristotle*, ed. W.D. Ross, Oxford (UK), Clarendon Press.
- Benjamin, W. [1972], *Neues von Blumen*, in: Id., *Gesammelte Schriften*, vol. 3. Frankfurt am Main, Suhrkamp, 151-152. (Original work published 1929)
- Blossfeldt, K. [1928], *Urformen der Kunst. Photographische Pflanzenbilder*, Berlin, Wasmuth.
- Blumenberg, H. [2013], *Ästhetische und metaphorologische Schriften*, ed. Haverkamp, Frankfurt am Main, Suhrkamp.
- Blumenberg, H. [2015], *Schriften zur Technik*, Frankfurt am Main, Suhrkamp.
- Caillois, R. [1960], *Méduse et Cie*, Paris, Gallimard.
- Di Napoli, G. [2011], *I principi della forma*, Torino, Einaudi.
- Figal, G. [2010], *Objectivity*, transl. T.D. George, Albany (NY), SUNY Press.
- Goethe, J. W. [2000a], *Hamburger Ausgabe*, vol. 1. München, Deutscher Taschenbuch Verlag.
- Goethe, J. W. [2000b], *Hamburger Ausgabe*, vol. 13. München, Deutscher Taschenbuch Verlag.

- Goethe, J. W. [2009], *The Metamorphosis of Plants*, Cambridge (MA), MIT Press. (Original work published 1790)
- Haeckel, E. [1904], *Kunstformen der Natur*, Leipzig/Wien, Bibliographisches Institut.
- Heidegger, M. [1998], On the Essence and Concept of φύσις in Aristotle's *Physics* B, 1 (1939), in: Id., *Pathmarks*, transl. W. McNeil, Cambridge (UK), Cambridge University Press, 183-230.
- Kant, I. [1974], *Kritik der Urteilskraft*, in: Id., *Werkausgabe*, vol. 10, ed. W. Weischedel, Frankfurt am Main, Suhrkamp. (Original work published 1790)
- Leghissa, G. [1998], *Le scienze diagonali di Roger Caillois*, in: R. Caillois, *L'occhio di Medusa*, Milano, Cortina.
- Mazzocut-Mis, M. [1995], *Gli enigmi della forma. Un'indagine morfologica tra biologia ed estetica a partire dal pensiero di D'Arcy Thompson*, Milano, Edizione dell'Arco.
- Mazzocut-Mis, M. [1997], *I percorsi delle forme. I testi e le teorie*, Milano, Bruno Mondadori.
- Pinotti, A., Tedesco, S. (eds.) [2013], *Estetica e scienze della vita*, Milano, Cortina.
- Schürmann, R. [1987], *Heidegger on Being and Acting: From Principles to Anarchy*, Indiana (IL), Indiana University Press.
- Tedesco, S. [2010], *Morfologia estetica*, Palermo, Aesthetica Preprint.
- Vercellone, F., Tedesco, S. (eds.) [2020], *Glossary of Morphology*, Cham, Springer.

Keywords

Morphology; Form; *kinesis*; Art; Life

Abstract

The aim of this article is to rethink the indispensable connection between aesthetics and life sciences. According to a consolidated tradition, the fundamental point of intersection between the two disciplines is represented by the concept of form. It is

therefore to morphology that the task of thinking about the *nature of form* and the *form of nature* is ascribed. In this sense, Goethe and the debates on morphology arising from his texts represent an essential speculative starting point. However, the Goetheian teaching is, in this context, even more compelling, because morphology is already configured as a science of form that suspends the kinetic difference between natural and artificial beings, between nature and art/technique. If nature, *physis*, has still been thought of by Aristotle as the realm of *arché*, it will be a question of comprehend how, through the testimony of Heidegger and Schürmann, it is possible to metaphysically found morphology by understanding the essential “anarchic” character of nature.

Pier Alberto Porceddu Cilione
University of Verona
E-mail: pieralberto.porcedducilione@univr.it