

THE COSMICITY OF SPACE AND TIME IN THE *OPUS POSTUMUM*

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Abstract. Despite its attempt to leave the subjective framework traced out in the *Critique of pure reason* behind, the *Opus postumum* does not succeed in making space and time things for themselves (*entia per se*) or sensible objects of sensible intuition (*objecta apprehensionis*). Rather, it keeps them within the limits of subjective intuition, limits that it extends by exploring their cosmicity, given by their representation as objects in universal space, on the grounds of the infinity they include in the concept of the collective, unconditioned unity of the manifold of intuition. Due to the dynamic construct in which space is framed, it is a sense object (mediately) and, alongside time, an absolute unity in the universe, an unconditioned unity of pure intuition. Nevertheless, the meaning of both space and time remains negative.

Keywords: space; time; matter; movement; force; transcendental idealism; physics; ether.

Matri meae

Opus postumum and the critical position. The most important challenge regarding space and time in the *Opus Postumum* is that of determining the extent to which Kant's account in this text departs from his previously articulated critical view,¹ in particular insofar as it makes the transition from the fundamental metaphysical principles of natural science to physics. Whereas with the metaphysical principles of natural science he took his own stand (a view he had articulated previously),² with physics he grounded his ideas in research conducted by Newton a century beforehand. The relationships between space and matter and its forces are therefore limited to gravitational force in the *Opus Postumum*;³ it is this that governs the movement of the planets and matter in the universe at

¹ Imm. Kant: *Kritik der reinen Vernunft*, 1781, 1787, Akademie Textausgabe, Berlin, Walter de Gruyter, 1968.

² Imm. Kant: *Metaphysische Anfangsgründe der Naturwissenschaft*, 1786.

³ Imm. Kant: *Kant's handschriftlicher Nachlaß*, Band IX, *Opus postumum*, Zweite Hälfte (Convolut VII bis XIII), Berlin und Leipzig, 1938, AA, 22: 20: "Der Raum ist nicht apperceptibel aber die bewegende Kräfte in ihm sind doch unter dem Gesetz ihrer Verhältnisse nach dem umgekehrten der Quadrate der Entfernung ist doch *a priori* (in der allgemeinen Anziehung) gegeben".

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the macrocosmic level. Kant seems to be generally satisfied with this aspect of Newtonian physics, but he expresses his disagreement with other aspects, such as the independence of space from matter and, consequently of the constancy of its features, whether it is conceived as being full of matter or empty.⁴ Given what classical mechanics offered him, he does not seem completely satisfied with what he was able to build on its basis; the cause of his dissatisfaction could be that the main part of his construction relies on his critical view, which is useful for possible experience. The aim of his last work urged him to go beyond experience, however, and Newton himself motivated him to go further, because he allowed for a metaphysical function of space as well, which is different from its empirical function. His notations in the *Opus* thus frequently include questions on the status of these entities, which are answered either by strengthening the critical position, either in its original expression dominated by the form of intuition, or by endeavours to go beyond this position through the dynamism imprinted by his theory on ether; these attest to his state of mind in his continuous search.

His search have as a starting point the critical philosophy; since space and time are conceived as instruments of rational thinking, which will be applied to experience, they were modeled according to the four categories, giving rule for judging. Among these categories, the one of quality, according to which space and time are forms of sensible intuition, is dominant. It is followed by the one of quantity, giving the characteristics of magnitude or quantum. As far as space and time are subsumed under the category of relation, the both appear as expressions of relationships and connexions of perceptions in space and time, being themselves determined as relations. The category of modality, expressing the relationships with the faculty of knowledge by reality, necessity and possibility is not found directly in characterizing space and time, but only in relation with the phenomenologizing of cosmic space, which expresses a relationship from possible to real. From the perspective of categories we could have a better understanding of how it happens that space and time are both forms of sensible intuition and magnitudes, and we meet them either in direct experience and in relation with cosmic space. This last relationship is the challenge of the *Opus postumum*, and its analysis will constitute the novelty the present text brings.

The characteristics of quality and quantity are found in the *Critique of pure reason* as well, in ensuring unity of reflection on phenomena, being distinguished by their quality of dynamical principles, able of a discursive certainty. However, the association of categories with space and time is not expressly followed in the present text, because

⁴ On account of these differences, Francisco Caruso and Roberto Moreira Xavier (“On Kant’s First Insight into the Problem of Space Dimensionality and its Physical Foundations”, In: *Kant-Studien*, 106, no. 4, 2015, 547-560) limit the Newtonian support to “the core of the Newtonian scientific program”, diverging from it, however, on “a crucial point of his system, namely the *essence of space*” (553). In general space is an *a priori* intuition for Kant, being the object of geometry, not physics. For more detail on the framing of the *Opus* in the context of contemporary physics in relation to the contributions of the *Metaphysische Anfangsgründe*, see B. Tuschling: *Metaphysische und transzendente Dynamik in Kants Opus postumum* (Berlin, New York, De Gruyter, 1971). Another source on the same relation is the work of G. P. Basile: *Kants »Opus postumum« und seine Rezeption* (Berlin, De Gruyter, 2013, pp. 385 f.).

Kant himself did not follow it. In addition, against the order and systematization of the *Critique of pure reason* around the main concepts, judgments and ideas of pure reason, the *Opus postumum* contains unsystematized notations, which urges us to our own reconstruction; as a result of which the contribution of the categories in space and time will appear as far as it supports the cosmicity of both. In order to distinguish what he achieved alongside his critical position, it is necessary to begin with space and time as subjective forms of receiving intuition, as they are reconsidered in the *Opus postumum*. In these forms, phenomena are subject to the laws of causality, which develop in space and time, and are referred to as products of nature; they are opposed to the products of freedom, which are subject to the laws of moral practical reason (*dictamina rationis practicae*), for which space and time are not meaningful. Within the limits of the laws of nature and of spatio-temporality that are necessary for their investigation, the thinking subject creates a world, which becomes the object of possible experience. In this framework, space and time are not things for themselves (*entia per se*) or sense objects of sensible intuition (*objecta apprehensionis*), which are given even outside of our representation; they are the subjective side of intuition, a product of our own faculty of representation. With the subjective component they represent, they constitute the formal part of the synthetic unity of the manifold in composing intuition⁵, by which the subject places himself (*dabile*) as determinable in space and time,⁶ becoming ready to receive the intuition (*cogitabile*). In this way, the existence of an object⁷ in space and time becomes its representation in the phenomenon, in so far as it occurs as an intuition, on the basis of which synthetic *a priori* statements can be built; a concept of a

⁵ Imm. Kant: *Opus postumum*, Kant's handschriftlicher Nachlaß, Band VIII, Erste Hälfte (Convolut I bis VI), Berlin und Leipzig, 1936, AA, 21: 18, 145, 209, 217; AA, 22: 4, 5, 8-13, 15-18, 20, 23-27, 39-41, 43, 46, 48, 517.

⁶ E. Förster (*Opus postumum*, Edited with an Introduction and Notes by Eckart Förster, Translated by Eckart Förster and Michael Rosen, Cambridge, Cambridge University Press, 199, 303 p.) suggests that because the doctrine of the *Selbstsetzung*, of the original self-positing, is developed in the VIIth Fascicle, in the course of which the notion of a thing in itself is re-examined, "the positing subject is a thing in itself because it contains spontaneity, but the thing in itself = *x*, as opposed to or corresponding to the subject, is not another object, [...] but a thought-entity without actuality, merely a principle[...] It is the correlate of the pure understanding in the process of positing itself as an object" (XLII).

⁷ Here's how Manuel Bachtold ("L'espace dans ses dimensions transcendante et pragmatiste", In: Kant-Studien, 102, no. 2, 2011, 145-167) presents the phenomenology of space: "[...] l'hypothèse de la permanence et de l'individualité des objets rend possible la constitution de l'espace. Cette hypothèse possède elle aussi un statut transcendantal. Il faut en conclure qu'objet et espace se conditionnent mutuellement" (162). And: "Dans la mesure où il rend possible la représentation des objets comme extérieurs les uns aux autres, et par suite, comme distincts et individualisés, il peut même revendiquer le statut de condition nécessaire et *a priori* de possibilité de toute connaissance (ou de toute activité humaine). Cependant, eu égard à sa structure, l'espace ne peut prétendre à une quelconque apriorité. L'approche transcendante ne semble pouvoir être sauvée qu'au prix d'une relativisation pragmatiste (du moins sur la question de l'espace). Il s'agit de concéder que la structure de l'espace qui rend possible la connaissance (ou plus généralement, qui assure le succès des activités humaines) n'est pas *a priori* au sens absolu, mais déterminée dans le cadre d'une certaine pratique qui se caractérise par un certain mode d'interaction avec l'environnement et qui met au jour des contraintes empiriques particulières auxquelles cette structure spatiale doit s'adapter" (167).

thing in itself = x corresponds to this phenomenon, as a correlate of a representation of the understanding with regard to the object. Once this critical function is established, however, there is a question of whether it is possible to go beyond the status of space and time as subjective forms, even against the background of the critical problems. The possibility that they are something else, determinations or relations of things,⁸ is present even in the two editions of the *Critique*, which attempt to derive possible extra-subjective or metaphysical implications, the displaying of which is better achieved in the context of the *Opus*.

The first attempt to answer this question, against the critical background, occurs on the occasion of the transcendental exposition of the concepts of space and time. Here the function of space and time as forms of receiving sensible intuitions with a view to synthesizing the manifold is designated as *empirical reality*; it satisfies the conditions of possible experience and offers objective validity to external objects. Beyond this dimension we are warned that the discourse on space and time should be transferred to another level, that of the *transcendental ideality* of things, considered by reason in themselves or independently of our sensibility. Consequently, it is said that “we therefore assert the *empirical reality* of space (with respect to all possible outer experience) though at the same time its *transcendental ideality*, i.e. that it is Nothing, as soon as we leave aside the condition of the possibility of all experience and take it as something that grounds the things in themselves”⁹. In the same way, time is subject to the same double measure: the empirical reality of the objects given to the senses, and the transcendental ideality, beyond the subjective conditions of sensible intuition, of things in themselves.¹⁰ Although this ideality is nothing more than a warning about the limits of empirical reality, which should not be taken as objective reality, its aim is to stimulate reflection. It is the exceeding of this limit on which Kant reflects in the *Opus postumum* – a possibility which, in the critical context, is cloaked in a veil of inaccessibility. In order to penetrate this inaccessible zone, in the present metaphysical context, the subjectivity of space and time is related to a non-subjective element, with which it interacts, i.e. motive forces, such as action and repulsion. It is said that no perception would exist in this world in their absence, but only the formal side, set out by space and time. Therefore, they are expected to open this formal side to the world and to the universe in which it is framed.

But what is meant by the world that the subject himself creates in this spatio-temporality? It is said to be determined as “[...]the totality (*complexus*) of things in A space and A time”;¹¹ it is not said to be in space and time, as if it were a matter of ob-

⁸ Imm. Kant, *KrV*, AA, 3: 37/ AA 4: 23: “Sind es wirkliche Wesen? Sind es zwar nur Bestimmungen oder Verhältnisse der Dinge[...]”.

⁹ AA, 3: 44/AA, 4: 27-28: „Wir behaupten also die *empirische Realität* des Raumes (in Ansehung aller möglichen äußeren Erfahrung), obzwar die *transcendentale Idealität* desselben, d.i. daß es Nichts sei, so bald wir die Bedingung der Möglichkeit aller Erfahrung weglassen und ihn als etwas, was den Dingen an sich selbst zum Grunde liegt, annehmen”.

¹⁰ AA, 3: 52-53/ AA, 4: 35-36.

¹¹ Imm. Kant, *Kant's handschriftlicher Nachlaß*, Band VIII, *Opus postumum*, Erste Hälfte (Convolut I bis VI), Berlin und Leipzig, 1936, AA, 21: 24: “[...]der Inbegriff (*complexus*) der Dinge in Einem Raume und Einer Zeit”.

jective framing, but about a space and a time, which a type of subjectivity, such as human subjectivity, could produce in the phenomenon. It could thus be conceived as our four-dimensional framing in the universe. Although it would be going too far to describe Kant as anticipating the possibility of the pluridimensionality of space, he did open the way to further discoveries, subsequent to those made by Newton. In this way, in spite of the relativity of the spatio-temporal framework, we have to imagine the world as penetrated by the motive forces only in space and time; in empty space, in which there is no corporeality, there are no motive forces. In this sense, Kant says of them that if “the central body disappears they are nothing”.¹² By this “central body” we should understand the world of corporeality, which is also essential to the action of the motive forces. For this reason, the human being, able to phenomenalyze, is considered both the subject and the object of knowledge. Faced with the world that is known to him, however, which is the result of what he can appropriate and turn into an object, the world as such is absolute, insofar as it is said that space and time are identical in it – in other words, that it is not limited to the relativity of the dimensions of space and time – while in a phenomenologizable world, both are distinct according to the human being’s capacity for knowledge. This is why the world as such, which is absolute, is like the thing as such or in itself; these kinds of entities are said to be absolute because they are independent of their reference to the subject and its capacity to be the subject of knowledge. Therefore, Kant completes the concept of the world through the knowledge with which one can reach it, owing to the framing in space and time. Once completed it becomes “the totality of the existence of what is in space and time as far as an empirical knowledge of it is possible”,¹³ that is, of this existential whole. The transcendental philosophy endeavours to satisfy this concept, offering the synthetic principles of the intuition of things and of thinking space and time as phenomena¹⁴, that is, as formal principles that allow for unification through the subject, by which he becomes his own author. They are distinct from the non-phenomenal aggregates, which are not unified through the subject’s faculties.

The world that is subordinated to empirical knowledge with the help of synthetic principles is framed into a more extensive world, however, which is that of cosmic space; this more extensive world is not identical to the world as such, which is absolute and cannot become an object of knowledge, while cosmic space is conceived of as a universal basis of the corporeal world and thus as something subsistent for itself, although it is said to be empty.¹⁵ Based on this latter assertion, the equality sign could be placed between the world as such and cosmic space, on the grounds that both are characterized as uncognizable, the first directly, the second indirectly. According to assertions in the context, however, by characterizing cosmic space as empty, we understand this emptiness

¹² AA, 21: 32: “[...]wenn der Centralkörper aufhört nichts sind”.

¹³ AA, 21: 36: “[...]der Inbegriff des Daseyns alles was ist im Raum u. der Zeit in so fern von ihm ein empirisches Erkenntnis möglich ist”.

¹⁴ AA, 21: 96.

¹⁵ AA, 21: 4: “Der Weltraum wird als eine allgemeine Basis der Körperwelt gedacht und so als etwas für sich bestehendes obgleich leeres”.

according to the experience we could have at a given moment, experience which can evolve in an indeterminate way; otherwise we cannot understand why it grounds the present experience. In a larger context we find first the *Metaphysical Foundations of Natural Science*; they assume the idea of a gradual phenomenologizing of experience, stating that space, as the totality of objects of experience, is named empirical space. As far as the movement is being perceived, it is movable. But a movable space supposes in turn another more enlarged space, in which it is movable, and so on to infinity.¹⁶ If it is movable to infinity, it means that matter, associating to it to infinity, excludes a certain limit between mobile space and cosmic space excluding, at the same time, the possibility of empty space. And, therefore, the problem of limit refers only to the means we dispose of at the present time, to achieve experience and knowledge in such a world, either named a world in constantly evolving or cosmic space.

Cosmic space and time. Opus postumum, which launched the challenging statement of the emptiness of cosmic space, took upon itself the task to bring forward some possibilities to penetrate the realm of this provisionally emptiness. One of the most surprising is that space and time are, at the same time, objects in universal space, just like planets, comets, fixed stars, etc. A first explanation given by Kant is that the two cognitive instruments constitute the ground of the possibility of perception of the intuitions coming from the respective bodies¹⁷ and, therefore, they have to be homogeneous with the investigated intuitions.¹⁸ Therefore, space and time can provide us with hopes that we can have knowledge of cosmic space, as surrounding the world and subject to empirical knowledge. It follows that cosmic space is phenomenologizable as well, since the cognitive reference points that apply to it are the same as those that apply in the world, subject to experience. Insofar as space and time are infinite, however, the world they sustain in order to become objects of phenomenological knowledge is subject to a process of unveiling which tends to infinity, just as our present understanding of the world could be extended in time into cosmic space; such an extension is supported by the fact that space and time are given as “internal forms of sensibility”,¹⁹ which sensibility, although it is not infinite like space, time and the world, nevertheless has no fixed determinate limits. Kant leaves room for its development depending on the instruments used for investigation. In this sense, he takes into consideration cosmic phenomena, for the observation of which sensibility is sustained by the development of the technique. The elliptic form of the zodiacal light, starting from particles moving in a unique direction, crossing each other in cosmic space, is of this kind, as is the eccentricity of comets and fixed stars, which seems to build “systems to infinity for progression”,²⁰ where no beginning is expected. The

¹⁶ AA, 4: 481: ”Dieser aber [der empirische Raum], als materiell, ist selbst beweglich. Ein beweglicher Raum aber, wenn seine Bewegung soll wahrgenommen werden können, setzt wiederum einen andern, erweiterten materiellen Raum voraus, in welchem er beweglich ist, dieser eben sowohl einen andern und so forthin ins Unendliche”.

¹⁷ AA, 21: 145.

¹⁸ AA, 3: 39/ AA, 4: 25.

¹⁹ AA, 21: 151: “[...] innere Formen der Sinnlichkeit”.

²⁰ AA, 21: 97. “[...] ins Unendliche Systeme...im Fortschreiten”.

Moon is also the object of such investigations from a distance; Kant says that this is the outcome of free aggregation, provoked by a central body, aggregation which should be divided between the planet and its satellite, in agreement with centripetal and centrifugal forces, maintaining the planet and its satellite formally in a permanent state of aggregation. In this way, cosmic bodies are forming as aggregates, and from the dispersed mass, existing in cosmic space, systems constituting the cosmic edifice are being built.²¹ The infinite lapse of time takes place similarly to space²² and presents itself as a progression through form. All these examples come to support the existence of matter framed into space and, at the same time, the unlimitedness of the possible experience. In another work elaborated approximately in the same period, namely *Anthropology from a Pragmatic Point of View*, the telescope for cosmic bodies and the microscope for microorganisms are proposed²³ because the sense of sight, which these instruments extend, plays an important role in the progressive process of experimentation. Sight is considered the “noblest” sense of sensibility, coming close to pure intuition, acquired through the direct representation of the object but without the visible intervention of sensation.²⁴ The *Opus postumum* retains the core of this process of transition, pointing out that ideas are dependent on the faculty of sight;²⁵ we can understand this notation as being dependent on conviction and appropriation, since of all the senses, sight seems to have the most direct relationship to the faculty of ideas. Together with the sight, the work of transition between the *Critique* and the *Opus*, which is the *Metaphysical Foundations of Natural Science*, emphasizes the theoretical potential of another sense, mainly in the thinking of space. It is designed as what can be sensed, and supports the framing of objects in space, as well as the thinking of space itself; because the real of the sensible intuition, and therefore the space in which we must have the experience of moving objects, must be sensed as well. In every experience – affirms Kant – something must be sensed, and space, as the totality of the objects of experience, is itself an object of experience; for this reason it is named empirical space.²⁶ This component comes to strengthen the non-formal side of space.

We can imagine that the cosmic phenomena mentioned above constitute objects of experience developed in space and time only if we take into consideration the transcendental sense of experience²⁷, which is distinct from empirical knowledge, insofar as it represents the idea of building up a concept. Otherwise, we could not even represent the purpose of this work, which is meant to provide a transition from the ground-

²¹ AA, 22: 7.

²² AA, 21: 145.

²³ Imm. Kant, *Werke*, Band VII, *Anthropologie in pragmatischer Hinsicht*, Akademie Textausgabe, 1968, AA, 7, 135 p.

²⁴ AA, 7: 156.

²⁵ AA, 21: 97.

²⁶ AA, 4: 481: ”In aller Erfahrung muß etwas empfunden werden, und das ist das Reale der sinnlichen Anschauung, folglich muß auch der Raum, in welchem wir über die Bewegungen Erfahrung anstellen sollen, empfindbar, d.i. durch das, was empfunden werden kann, bezeichnet sein, und dieser, als den Inbegriff aller Gegenstände der Erfahrung und selbst ein Object derselben, heißt der *empirische Raum*”.

²⁷ AA, 3: 81/ AA, 4: 56.

ing metaphysical principles of natural science towards physics, which relies on empirical principles and has as its object the possibility of experience. Therefore, we should start from the idea that the absolute unity of the system of ideas of pure reason, in their quality as human constructs, has as its purpose the unity of possible experience. For this reason, transcendental experience is considered unique because it is a system that is made possible by *a priori* principles. In order to satisfy it, the transcendental philosophy, as a system of ideas of the thinking subject, unites the formal side of *a priori* knowledge from concepts in a principle of possible experience.²⁸ Since experience is grounded in a formal principle, observation and experiment, as aggregates of perceptions, cannot ground experience, which is an absolute unity and not an aggregate produced unsystematically, starting from perceptions (*observatio et experimentum*). Therefore, apprehension has to be achieved through transcendental knowledge in a system as a whole in favour of experience²⁹; empirical knowledge becomes associated with it only when it is generally determined.

Another possible ground for considering space and time objects in cosmic space is that they both (in their quality as intuitions and, therefore, as non-concepts) include infinity in the concept of the collective unconditioned unity of the manifold of intuition, an infinity by which they are compatible with the objects of cosmic space. Nevertheless, by cosmic objects we must understand not the similarity with bodies or cosmic phenomena but the cosmic dimension acquired by space and time, because of the permanent relation of both to the whole they can render cognoscible. They help the objects to unite in an absolute whole, by which the subject constitutes itself, at the same time building a system expressly elaborated in favour of the possibility of experience. To carry out the corresponding system of principles, it is necessary that the subject counts as given in advance, in comparison to which the act of composing, unlimited in progression, contains as its object of thought the intuition of a whole. This whole possesses a subjective infinity, being represented as an infinite given. Space, time and the comprehension (*complexus*) of the manifold of intuition in space and time grounds the formal part of the subject's conditions, by which he counts *a priori* as an object in the phenomenon, as *dabile*, and thinks of himself synthetically as a determinable *cogitabile*; a process the result of which is that space and time are not discursive representations from concepts, but intuitive representations, the intuition of the singular, not the intuition of the universal, as required by the concept.³⁰ It follows that space is not a perceptible object (apprehensible), but it is an outcome of the faculty of representation as spontaneity (*Spontaneitas* not *Receptivitas*), in order to represent the *aspectabile* as *cogitabile*.³¹ The imperceptibility of space renders it inseparable from matter.³² From their association it follows not that intuition of space

²⁸ AA, 21: 87.

²⁹ AA, 21: 15.

³⁰ And as pointed out in the *Critique of Pure Reason*, as a contribution of the second edition, AA, 3: 40.

³¹ AA, 22: 42.

³² Wing-Chun Wong: "Kant's Concept of Ether as a Field in the *Opus postumum*" (*Proceedings of the Eighth International Kant Congress*, Memphis, 1995, Volume II, Part 1, Ed. by Hoke Robinson, Mar-

produces the perception of an existent, but that it produces an *a priori* representation, which is the formal part of a composition (*coordinatio et subordinatio*) in a complex of sense objects, which, based on a principle of general determination, has a tendency to achieve a system of the manifold in favour of the possibility of experience – experience which can be only one (a oneness that it shares with space and time) and presents the object in the phenomenon of the affected subject, not according to what this subject is as a thing in itself, where the thing in itself = *x* is a pure concept of the relationship the subject represents. Space and time are relationships of objects³³ as well: an act of spontaneity of the subject in intuition in the composition of the manifold, on the one hand, and affections of receptivity in the presentation of that composition in the unity of the concept on the other. They cannot be presented by the perception of the subject, because they are two relationships of the objects of pure intuition, which contain *a priori* principles of their composition as alongside one another and successive (*iuxta et post se invicem positurum*).³⁴ They are represented only in the subject who intuits, as conditions of the composition of the manifold, each as an unconditioned unity and both as infinite magnitudes, whose parts are not objects of perception, which is an empirical representation with consciousness. In themselves they are not existent, but rather pure formal intuitions, called phenomena³⁵.

The ether. Another defining endeavour of the *Opus postumum*, that of bringing the infinity of cosmic space closer to the cognoscible world, consists in the introduction of a type of matter – one that penetrates all bodies (as an *onus*), moves them continuously (as *potentia*)³⁶ and is called either *ether* or *caloric*. Penetrating all bodies, it is conceived of as an elastic original fluid, which fills cosmic space, “attracting in all its parts at infinite distances and rejecting at the same time equally powerfully [...] in an outer movement of oscillation (*vibratio, vndulatio*)”.³⁷ Thanks to this property, everything became a non-locomotive motive force, without changing place, due solely to inner movement. Later, this force was divided into specifically different elementary parts, each spreading as a continuous whole in cosmic space, penetrated by others and equally essential. Together they constitute a “whole” of motive forces whose existence is known *a priori*. Kant spec-

quette University Press, 1995, 405-411) argues that if Kant’s conception on space implies its inseparability from matter, and if space is the form of external intuition, then matter should be intuited. “Since space is the form of outer intuition, without the presence of matter, we will have nothing to intuit.” The change brought about by the *Opus postumum* compared to the *Critique* is that space is identified with the moving forces of ether, because they affect us. “Since Kant says that all sensible intuitions are grounded on affection, our representation of space must somehow be related to force” (406).

³³ AA, 22: 43.

³⁴ AA, 22: 42-43.

³⁵ AA, 22: 43.

³⁶ AA, 21: 216.

³⁷ AA, 21: 252-253: “[...] in allen ihren Theilen in unendliche Entfernungen Anziehend eben so wohl als in der größten Naheheit eben so stark abstoßend in ewiger erschütternder Bewegung (*vibratio, vndulatio*)”. Wing-Chun Wong, *Op. cit.*, writes: “[...] it is clear that Kant’s ether satisfies the third property of a field, namely that it functions as a continuous medium for the transmission of action across space” (410).

ifies that this idea should not pass as a hypothesis, but it is given in the representation of space in general as the object of sensible intuition, a representation by which it becomes, mediately, a sensible object.³⁸ Without this property, space would only be an object of thinking, and it could not become an object of perception; although space as such is not perceptible, its motive forces fall under the universal law of attraction,³⁹ which makes objects perceptible. This original matter acts as a principle, represented by the perceptible space liberated, in thinking, from other properties. As original matter, necessary to objects of sense, it is the opposite of being empty, and thus we can represent it as serving as the basis of any other moving matter. Together with the penetrated bodies, it constitutes the whole universe, subsisting for itself and possessing internal movement.⁴⁰ In this quality, its motive force is only its own agitation which is proper to it, being deprived of any other motive forces – agitation by which it maintains any other motive forces in a constant and lively activity. To sustain the progressive cognoscibility of cosmic space, it helps that the penetration of space by the material *a priori* contained in the original matter in order to make experience possible is given as a theorem, experience which becomes possible together with the intervention of motive forces.⁴¹ If we do not admit the continuity between what is uncognizable at a given moment and what is presently cognizable or subject to experience, then we should admit empty space as an interval between spaces filled with matter, passages which to Kant would mean that “a perception of non-existence”⁴² is interpolated between the perceptions of existence, which is contradictory insofar as non-existence and the emptiness with which space is associated do not present the effects of the motive forces of matter to our senses.⁴³ From the point of view of con-

³⁸ AA, 22: 10, 21.

³⁹ AA, 22: 20.

⁴⁰ Fernando Guerrero Jiménez: “Le nouveau tournant transcendantal de Kant” (*Années 1796-1803, Kant. Opus postumum*, Sous la direction de Ingeborg Schüssler, Paris, Librairie J. Vrin, 2001, 67-73) argues that the thinking subject is the one who creates the ether, together with the framework that valorizes it, such as the motive forces and space: “Even the subject sets himself (or proposes himself) as space (and time) which produces (in the sense that it directs it to systematicity) every time when it perceives motive forces; it is not it which produces motive forces themselves, but it is the one which projects itself as an «active principle of unification of all motive forces of matter», that is as ether, as a «sensibilized» space (or better as a carnal anticipation: the material form of any experience). This ether becomes, in this way, the objective correlate of the supreme principle of the possibility of experience, the correlate, in the physical sphere, of the *I think* in the cognitive sphere. And thanks to the ether, the gap between understanding and intuition, between spontaneity and receptivity, between metaphysics and physics can be surpassed” (73).

⁴¹ AA, 21: 223: »Die uranfänglich bewegende Materien setzen einen den ganzen Weltraum durchdringend erfüllenden Stoff voraus als Bedingung der Möglichkeit der Erfahrung der bewegenden Kräfte in diesem Raume welcher Urstoff nicht als hypothetischer zur Erklärung der Phänomene ausgedachter sondern categorisch *a priori* erweislicher Stoff für die Vernunft im Übergange von den metaph. A.G. der N.W. zur Physik identisch enthalten ist.«

⁴² AA, 21: 219: “[...] eine Wahrnehmung vom Nichtseyn”.

⁴³ Burchard Tuschling (*Metaphysische und transzendente Dynamik in Kants Opus postumum*, De Gruyter, 1971, 224 p.) considers that the new concept of matter provided by Kant in *Metaphysische Anfangsgründe* and continued in the *Opus*, which includes cosmic matter, the continuity of matter, ether and caloric, is the concept by which he reconsidered his dynamics, making it more appropriate to the grounding

temporary physics we can compare the presence of this penetrant matter with the fluidity of quantum fields, which penetrate the universe and vibrate in all of the points framed in space-time. The express grounds for which Kant introduces this matter is the fact that intuitions in space and time are only forms, and in the absence of something that makes them cognoscible to the senses, like penetrant matter is, they would not reach any real objects that give us existence in general, mainly magnitude. Otherwise, space and time would remain only empty frames for experience. In its quality as cosmic matter given originally as a driving force, it designates, first, the intuition, which would be empty and without perception in the absence of this matter. It can be recognized and postulated *a priori*, belonging necessarily to the transition from the metaphysical principles of natural science to physics. By this association of original matter with spatio-temporal form, all phenomena of matter and their motive forces are bound to the whole universe, insofar as space and time are considered absolute unities; this is the implicit ground of introducing this penetrant matter. On its basis, one can admit a universal principle of the reciprocal action of phenomena and motive forces, consisting of real, reciprocal relationships. The interaction of objects and the reciprocity with which they are attracted make experience possible; this reciprocal interaction is *a priori* admitted, as given in the phenomenon. More precisely, space considered in formal intuition, as an object of the senses or as an object in the phenomenon, is sensible space, in opposition not only to empty space, which is a space of non-objectuality, but to intelligible space, which is subjective as well but thought as the substratum of all possible perceptions, and therefore as a substratum of objectuality. While empty space and intelligible space are outcomes of thinking and limits of sensible space, intelligible space has the capacity to constitute a system of the motive forces of matter, which is achieved according to the rule of identity as an absolute unity. The purpose of this unity is to make space an object of experience and to build up an absolute whole of the general determination of objects of sense.⁴⁴ Another limiting outcome of thinking, conceived by the *Metaphysical Foundations of Natural Science*, is the *absolute space*. It is nothing in itself and cannot be perceived in its effects, in order to make experience possible. Since it exists only in thinking, nothing is known about the matter it designates; making abstraction of matter, it is represented as a pure, non-empirical and absolute space, to whom can be compared the empirical space. The last one is defined as the totality of the objects of experience⁴⁵, as in *Opus postumum* through the intervention of ether. *Opus postumum* has renounced, terminologically, to this concept, keeping for the same empirical reality the term of *sensible space*. The motive forces of matter, meant to render it an object of experience, are the causes of the possibility of

of physics as a science. It favours one concept of “transition from the metaphysical principles of the natural science to physics”: “[...]die Übergangsidee die revidierte Materietheorie des O.P. bereits voraussetzt und nur aus ihr zu verstehen ist und nicht umgekehrt sie zu erklären vermag. Der Übergang ist [...] eine ad-hoc-Lösung, dazu bestimmt, die Notwendigkeit des neuen Unternehmens zu begründen, zugleich aber seine sachliche und systematische vereinbarkeit mit den MA nachzuweisen” (61-62).

⁴⁴ AA, 22: 517-518.

⁴⁵ AA, 4, 481.

perceptions in matter. The first among the motive forces, which constitutes the existence of sensible space, is that by which the intuition is given empirically, extensively in the possibility of perception of what is external in the object; the second is that by which the intuition is given in perception intensively, in sensible time, according to their degree.⁴⁶ Both are produced subjectively, according to the form in which the subject is affected. They manifest themselves through attraction and repulsion, which are acts of the agitating forces of matter, containing *a priori* a principle of the possibility of experience and making possible the transition to physics. This principle belongs to the fundamental metaphysical principles of natural science and thus belongs to philosophy, which uses mathematical principles as an instrument in favour of philosophy, with regard to the relationships of the given forces of matter. They act according to laws that derive from the universal system of gravitation, starting from the original attraction.

It should be specified that the original matter referred to as ether only exists in thinking with the property attributed to it, that of an original motive force; this matter is neither hypothetical nor an object of experience, since it is said that only physics can have experiences bound with such matter, while philosophy is only left with thinking it.⁴⁷ It has reality to the transcendental philosophy, and its existence can be postulated because in the absence of the acceptance of such a cosmic matter and its motive forces, space would not be an object of the senses, insofar as there would be no experience, whether affirmative or negative, of it as an object.⁴⁸ This original matter, devoid of form, penetrating all the spaces and guaranteed only by reason, which we can conceive

⁴⁶ James L. McCall ("Metaphysical Foundations and Ponderomotive Nature", In: Kant-Studien, 96, no. 3, 2005, 269-311) considers that the extensive magnitude of space has an intensive counterpart, "[...] foreshadowing Kant's «universal dynamic law»", and the extensive magnitude of time has an intensive counterpart as well, as "a determination missing from Kant's dynamic law but consistent[...] with a modified dynamic law of extensive and intensive magnitudes" (300).

⁴⁷ Ether's standing as an intermediary concept (*Zwischenbegriff*) between the metaphysical foundations and physics is emphasized by Stephen Howard as well ("The transition within the Transition: the *Übergang* from the *Selbstsetzungslehre* to the ether proof in Kant's *Opus postumum*", In: Kant-Studien, 110, 4, 2019, pp. 595-617); being a "dazwischen liegende[s] Object der Wahrnehmung", it "«precludes the notion of empty space and, als eine bewegende Kraft und reeler Stoff», provides an intelligible way that moving forces are connected (OP; AA, 21: 229.03)" (601-2).

⁴⁸ In relation to the possibility of experience, V.J. Rollmann ("*Apperzeption und dynamisches Naturgesetz in Kants Opus postumum*. Ein Kommentar zu Uebergang 1-14", Kant-Studien Ergänzungsheft, 2015, 325 p.) invokes the ether as well, which is constitutive for experience as a whole, "weil er dieses Ganze ist", "Der Inbegriff dessen, was zur Möglichkeit der Erfahrung gegeben sein muss in objektiver Realität. Selbst keine Erfahrungsgegenstand, ist er die Erfahrung als Gegenstand und deren objektives Prinzip" (265-266). From experience as a whole, G.P. Basile (*Kants »Opus postumum« und seine Rezeption*, Berlin, De Gruyter, 2013, 437 p.) sets ether in relation to the body, seeing in it the correlate of the body, viewed in connection with self-consciousness, where it is "eine notwendige Bedingung *a priori* für die mögliche Erfahrung". In this sense it could be said that "Er stellt in diesem Sinne das Korrelat des Äthers dar, welcher die wirkliche, wenn auch nur indirekte Ursache der Affektion und zugleich für den Physiker ein konstruierter Begriff ist. Der Leib entspricht als technische Subjektivität dem Äther als Konstrukt in der Physik, als Selbstbewusstsein dem Äther als wirklichem Stoff. Wie der Äther nur eine indirekte Anschauung ist, so stellt auch der Leib als Selbstbewusstsein nur eine indirekte Selbstanschauung dar" (419).

of only as motive forces spread through space and penetrating everything, allows for the postulation of its rational, *a priori* reality in favour of possible experience. And, in spite of its subjective argumentation, the necessity of postulating such a universally spread material, according to Kant, “[...] is grounded in the concept of the same [material – n.n.] as a space thought *hypostatical*”;⁴⁹ as such, it takes over matter’s characteristic of being indissolubly bound to space. Therefore, this original matter was introduced due to the necessity of giving space a non-formal dimension. Because this matter is introduced, space and time’s formal dimension of receiving intuition can be extended. In conformity with this extension, following from the relationship between space, matter and cosmic matter, space, and also time, are given as magnitudes. As magnitudes (*quanta*), they precede empirical intuition with consciousness, which is perception, and if they precede empirical intuition, they should be *a priori* intuitions: respectively two forms of the composition of the manifold in intuition as a phenomenon for the subject, as it is affected. In the absence of their *a priori* character, they could only be things (*reale*) which can exist outside our representation, not merely subjective determinations of intuition, possible as such.

Space and time as infinite quanta. Having the quality of an infinite given (infinity transmitted by its quality of being an absolute unity⁵⁰) space, and like it time, are given as infinite quanta as well, because what is progressive to infinity (*in indefinitum*) can be represented as an infinite given (*in infinitum*) – “according to the mathematical predicates of intuition [...] as if they are real places, in which things and their changings are placed”.⁵¹ As quasi “real places”, they could pass for negative infinite quanta (*quanta indefinite talia*), their infinity being that which distinguishes them from concepts (*conceptus*) and defines them as intuitions (*intuitus*). As quantum, space can only be given as a part of a greater quantum, and likewise for time⁵². This idea of a quantum, dependent of another ever-growing is found in Kantian post-critical thinking, as mentioned before, in the thinking of the concept of *mobile space* in the *Metaphysical Foundations of Natural Science*. About it is stated that its perception of movement supposes, in turn, a more extensive space, in which it is mobile infinitely. We can imagine this greater whole as the presence of the two entities in the world of experience, which extends its limits, in an indeterminate time, to cosmic space. This possibility of extension proves the identity of space, either phenomenal or cosmic. For this reason, Kant asks us not to speak about spaces and times, but about space and time, which are infinite. In the same way, he asks us not to speak about parts of space and time, but about places (*positus*) in space and time; they give birth to forms and series, which are always in a subjective progression in the determination of time. In agreement with this whole, there is a world, a space, a time and an experience, integrated into an infinite whole, and no limit to the manifold in space

⁴⁹ AA, 21: 221: “[...] hat ihren Grund in dem Begriffe desselben als *hypostatisch* gedachten Raumes”.

⁵⁰ AA, 21: 21; AA, 22: 340.

⁵¹ AA, 22: 11: “[...] nach mathematischen Prädicaten der Anschauung...gleich als ob sie wirkliche Stellen wären darin die Dinge oder ihre Veränderungen vorgehen vorgestellt”.

⁵² AA, 22: 13, 21.

is possible as a real limitation, since otherwise emptiness would be an object of the senses. It should be mentioned that the representation of space and time as magnitudes is strengthened and diversified in the *Opus*, in comparison with the initial exposition made in the *Critique*;⁵³ in comparison to the *Critique*, the *Opus* makes the distinction between space as *magnitude* (*Größe*) and as *quantum* (*Quantum*), the first meaning the *dimension* or the *expanse*, which would make it more appropriate to a formal approach than the latter, by which is meant the *quantity* or the *amount*. However, with the Latin equivalent that Kant gives for *magnitude*, it is clear that although he assumes that the difference between the two terms is minimal, with this minimal difference he attempts to take a small step beyond the formal background. But, whatever the difference between the both terms would be, what is important is the association of the magnitude to space and time, in order to be considered objects in cosmic space. The idea of homogeneity between the space considered as a "given infinite magnitude"⁵⁴ and the objects represented in space appear also in the *Critique of pure reason*. Here it is stated that the objects are in totality magnitudes, and have to be represented by the same synthesis as the one by which space and time are represented⁵⁵. But in the critical thinking, the magnitude comes from the category of quantity the space follows, as a receptor of phenomena subordinated to categories. If it is established that there is a single space, and that space is indissolubly bound to matter, it follows that cosmic space, although it is temporarily thought of as empty in the initial stage of possible experience, should, in general, be thought of as filled with matter. How much or how little of this space is filled is unimportant, insofar as there is only one space. It is considered the only "means" to the local movement of bodies, and the matter which fills the space can be mobile in the same place only within; it serves as an object of possible experience and constitutes a material, having the function of a principle of possible experience. Based on the law of gravitation, Kant deduced that, if only attraction were proper to its parts, then all the parts would converge in a point, and space would remain empty; if repulsion were the only means by which the parts acted on one

⁵³ "Der Raum wird als eine unendliche *gegebene* Größe vorgestellt. Nun muß man zwar einen jeden Begriff als eine Vorstellung denken, die in einer unendlichen Menge von verschiedenen möglichen Vorstellungen (als ihr gemeinschaftliches Merkmal) enthalten ist, mithin diese *unter sich* enthält; aber kein Begriff als ein solcher kann so gedacht werden, als ob er eine unendliche Menge von Vorstellungen *in sich* enthielte. Gleichwohl wird der Raum so gedacht (denn alle Theile des Raumes ins unendliche sind zugleich). Also ist die ursprüngliche Vorstellung von Raume *Anschauung a priori* und nicht *Begriff*." (AA, 3: 39-40/ AA, 4: 25). And: "Die unendlichkeit der Zeit bedeutet nicht weiter, als daß alle bestimmte Größe der Zeit nur durch Einschränkungen einer einigen zum Grunde liegenden Zeit möglich sei. Daher muß die ursprüngliche Vorstellung *Zeit* als uneingeschränkt möglich gegeben sein." (AA, 3: 48/ AA, 4: 32).

⁵⁴ AA, 3: 39/ AA, 4: 25. See, about this feature, the study signed by Lydia Patton ("The Paradox of Infinite Given Magnitude: Why Kantian Epistemology Needs Metaphysical Space", In: Kant-Studien, 102, nr. 3, 2011, pp. 273-289), which deals with the paradox generated by this formulation, intended for experience, but which go beyond the limits of this one; however, it is said that it is necessary to reconcile his empiricism with his transcendental idealism.

⁵⁵ AA, 3, 203: "[...]die Erscheinungen sind insgesamt Größen und zwar *extensive Größen*, weil sie als Anschauungen im Raume oder der Zeit durch dieselbe Synthesis vorgestellt werden müssen, als wodurch Raum und Zeit überhaupt bestimmt werden".

another, then the corresponding material would disperse its parts and spread to infinity, and cosmic space would again remain equally empty. Therefore, he proposes the representation of the existence of matter as a whole consisting of material points which, repulsing each other and attracting each other at the same time, fill space both extensively and intensively.⁵⁶ In this material whole we should represent cosmic space as being devoid of intermediate empty spaces that are surrounding or surrounded, since the non-existence of these spaces cannot be the object of possible experience. Nor should movement be represented outside of space filled with matter, which forms a continuum of matter, because the movement of matter through empty space is not an object of possible experience, even if the movement is temporary, as a transition from fullness to emptiness and vice versa – because, as previously shown, no movement or motive force can exist for the senses and for the conditions of possible experience unless they take place in space filled with matter. And it should be filled, since space is not a sensible object, but the synthetic form of intuition, as a phenomenon of the aggregation of motive forces in the system of binding the manifold of these forces, in order to ensure the unity of possible experience. Its filling and the repulsion of empty space are demanded by the attraction of the original gravitation⁵⁷.

Dynamic versus mechanic. It should be mentioned that the dynamic,⁵⁸ which is meant to give a specific sense to the basic elements of transcendental idealism, including space and time, is opposed by Kant, in both the *Opus* and the *Critique*, to the mechanic mode of building up the same elements, as a derived and limited mode, while the former is considered original. In agreement with this mode of treating concepts and principles, the world is given as the totality of the beings of nature, making up the whole of existence in space and time, only related to sensible-rational beings, who are not purely moral,⁵⁹ because the unity in which the world comes to be framed is a dynamic-moral unity – a dynamism in which dual beings share as well. To these dual be-

⁵⁶ AA, 22: 211.

⁵⁷ On this relationship see Rodica Croitoru: Is there a Temptation of the Void Space in *Opus postumum*? In: Noema, Romanian Academy, 21-23 (2022), 4-11.

⁵⁸ Wing-Chun Wong: *Op. cit.*, limits the dynamic view on space, sustained by Kant in *Opus postumum*, to “the fusion of the concept of force with the concept of space, which provides a conceptual basis for the idea of an all-pervasive substrate for physical reality - the ether” (407). Unlike him, Bryan Hall: “Understanding Convolut X of Kant’s *Opus postumum*” (In: *Recht und Frieden in der Philosophie Kants*, Akten des X. Internationalen Kant-Kongresses, Band 5, Hrsg. von Valerio Rohden, Ricardo R. Terra, Guido A. de Almeida und Margit Ruffing, Berlin, New York, 2008, 245-256) states that the dynamic proceedings are not only valorized by the ether, but the ether contributes to completing of the process of transition as well, including the dynamic proceedings, because “the addition of the ether as a dynamic force plenum and transcendental *material* condition of experience leads Kant to substantially revise how the transcendental *formal* conditions of experience function in their empirical application. We discover that space and time require the ether for their empirical reality. Although the categories themselves do not change, a new function of the understanding is added in the *a priori* concept of the systematic unity of the moving forces of matter which is applied objectively to experience through the principles of pure understanding, resulting in an absolute unity of consciousness” (255).

⁵⁹ AA, 22: 60.

ings, the object of the senses is not to be considered a thing in itself (*obiectum Noumenon*), but as given in the phenomenon, which takes place in an original act of sensible intuition of oneself, which is at the same time valuable for the object, because the object cannot be given but by the dynamism of the subject, in a process in which the forms of space and time identify themselves with the binding of the manifold into a unity. Space, time and together with them the determination of the manifold in intuition of the object (*descriptio*), which is given in space and time, are *a priori* principles of synthetic *a priori* knowledge of the transcendental philosophy, the determination of which as objects grounds axioms,⁶⁰ such as: space and time each constitute an absolute whole and, as a consequence, they are infinite; space is represented by three dimensions of corporeality – the surface, the line and the point; they are given as axioms of the subjective intuition of oneself, representing the formal part of the synthesis of the manifold in space and time, which occurs in the phenomenon; time contains only a dimension, from which it follows that time is devoid of duration, whereupon its present, past and future existence is contained within a moment; standing beside and outside each other are positions (*positus*) in space; time runs in regression, which is the decomposition of the elements of space, until the point, and time runs on the same line until the moment.⁶¹ From these sentences it follows that space and time, which are unique, are represented not only negatively, as unlimited, but also positively, as infinite magnitudes in the progression of *a priori* synthesis, and consequently as given not in the object of representation (as *dabile*), but in the composing subject (as *cogitabile*); therefore, space and time are neither apprehensible objects nor objects of perception, whose systematic connection builds up the experience. Nevertheless, they make possible synthetic *a priori* judgments, which are set as a ground of the experience of objects. The sensible representations coming from them should only be thought indirectly, namely not as knowledge of objects in themselves, but as an intuition of objects as phenomena, the only one which can be given *a priori*. From here it follows that, without such a mode of representation as its ground, experience would not be possible. By such reconsideration, space could become, mediately, a sensible object⁶² and, along with time, an absolute unity in the universe. We acknowledge that the first thinking from which the faculty of representation starts is the intuition of oneself and the category of the synthetic unity of the manifold in the phenomenon, that is pure, non-empirical representation, preceding any perception by *a priori* principles, which shows us that the possibility of synthetic *a priori* statements is contained in the unconditioned unity of space and time as pure intuitions. Their quality consists in the fact that the formal part of this manifold, as an unconditioned whole, is the representation of space and time, in agreement with the things that are present themselves as one near the other and one after the other, constituting a pure representation, given *a priori*, by which the subject places himself and becomes an object of the senses. These elements present themselves

⁶⁰ AA, 22: 9.

⁶¹ AA, 22: 5, 9.

⁶² AA, 22: 17, 21.

in this way only in the phenomenon, however, not as a thing in itself (*ens per se*) and not merely analytically, according to concepts, but synthetically, by their construction in the complex of the manifold of intuition, as a “true object”, not an *ens rationis*, which is merely an object of thinking.⁶³ In this framework, we receive the motive forces in our inner selves, ascribing value to space, first in sensation, and then as an *a priori* intuition, in favour of experience. This is the basis of knowledge as a process, in which the intuitions of space and time exercise their dynamic function, of placing a manifold of intuition in the phenomenon as *abile*, but as *aspectabile* as well,⁶⁴ which precedes any representation of apprehension and is thought synthetically *a priori* according to a principle, as being generally determined (*intuitus quem sequitur conceptus*). By this determination, the subject places himself in the collective unity of the manifold of intuition. For him, space and time, together with the manifold contained by these representations, should be thought of in terms of two kinds of relations: first, as far as representations are sensible intuitions, and second, since their manifold in general makes synthetic *a priori* statements possible, in this way constituting a principle of representations. It is on this dynamic construct that the necessary science of the transcendental philosophy is grounded. Through it, space and time, which are considered infinite, build an unconditioned unity of pure intuition. Their infinity gives a sense to the inconceivability of a first beginning of movement. Because there is movement in cosmic space, the postulation of an original movement of matter and the existence of its motive forces is inevitable; however, the eternity of this movement and its continuity entails a necessity that is unacceptable to transcendental idealism. A prime motor (*primus motor*), which would ground its movement in an act of free will, would also be unacceptable; it would be an immaterial principle, excluded by the transition from the grounding metaphysical principles to physics, which constitutes the purpose of the *Opus*. Kant solved this problem of original movement by introducing ether, which is consubstantial with the infinity of matter. By introducing this, he provided an explanation of the entire universe, through a dynamic construct through which matter and, in general, the edifice of the world are put into motion by a natural and original element, by which a subtle distancing from divine intervention is achieved⁶⁵. This can be compared to a theory in contemporary physics, namely field theory, through which Einstein also attempted to provide an explanation of the entire universe.

Conclusion. Despite its intention of moving away from the subjective framework drawn by the *Critique of pure reason*, the *Opus postumum* did not succeed in making space and time things for themselves (*entia per se*) or sense objects in sensible intuition (*objecta apprehensionis*). Nevertheless, it did keep them within the limits of the subjective part of intuition, limits which Kant extended by exploring their cosmicity, given by

⁶³ AA, 22: 25: “[...] als wahres Object (nicht als *ens rationis* ein bloßes Gedankending)”.

⁶⁴ AA, 22: 44.

⁶⁵ On this topic see our study: Rodica Croitoru, “Eterul și caloricul, piloni ai *Opusului postum*. Evaluare din perspectiva secolului XX”, in Al. Surdu, Al. Boboc, C. Băciu, S. Bălan, I. Tănăsescu (eds.), *Studii de istoria filosofiei universale*, XXVI, București, Editura Academiei Române, 2018, pp. 49–62.

their representation as objects in universal space, on the ground of the infinity they include in the concept of the collective unconditioned unity of the manifold of intuition. How this manifold is composed is yet another gain for unveiling new aspects of this pair, which for the thinking subject is formed by two collective unconditioned unities. Being absolute unities, they pass, at the same time, for absolute given magnitudes. Having the quality of an infinite given, as far as they are absolute unities, they are also characterized as infinite quanta; their infinity is a negative one, but it is that by which they carry out the function of *a priori* principles of the synthetic *a priori* knowledge of the transcendental philosophy, the determination of which as objects grounds the problem of the transcendental philosophy. It expresses itself in the statement “how is synthetic *a priori* knowledge possible?”, synthesis by which the subject constitutes himself as an object. These new elements, which appear in the approaching of space and time, show that the discourse on the Nothing, which used to designate their transcendental ideality, could be valorised and diversified due to the dynamic construct in which space was framed, by which it was offered the chance to become, mediately, a sensible object and, alongside time, an absolute unity in the universe, an unconditioned unity of pure intuition. Nevertheless, the meaning of both remains negative. Another (no less important) achievement of the *Opus postumum*, given by the general relation of space to human subjectivity, is constituted by the openings it provides for contemporary theories of multidimensional space, included in the inner networks of the human brain. These developments and openings to the future generate arguments in favour of the motives of satisfaction Kant could have had concerning his critical theory of space and time, which not only provided the integration of physics (the Newtonian transformed physics) in the system of transcendental idealism but, at the same time, attracted attention to the essential role of subjectivity in the investigation of phenomena of nature. The many inquiries into the status of space and time indicate the necessity of developing this question further.

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