

SUBSTANCE, CHANGE AND MATTER IN THE ANALOGIES OF EXPERIENCE OF KANT'S *CRITIQUE OF PURE REASON*.

Jacinto RIVERA DE ROSALES¹

The subject discussed in this article is primarily the concept of substance (*Substanz*), but additionally, also debated are the concepts of change (*Wechsel*) and matter (*Materie*), both closely related to the first. All three are studied in the Transcendental Analytic and specifically in the Analogies of Experience in the *Critique of Pure Reason*. Since Roman times, when the concepts of “*hypóstasis*” and the Aristotelian category of “*ousía*” by “*substantia*” were first translated, the term substance has been taken on a long and intense journey throughout the history of philosophy.

In the KrV (*Critique of Pure Reason*) there are mainly two moments to consider regarding the substance. Firstly, the transcendental Analytic, which studies the substance as the first category of relation, its scheme and its functioning in the first of the Analogies of Experience. Here Kant explains its objective or phenomenal meaning.

Secondly, the transcendental Dialectic must be taken into consideration, starting with the Paralogisms, because there are posited ontological limits to the category of substance considering that it is not applicable to “I think” or “Transcendental Apperception”, because the transcendental subject has not the mode of being of the substance, but it is an ideal and a logical-transcendental action. This calls into question contemporary criticisms towards the so-called “modern” subject, thus levelling the philosophical proposals of modernity in relation to subjectivity and matching all of them with the Cartesian *res cogitans*. Kant's transcendental I is not a substance², not a *res*, neither immanent nor transcendent to the world, nor is it a thinking monad, nor the mode of an absolute single substance, as proposed by Spinoza. It is the ideal action of cognise the world; its unity does not have the quantitative attribute of the substance, but the qualitative property of the transcendental action, which unifies both the manifold of every object and of the whole experience³, which is in continuous expansion following the guiding thread of the interaction (*Wechselwirkung*).

The thesis that defends “that all things in the world are simple entities, that composition is only an external state of these beings, and that even though we can never put these elementary substances (*Elementarsubstanzen*) completely outside this state of combination and isolate them, reason must still think of them as the primary subjects of all composition and hence think of them prior to it as simple beings”⁴ can be found in the second of the Antinomies of Pure Reason. But according to transcendental idealism there is nothing in the world of appearances that is simple in itself, but everything extends into the unlimited sensible multiplicity of the time-space, so that all phenomena are extensive manifolds (*extensive Größe*)⁵ as *partes extra partes*. Even in Chapter III of the transcendental Dialectic, “The ideal of pure reason,” the idea of God appears as the idea of “a transcendental substratum”, “the idea of a whole of reality (*omnitude realitatis*)”⁶, that objective cognition cannot reach, but that only extends to the temporal-spatial-causal conditioned.

However, this article does not address the issues discussed in the Dialectic, it is limited to the evaluation of the substance as found in the Transcendental Analytics of the *Critique of Pure Reason*, to keep to the space allowed, and also because it contains the basis of Kant’s thoughts regarding concept or category of substance. I will structure this assessment in ten key points that explain the meaning of the substance in Kant’s philosophy.

1.

The substance appears in the table of categories as the first of the categories of relation. These are double categories, and the category of substance goes together with the category of accident⁷. The other relation categories are those of cause and effect and that of interaction between substances.

The categories of relation systematically follow those of quantity and quality. It is thanks to the former that the sensible form and matter of the appearance respectively are strictly demarcated according to the rules of the transcendental imagination (schemes) and understanding (categories), thus configuring every object in its singularity. Objects are defined in their time and space by means of the categories of quantity and their schemes, and the empirical content of every appearance is understood as real by virtue of the categories of quality and their schemes.

After this process of delimitation and quantitative-qualitative interpretation of all appearances, the work of positing them in relation to each other begins with two purposes, firstly, to place them among themselves in the common time and space, that is to say, in the objective time and space, and, secondly, to establish their relations of dependence (of heteronomy) on each other. That is the task of the relation categories, their schemes and their principles, which also operate based on the categories of quantity and quality, and it is because of them that a link is built, an interconnection between all appearances, a unified experience with all of them, a “*natura formaliter spectata*”⁸. “By nature (in the empirical sense) we understand the combination of appearances as regards their existence, in accordance with necessary rules, i.e., in accordance with laws. There are therefore certain laws, and indeed *a priori*, which first make a nature possible; the empirical laws can only obtain and be found by means of experience, and

indeed in accord with its original laws, in accordance with which experience itself first becomes possible. Our analogies therefore really exhibit the unity of nature in the combination of all appearances”⁹. It is here where the category of substance appears, placed as the first among all the categories of relation, and presented as the basis or the substratum that makes the formation and objectification of the relation between appearances possible. That is the *first point*.

2.

A category, and that includes the category of substance, is a rule of the synthesis between the sensible manifold that the knowing subject follows to organize and interpret the sensible world objectively, that is, in a regulated manner, not arbitrarily or chaotically (in which case it would not be possible to cognize something), and therefore in an intersubjective manner, valid for all objects and all human beings. Transcendental idealism proposes that these rules are not given to the knowing subject by concrete objects, because if they depended on them, there could be objects appearing outside space or time, objects with no cause that did neither persist nor change, etc., which is an impossibility, because should this be the case, it would not be possible to either find them or to make an experience with them.

These rules are forms created by the transcendental subject. They are questions that the subject poses from himself, from its spontaneity, to the sensible appearances to which they must respond: what space they occupy, what time, what is their cause, what interrelation do they have, etc. These questions are not based on a particular experience, but they configure all empirical cognition, in the same way that grammar structures all use of language, without being able to give a reason as to why those rules and not others (facticity of form)¹⁰. They are questions or regulated ideal actions of the subject, because it is only in this way, according to Kant, that those idealities can have universal and necessary validity for every object and every subject, and it is not possible for an object not to fulfil them¹¹, because, if it did, it would not be an object for us, we would not understand it objectively, would not know how to place it, to order it within the experience.

In addition, it must be taken into consideration that objects are unable to offer or transfer concepts, idealities to us, because they do not possess them, they can only cause physical effects. Cognition is an ideal elaboration of reality made by the subject: when I cognize an object, for example a tree, I do not really transform it, I do not water it, I do not prune it, I do not cut it, I do not transfer it to another place, nor I do not burn it, etc., but I introduce it into the ideal field of cognition. It is only in this way that the subject is able to discover the reality of the world and turn it into something *for* him; cognition or consciousness is an ideal sphere opened by self-consciousness, not by objects. Here, therefore, is *the second point*, ie, that the category of substance, like the others, is ultimately an ideality, not an ontic law of objects in themselves, but a transcendental need for objective understanding of the world, a subjective strategy for the ordering and interpretation of the experience, to “spell out” the appearances and “be able to read them as experience”¹². Other than that, the categories only have a logical, albeit not objective, meaning¹³.

3.

Consequently, to become cognition, transcendental ideality implies and requires, in turn an empirical realism, something sensibly given, otherwise all that is left are mere empty idealities, without an objective scope; that also happens with the category of substance. Furthermore, neither the “I think” nor its transcendental idealities would exist if the objects of the world did not respond to them in any positive way, at least to a sufficient extent to enable the management of objectivity¹⁴, as they are actions and forms of objectification. They are ways of objectively elaborating and ordering the given sensible experience, and to cognize the world, so that the I knows about it. For example, all theories about the multiple subatomic particles become valid when they are somehow physically detected; otherwise, the theory or idea about a particle would be a mere hypothesis still empty, without objective validity.

For this reason, such transcendental forms or idealities would not occur without what is given in the sensible experience, without a real world to cognize. The rules are not given by the objects, but they would not exist without a positive response from the world and, in that context, it can be said that they also depend on the objects. However, (1) objects cannot be considered things in themselves in a transcendental sense, as they answer our questions, our cognitive forms, and in that respect the form they present is dependent on ours, on our questions, and we would not know if they could respond to others, that is, to other knowing beings that acts with other transcendental forms (facticity of our forms, especially time-space). (2) In known things, time, space and categories are as empirically real as transcendently ideal¹⁵; if they were not ideal, the I could not process the objectivity of the world and discover it, but if they were not to correspond to the empirical reality of the objects, then those forms would be empty, they would not have objective validity and, in the end, they would disappear along with the subject of cognition. Therefore, (3) when we go beyond the experience, questioning the unconditioned: the soul as a simple and immortal substance, or the world as a whole or God, we are only left with mere idealities that fail to provide us with cognition of what is real, because of the absence of that Real. This is what Kant studies in the transcendental Dialectic.

It could be possible the world not to exist at all, and that would not be contradictory since existence is not another predicate among the predicates of a thing but the absolute positing of the thing with all its possible predicates, as Kant clarifies in his work *The Only Possible Argument in Support of a Demonstration of the Existence of God*¹⁶, and again explains in the *Critique of pure reason*, arguing against the ontological argument about the existence of God¹⁷. The modal category of existence is different from the modal category of possibility because it also requires that something should be given empirically. But if the world did not exist in any way, we as cognitive subjects would not exist either, as the transcendental I is not a transcendent substance that could exist without a world.

Transcendental forms are not empirical, nor are they divine forms that could materially and magically create their own world. The world could be different, have another form, and transcendental reflection, contrary to rationalism, starts with the facticity of *a priori* forms. But given that we exist as cognitive beings, there are good basis to assert, contrary to scepticism, that the world exists and that it is how we objectively cognize it, at least to a sufficient extent

to manage ourselves within it, and our task is to constantly increase that cognition. Although the empirical cognition of the world is, or should be, in continuous progression, it is always based on an *a priori* transcendental structure because they are needed to understand and organize the experience. For example, it would be possible to say that everything in the world is predetermined, but only to the extent to which the cause of an appearance is found by means of the categories of causality and interaction, and insofar as this cause explains (always partially) that appearance. The categories of relation are regulative, they do not provide us with the object in intuition (contrary to what happens with the categories of quantity and quality), but they offer the rule to seek it¹⁸. Real cognition is always *in fieri*, in the spatial-temporal-causal continuum.

It may also be that chaotic states exist in the world, as it seems to be in black holes or at the time before the big bang. In that case nothing responds to anything persistent and therefore objective cognition would be impossible.¹⁹ The category of substance does not state that there will always be something persistent in the world, as if by divine decree, but that the subject always needs something persistent in order to make objective cognition possible as well as - I would add - the real action of the subject and the subject itself. The category, and that includes the substance, is a transcendental requirement, not an ontic law of things in themselves. This allows an understanding of what is given, and thus a search for regularities begins, regularities that are real, constitutive and not simply “as if”, which is the case with teleology in nature, since that is not an object of intuition. There is always a search for persistence, change and dependence, and as these are found, objective cognition exists. But it is very possible that we ignore more than we know. A single category with nothing empirically given is not objective cognition: “Thoughts without content are empty, intuitions without concepts are blind”²⁰. This is also the case with the category of causality, which does not give us the cause in intuition but initiates a search for it, and it only has objective meaning when the cause is empirically found. Consequently, it cannot be said that everything is determined, since the totality is not an object of experience, even not the totality of an object, because all real empirical experience is limited, and empirical cognition is always *in fieri* in the spatial-temporal-causal continuum. The categories without empirical experience are empty, unrealized tasks, forms without any objective content.

Thirdly, the category of substance also requires its empirical realism.

4.

“Now that which connects the manifold of sensible intuition is imagination, which depends on understanding for the unity of its intellectual synthesis and on sensibility for the manifoldness of apprehension”²¹. It is the scheme of the transcendental imagination that makes it possible to assign a sensible reality to what is demanded by the categories. The category does not apply directly to the empirical, it does so through the *a priori* forms of sensitivity, that is, through time and space. The same occurs in the category of substance, contrary to what Hume sought, as he wants apply it to an impression as the last criterion of reality, and required that an impression always remained present in order to designate it as a substance and because he

did not find it, he disqualified it as a category²². The necessity is not in the impression, in the empirically given, since it offers us only the case, not the necessity, but it is situated in the transcendental requirement of understanding expressed in the *a priori* forms.

The objective application or use of the category goes, according to Kant, through an imaginative process or translation of the logical content of the category in time and space as *a priori* forms of sensitivity. In transcendental Schematism, Kant offers an uniquely temporal translation of the categories, so that “the scheme of substance is the persistence (*Beharrlichkeit*) of the Real in time”²³, “for only this persistence is the ground for our application of the category of substance to appearance”²⁴, since all modification is predicated on the persistent. The substance in the appearances is something that lasts (*dauert*) over time. In the appearances, this sensible persistence of the object corresponds (*correspondiert*) to the time considered as persistent and to always being the same, the same time, in its incessant flow, and since time itself is, as form of intuition, unlimited and cannot be perceived, it is the phenomenal substance, as sensible persistent what makes the perception of persistent time possible²⁵ and with it, the other two modes of time: succession and simultaneity²⁶, that is, the determination and objectification of what changes and what exists at the same time (*die Folge und das Zugleichsein*), although other elements are also required to make other two determinations of time possible: “that which persists is the substratum of the empirical representation of time itself, by which alone all time-determination is possible”²⁷.

But following the production of the passage of the *Critique of pure Reason*, second edition called “Refutation of idealism”, Kant understood that all persistence also requires a space in which to persist, while empirical time always flows, and that it is that spatial persistence or matter²⁸ with its own temporality, namely, that of external objects or of the outer sense, which makes it possible to objectively determine the particular and different temporality of the representations of the inner sense. The argument of the first Analogies of Experience²⁹ starts precisely from that distinction between the temporalities of external objects, that can be persistent, and the representations of the inner sense, that are always successive and dependent on attention (*Aufmerksamkeit*)³⁰. The persistent is necessarily a time-space appearance. That is why Kant concludes that the time of inner sense is not enough to assign objective reality to the categories, something he had previously believed and pointed out in his Transcendental Schematism (where the idea of transcendental aesthetics was followed, according to which the time of the inner sense was the time of all appearances), which he would have to rewrite, but that also required are the outer and spatial intuitions³¹ and the temporality of these objects. So, “in order to give something that persists in intuition, corresponding to the concept of substance (and thereby to establish the objective reality of this concept), we need an intuition in space (of matter), since only space alone persistently determines, while time, however, and thus everything that is in the inner sense, constantly flows”³². The persistent leads us to something external and spatial, which Kant calls matter, “object of outer sense [...] impenetrable lifeless extension”³³, and this cannot persist in a mere impression of the inner sense, as claimed by Hume: “the concept of matter as substance is the concept of something mobile in space”³⁴. And the same can be said of simultaneity, the scheme of the category of interaction, which also requires space, namely, that two or more objects occupy different spaces so that they can exist

at the same time³⁵. And that also happens with causality, the second category of relation, since it is what determines the successive temporality of external and extensive objects.

Fourth idea: the category of substance is applicable to the sensible persistent in time-space, where changes or accidents are inherent - that is its interpretation, application or objective translation, its possible empirical realism³⁶. This persistence or duration of the appearance or object is the work of the imagination, which goes through the sensible manifold, takes it up and synthesizes it in a unity³⁷, maintaining the differences, the consciousness of the different parts of the space, the different moments of time and the qualitative differences in that extension and temporality, and the object responds positively to that subjective action. It is the imagination that implements in time-space-qualities what is required by the category of substance³⁸. The persistent that corresponds to the substance is gone through, taken up and combined by the subject thanks to the imaginative synthesis of the sensible manifold of an object and recognized reflexively by the concept or category of substance. The figurative synthesis of the imagination or imaginative scheme, and the intellectual one of the category (concept, understanding and Judgment)³⁹, are acts of spontaneity of the transcendental subject, without whose spontaneity or action it would not be able to understand anything, and is not found in impression or perception (*Wahrnehmung*), which in contrast contain a pure manifold in random juxtaposition⁴⁰.

From the concept of substance different meanings can be now identified. The *logical* meaning, where substance is the ultimate subject of predication that cannot become a predicate⁴¹. From the *ontological* perspective, or according to the modes of being, the substance is the substratum or support of its accidents or states (*Zustände*), not in the sense of the accident being something in itself, but “only through the way in which the existence of a substance is positively determined”⁴². *Transcendentally*, it is required that this existence occurs sensibly in time-space, specifically as something that persists and lasts, while accidents change, as the support or the substratum of the changes in the world is the persistent. That persistent then appears *physically* or ontically as an object, specifically as an external object of the world, that is, as a material body, because in the inner sense there is only a constant flow of representations, there is nothing that lasts, as Hume already indicated when he said that no impression remains, and therefore no substance can be found in that sphere, because the substance also needs space. Hence, for the temporal determination of the inner sense and its representations, it is necessary to have a relation with the extensive objects of the outer sense and its temporality, ordered through category of causality, which was demonstrated by Kant in his “Refutation of Idealism”⁴³.

5.

In the transcendental Analytics of the Principles, the forms previously studied in the Critique are put through a synthetic process: the pure forms of sensibility, the categories and their schemes. With them the first judgments or principles about the entities as objects are formed. In this way the category of substance and its scheme are also put into practice, and its objective meaning and scope are determined more precisely.

In the first two principles, namely, in the Axioms of Intuition and in the Anticipations of Perception, transcendental and regulated syntheses of the spatial and temporal forms, and the sensible content or reality of each appearance are studied. But there would be no unity of experience, which is necessary for the unity of the subject and its objective orientation, if these appearances were isolated from each other, or related without any rule. If they were isolated, the subject would live in several worlds unconnected from each other without knowing how to move from one to the other, and consequently not knowing how to act in any of them. And if the appearances were randomly related, the subject could not be orientated in the experience, or there would be no cognition of what to expect, because it would not be possible to discern what happens, or what will happen, or what to do with each of these appearances. It is therefore necessary that they form a web, a network of connections and links, of regular successions and simultaneities, in other words, it is necessary for the subject, for its cognition and action, that the objects are not connected randomly but linked to each other by means of rules or concepts, thanks to which the subject can, firstly, place the appearances in the objective time and space and, secondly, establish their dependencies, their natural laws, with which to predict, dominate, use or avoid them, fend off them, etc. Judgment in the general formulation of the content of the three Analogies of Experience, as a condition of possibility of objective experience, arrives here at the basic and transcendental principle that: “Experience is possible only through the representation of a necessary connection of the perceptions”⁴⁴.

However, Kant states in each of the three Analogies (although he still speaks only of time there) that in order to place the appearances in objective time and space, absolute time and space cannot be used, because these are not perceived⁴⁵, as everything perceived must be limited, gone through and unified (synthesized) by the imagination. Therefore, the appearances can only be placed spatially and temporarily in relation to each other, i.e., “the appearances themselves must determine their positions in time [and in space] for each other [...] in accordance with a general rule” (KrV A 200, B 245)⁴⁶ by means of their dynamic relation (with physical influences) and according to a universal rule. Hence the expressions that the sun is so many kilometres from Earth, or that the taking of the Bastille took place 1789 years after the birth of Christ, etc. This is also the case when their dependencies or causalities, as well as their simultaneity are determined, that is, in the three modes of time.

Hence, *in the fifth place* it can be said that the substance, as persistence, is necessary to be able to perceive and objectify changing appearances or alterations, and that both, what remains and what changes, are determined by each other, by contrasting the one with the other, because “all alteration presupposes something that persists in intuition, even in order merely to be perceived as alteration”⁴⁷; all consciousness requires distinction and contraposition. The persistent is the substratum of any change⁴⁸ and “that alone can represent the unit of time, namely the identity of the substratum in which alone all change has its thoroughgoing unity. This persistence is therefore nothing more than the way in which we represent the existence of things (in appearance)”⁴⁹. Consequently, substance is an appearance, or object, or body that persists even though it is altered (*verändert*)⁵⁰, while its accidents or determinations (*Bestimmungen*) change (*wechseln*)⁵¹ and follow one another. This sensible persistence allows the positioning of the changing appearances in time

and space, because it is not possible to resort to absolute time and space to proceed with that determination because they are not perceived.

The substance in Kant is not the essence of things (*das Wesen der Dinge*), but it is a moment of it. This essence of the appearance or *realitas* is expressed in the strictest manner by the categories of quality, their scheme and their principle. Alternatively, it could be thought that the essence of the appearance comprises the first three classes of categories, those of quantity, those of quality and those of relation, since modality does not contribute anything to the content of the object, but to its relationship with the transcendental subject⁵². However, the categories of modality can also be included, since they express the relation of the appearance with the transcendental subject and therefore also its character of appearance.

6.

Persistence is necessary to capture change. But why is change necessary? Kant does not explain this. Moreover, he believes that all alteration (*Veränderung*) is *a posteriori*, so that nothing could be said about it *a priori*⁵³, “since alteration is a concept that can be drawn only from experience”⁵⁴. Similarly, the possibility of movement (*Beweglichkeit*) of the substance-matter in space is an empirical predicate⁵⁵. Therefore, there would not be a transcendental necessity for change or alteration, or for accidents or movement, and the only thing that exists is the empirical finding that these occur empirically.

But if change is not transcendently necessary, why should persistence be necessary, when they are correlative concepts, and having been accurately argued that persistence is necessary because without it change cannot be captured, that is to say, that the necessity for persistence has been made dependent on change? Change or alteration is required by the category of substance itself as the necessary opposing element, because if it is true that without the persistent it would not be possible to perceive change, the reverse is also true: without change it would not be possible to perceive what persists and lasts. The duration of the substance also implies the presence of changes, because “only through that which persists does existence in different parts of the temporal series acquire a magnitude, which one calls duration”⁵⁶. This would not be noticeable without a sensible differentiation of successive moments of time by virtue of objective changes ruled by the law of causality.

It is my view that both permanence and change are transcendently necessary as their contrast is required for consciousness and cognition. The need for persistence is expressed in terms of the category of substance whilst the need for change in terms of the category of accident, which in turn is also considered a category because categories of relation are necessarily dual. They do not synthesize homogeneous elements (*Verbindung, conjunctio*) that are sensibly given in the way categories of quantity and quality do, instead they combine different elements in their existence, that is, they are connections (*Zusammensetzung, compositio*) between two or more appearances and indicate “the synthesis of that which is manifold insofar as they necessarily belong to one another, as e.g., an accident belong to some substance, or the effect to the cause - thus also as represented as unhomogeneous but yet as combined *a priori*”⁵⁷,

and not purely empirically. The two categories, that of substance and that of accident, like all categories⁵⁸, are original actions of the transcendental subject, which cannot be deduced from other, synthesize the phenomenal world in a regulated manner and point out transcendental necessities in view to order and interpret experience. Therefore, it is also necessary for change or alteration to occur together with persistence in the world of appearances⁵⁹.

Kant affirms that time persists while appearances change over time, but as time in itself is not perceived, a visualization of that persistence by means of the phenomenal substance is necessary. He also states that fragments or moments of time are all successive⁶⁰, and this succession of temporary moments could not be empirically captured if everything remained unchanged, but only if there are things that change from one moment of time to another. Therefore, there must be change in the appearances. That is the method of transcendental reflection: “everything in regard to objects of experience is necessary without which the experience of these objects itself would be impossible”⁶¹.

The first category of relation establishes that there must be persistence and change, but it is in the second category, the category of causality, where the category or law that governs and objectifies the change or temporal succession of the objects is determined: the effect cannot be prior to its cause, because the existence the former depends on the latter⁶². As a result, the categories of cause and effect require that there should be change and alteration, since without them there would be no causality, nor the establishment of the objective succession of appearances, nor objective cognition of the world, nor consciousness and self-consciousness.

It can also be argued that, if according to the first two principles, the Axioms of Intuition and the Anticipations of Perception, the extent and reality of each appearance has to be limited in order to be intuited, it follows that appearances also have to be limited in time, they must appear and disappear, and that constitutes change.

If there was no change there would be no inner sense, because this consists of a temporary flow of representations⁶³. But if there were no inner sense, then the external object would not be understood as external, there would be no consciousness of it as such due to lack of distinction and contrast, the inner life of the spirit would be stopped, frozen, petrified, and with it the world and the transcendental I self.

Finally, if “all interest is, after all, practical”⁶⁴ and freedom “is the cornerstone of the entire construction of a system of pure, even speculative reason”⁶⁵, as Kant explains in the *Critique of Practical Reason*, then it can be affirmed the transcendental need for change and movement in order to allow the realization of freedom and its aims in the world. Without changes there would be neither free action capable of modifying the world according to free purposes nor freedom itself, because freedom is not a transcendent substance that could be without a world, but it is an action of transformation of the world. There would therefore be no moral, no consciousness, and no subject. Nature cannot have an influence on freedom, but freedom must influence nature to fulfil its aims within it⁶⁶ and therefore it must be possible to modify it.

Hence, and that is the *sixth idea*, there must be change and, consequently, persistence cannot occupy everything, it must not be absolute: without change there would be no consciousness nor freedom. The phenomenal substance is also necessarily finite and modifiable.

7.

Persistence is not absolute, but change cannot be absolute either. If there were an absolute change, if suddenly everything changed radically with nothing persistent, that is, leaving no continuity, there would be a lapse in the world of experience, and its unity would be totally broken: the unity of time, of space and of causality, and with it also the unity of consciousness. Assuming the subject could survive, it would mean crossing from one world to another without a bridge or transition, magically, without any orientation or identity of the consciousness or continuity of the empirical self, for there would be an empty moment where there would be no experience⁶⁷. “The general principle of all three analogies [of experience] rests on the necessary unity of apperception [or “I think” or transcendental subject] with regard to all possible empirical consciousness (of perception) at every time”⁶⁸. There could not be an awareness of that absolute change, “for it is this very thing that persists that makes possible the representation of the transition from one state to another, and from non-being into being”⁶⁹.

Thus, the *seventh conclusion*, there must *always* be something *real* that *persists* in time-space⁷⁰ without which there would be no experience nor transcendental subject, and that is the actual requirement expressed in the category of substance and in the first of the Analogies of the Experience. Here, the terms “always” and that “persist” are added to the Real (*Realität*) or qualitative *realitas*, that is, to what is presented as real in the category of quality and the Anticipations of Perception, which already points out that the material is the Real that occupies different spaces⁷¹. In the category of substance it is added that there must *always* be some phenomenal spatial and temporary *realitas* with a certain *persistence* or duration⁷².

8.

The transcendental requirement expressed in the category of substance is that something always persists or lasts in the experience, that not everything changes, in the same way that the category of accident states that always something changes and that not everything remains the same. But then, according to the first two principles (Axioms of Intuition and Anticipations of Perception), a body does not always persist due to its spatial-temporal-real, quantitative and qualitative finitude, or to their relationship with the other objects that can destroy it (causality and interaction).

Moreover, to our previous discussion that neither persistence nor change can be absolute, it can now be added that one body cannot persist absolutely. In the appearances nothing is absolute, because every object is finite in its quantity and quality, as it is in its interrelation with others. Everything that persists does not do so in relation to absolute time or space, since it cannot be perceived, but only by means of the interaction of some appearances with others, which can determine their modes of time: permanence, succession, simultaneity. The category

of substance requires an appearance to be considered persistent in relation to others; the process of objectification considers that objects change and persist relatively to other appearances, in other words, that they remain in a mutual relation of some appearances with others, in such a way that whatever changes more slowly, or much more slowly, can serve as a permanent object, that is, as the substance for the perception and determination of others, and vice versa. In Plato's view, bodies do not comply perfectly with the requirements of ideas, as they do not comply in this context either with the transcendental demands expressed in the concept or category, which is universal and abstract because they express the rule as a rule, although bodies do so with respect to the demands expressed in the transcendental imagination, which works with the concrete.

Therefore, if the substance can only be altered (*verändert*) in its accidents but cannot be made to appear and disappear (*wechseln*)⁷³, if the substance cannot arise nor perish⁷⁴, it may be thought that, ultimately, the transcendental and ideal requirement expressed in the category of substance points not to something permanent that may be different in each case, but to something concrete and real always persistent in the time-space of the sensible world as the ultimate support of any change. That is the *matter* which Kant came to call "transcendental matter"⁷⁵, along the lines of the Aristotelian-scholastic *materia prima* or first matter but regarded as an objective transcendental demand. In that case there would be only one substance and all the appearances of the world would be its various states or accidents. From the persistence of the substance, judged this time with the implacable universality of the concept, in an absolute way (not by simple analogy and with the "more or less" of the imagination that has to deal with the concrete and finite), stems the strict conservation of its quantity. From that perspective it could be said that matter is neither created nor destroyed, it is only transformed, as the chemical law of the conservation of matter of Lomonósov-Lavoisier says, and that is what Kant ultimately thinks in relation to the substance⁷⁶. It then appears that there could be only one substance in the background, since all the objects in the world do appear and disappear, increase and decrease, and last or persist relatively.

Eighth idea: the phenomenal substance can ultimately point to the universal matter of all material objects, which would undergo alterations in time-space and should be the last substratum of everything that exists and changes in it. Relatively speaking, that is, given the relation of some appearances with others, there are many substances, that is to say, many objects in the sensible world that can be considered, and are in fact considered, as substances and also as persistent in relation to others; for example, this table is considered as a substance in relation to its colour, its parts, its defects, its place, etc. From that perspective there is a plurality of substances, and it makes sense to speak about them in this way and thus to apply the category of substance to give appearances an order. But it could also be affirmed that, in the final analysis, what the requirement of persistence, as expressed in the category of substance, points out to relates to the unique and universal matter from which all things in the world are made, which would be variations of that matter, resulting in a single substance.

Both uses or levels in the use of the concept of substance are accepted by Kant, because "matter is divisible indefinitely and specifically into parts that are equally matter"⁷⁷, so that

objects are also matter that move in time-space with its properties or accidents: “The concept of substance signifies the ultimate subject of existence, i.e. everything that doesn’t exist merely as a predicate [here = ‘property’] of some other existing thing. Now, matter is the subject of everything existent in space; for besides matter no other spatial subject can be thought of except space itself [...]. So, matter—as what is movable in space—is substance in space. Similarly, every part of a portion of matter will also be called substance, and therefore also matter, insofar as (*so fern*) it can be said that they are subjects and not mere predicates of other matters. And they are subjects if they are movable and therefore also something existing in space outside the relation with other parts that were next to it”⁷⁸, that is to say, insofar that they can move as an independent unity in space. In the “so fern” (“insofar as”) one can see how the category of substance is a transcendental strategy to objectify and give order to the appearances, and not an ontic law of things as such⁷⁹.

However, this transcendental matter has been thought of as such only from the universality of the category and from the concept of persistence as a concept, without taking into account the necessary concrete action of the imagination⁸⁰ and its empirical spatial-temporal limitations which we see, for instance, when Kant analyses the aesthetic sublime⁸¹. Although it can be understood that Kant affirms that the necessity for persistence expressed in the category of substance “is inseparably connected with the necessity to always having existed” (KrV A 185, B 229), i.e., with the existence of an identical substratum that always persists the same and thanks to which the unity of the objective time could be represented⁸², due precisely to that limitlessness in which the said transcendental matter is thought, this substance cannot become a phenomenal object, it does not actually become a sensible appearance, no more than unlimited time and space as such do, nor therefore does it make perceptible and secure the unity of time of all objects, that is, that they all share the same objective time⁸³. This matter becomes sensible in the form of concrete objects, only they are perceived, and therefore only from them and their relations to each other, determined by the three categories of relation, their schemes and their principles (the Analogies of experience), can the modes of time and their unity in the experience be objectively determined⁸⁴. Consequently, the most appropriate use of what is expressed in the category of substance is to refer it to the multiple sensible objects⁸⁵. This is what happens in the third Analogy of experience, which studies the simultaneity of the various phenomenal substances or external objects that indicate each other’s place and time through their interaction: “All substances, insofar as they can be perceived in space as simultaneous, are in thoroughgoing interaction”⁸⁶. Here Kant talk about “a manifold of substances as appearances”⁸⁷; these are relative substances, that is, relatively to other appearances that change more rapidly, and that is characteristic of the phenomenal sphere⁸⁸.

It is my opinion that it is not transcendently necessary for a substance to always persist absolutely, as that is not sensibly noticeable, instead, only something sensible that persists is transcendently necessary so that there is no interruption and discontinuity in the experience that results in empty time and space. But that does not prevent science from operating with the regulatory idea that all material is nothing but modifications of the same matter or energy in different variations, clusters, compositions, complexities, etc.; science continues on the path of discovering new and increasingly smaller particles of matter-energy in the direction of that

absolutely persistent substratum or ultimate matter, providing that makes sense in something that is in continuous process⁸⁹. Everything that bears the mark of the “absolute”, in this case an absolutely persistent unique matter, surpasses the imagination and is outside the scope of understanding and Judgement, it is in fact an idea or a requirement of reason that does not have a constitutive, but at best a regulatory, function for objectivity.

9.

Yet, here we are referring to phenomenal matter, the matter that is found in time and space of objects. But in time and space there is nothing simple, no absolutely indivisible point, nothing that cannot be seen as compound. Therefore, in principle, everything that belongs to intuition as a sensible element of cognition “contains nothing but mere relation, of places in one intuition (extension), of alteration of places (motion), and laws in accordance with which this alteration is determined (moving forces)”⁹⁰. Matter is exteriority and manifold, *partes extra partes*, it lacks simple parts (second Antinomy) that could always remain invariable, and neither does it configure a concrete totality or an unmodifiable and indestructible body, but it is also in principle unlimitedly divisible⁹¹. Hence, Kant affirmed when arguing against Leibniz and his concept of monad as a simple substance that “the inner determinations of a *substantia phaenomenon* in space are nothing but relations, and it is itself entirely a sum total of mere relations”⁹². Matter cannot contain anything internal, everything referred to as “internal” is meant to be comparatively so⁹³. In the matter of the appearance there is nothing unconditioned. For that reason it can take multiple different forms and be configured in unlimited ways, which could not happen with indivisible elements that would always be equal to themselves, nor with unmodifiable and eternal bodies or totalities.

The subject demands that the phenomenal world should be modifiable to introduce into it its own conscious and free actions, but at the same time this world should be governed by laws, because only then the subject manages to cognize it, to orient itself and know how to act on it to achieve its aims, and that is precisely what is expressed in the categories of relation. But concrete, empirical laws have to be discovered, because the categories of relation are discursive and regulatory, not intuitive: they no longer provide the intuition of the other appearance connected with the one that faces us (contrary to what happens with the two first types of categories, quantity and quality, and with the application of their schemes), since the existence (of the other appearance) can never be deduced *a priori*, but it can only be indicated what has to be found, namely, the other element not yet sensibly given but necessarily connected with that given by intuition, for example the cause of an appearance, or what persists in it, or what other objects it interacts with and how, in order to recognise it when we find it, all by means of analogies with other cases⁹⁴.

These concrete laws of the world can be varied and diverse. Even though Kant thought that Newton had laid the foundations for all of them, since the beginning of the 20th century physics, chemistry and biology have been opening increasingly strange worlds, with appearances that surprise and challenge our imagination and understanding, accustomed as we are to move in our reduced conscious mesocosm. Given this diversity, human compression will always tend and try to bring all this manifold of appearances and laws to a system that should

be comprehensive, and connected or coherent, appropriate to our capacity of cognition and necessary for the unity of experience through teleology, as a transcendental regulatory principle for understanding nature, as explained by Kant in his *Critique of Judgement*. The further we move away from the mesocosm, the more bizarre the world becomes. But we must always look for laws. For example, particle physics is determined to unify the four fundamental forces or interactions: the strong, the weak, the electromagnetic and the gravitational.

Ninth point: the phenomenal substance or matter is not something fixed, simple or indivisible, instead it is relational and, in principle, limitlessly modifiable, even though it is transcendently required that it can be modified according to rules or laws, not arbitrarily or chaotically, since the latter would make objectivity and subjectivity impossible. Thus, subjectivity occurs, and there is ground to state that the world is the way we cognize it, at least to a sufficient extent.

10.

Although phenomenal substances and matter contain mere relations and nothing absolutely internal, they are nevertheless real and “the primary substratum of all outer perception”⁹⁵ and not mere idealities or pure illusion (*Schein*), but appearances (*Erscheinungen*).

Firstly, it is not a deception when we apply the category of substance to physical bodies, since they persist sufficiently in relation to other appearances and to our perceptions and the empirical speed of our life time, so that it is useful to consider them persistent and to identify them as singular objects with the view to ordering other appearances and themselves and to orient ourselves in the objective world. They are substances relatively. We say: “this tree is a substance”, which is the same as affirming “this tree is an object” and we treat it as such, not because it always remains exactly the same, because it is born and dies and is in continuous movement or change, but because it does retain its unity for a while and responds sufficiently to that transcendental requirement compared to other appearances, for example, its growth or its change of colour and leaves in autumn or the nutrients it takes from the earth.

Secondly, and above all, the application of the concept of substance to physical bodies (or even to matter as the last substantial support of the phenomenal world) is justified because they present their own reality in the sense that they are not created *ex nihilo* by the subject, but they are *given* to it⁹⁶, which justifies empirical realism, that is, that these substances are not mere idealities. This is recorded in transcendental Aesthetics, also in the qualitative category of reality (*Realität*), its scheme and its principle, a category to which the substance adds the requirement of persistence and of always. The phenomenal substance is not mere relation as if it were only ideality, but it consists of real relations and exhibits its own *realitas*, which is recognized in the category of reality, its scheme and its principle. Faced with these realities of the appearances, the subject behaves passively, they are given to it and it does not create them, which demonstrates that the appearances exhibit a certain reality from themselves, something that Kant tries to analyse using the problematic concepts of thing in itself and of sensible affection⁹⁷.

Kant understands this mode of being and presenting itself that have the material objects, which makes the empirical realism of the substance possible, by means of the concept of force.

The phenomenal substance manifests itself to us as a force from itself capable of being a cause. “Causality leads to the concept of action, this to the concept of force, and thereby to the concept of substance”⁹⁸. The action (*Handlung*) is an empirical criterion sufficient for substantiality, since it is only what persists that can cause that something else changes⁹⁹. “Where there is action, consequently activity and force, there is also substance, and in this only must be the seat of this fruitful source of appearances be sought”¹⁰⁰. Substance is the cause, because the effect is related to what changes, and what changes cannot be the cause of the change but the effect of what persists. “The category of substance lies at the ground of all concepts of real things”¹⁰¹.

Kant defends in his *Metaphysical Foundations of Natural Science* a dynamic conception of matter in line with the Leibnizian tradition, because according to him matter is made of two original moving forces, not deductible from others nor, of course, created by the subject, and it is because of these forces that matter fills a space. One is the expansive or repulsive force, also called elasticity, and the second is the force of attraction, which limits the expansive force and keeps the body within spatial limits. These physical forces and their occupation of time and space give empirical realism to the unity of the imaginative synthesis with which we interpret an object and its unity. “We know substance in space only through forces that are efficacious in it, whether in drawing others to it (attraction) or in preventing penetration of it (repulsion and impenetrability)”¹⁰². In that sense we have to see a plurality of phenomenal substances as forces that are in interaction according to the principle of action and reaction (Newton’s third law).

Tenth and last point: the phenomenal substance and matter are dynamic, they are forces, about which it would be said nowadays, are ultimately energy. Matter-force or energy is the origin and the real cause of all appearances, both of them being considered as substance and their accidents. In addition, since matter-force does not contain simple elements¹⁰³, as previously stated, phenomenal substance is formed by a field of forces, with no simple elements. This is the final conclusion, not very different from modern physics and its field concepts¹⁰⁴.

Abstract: This article explains in ten points the concepts of substance, change and matter that appear in the transcendental Analytics of Kant’s *Critique of Pure Reason* as categories and schemes, as well as how they function in the Analogies of Experience. It aims to demonstrate how the category in general, and that of substance in particular, are, in their transcendental ideality, a strategy of the subject to order and objectify the phenomenal world. It establishes that change is also necessary *a priori*, that both change (accident) and persistence (substance), as well as all appearances, are finite and limited. This would lead to the affirmation that only matter, transcendental matter, is entirely persistent; however, transcendental matter is not a sensible object and therefore those sensible objects that relatively persist in time-space are the only empirical reality of the substance. Finally, matter is made up of forces, and given that there is nothing simple in matter, it can be inferred that empirical substance is nothing other than a field of forces.

Keywords: Kant, substance, matter, change, analogies of experience, Critique of pure reason.

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NOTAS / NOTES

¹ Jacinto Rivera de Rosales is Professor of Philosophy at the UNED (National University of Distance Education), where he teaches History of Modern Philosophy. He has specialized in German Classical Philosophy, about which he has published numerous articles and also books such as *El punto de partida de la metafísica trascendental. Un estudio crítico de la obra kantiana* (Ediciones Xorki, Madrid, 2011) or *Fichte* (RBA, Barcelona, 2017) also translated into Italian and French. He has been President of the International Fichtean Society (IFG, 2012-2018) and of the Society of Kantian Studies in Spanish Language (SEKLE, 2014-2018), and is Coordinator of the Iberian Network of Fichtean Studies. He is organizing a conference on Schelling, and belongs to a research group on Hegel, another international on Hermeneutics and a third on contemporary Nihilism.

² The “I think” or self-consciousness is not substantial because it is not intuition (KrV B 278, 421-422). See, for example, the article by Carsten Olk, “Ich, Selbstbewusstsein und der psychologische Paralogismus. Zur möglichen Bestimmung reflexiver Subjektivität und zur unmöglichen Bestimmung einer Ich-Substanz bei Kant“ (*Kant-Studien* 109(2), 2018, S. 228-248).

³ KrV B 132-136.

⁴ KrV A 436-437, B 464-465.

⁵ KrV B 202-203; A 162-164, B 203-204.

⁶ KrV A 575-576, B 603-604.

⁷ KrV A 80, B 106; A 186, B 229-230

⁸ KrV B 165.

⁹ KrV A 216, B 263.

¹⁰ Prol AA 4: 322-323.

¹¹ KrV B 3-6.

¹² Prol, § 30; AA 4: 312. See also KrV A 314, B 370-371.

¹³ Prol § 39, AA 4: 324.

¹⁴ KrV B XIII ff.

¹⁵ KrV A 28, B 44; A35-36, B 52.

¹⁶ AA 2: 72-77.

¹⁷ KrV A 597-601, B 625-629.

¹⁸ KrV A 161-162, B 201.

¹⁹ “I do not in the least hereby mean to refute empty space; that may well exist where perceptions do not reach, and thus where no empirical cognition of simultaneity takes place; but it is then hardly an object for our possible experience at all” (KrV A 214, B 261).

²⁰ KrV A 51, B 75. “With us understanding and sensibility can determine an object only in combination. If we separate them, then we have intuitions without concepts, or concepts without intuitions, but in either case representations that we cannot relate to any determinate object” (KrV A 258, B 314).

²¹ KrV, B 164.

²² “The representation of something persisting in existence is not the same as a persisting representation; for that can be quite variable and changeable, as all our representations are, even the representations of matter, while still being related to something permanent, which must therefore be a thing distinct from all my representations and external” (KrV B XLI footnote). Here external objects are distinguished from representations of inner sense.

²³ KrV A 144, B 183.

²⁴ KrV A 184, B 227. See also Prol § 48, AA 4: 335.

²⁵ KrV B 225-226.

²⁶ “The three *modi* of time are persistence, succession, and simultaneity. Hence three rules of all temporal relations of appearances [...] precede all experience and first make it possible” (KrV A 177, B 219).

²⁷ KrV A 183, B 226

²⁸ KrV B 277-278.

²⁹ KrV A 182, B 225-226. The necessary distinction between subjective (inner sense) apprehension and objective temporality of external objects (KrV B 219; A 189-191, B 234-236; A 194-199, B 239-244; B 258), but they will also have to be linked to the unity of experience, so that “I must therefore derive the subjective succession of apprehension from the objective sequence of appearances” (KrV A 193, B 238).

³⁰ KrV B 156-157 footnote.

³¹ KrV B 291.

³² KrV B 291; see also KrV A 381. I have explained more about this important issue in the article “Heidegger and Kant’s „Refutation of Idealism”, published in the book *Objectivity after Kant. Its Meaning, its Limitations, its Fateful Omissions* (Olms, Hildesheim, 2013), pp. 249-278.

³³ KrV A 848, B 876.

³⁴ MAN, AA 4: 543.

³⁵ This is recognized by Kant already in the formulation of the Third Analogy of experience (KrV A 211, B 256), although later in his explanation he does not take into account that necessary *a priori* element. “Different times are not simultaneous, but successive (just as different spaces are not successive, but simultaneous)” (KrV A 31, B 47).

³⁶ „In fact, the proposition that substance persists is tautological. For only this persistence is the ground for our application of the category of substance to appearance, and one should have proved that in all appearances there is something that persists, of which changes is nothing but the determination of its existence” (KrV, A 184, B 227).

³⁷ KrV A 77, B 102.

³⁸ KrV A 183, B 226.

³⁹ KrV B 151-152.

⁴⁰ KrV B 218-219.

⁴¹ See KrV A 147, B 186; A 242-243, B 300-301; B 149, 288-289, 410. The category of substance is deduced by Kant from categorial judgments (KrV §§ 9 y 10).

⁴² KrV A 187, B 230.

⁴³ KrV B 277-278 y 291; A 381.

⁴⁴ KrV B 218.

⁴⁵ KrV B 219; B 225; A183, B 226; B 233 y 257; A 200, B 245. “The temporal place in each case and the temporal relation of an object can never be constructed *a priori* from the pure course of time, that is, they can never be exposed or presented intuitively”, says Heidegger (*Die Frage nach dem Ding*, Max Niemeyer, Tübingen, 1987, p. 182). Concerned especially about time, Heidegger does not take note of the necessary presence of space in the Analogies of experience. Paul Guyer doubts “that we cannot know that time itself is permanent from the pure intuition of time, although that change takes place in time and therefore time does not change” (*Kant*, Routledge, London and New York, 2006, p. 106). But the problem lies in not knowing that time will always exist in every objectification, a point analyzed in transcendental Aesthetics and in the categories of quantity, their scheme and their principle or Axioms of intuition, but that we cannot objectively perceive it as such, because it is unlimited, delimited only in objects, and it acquires an empirical reality.

⁴⁶ See also KrV A 214, B 261.

⁴⁷ KrV B 292.

⁴⁸ KrV A 183-4, B 227.

⁴⁹ KrV A 186, B 229.

⁵⁰ That’s how Christian Wolff also defined it: “Subjectum perdurable et modificabile dicitur Substantia” (*Philosophie prima sive Ontologia*, Frankfurt/Leipzig, 1736, § 768. It is a definition that is evident to Kant: “In fact, the proposition that substance persists is tautological” (KrV A 184, B 227). As it has been noted many times, Kant’s definitions of the term substance have an Aristotelian origin, but their meaning is profoundly transformed from their transcendental interpretation.

⁵¹ KrV A 187, B 230-231.

⁵² KrV A 74, B 99-100; A 219, B 266-267; A 233-235, B 286-287.

⁵³ KrV A 171, B 213.

⁵⁴ KrV B 3. This issue is not discussed by Kantian researchers.

⁵⁵ MAN AA 4: 472, 482. Prol 4: 295. “Much as was the case for the schematized category of substance (persistence of the Real in time) and the mere concept of matter (occupation of space) from CPR, the non-schematized category of substance (something that supports properties) and the empirical concept of matter (movable in space) from the MFNS have different meanings (intensions) though matter is what gives objective reality to the category in empirical intuition” (Hall 2011, p. 98-99).

⁵⁶ KrV A 183, B 226.

⁵⁷ KrV B 201 nota.

⁵⁸ The four classes of categories include three, and “the third category always arise from the combination of the first two in its class. [...] But one should not think that the third category is therefore a merely derivative one and not an ancestral concept of pure understanding. For the combination of the first and second in order to bring forth the concept requires a special act of the understanding, which is not identical with that act performed in the first and second” (KrV B 110-111).

⁵⁹ Both are appearances of the outer sense, what persists and what changes in the sensible world of objects interpreted categorically and imaginatively, with a change ruled by the law of causality and with a temporality different from that of the representations of the inner sense (see my article “Heidegger and Kant’s ‘Refutation of Idealism’”). That is what, I believe, Georg Sans has not understood in his article “Wie viel Substanz braucht Kant?” (in *Portuguese Journal of Philosophy* 61 (3-4), July-December 2005, pp. 707-730), which identifies the change of the states of substances with the succession of the apprehension of multiplicity in the inner sense (p. 712-713, 718, 723), which contradicts what Kant points out with his example of the visit to a house (KrV A 190 ff., B 235 ff.). If we do not perceive the persistent, just as we do not perceive absolute time and space (as *a priori* forms of sensibility), we cannot perceive either change or simultaneity.

⁶⁰ KrV A 183, B 226.

⁶¹ KrV A 213, B 259-260. See also KrV A 216-217, B 263-264; A 346-347, B 405.

⁶² “This rule [...] is that in what precedes, the condition is to be encountered under which the occurrence always (i.e., necessarily) follows” (KrV A 200, B 246).

⁶³ “Our apprehension of the manifold of appearance is always successive and is therefore always changing” (KrV A 182, B 225).

⁶⁴ “All interest is, after all, practical, and the very interest of speculative reason is only conditioned and only complete in practical use” (KpV, AA 5: 121).

⁶⁵ “The concept of freedom, insofar as its reality is proved by an apodictic law of practical reason, constitutes the cornerstone of the whole building of a system of pure reason, even of speculative” (KpV 5: 3-4).

⁶⁶ KU, Introduction II.

⁶⁷ An empty time is not subject to perception (KrV A 186, B 229; A 188, B 231).

⁶⁸ KrV A 177, B 220.

⁶⁹ KrV A 188, B 231. Paul Guyer asks: “Why couldn’t we perceive one (impermanent) object in one state being followed by a different (impermanent) object in a different state at the next moment of time?” (o.c. p. g107). We could, but on the basis that other objects persist so that the bond and unity of experience is not cut.

⁷⁰ That “always” of time, space and matter correspond to the three absolute magnitudes of Newton’s mechanics.

⁷¹ KrV A174, B 216.

⁷² KrV B 225.

⁷³ KrV A 187, B 230-231.

⁷⁴ KrV A 205-206, B 251

⁷⁵ KrV A 143, B 182.

⁷⁶ “In all change of appearances substance persists, and its quantum is neither increased nor diminished in nature. [...] Since this, therefore, cannot change in existence, its quantum in nature can also be neither increased nor diminished” (KrV B 224-225). See also KrV, A 185, B 228; A 277-228, B 279-280. *Metaphysical Foundations of Natural Science* III (AA IV, 541-542).

⁷⁷ MAN, AA 4: 503.

⁷⁸ MAN, AA 04: 503. “In all matter, what moves in space is the last subject of all accidents inherent in matter, and the amount of what moves outside of others is the amount of the substance” (MAN, AA 04: 541-542). “We do not even have anything persistent on which we could base the concept of a substance, as intuition, except merely matter” (KrV B 278).

⁷⁹ “What can be considered a persistent substance is left open, in accordance with the regulatory nature of the principle. This can only be determined by experience. The persistent, however, must be something ‘real’, that is, in principle perceivable” (Bernhard Thöle, „Die Analogien der Erfahrung“, in *Immanuel Kant. Kritik der reinen Vernunft*, Akademie Verlag, Berlin, 1998, p. 275). I can take a river, a stone or a tree as substances, or I can think of them as accidents on Earth as a permanent substance.

⁸⁰ KrV A 181, B 223-224.

⁸¹ KU § 26.

⁸² KrV A185-186, B 228-229.

⁸³ Henry E. Allison thinks otherwise (1992, pp. 310 ff. And 321 ff.), and Andree Hahmann (2010 p. 590), and also Bryan Hall (2011). When Kant talks about the identity of the substrate (KrV A 186, B 229) or that it persists in the changes (KrV B 225), it could also be understood that *in each case* there must always be something that persists identical, but not necessarily that that identical and persistent thing is the same *in all cases*. Or when Kant states “that the arising or perishing of the substance does not occur” (KrV B 233) because that would have as result a breaking of the unity of time, that can be understood that there should be *always* something that persists *in each change*, and that what persists in each case is taken at that time as a substance.

⁸⁴ “Experience is an empirical cognition, i.e., a cognition that determines an object through perceptions. [...] the determination of the existence of objects in time can only come about through their combination in time in general” (KrV B 218-219).

⁸⁵ “Therefore, in all appearances that which persists is the object itself, i.e., the substance (*phaenomenon*)” (KrV A 183, B 227)

⁸⁶ KrV B 256.

⁸⁷ KrV A 212, B 258.

⁸⁸ This duality of perspectives according to which there would be, for one, only one substance, and for the other would be a great multiplicity of them, so many as objects, has been much discussed in secondary literature and considered sometime as a contradiction; see, for example, Andree Hahmann (2010), who defends the transcendental necessity of this absolutely persistent matter as the ground of the unity of experience since time as such cannot be perceived; but I would say that neither can be perceived that universal matter. Martín Arias-Albisu (2011) suggests to take the relatively persistent objects of our sensible experience as substances, which Arias calls substances₁ following Jonathan Bennet, these would be accidents or ways of existing of matter as the only absolutely persistent substance or substance₂. I would say that the contradiction is also resolved if we consider the substance not as an ontic law of things in itself, but as a strategy of ordering appearances, as a transcendental category of relation that puts us in search of that appearance that could comply with the scheme in a sufficient manner for the ordering of appearances, and that finds various levels of application. In fact, Kant does not find it problematic to use the term substance in the singular and plural in the same sentence: “the magnitude of matter of the substance is nothing other than the amount of substances of which it is composed” (MAN, AA 4: 542).

⁸⁹ “Kant’s point is not that anything that we casually call substance is permanent, but that in both everyday life and scientific inquiry we must assume that there is some sort of thing that endures through all change, although maybe only science can tell us what that is, and maybe even science will never reach a final theory of what that is” (P. Guyer, o.c. p. 108).

⁹⁰ KrV B 66-67. Nachträge zur KrV, AA 23: 37. Kant’s letter to Kiesewetter of February 9, 1790.

⁹¹ “Matter is divisible *ad infinitum*, and it is so in parts each of which is in turn matter” (MAN II, Theorem 4, AA 4: 503). See also KrV, A 525-526, B 553-554.

⁹² KrV A 265, B 321. See also KrV A 270 ff., B 326 ff.; A 283-286, B 339-342; A 413, B 440; Refl. 3921 (AA 17: 345-6) y 5982 (AA 18: 415).

⁹³ KrV A 285, B 341.

⁹⁴ “For, since this existence cannot be constructed”, contrary to what happens in mathematical analogies, the Analogies of experience “can concern only the relation of existence, and can yield nothing but merely regulative principles, [...] it cannot be said *a priori* which and how great this other perception is, but only how it is necessarily combined with the first, as regards its existence, in this modus of time, [...] although I have a rule for seeking it in experience and a mark for discovering it there, [...] and as a principle it will not be valid of the objects (of the appearances) constitutively but merely regulatively” (KrV A179-180, B 221-22). See also KrV A 162, B 201-202. The Kantian concept of that analogy can be seen in his *Logic* (AA 9: 133).

⁹⁵ KrV A 284, B 340.

⁹⁶ MAN, AA 4: 481.

⁹⁷ See my article “Die vierfache Wurzel des Dings an sich“ (*Kant und die Philosophie in weltbürgerlicher Absicht*, Walter de Gruyter, Berlin, 2013, pp. 743-754).

⁹⁸ KrV A 204, B 249.

⁹⁹ KrV A 205, B 250-251.

¹⁰⁰ KrV A 204, B 250.

¹⁰¹ Prolog AA 4: 325 note.

¹⁰² KrV A 265, B 321.

¹⁰³ “That neither nor appearance in time consists of smallest parts [...] No difference of the Real in appearance is the smallest, just as no difference in the magnitude of time is” (KrV A 209, B 254).

¹⁰⁴ “That is what suggests Michael Oberst, “Kant über Substanzen in der Erscheinung”, in *Kant-Studien* 108(1), 2017, p. 1-18.

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