



THE 1768 OPUSCULE: “ON THE ULTIMATE GROUND OF THE DIFFERENTIATION OF REGIONS IN SPACE” AND ITS CONTRIBUTION TO SPACE AS A THEME IN KANT’S “TRANSCENDENTAL AESTHETICS”

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Abstract: This paper aims to investigate the relevance and some contributions of Kant’s 1768 opusculum, entitled “On the Ultimate Ground of the Differentiation of Regions in Space” (RS),¹ to the advent of critical philosophy, more specifically to the doctrine of space found in the “transcendental aesthetics” from the *Critique of Pure Reason*. We believe this paper is justified as it brings along not only a purely historical approach to the thought of the Königsberg philosopher, but it allows the presentation of some assumptions which are not always discussed; especially those on Kant before the *Critique of Pure Reason*, which, nevertheless, have a great importance, including the *Critique* itself.

Keywords: Space. Kant. The 1768 Opusculum.

O OPÚSCULO DE 1768: “SOBRE O PRIMEIRO FUNDAMENTO DA DISTINÇÃO DE DIREÇÕES NO ESPAÇO” E SUA CONTRIBUIÇÃO AO TEMA DO ESPAÇO EM KANT NA “ESTÉTICA TRANSCENDENTAL”

Resumo: Este artigo tem por objetivo investigar a relevância e algumas contribuições do opúsculo de Kant de 1768, intitulado “Sobre o primeiro fundamento da distinção de direções no espaço” (DE), ao advento da filosofia crítica, mais especificamente à doutrina do espaço encontrada na “estética transcendental” da Crítica da razão pura. Acreditamos que este trabalho justifica-se de maneira tal que traz consigo não somente uma abordagem meramente histórica do pensamento do filósofo de Königsberg, mas possibilita a apresentação de alguns pressupostos que nem sempre se discutem; principalmente aqueles sobre o Kant anterior à Crítica da razão pura, que, não obstante, são de grande importância, incluindo a própria Crítica.

Palavras-chave: Espaço. Kant. Opúsculo de 1768.

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¹ *Von dem ersten Grunde des Unterschiedes der Gegenden im Raume* – (Ak II, 375-83). We will use the initials RS to refer to Kant’s text.

Introduction

In this paper, we will see that the proposals of the Philosopher of Königsberg in the *1768 opusculum* are basically two, namely:

- 1st – To refuse the Leibnizian conception of space (relative space);
- 2nd – To prove the reality of absolute space.

Having in mind the primary proposals of the *1768 opusculum*, to the fulfillment of our task we opted to divide this exposition into three distinct moments, namely:

I – Providing the context in which the problem of space is inserted, briefly exposing the controversy that existed in the 18th century on that issue; more specifically, between Leibnizians – with the conception of relative space – and Newtonians – with the conception of absolute space.

II – Entering in Kant's *1768 opusculum* which, by its turn, will be divided into four parts, titled: 1 – "Problem statement"; 2 – "Identification of the different spatial orientations"; 3 – "The incongruous counterpart argument"; and 4 – "Kant's conclusion".

III – Finally, we conclude with some considerations, although somewhat provisional, about the evolution of space as a theme in Kant, which consolidates itself in the "transcendental aesthetics" from the *Critique of Pure Reason*. The 1768 text is the starting point.²

1. The background: The space problem in the 18th century

Let us make a very briefly clarification on the status of the space theme in Leibniz and Newton. This problem is attributed, roughly, to the problem of physical space. In the 18th century, it was accepted that the physical space is distinct from the material things occupying it. However, there are two different positions concerning the nature of this distinction, namely:

² Certainly, the space theme is not a particularity of Kant's *1768 opusculum*. As it is known, this theme is relevant to the philosopher since the beginning of his intellectual career – in the early 1740s –, therefore, let us mention some of Kant's previous writings, where the philosopher addressed the space theme: 1st – in the 1740s, when Kant wrote his first text, entitled "Thoughts on the true Estimation of Living Forces" (*Gedanken Von der wahren Schätzung der lebendigen Kräfte und Beurtheilung der Beweise deren sich Herr von Leibniz und andere Mechaniker in dieser Streitsache bedient haben, nebst einigen vorhergehenden Betrachtungen, welche die Kraft der Körper überhaupt betreffen* – Ak I, 1-181 – 1746); 2nd – in the 1750s, he wrote his "Nova Dilucidatio" (*Priniporum primorum cognitionis metaphisicae nova dilucidatio* – Ak I, 385-416 – 1755); his "Physical Monadology" (*Metaphisicae com geometria junctae usus in philosiphia naturale cujos specimen I. Continet monadologiam physicam* – Ak I, 473-87 – 1756) – this writing is very relevant on the theme of space, as Kant intended, roughly, to conciliate the Leibnizian and Newtonian theses, that is, both conceptions of an ideal-relative space – from Leibniz's part – and an absolute-real space – from Newton's part. Nevertheless, in 1768, as we will see here, Kant no longer defends the Leibnizian thesis of relative space, showing to be in favor of the thesis of absolute space. However, discussing this text as well as all texts before the *1768 opusculum*, in which he addressed the problematic of space, would lead us to escape from the proposed scope. For further knowledge on the 1756 text – Kant's "Physical Monadology" – we recommend the book by Lucio L. Prado: *Monadologia e Espaço Relativo – O Jovem Kant Recepcionando Leibniz*. São Paulo, Educ, 2000. Moreover, from the 1750s, we have also Kant's "New Conception of Motion and Rest" (*Neuer Lehrbegriff der Bewegung und Ruhe und der damit verknüpften Folgerungen in den ersten Gründen der Naturwissenschaften, wodurch zugleich seine Vorlesungen in diesem halben Jahre angekündigt warden* – Ak II, 13-25 – 1758). And 3rd – in the 1760s, when Kant had a great influence from the empiricists (Locke, Hume, and also Crussius), we find the philosopher mentioning the space theme in the writings: "Attempt to Introduce the Concept of Negative Magnitudes into Philosophy" (*Versuch den Begriffe der negativen Grössen in die Weltwesheit einzuführen* – Ak II, 63-163 – 1763) and "Inquiry Concerning the Distinctness of the Principles of Natural Theology and Morality" (*Untersuchungen über die Deutlichkeit der Grundsätze der natürlichen Theologie und der Moral* – Ak II, 273-301).

1st – if space is a consequence of the existence of bodies (no possibility to the existence of an empty space);

2nd – if space is a prerequisite for such bodies to exist (something that can exist without the spatial things).

Basically, facing this controversy leads to the arise of the conflict between the adverse positions of Leibnizians (relative space) and Newtonians (absolute space). Let us begin with Newton.

To the English physicist, space had four basic characters. They are: 1st – space is real; 2nd – space is where all physical phenomena occur; 3rd – space is distinct from the things that exist in it, or, in other words, space is distinct from the spatial things; and, finally, 4th – relative space is part of absolute space.³ With these criteria, we verify that to Newton the existence of an empty space is possible, that is, space can exist independently from spatial things; since it is not spatial things that determine it, but it is space which is previous to the things themselves.

Leibniz, in opposition to this conception, believed that space is basically a system of relations devoid of any existence. Therefore, one of his greatest criticisms to the English physicist concerns precisely the existence of absolute space (and also time).⁴ One remarkable example of the criticism of Leibniz to the conceptions by Newtonians, especially those about absolute space and time, is found in his *Correspondences with Clarke* (1715): there, we find the exchange of letters between Leibniz and the Newtonian Samuel Clarke, which is very interesting to the subject matter, and, consequently, to Kant, because after reading these *Correspondences*, which are believed to have been held in the year of 1769 – that is, between the 1768 *opuscule* and the *Inaugural Dissertation of 1770* – present the Kantian view of space changes, as we shall see later, in our concluding remarks.

Leibniz, unlike Newton, had a concept of relative space. Now, this means more concretely that space is a relationship with something that occupies it; that is, space distinguishes itself from things only in thinking, everything has a position related to other things; the idea of this system is the idea of space.⁵ And, yet, the philosopher of Leipzig also believed that there is no matter, nor there is space, and that space does not have absolute reality in itself; this last consideration is one of the criticisms by Leibniz to Newtonian concepts. Thereby, the existence of empty space is not possible. The relationship of position would be enough to have an idea of space. So, to Leibniz, space does not need to invoke any absolute reality, as in the case of Newton.⁶

³ These considerations about space are found in the English physicist's major work: *Principles* (1686). He wrote: "II –Absolute space, in its own reality, without any relationship with anything external, remains always similar and immobile. Relative space is some dimension or movable measure of absolute spaces, which our senses determine by its position with relation to the bodies and is, usually, took by immovable space; thus is the dimension of a subterraneous space, aerial or celestial, determined by its position in relationship with the earth. Absolute and relative spaces are the same in configuration and magnitude, but they are not remaining numerically the same. Because, for example, if the earth, a space of our air, which relatively to earth remains always the same, it will be in some moment part of the absolute space which the air passes; in other moment will be other part of the same, and thus, certainly will be continually changing" (NEWTON, 2008, p. 45).

⁴ To Newton, the notion of absolute space and time was a prerequisite to the validity of his Law of Inertia: "Every body preserves the state of repose or uniform motion in a straight line, unless it is compelled to change this state by forces pushed on it" (NEWTON, 2008, p. 13).

⁵ We must also always have in mind the Leibnizian thesis of *pre-established harmony*. As well as the principle of *non-contradiction* and the principle of *sufficient reason*.

⁶ Only for purposes of illustration, we find a passage in the *Correspondence with Clarke* where Leibniz is criticizing expressly the Newtonian position on the existence of absolute space. He wrote: "I only affirm that there

Another aspect that should be taken into account for our purposes here would be the Leibnizian position on the congruence phenomenon – also one of the objects for Kant’s criticism in 1768.⁷ This phenomenon may be explained this way: if two bodies are given, they are congruent when being equal, that is, while they have the same measure, they may overlap. To Leibniz, every counterpart is congruent, i.e., likely to overlap. We will take a look here on Kant’s argument against this position.

2. The 1768 opuscule

2.1 Problem statement

As mentioned earlier, the criticism expressed by Kant in 1768 is directed towards Leibniz. Thus, we find Kant, already in the first lines of his text, mentioning the other philosopher;⁸ he makes reference especially to the Leibnizian conceptions about space, which considered it as a system of relationships between objects that occupy space.

In an attempt to demonstrate the reality of absolute space, Kant begins his considerations in *RS* with the following premise: the positions of parts of space in their relationships presuppose a direction for which they are ordered. Now, a direction does not consist in the relationship of something with another one in space, due to the simple fact that this would be only the concept of position, but it consists in the relationship of the system of positions with the universal and absolute space, or, in other words: to demonstrate absolute space, there’s a need for showing that the direction does not point to a position, but points first to space – which is universal and independent from the existence of any matter. Pointing a direction is itself a good clue that there is a space before the things. Thus, space acquires a unitary character, and its extensions, such as the different directions and orders, are parts of it.⁹

After weaving his opening remarks, Kant states his purpose in the text:

My purpose in this dissertation would be to investigate whether the intuitive judgment of extension, as it contains the geometry, do not find clear evidence that the absolute space, independently of the existence of all matter and even as the first ground of the possibility of its composition, has its own reality.¹⁰

is no space where there is no matter, and that the space in itself it is not an absolute reality” (*Fifth letter of Leibniz, or answer to the fourth reply from Clarke – about the 15th paragraph*).

⁷ Among other considerations on Kant’s *1768 opuscule*, it is also known in the specialized literature as the text in which the philosopher presents the incongruous counterparts argument. Cf. Kemp Smith (2008, pp. 161-6). Moreover, in the item 2.3 we will make some considerations on the congruence phenomenon and the Leibnizian project entitled *Analysis situs*.

⁸ “Der berühmte Leibniz besaß viele wirkliche Einsichten, wodurch er die Wissenschaften bereicherte, aber noch viel größere Entwürfe zu solchen, deren Ausführung die Welt von ihm vergebens erwartet hat” (Ak II, 377).

⁹ “Denn die Lagen der Teile des Raums in Beziehungen aufeinander setzen die Gegend voraus, nach welcher sie in solchem Verhältnis geordnet sind, und im abgezogensten Verstande besteht die Gegend voraus, nach welcher sie in solchem Verhältnis geordnet sind, und im abgezogensten Verstande besteht die Gegend nicht in der Beziehung eines Dinges im Raume auf das andere, welches eigentlich der Begriff der Lage ist, sondern in dem Verhältnis des Systems dieser Lagen zu dem absoluten Weltraume. Bei allem Ausgedehnten ist die Lage seiner Teile gegen einander aus ihm selbst hinreichend zu erkennen, die Gegend aber, wohin diese Ordnung der Teile gerichtet ist, bezieht sich auf den Raum außer demselben und zwar nicht auf dessen Orte, weil dieses nichts anders sein würde, als die Lage ebenderselben Teile in einem äußeren Verhältnis, sondern auf den allgemeinen Raum als eine Einheit, wovon jede Ausdehnung wie ein Teil angesehen werden muß” (Ak II, 377-78).

¹⁰ Ak II, 378.

2.2 Identification of the different spatial orientations

Having put into questions the Leibnizian concept of space – Kant’s object of criticism – and explained what he aims in his text, the philosopher of Königsberg presents the remarks to complete his task and starts his next move, which is: to prove the reality of absolute space.

Firstly, Kant describes the three dimensions of space and its representations in the three respective planes. Thus, we have in the horizontal plane the notions of “top” and “low” (or height) – perpendicular to this plane the notions of “left” and “right” (or width) – and, finally, perpendicular to this second one, we obtain the notions of “forward” and “backward” (or depth). They are known, as witnessed by Kant himself, through the senses, yet we part from the first foundation of regions of space from our body.¹¹ According to the notions of direction, it is not possible to put the things ordered in a list, but related to absolute space. So, Leibniz’s position – which we have already mentioned (item 1) – would not be sufficient to demonstrate that the orientation of a body is also a feature of space and, therefore, related to absolute space.

Considering that the notions of spatial directions are related to absolute space, let’s say the following: if something is facing one direction – for example to the left – so this is so in relation to a reference point that is pointing to this direction (in the case mentioned, to the left). However, if I am located in space, so I need to know where is left, therefore, I am not in this world of access to a external way, because I am also located in space. Consequently, I am the reference frame to indicate a direction in space. The reason why Kant uses these examples is related to the purpose of proving that what determines the form of any bodily is not based on the relationship they share with one another, but, as seen previously, with absolute and real space, because it is the only foundation which establishes the differences between the bodies occupying space.

2.3 The incongruous counterpart argument¹²

Kant begins his incongruous counterpart argument as follows: if we are given two figures equal to another pattern in a plan, then we can conclude, without anything else, they can cover each other – well, that is for sure – however, due to the extended body, lines and surfaces that are not in a plan, although the figures given are equal, it is possible that they differ. This occurs because the limits of one figure may not correspond to the limits of the other.¹³ At first, this may sound a little strange, but perhaps the example by Kant can help us to understand it better. In his text, the philosopher wrote: “A screw tread which proceeds from left to right will never serve a

¹¹ “Sogar sind unsere Urteile von den Weltgegenden dem Begriff untergeirdenet, den wir von Gegenden überhaupt haben, insoferne sie in Verhältnis auf die Seiten unseres Körpers bestimmt sind” (Ak II, 379).

¹² To Leibniz, the congruence phenomenon was the fundamental of his *Analisis situs* project, which was a project of geometry established from a determined system of a place deriving the hypothesis of geometry from this kind of Leibnizian conception of space – the conceptual character of space –, entirely disconnected of extension. However, this project by Leibniz was, according to Kant’s testimony, a mere “chimera”. In his opusculum he wrote: “Zum wenigsten hat es Anschein, daß eine gewisse mathematische Disziplin, welche er zum voraus *Analysin situs* betitelte und deren Verlust unter andern *Buffon* bei Erwägung der Zusammenfaltunden der Natur in den Keimem bedauert hat, wohl niemals etwas mehr als ein Gedankending gewesen sei” (Ak II, 377).

¹³ “Wenn zwei figuren, auf einer Ebene gezeichnet, einander gleich und ähnlich sind, so decken sie einander. Allein mit der körperlichen Ausdehnung oder auch den Linien und Flächen, die nicht in einer Ebene liegen, ist es oft ganz anders bewandt. Sie könnenvöllig gleich und ähnlich, jedoch an sich selbst so verschieden sein, daß die Grenzen der einen nicht zugleich di Grenzen der andern sein können” (Ak II, 381).

threaded nut which goes from right to left, even if the thickness and number of turns of the screw were equal at the same time”.¹⁴ It is from this example that we have the explicit definition of incongruence, namely: a body perfectly identical to another one (whether the same size or, as in the example mentioned – over the screw and the nut; with the same thickness and the same number of turns), but that cannot be included in the limits of the other, or, as Kant might say; in the limits of its *incongruous counterpart*.¹⁵ Another example that Kant describes in his text, only for purposes of illustration, is the members of our body. Take, for instance, our hands: both the right and left are equal, but if we put one hand – the right one, for example – in a surface, it would not be possible that the same space is occupied by both the right and left hands on that surface, although the hands are equal and have the same size. In this case, the incongruous counterpart of the right hand is the left one, because both can never be included on the same surface. We could also think of another example similar to this, namely, our feet; despite having the same size, the left shoe never fits the right foot. And several other examples could be presented. The reason for this is the different spatial orientation.

2.4 – Kant’s conclusion

Summarizing his argument on incongruity, using again the hands example – even being equal, they cannot occupy the same place, since the “surface, which delimits the space of a body, cannot serve boundary to the other”¹⁶ – we come to the conclusion of Kant’s *1768 opuscule*.

Let us remember that once, in the beginning of his text, Kant had placed as problematic the understanding of some philosophers regarding the concept of space – especially Leibniz –, he did that because if space was a mere external relationship between things, then it would be, in effect, that a thing occupies space.¹⁷ However, if space was merely an order of coexistence, then the incongruence phenomenon would not be possible and Kant’s argument would not be needed. The presentation of the incongruent counterpart by Kant is a refutation to the Leibnizian thesis that all counterparts are congruent; therefore, the similarity does not imply being congruent, i.e., it can be framed within the same limits.

If we do not take into account that the bodies are oriented in one direction, it is not possible to distinguish between incongruent counterparts. And that is where we find the great Kantian turns: he finds the autonomous reality of space and that the determinations of space do not arise from situations of objects, on the contrary. This way, space is: absolute, independently of the relationships occurring in it and it is necessary for the establishment of such relations. Thus, Kant concludes that space is not an object of external sensation, but a fundamental concept which turns objects possible. Consequently everything we perceive in the form of a body is related to pure space, only in comparison to other bodies.¹⁸

¹⁴ Ak II, 381.

¹⁵ “Ich nehme einen Körper, der einem ander völlig gleich und ähnlich ist, ob er gleich nicht in ebendenselben Grenzen kann beschlossen werden, sein *inkongruentes Gegenstück*” (Ak II, 382).

¹⁶ Ak II, 382.

¹⁷ “Nimmt man nur den Begriff vieler neuen Philosophen, vornehmlich der deutschen an, daß der Raum nur in dem äußeren Verhältnisse ser nebeneinander befindlichen Teile der Materie bestehe, so würde aller wirkliche Raum im dem angeführten Falle nur derjenige sein, *den diese Hand einnimmt*” (Ak II, 383).

¹⁸ “Es ist hieraus klar, daß nicht die Bestimmungen des Raumes Folgen von den Laden der Teile der Materie gegeneinander, sondern diese Folgen von jenen sind, und daß also in der Beschaffenheit der Körper

Finally, on the last paragraph of his opusculum, Kant refers to those “reflexive readers” that could understand his space conception in the same way as the geometers and those “sagacious philosophers” who applied the concept in their theories of natural science, that is, by intuition through inner sense.¹⁹ Now, the “sagacious philosophers” mentioned by Kant are not other thinkers, but Newton and his disciples. This proves, once again, the tendency of Kant, in the *1768 opusculum*, to assume the Newtonian conception of absolute space.

Concluding remarks: towards the *Critique of Pure Reason*

By way of conclusion, we observed that Kant’s essay: *On the Ultimate Ground of the Differentiation of Regions in Space* (1768) shows us, without any doubt, a further step in the evolution of Kant concerning the theme of space from his major work: the *Critique of Pure Reason*. Although the author does not adopt in the *Critique* the same position regarding space as that from the *1768 opusculum*, let us see some of the contributions of *RS* to the advent of critical philosophy.²⁰

First: the refutation to Leibniz. This separation allows Kant, at least in an embryonic stage, the ability to understand the sensibility as a source of knowledge – something very valued to the philosopher of Königsberg, especially years later when we find in the *Critique of Pure Reason* his doctrine of sensibility consolidated in the “transcendental aesthetics”, since if we remember some of Leibniz considerations on sensitive knowledge, we will remember, among other things, that for him this kind of knowledge would be a knowledge simply said “confused.”

Another aspect that we find in the *1768 opusculum* which seems worthy of mention is that Kant sometimes refers to geometry (see, for instance, note 10 above). This reference is of great importance, because, as we know, and again the *Critique of Pure Reason* is a testament of that, geometry²¹ is one of the subjects considered as a synonym of science by Kant – the other would be the Newtonian mechanics. Geometry, Kant wrote in his first *Critique*, “is a science that determines synthetically and yet *a priori*, the properties of space”.²²

A third point for taking into account the *1768 opusculum* is perhaps the proof that Kant provides us with the end of his writing, which is: if we want to learn the reality of space, it is by means of an intuition, through the internal sense (*innerer Sinn*).²³ Something that seems to enable us, and here it is also embryonic, what Kant

Unterschiede angetroffen werden können und zwar wahre Unterschiede, die sich lediglich auf den absoluten und ursprünglichen Raum beziehen, weil der absolute Raum kein Gegenstand einer äußeren Empfindung, sondern ein Grundbegriff ist, der alle dieselbe zuerst möglich macht, wir dasjenige, was in der Gestalt eines Körpers lediglich die Beziehung auf den reinen Raum angeht, nur durch die Gegenhaltung mit andern Körpern vernehmen können” (Ak II, 383). Our emphases.

¹⁹ “Ein nachsinnender Leser wird daher den Begriff des Raumes, so wie ihn der Meßkünstler denkt und auch scharfsinnige Philosophen ihn in den Lehrbegriff der Naturwissenschaft aufgenommen haben, nicht für ein bloßes Gedankending ansehen, obgleich es nicht an Schwierigkeiten fehlt, die diesen Begriff umgeben, wenn man seine Realität, welche dem innern Sinne anschauend genug ist, durch Vernunftideen fassen will” (Ak II, 383).

²⁰ By labeling the writings of Kant as *precritical* and *critical*, it should be clear that his early writings, that is, those before the *Critique*, are not, in any way, obsolete texts, but on the contrary, they are crucial for a better overview of the Kantian corpus. In his *precritical* period Kant was also very consequent in his positions, however, we find his consolidated system from the *Critique of Pure Reason*.

²¹ And here we must know that when Kant refers to geometry he understands the Euclidean geometry.

²² *KrV*, B 40.

²³ Although Kant writes in his text “internal sense” (*innerer Sinn*), we must here say something else about this so important concept. Let us then make a few very briefly considerations about this concept inside the context of the writings of the period of pre-critical Kant, more specifically within the context of two texts published in the period

conceived as the concept of pure intuition (*reine Anschauung*) in the *Inaugural Dissertation of 1770*.²⁴ However, in 1768, the concept of intuition is not yet as clear and precise as the one which the philosopher uses in his *Inaugural Dissertation of 1770*, and, finally, in his *Critique of Pure Reason*.

Moreover, one last point to be emphasized here would be that presented by Kant in the last section of his opusculum: in 1768 there is one aspect described by the philosopher on the concept of space that will be preserved to posterity of his doctrine, namely, the non-empirical character of space. Kant begins exactly this way his “metaphysical exposition” – in § 2 – of the “transcendental aesthetics” from the *Critique*.²⁵ In this exposition, Kant intended to present us space as a concept *a priori*. In his first argument, the philosopher wrote:

1. Space is not an empirical concept (*Begriff*), which has been abstracted from outer experiences. Effectively, so that certain sections are related to something outside me (that is, to something in another region of space from that in which I find myself), and similarly in order that I may be able to represent them as outside one another, and accordingly as not only [qualitatively] different but as in different places, the representation of space must be presupposed (*muss schon zum Grunde liegen*). Thus the representation of space can not be extracted by the experience of the relations of external phenomena; on the contrary, this external experience is only possible, first of all, through this representation.²⁶

And, after this one, three other arguments on space follow, constituting the “metaphysical exposition of the conception of space”.

from 1762-64, namely: “The False Subtlety of the four Syllogistic Figures” (Ak II, 45-61) of 1762, and Kant’s “Inquiry Concerning the Distinctness of the Principles of Natural Theology and Morality” – also known as “*Preisschrift*” (Ak II, 273-301) of 1764. Let us see:

1st – There is a difference between the concept of internal sense (*innerer Sinn*) in Kant’s so called pre-critical period and the critical period.

2nd – The concept of internal sense, so important to Kant’s reflection on mathematics in his pre-critical period must be taken into account to that Lockean, and consequently by Crusius, conception; in summary, he says: the concept of internal sense correspond to a mental reflection about – in the case mentioned here, mathematics – to figures and mathematical concepts.

3rd – In Kant’s “*Preisschrift*”, considered in the specialized bibliography as the text in which, among other considerations, Kant writes exclusively about the method and it is also in this text that Kant takes as a model of the Newtonian method. However, this position in favor of Newton was not a particularity of “*Preisschrift*”, because Kant, in an earlier writing, namely his “Universal Natural History and Theory of Heavens, or an Essay on the Constitution and Mechanical Origin of the Entire World Edifice Treated According to Newtonian Principles” (Ak I, 215-368) of 1755; as evidenced by the very title of Kant’s work attested in favor of the Newtonian model.

4th – In his 1762 writing “The false Subtlety of the four Syllogistic Figures” Kant classified the concept of internal sense as: “the faculty to make our own Ideas (*Vorstellungen*) objects of our thought” (Ak II, 60). Our emphases.

5th – Finally, Kant’s critical position of the concept of internal sense (*innerer Sinn*) emerged in 1769, when this concept no longer is, so to speak, a function of the knowledge of external word, as we see here when Kant defended this position in the 1768 opusculum (see note 19 above), but this concept has, in 1769, an intermediary function for knowledge; and it allows those distinctions found on the *Inaugural Dissertation of 1770*, namely, sensibility-understand; sensible-intelligible; etc.

So we could conclude this very briefly consideration saying that there would be at least three stages of the concept of internal sense in Kant, namely: 1st that from the *False Subtlety* and the *Preisschrift*; 2nd the one used here, in the *1768 opusculum*; and 3rd that defended in 1770 and then in the *Critique of Pure Reason*, when this concept assume the *form* (in the Kantian sense of the concept) of time. But it is certain that the concept of “internal sense” would undergo many more considerations and deserved a whole article for a consequent consideration of itself. For further reading, we indicate the concise article by Ernesto Giusti (2005). See also: H. J. Paton, “Inner Sense and Self Knowledge”, 1936, v. 2, and Kemp Smith (2008).

²⁴ “De Mundi Sensibilis atque Intelligibilis Forma et Principiis” (Ak II, 387-419).

²⁵ It is also this way, in the *Inaugural Dissertation of 1770*, that Kant begins his argumentation about space. See § 15 of the *Inaugural Dissertation of 1770*.

²⁶ *KrV*, B 38. The italics are ours.

In writings after 1768, space loses its realistic features to become a pure intuition (*reine Anschauung*). An important step towards the maturation of this position is found a few years later in his *Inaugural Dissertation of 1770*, writing in which we find the famous Kantian distinctions: sensibility and understanding, matter and form. It is also where the philosopher classifies for the first time the concept of pure intuition and begins to study space along with time. In the *Inaugural Dissertation of 1770* it is already possible to find a refutation to the objectivist theory of space – namely, in § 15 – giving rise to a subjective and ideal conception of space, also announcing that space is a pure intuition. Thus, in view of this new conception of space, neither Newton nor Leibniz was correct in their corresponding conceptions of space.²⁷

We see that only in the “transcendental aesthetic” from the *Critique of Pure Reason* Kant reaches his goal, in his “transcendental exposition” of space – § 3 – there we find the explanation of something regarded as a principle, that is, to the extent that the possibility of synthetic *a priori* knowledge can be understood. In his *Consequences* – regarding the exposition – the philosopher wrote:

- a. The space does not represent any property of the things-in-itself, neither this things in its reciprocal relations; that means, it is no determination of the things inherent in the objects themselves and to remain, even abstracting from all the subjective condition of intuition. Because no determinations, be absolute, or be relative can be intuited prior the existence of things that suit, that is, *a priori*.
- b. The space is nothing more than the form of the external senses, that is, the subjective condition of sensibility, one that allows the external intuition.²⁸

These features are of great importance to which entails the Kantian doctrine of space. Thus, space no longer has that realistic feature, defended in 1768, although Kant does not deny that space exists empirically – what Kant calls in the *Critique* **empirical reality** of space – in addition, space has another characteristic, namely; its **transcendental ideality**, that is: space is a condition of experience.

Despite the contributions of the *1768 opuscule* to the maturation of the Kantian doctrine of space, if in the *Critique of Pure Reason* the philosopher kept the same understanding of 1768, so he would be bound to some problems, namely; insofar as the Newtonians – particularly Newton and Euler – which greatly influenced Kant are physicists and therefore care about the problems of physics, Kant is not really a scientist but a philosopher. Thus, let us remember that one of his major problems, including those beyond the possibility of physics and geometry as scientific disciplines, was that of metaphysics as a science. Hence, beyond the legacy of the great scientists of his time, Kant was also a direct heir of the rationalists (in the last instance Wolff’s rationalism) and the German empiricism (represented mainly by Crussius). That is, if Kant mates in the *Critique of Pure Reason* his conception of space as real and absolute, so things could only exist upon creation, by the fact that this space would be considered as a thing-in-itself; something that Leibniz had pointed out as problematic and criticized this position of the Newtonians in his *Correspondences with Clarke*. This would result in major problems to Kant. To

²⁷ In the *Inaugural Dissertation of 1770*, although now in the § 14 – about time – Kant criticizes both Newton and Leibniz conception of time. See the § 14. In the *Critique of Pure Reason* Kant mentions both conceptions: space and time, in both thinkers: Leibniz and Newton. See: *KrV A 37-42 – B 53-59*.

²⁸ *KrV*, B 42.

highlight just one: it would imply the problem of mixing the sensible with the intelligible, and so, if we shift the problem to a last instance, it would lead to antinomies, one of the major problems of the *Critique*. In 1768 Kant would not be able to solve such problem. In 1769 Kant had access to the *Correspondences with Clarke*,²⁹ and that changed a lot. As mentioned in the *Inaugural Dissertation of 1770*, it was a reference frame on Kant's way to the *Critique of Pure Reason*, among other considerations; the reading of Leibniz's *Correspondences* also contributed to this maturation, however, we must remember that after the 1770 text, in the Kant's period called "silence decade" (between 1770-1781), we find some very important writings that must not be neglected. There we find writings by Kant basically on two subjects, namely: anthropology³⁰ – which had no great importance to the *Critique of Pure Reason* within the context of its general problem – "How are synthetic *a priori* judgments possible?" – And some other Kantian reflections on this theoretic aspect, which is our main interest here. However, these little reflections were published only several years after Kant's death, then a selection of this reflections by the philosopher was published in a volume entitled *Reflexionen*,³¹ which covers the "silence decade", the most important periods of Kant's reflections was from 1772 to 1775, and the years of 1774-75, with the manuscripts entitled: "*Duisburg Nachlass*" (the *Reflections* 4674 to 4684).³² And there are also Kant's letters, which are worthy mentioning, especially those to his college Marcus Hertz.³³ We believe that the period between the second half of the 1760s (specifically from the writing "Dreams of a Spirit-Seer elucidated by Dreams of Metaphysics" – of 1766 –, and the 1768 opuscule), the *Inaugural Dissertation of 1770*, the "*Reflexionen*" and the *Correspondence* with his colleges: Hertz, Lambert, Mendelssohn, and Schultz are of a great importance for the period until 1781, which is inaugurated with the first edition of the *Critique of Pure Reason*, and consequently to the following writings by Kant where he mentioned the space theme. But it is clear that what we have just outlined was made too quickly and it is not fully faithful to the thinker, because it lacks many details which remain to be clarified more appropriately. However, we believe that referring to some of these aspects seems very valid, since this mere mention involves various shades of Kant's thought and even the space theme, which we work on here briefly.

Finally, we sought here a first approach to the subject of space, giving specificity to the interpretation of a single text: the 1768 opuscule. Thus, what we observed, in 1768, was a more mature Kant regarding the space theme in relation to his previous works – which, as we know from the beginning of his works, between the late 1740s until the mid 1760s, this theme had a great importance. Moreover, another important point observed here was that the theme of space in Kant's thought

²⁹ About the influence of Leibniz's *Correspondence with Clarke* and his *Nouveaux Essais* see: Cassirer (2003).

³⁰ Concerning the subject of anthropology, in the 1770s Kant published the texts: "*Von dem körperlichen Unterschiede zwischen der Structur der Thiere und Menschen*" (Ak II, 421-5) of 1771; "*Von den Verschiedenen Racen der Menschen, zur Ankündigung der Vorlesungen der physischen Geographie im Sommerhalbjahre 1775*" (Ak II, 427-43) of 1775; "*Über das Dessauer Philantropin*" (Ak II, 445-52) of 1777, and, finally, the dissertation "Concerning Sensory and Poetic Fiction", wrote in Latin in answer to the "*Dissertatio philologica-poetica de principiis fictionum generalioribus*" by Johann Gottlieb Kreutzfeld.

³¹ B. Erdmann was the first to organize these *Reflections*, in 1882: *Reflexionen Kants. Zwei Bande, B. I. Refl. Z. Anthropologie*. Leipzig, 1882; *B. II. Refl. Z. Kritik der reinen Vernunft*, Leipzig, 1884. After him R. Reicke also published his edition: *Lose Blätter aus Kant Nachlass*, Königsberg, B. I. 1889; B. II. 1895; B. III. 1899. Then we have also Theodor Hearing's edition: *Der Duisburg'sche Nachlass und Kants Kriticismus um 1775*. Tübingen, J. C. B. Mohr, 1910. And finally Erich Adickes, in the period of 1926-28 edited Kant's *Reflexionen* (Ak XVII-XVIII). Adickes edition is the edition from the Berlin Academy of Science.

³² There are also the *Reflections* of the period of 1776 to 1778, but we will not mention these ones.

³³ See for example the *letter to Marcus Hertz of 1772*.

is, in some way, advancing, and its end is given only in the *Critique of Pure Reason*. Now, this progress is already a good sign and an invitation to read a text that addresses one topic of major importance to the thinker: *On the Ultimate Ground of the Differentiation of Regions in Space* is a text that should be read more carefully, especially by those who want a more refined approach on the subject.

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