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# The Image of the Universe and Its Purpose: Kant on Hypotyposis and Functional Cosmology

**Abstract:** This contribution focuses on Kant's doctrine of hypotyposis as deployed in the *Critique of Judgment* and explores its implications for his view of what I call "functional cosmology". Despite the number of metaphors used by Kant in the pre-critical works, it is only in the early 1790s that his system could account for the use and function of metaphors and symbolic representation in the natural sciences connecting them to aesthetics and ethics. This account was also stimulated by the debates surrounding Plato's dialogues and Neoplatonic texts at the end of the 18th century. Therefore, this paper suggests that Kant offered his own solution to the problem of thinking of the universe as an organism within the limits of transcendental philosophy.

## 1 Introduction

In both pre-critical and critical writings, Kant associated a huge number of metaphors to his philosophical system and the cosmos. An important one has been subject of investigation by Simon Shaffer (1978): the "Phoenix of Nature". This beautiful image was used in *Universal Natural History and Theory of Heavens* (1755) to identify the complex process of destruction and formation of solar systems within our galaxy. Another well-known metaphor used by Kant is that of a "Proteus" of nature in his *Examination of the question whether the rotation of the Earth on its axis by which it brings about the alternation of day and night has undergone any change since its origin and how one can be certain of this, which [question] was set by the Royal Academy of Sciences in Berlin as the prize question for the current year* (1754) when describing the principle of transformation to which our planet underwent and that produced cyclical catastrophic events restoring new balance in the climate and the environment (AA 01, 211–212).[1] Needless to say that metaphors are constantly present in Kant's works even in the crit-

1 All citations of Kant's work follow the standard Akademie edition (AA) and the English translation of his work is taken from the edition of Kant's works published by Cambridge University Press.


https://doi.org/10.1515/9783110674194-003

ical period and with reference to structural elements of his system. Not only in the *Critique of pure Reason*, where he defines the transcendental ideal as *focus imaginarius*, but also in the *Critique of practical Reason* we find a constant use of metaphors, as it is in the case of the idea of freedom of Leibniz's *automaton spirituale* defined as "a roasting spit" (KpV A174). However, only the *Critique of Judgment* offers a systematic account of the use of metaphors and their expositional role. In the third Critique, Kant famously used an analogy to exemplify the symbol of absolute monarchy by portraying the State governed by the king's despotic will as a hand mill in opposition to the State represented as a living being (AA 05:352). The literature commented on these metaphors and a plethora of studies interpreted their use in general (De Man 1978, Zammito 1992, 280, 287–289, Brown 2000, Pillow 2001, Zöller 2018a and 2018b) or by focusing on either Kant's aesthetics (Cazeaux 2004) or theory of the State (Møller 2020, Johnson 1985). Less attention has been paid on the possible use of metaphors and analogy in the teleological representation of the universe as a whole. My attempt in this paper is to show how the role of images and metaphors increases its importance in Kant's work thanks to the development of his doctrine of hypotyposis. As we shall see, the admitted teleological account of the cosmos can be identified in terms of functionalism and plays a regulative heuristic role in absence of a mechanical explanation. In this respect, my analysis starts from Clugston's recent work *Hypotyposis in Kant's Metaphysics of Judgment: Symbolizing Completeness* in order to deepen the implications of Kant's theory of hypotyposis for cosmology. For if it is clear that Kant used metaphors, I want to address the question of what Kant thought about the use of metaphors in the study of nature and in particular in the context of cosmological and astronomical studies when a renaissance of Plato and Neoplatonic studies heavily inspired academic work and debates. As a result, the impact of the *Critique of Judgment* will be assessed from a fresh perspective. With the third Critique Kant wanted to show how his system was able to support a solid heuristic enquiry of the cosmos as an alternative to pure teleological explanations that were inspired by the reading of Plato's *Timaeus*.

## 2 From the Critique of Rational Cosmology to the Problem of the Cosmic Structure

Kant's interest for the cosmological problem is central for the elaboration and development of his system. One can identify in the concept of "World" (*Welt*) the guideline to connect Kant's pre-critical and critical works:

> It was not the investigation of the existence of God, immortality, and so on, but rather the antinomy of pure reason – 'The world has a beginning; it has no beginning, and so on, right up to the 4th [sic]: There is freedom in man, vs. there is no freedom, only the necessity of nature' – that is what first aroused me from my dogmatic slumber and drove me to the critique of reason itself, in order to resolve the scandal of ostensible contradiction of reason with itself. (Kant, Letter to Garve, 1798: Br AA 12, 257–8)

In the *Critique of pure Reason*, Kant maintains that the antinomy of pure reason in its cosmological ideas can be removed by showing that it is merely dialectical and a conflict due to an illusion arising from the fact that "one has applied the idea of absolute totality, which is valid only as a condition of things in themselves, to appearances that exist only in representation, and that, if they constitute a series, exist in the successive regress but otherwise do not exist at all" (KrV A506/B534). The resolution of the antinomy consisted in a cosmological principle compatible with transcendental philosophy and its pillars:

> Hence the cosmological principle of reason is in fact only a rule that commands to perform in the series of conditions of given appearances a regression that is never permitted to stop at anything absolutely unconditioned: a Regressum in indefinitum is a universal rule that we apply to determine our universe, which therefore has no limit in spacetime as for what concerns the past, but is subject to an expansion in indefinitum also. (KrV A509/B537).

The *Critique of Judgment* must be included at the end of the road driven through this guideline. It is no chance that in the *Dialectic of the teleological Judgment* Kant presents its antinomy (see Sections 69 – 71, KU AA 05, 385 – 390), according to which the thesis and the antithesis are represented as two different ways of portraying processes in the world, i.e. by causally mechanical inferences vs. reflective teleological inferences:

> **Thesis:** All generation of material things is possible in accordance with merely mechanical laws.
>
> **Antithesis:** Some generation of such things is not possible in accordance with merely mechanical laws.

The antinomy constitutes an antithetic regarding the way in which we must regard the world and judge of it. In this context "World" means of course natural phenomena in their conjunction and interaction, not the pure idea of the world as whole, which is not an object of possible experience. The resolution of the antinomy of teleological judgement implies that there is a maxim to follow in empirical knowledge and scientific practice, namely in investigating nature we must follow the causal link, as long as it is possible and when the empirical series stops, we can use the principle of teleological judgment, albeit provisionally.

Kant grounds this position on the fact that it is impossible for us to explain and prove the generation of organisms by means of pure mechanism:

> We can by no means prove the impossibility of the generation of organized products of nature through the mere mechanism of nature, because since the infinite manifold of particular laws of nature that are contingent for us are only cognized empirically, we have no insight into their primary internal ground, and thus we cannot reach the internal and completely sufficient principle of the possibility of a nature (which lies in the supersensible) at all (KU AA 05, 388).

The ground for the explanation of such products must be found in the assumption of an agency responding to another kind of causality and it can work as a principle of the reflective power of judgment:

> Whether, therefore, the productive capacity of nature may not be as adequate for that which we judge as formed or combined in accordance with the idea of ends as well as for that which we believe to need merely the machinery of nature, and whether in fact things as genuine natural ends (as we must necessarily judge them) must be based in an entirely different kind of original causality, which cannot be contained at all in material nature or in its intelligible substratum, namely, an architectonic understanding: about this our reason, which is extremely limited with regard to the concept of causality if the latter is supposed to be specified *a priori*, can give us no information whatever. However, with respect to our cognitive faculty, it is just as indubitably certain that the mere mechanism of nature is also incapable of providing an explanatory ground for the generation of organized beings. It is therefore an entirely correct fundamental principle *for the reflecting power of judgment* that for the evident connection of things in accordance with final causes we must conceive of a causality different from mechanism, namely that of an (intelligent) world-cause acting in accordance with ends, no matter how rash and indemonstrable that would be *for the determining power of judgment* (KU AA 05, 388 – 389).

To be more concrete with respect to the impact that such a view had on his cosmology, one could think that in 1790 Kant was ensuring a possible way of building up knowledge of new astrophysical phenomena, such as nebulae (De Bianchi 2016, 2013a, 2018). Thanks to William Herschel's observations, Kant knew that his hypothesis regarding the multiplicity of galaxies like our Milky Way was highly plausible (*wahrscheinlich*). Therefore, he also wanted to provide a possible way of judging and advancing in our knowledge of the observational universe. In other words, a function must have been attributed to such a systematic organization of the world, but a universally known mechanism generating and disposing galaxies in the way they are was not available. Whether there was a divine design or not behind it, its meaning was unknown.[2] Whether

**2** For further details on arguments from design and Kant's solution of admitting the idea of a

there was a physical ground for the collocation and distances of galactic systems, this was not entirely describable due to gravitational effects and other hypotheses had to be set forth such as the existence of the aether endowed with a repulsive effect.

It is precisely within this vivacious context and debates in cosmology that Plato's and Neoplatonic works were translated and published in the German and English-speaking world. In particular, the astronomical and cosmological works were critically reviewed but at the same time deeply studied because they posed the question of the disposition of planets and stars and their profound meaning. We shall come back to this point in the next section, but for the time being it is worth mentioning that most of the reconstructions of Kant's teleology (Steigerwald 2006, Breitenbach 2006 and 2008, Guyer 2003) rightly point to the relevance that sections 62–65 have for the discussion of the notion of *Naturzweck* and the antinomy of teleological judgment, unanimously considered the heart of Kant's argument in support of a provisional and regulative use of teleology in natural science and the key for bridging the gap between natural science and moral philosophy in the eticotheleology sections. However, what has not been yet explained by the literature is the reference to Plato that Kant inserts in section 62. The passage reads as follows:

> All geometrical figures that are drawn in accordance with a principle display a manifold and often admired objective purposiveness, namely that of serviceability for the solution of many problems in accordance with a single principle, and indeed of each of them in infinitely many different ways. [...] Plato, himself a master of this science, was led by such an original constitution of things, in the discovery of which we can dispense with all experience, and by the mental capacity for drawing the harmony of things out of their supersensible principle (to which pertain the properties of numbers, with which the mind plays in music), to the enthusiasm that elevated him beyond the concepts of experience to ideas, which seemed to him explicable only by means of an intellectual communion with the origin of all things. No wonder that he banned from his school those who were ignorant of geometry, for he thought he could derive that which Anaxagoras inferred from objects of experience from the pure intuition internal to the human mind. For in the necessity of that which is purposive and so constituted as if it were intentionally arranged for our use, but which nevertheless seems to pertain originally to the essence of things, without any regard to our use, lies the ground for the great admiration of nature, not outside of us so much as in our own reason; in which case it is surely excusable that through misunderstanding this admiration gradually rose to enthusiasm. This intellectual purposiveness, however, although it is objective (not, like the aesthetic, subjective), can nevertheless be conceived, as far as its possibility is concerned, as merely formal (not real), i.e., as purpo-

technique of nature explaining the generation of life in the cosmos see Illetterati (2014) and Goy (2014).

> siveness that is not grounded in a purpose, for which teleology would be necessary, but only in general (KU AA 05, 362–364).

From this passage we can infer that Kant's reference to Plato is clearly ascribed to his doctrine of polyhedral figures as exposed in the *Timaeus* and that he argues that Plato's view is correct with respect to the purpose of geometrizing matter and natural phenomena, but he thinks that to ground this procedure of geometrization just on the theory of numbers and harmonics was still primitive. There was a physical mechanism, albeit unknown, from which the order, the shape and disposition of natural entities could have been derived and explained. In the absence of such a clear ground, only an exposition of the systematic order of the cosmos could be allowed in agreement with transcendental principles. That Kant believed that there were physical laws determining the structure of the cosmos is evident from the late unpublished writing *Transition from the metaphysical foundations of natural science to physics* contained in the *Opus postumum*. In it, the dependence of the whole structure of the universe on the universal repulsion of the aether implies that the universe assumes a specific configuration dictated by the inverse square law:

> All matter, however, is originally connected to the universal attraction into a whole by universal Gravitation, and thus the aether itself would be in a state of compression without any other matter as far as it may always extend. [The aether], however, must be oscillating, because the first effect of this attraction at the beginning of all things must have been a condensation from which followed expansion, and thus because of its elasticity must have been put into an always continuous oscillation and therefore the secondary matter spread in the aether must have been forced to unite together to bodies in certain points and then to form celestial bodies (OP AA 21, 378).

However, in 1790, Kant more prudently suspended his judgment and simply agreed to reprint an excerpt of his *Universal Natural History and Theory of Heavens* in 1791 without talking about the cosmic aether (Falkenburg 2020, 210; De Bianchi 2013b, 17–45; Ferrini 2004).

## 3 From hypotyposis to the Foundations of Functional Cosmology

In the previous section, I mentioned a renaissance of Plato studies at the end of the 18$^{th}$ century and its impact on Kant's way of rethinking of the results from observational cosmology. It is not my intention to reconstruct all the debates surrounding the edition of Plato's dialogues and Neoplatonist works in 1780s and

1790s, but I want to emphasize two main points. Soon after the publication of the *Zweibrücke* edition (Editio Bipontina) of Plato's work, a great interest for Plato's cosmology flourished together with philologic and monographic studies on his dialogues. A clear example of it is Dietrich Tiedemann's *Dialogorum Platonis Argumenta exposita et illustrata* (1787), but more importantly, one should notice that in the early 1790s the systematic interpretation of Plato was used to establish and test Kant's idea of a history of pure reason, as clearly emerges from the texts of Wilhelm Gottlieb Tennemann (1791).

Second, Plato's *Timaeus* portrays the cosmos as a living thing and clearly connects the cosmological problem with ethics and aesthetics. This organicist view of the cosmos influenced the reflection of many idealists in the 1790s, including the young Schelling. Plato's *Timaeus*, by means of metaphors and analogies, treated and highlighted the same problems that astronomers had at the end of the 18$^{th}$ century, i.e. to justify the arrangement of the stars and planets exactly as they are and to measure their relative distances. Not only Kant mentions Plato in Section 62 of the *Critique of Judgment*, but even the terminology employed in a technical way in the third Critique is clearly influenced by Neoplatonism. Now, the interesting point to notice is that Kant used Platonism to elaborate his doctrine of symbolic exposition, which is fundamental to present the cosmos without explaining the underlying mechanism for its organization.

Now, the term "hypotyposis", I claim, is borrowed from the Neoplatonic tradition and it appears in Kant's system in an apparently different context than rhetoric, but very consistent with the publications of that time in Europe. Indeed, Thomas Taylor in England published Proclus' *Hypotyposis Astronomicarum Positionum* in 1789. In Proclus the term "hypotyposis" means of course "draft", but the draft was clearly referred to Platonic astronomy and cosmology. Even if we know that both Plotinus and Quintilianus attached to the meaning of hypotyposis the notion of blurred image and referred to it in terms of a surplus of details that can produce a symbolic representation of a person or an object, in the case of Proclus, his scope was to render a sort of intellectual vision of Plato's cosmos. It is this sense of hypotyposis that Kant had in mind when declaring that hypotyposis can be schematic or symbolic. When it comes to the representation of astronomical phenomena and their mathematization through geometry, schematic hypotyposis is at stake because a certain determination of inner sense by means of the understanding is involved, whereas in the aesthetic or symbolic hypotyposis another type of determination of time is under consideration. Let us now explore more in detail Kant's view of hypotyposis, in order to better understand its

application to cosmology. Kant introduces the notion of hypotyposis[3] in Section 59 "On Beauty as a Symbol of Morality" as follows:

> All *hypotyposis* (presentation, *subjecto sub adspectum*), as making something sensible, is of one of two kinds: either *schematic*, where to a concept grasped by the understanding the corresponding intuition is given *a priori*; or *symbolic*, where to a concept which only reason can think, and to which no sensible intuition can be adequate, an intuition is attributed with which the power of judgment proceeds in a way merely analogous to that which it observes in schematization, i.e., it is merely the rule of this procedure, not of the intuition itself, and thus merely *the form of the reflection* [emphasis is mine], not the content, which corresponds to the concept (KU AA 05, 351).

Let us notice first that the definition of hypotyposis is related to the function of presenting, exposing rather than explaining. Through hypotyposis we can make a concept sensible, even the concept of the World. There can be either an adequate correspondence between the conceptual content and the intuition, thus a schematic hypotyposis, or a vague correspondence that is built up thanks to the reflective power of judgment giving rise to a symbolic hypotyposis. It is clear that in agreement with transcendental philosophy only a symbolic hypotyposis of the cosmos as a whole can be accepted. Second, one notices that symbolic hypotyposis occurs when concepts of reason are involved, i.e. ideas and that the power of judgment only imitates what the understanding does in the schematic hypotyposis with respect to the procedure and not with respect to the conceptual content grasped by the understanding. In other words, according to Kant, symbolic presentation of ideal content is possible only thanks to a form of analogical reasoning. This applies to concepts of reason, such as the idea of totality as a whole and therefore to the universe as "Weltall". However, Kant is even more accurate in determining schematic and symbolic kinds of representation and thus further defines hypotyposis:

> Both are hypotyposes, i.e., presentations (*exhibitiones*): not mere *characterizations*, i.e., designations of the concepts by means of accompanying sensible signs, which contain nothing at all belonging to the intuition of the object, but only serve them, in accordance with the laws of association of the imagination, and hence in a subjective regard, as a means of reproduction; such things are either words, or visible (algebraic, even mimetic) signs, as mere *expressions* for concepts. All intuitions that are ascribed to concepts *a priori* are thus either *schemata* or *symbols*, the first of which contain direct, the second indirect presentations of the concept (KU AA 05, 352).

**3** One of the most exhaustive work available on this topic is that of Crosby-Grayson (2015).

Here Kant is giving further details on the way in which a concept can be made sensible, for instance by means of signs or words and what guides the right association of these signs to the concept are the laws of association of imagination. It would be further the aim of this paper to compare Kant's doctrine of productive imagination in the first Critique with the present one, but perhaps it is worth mentioning that here we have a clear statement on how the laws of association guide the synthetic activity of the reflective power of judgment, whereas in the case of the determining power of judgment the principles guiding the synthetic activity of imagination are the pure concepts and principles of the understanding that so to speak subdue imagination and intuition to their forms. On the contrary, when the reflective judgment is at stake, there is analogical reasoning playing an eminent role.

As underlined in the previous passage from the third Critique, with the expression "the form of reflection", which is what the power of judgment imitates from the understanding, Kant refers to the ground-consequence relationship and to the schema of cause (see KU AA 05, 351). The latter however is only imitated in its form but follows other guidelines than the categories. Indeed, when it comes to judging products of nature, we can either proceed via reflective or determining judgments. In the former case Kant adds important considerations, namely when the concept of nature as a whole and its inner organization is at stake, the use of analogical reasoning and symbolic representation is not only allowed but it is the only one that can grasp the type of ground-consequence relationships at stake: "Strictly speaking the organization of nature is therefore not analogous to any causality that we know" (KU AA 05, 375).

Therefore, nature as a whole and its inner organization is not judged on the ground of the *nexus effectivus*, but only with respect to the ends that can be associated to the ground/consequence members identified in a series. In other words, what counts is not the effect produced by a cause, but the end (*Zweck*) that is entailed in a certain object and affects another as if the latter were the cause of this purposiveness. According to Kant, this purposiveness cannot really be attributed to nature and its products but represents only a subjective rule for judging them. Furthermore, since the symbolic hypotyposis has nothing to do with the function of explanation and determining judgments, its role is eminently that of accounting for what Kant calls "exposition" (*Expositio*) of concepts. Its role can be associated to our capacity of rendering through images and signs a complex process. Thus, through analogy and a symbolic indirect presentation of the content of a concept, the *nexus finalis* in nature is best portrayed by our faculties. The very same consideration holds when we do not have to find an adequate presentation of the concept of nature but of a whole in general.

We have seen in Section 2 how Kant portrayed the idea of the World from a metaphysical standpoint, it is now important to consider how he presents the idea of the universe, albeit indirectly, as a product of the reflective power of judgment and reason:

> We call *sublime* that which is *absolutely great*. However, to be great and to be a magnitude are quite different concepts (*magnitude* and *quantitas*). Likewise, simply (*simpliciter*) to say that something is great is also something entirely different from saying that it is absolutely great (absolute, non comparative magnum). The latter is that which is great beyond all comparison (KU AA 05, 248).

What is great beyond comparison or absolutely great *par excellence* is the universe. However, considering Kant's writings on natural science, we also know that astronomical phenomena and the universe are measurable. The central concept that symbolic presentation must expose is the organization of a whole, be it of nature, of the universe, or of a living being. In this sense, an analysis and interpretation of Section 65 can lead us to a deeper understanding of how to apply to cosmology the lesson of Kant's third *Critique:*

> One can, conversely, illuminate a certain association, though one that is encountered more in the idea than in reality, by means of an analogy with the immediate ends of nature that have been mentioned. Thus, in the case of a recently undertaken fundamental transformation of a great people into a state, the word *organization* has frequently been quite appropriately used for the institution of the magistracies, etc., and even of the entire body politic. For in such a whole each member should certainly be not merely a means, but at the same time also an end, and, insofar as it contributes to the possibility of the whole, its position and function should also be determined by the idea of the whole (KU AA 05, 375 footnote)

This footnote is of extreme importance to grasp the consequence of Kant's view for the cosmological discourse. The universe as a whole cannot be known or represented by means of our determining power of judgment. What is left to us is to use analogical reasoning and the symbolic presentation of its organization, in such a way that our reflective power of judgment can present or expose some content regarding the form of the *nexus finalis* of the cosmic structure of the universe. According to Kant, indeed, the organization of the universal structure becomes subject to a universal principle of purposiveness according to ends. Therefore, each cosmic structure is not considered as being just a means but also an end for the organization of the whole universe. This implies a fundamentally different approach to the enquiry of astronomical objects, their shape and collocation. Furthermore, to represent astronomical objects and structures according to the principles of teleological judgment, does not imply that they are not determi-

nable. Quite the contrary, indeed, at least according to Kant's doctrine of measurement as exposed in the section devoted to the mathematical sublime:

> Examples of the mathematically sublime in nature in mere intuition are provided for us by all those cases where what is given to us is not so much a greater numerical concept as rather a great unity as measure (for shortening the numerical series) for the imagination. A tree that we estimate by the height of a man may serve as a standard for a mountain, and, if the latter were, say, a mile high, it could serve as the unit for the number that expresses the diameter of the earth, in order to make the latter intuitable; the diameter of the earth could serve as the unit for the planetary system so far as known to us, this for the Milky Way, and the immeasurable multitude of such Milky Way systems, called nebulae, which presumably constitute such a system among themselves in turn, does not allow us to expect any limits here. Now in the aesthetic judging of such an immeasurable whole, the sublime does not lie as much in the magnitude of the number as in the fact that as we progress we always arrive at ever greater units; the systematic division of the structure of the world contributes to this, representing to us all that is great in nature as in its turn small, but actually representing our imagination in all its boundlessness, and with it nature, as paling into insignificance beside the ideas of reason if it is supposed to provide a presentation adequate to them (KU AA 05, 256 – 257).

We can now better grasp also the link between a symbolic presentation of astronomical objects and our awareness of a supersensible and moral destination as human beings. However, this can be reached by means of a profound reform of the meaning of cosmology and thanks to the foundations of what I called Kant's "functional cosmology".

This means that from this perspective, one should not consider the Sun from a purely mechanical standpoint but also from a functionalist one. The same holds for galaxies or nebulae, once we assume that what counts in judging the organization of the universe is the question: "How do I consider this object X as not only means but also end of a certain structure?" or "What is the function of a certain object X that I can consider as means and end to the organization of the universe?". In other words, Kant's approach is suggesting that we should start asking questions regarding the function that a certain celestial body has within the whole organization of the system it lives in. This approach did not survive in modern cosmology, in so far as we do not ask questions, such as "what purpose serves a black hole at the centre of our galaxy?" or "what is the function of galaxies with respect to the whole cosmic structure?". These questions are not posed in these terms nowadays and therefore are questions without an answer, but they show that it is perfectly possible to look at the universe and ask different questions as those formulated following the ground of the determining power of judgment. However, Kant's view is even deeper than this. Indeed, if we consider astronomical objects as ends *per se*, we can also judge of them by

looking at their beauty only. Thanks to his theory of symbolic hypotyposis and doctrine of reflective power of judgment, Kant was able to give a systematic account of the reason why we find very easily a connection between astronomical observation and beauty, or between cosmological and moral considerations. Kant suggested to look at cosmology in functionalistic terms and thanks to this approach he built up a bridge between science and aesthetics by admitting a teleological perspective.

## 4 Closing Remarks

In this paper I underscored the relevance of Kant's doctrine of symbolic hypotyposis for the foundations of a teleological approach to observational cosmology. Facing the great challenge of accounting for the shape and colocation of nebulae and galaxies in the universe, in the late 18$^{th}$ century a renaissance of Platonic and Neoplatonic studies influenced Kant's approach to cosmology, by allowing the foundation of what I called "functional cosmology". According to this approach, when it is not possible to clearly identify a physical law and mechanism determining the cosmic structure and behaviour only a teleological approach is allowed and in agreement with the tenet of transcendental philosophy. According to Kant's functionalist cosmology, symbolic hypotyposis can present and expose the organization of the universe. This move is not only allowed by transcendental philosophy, but it is also useful to give meaning to cosmological observation and to inspire scientific research. Furthermore, Kant's functionalist approach to cosmology is also able to build up a bridge connecting science, aesthetics and ethics and is the only possible teleological approach in agreement with Kant's transcendental philosophy and cosmological principle. Further research will assess whether the pages of the *Opus postumum* can be read within this framework and what functional role the idea of the aether can assume to guarantee the unification of Kant's view of cosmology and of his overall system.

## Acknowledgement

This result is part of the PROTEUS project that has received funding from the European Research Council (ERC) under the Horizon 2020 research and innovation programme (Grant agreement No. 758145)

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KrV / Kritik der reinen Vernunft (according to original pagination A/B)

KU / Kritik der Urteilskraft (AA 05)

Br / Briefe (AA 10–13)

OP / Opus Postumum (AA 21 and 22)

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