

Harmonia in commercio vs Harmonia absque commercio.

Kant's eclectic dealing with causality

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El tratamiento ecléctico de la causalidad en Kant

GUALTIERO LORINI*

Centre of Philosophy, University of Lisbon, Portugal

Abstract

The present paper aims to provide an overview on Kant's dealing with the main theories of causality which were proposed and discussed in his time. The goal is to show that, since the pre-critical period, he has never simply accepted the theories of causality that he could find in second-scholastic sources, but has always tried to develop an original position. Starting from a general acceptance of the theory of the "physical influx", Kant tries to amend this theory, as it had been roughly provided by Knutzen and Crusius. This emendation is carried out through elements coming from the Leibnitian tradition. But neither in this field Kant totally embraces the Wolffian, as well as the Baumgartenian model. The paper tries also to shed light on the way in which the critical conception of space allows Kant to fulfill his original theory of causality as an amended version of the physical influx.

Key words

Physical Influx; Occasionalism; Pre-established Harmony; Causality; Space

* Postdoctoral Research Fellow at the Centre of Philosophy of the University of Lisbon (CFUL). E-mail contact: gualtiero.lorini@gmail.com.

Resumen

El presente artículo pretende ofrecer una perspectiva del tratamiento que Kant dedica a las principales teorías de la causalidad propuestas y discutidas en su tiempo. El objetivo es mostrar que Kant nunca aceptó, desde el periodo pre-crítico, las teorías de la causalidad que pudo encontrar en fuentes de la Segunda Escolástica, sino que intentó siempre desarrollar una posición original. Tomando como punto de partido la aceptación general de la teoría del “influjo físico”, Kant intenta corregir esta teoría, tal y como fue esbozada por Knutzen y Crusius. Esta corrección se lleva a cabo por medio de elementos procedentes de la tradición leibniziana. Pero ni siquiera en este campo Kant abraza totalmente el modelo de Wolff y Baumgarten. El artículo aspira a arrojar luz sobre la manera en que la concepción crítica del espacio permite a Kant completar su teoría original de la causalidad como una versión corregida del influjo físico.

Palabras clave

Influjo físico; ocasionalismo; armonía pre-establecida; causalidad; espacio

1. Kant and his sources on *causality, force and change* in the pre-critical period

Kant’s approach to the different theories of causality that are at stake in the scientific and philosophical debate of his age is characterized, on the one hand, by the reference to his most direct sources, and, on the other hand, by the tendency to elaborate an original perspective that is not totally reducible to the sources. In this context, one of the first focal points is represented by a reference to Leibniz, which is often mediated by authors like Wolff and Baumgarten. This sometimes leads Kant to maintain he is positioning himself against Leibniz’s theories, whereas he is actually attacking e.g. Wolff’s thesis or the thesis of a Wolffian. It happens less frequently for Baumgarten, who is a more orthodox Leibnizian than Wolff.

A further line of interpretation consists in Kant’s employment of Crusius’ positions as a term of contrast to the Wolffian formalism. However, though Kant’s disagreement with Crusius is usually more hidden and implicit, it is nonetheless often sharp and also determines the rise of autonomous positions in Kant’s thought. The still point in the analysis of this panorama is what Kant himself (speaking of ontology) called the “vestibule of metaphysics” (See: *RPM*, AA 20: 260). In this case the vestibule is the text through which Kant faces the metaphysical tradition, namely Baumgarten’s *Metaphysica*, which he employed throughout his entire academic career as a manual for his lectures on metaphysics. That is why we will start from this text.

For Baumgarten *ratio* [*Grund*] is meant as the “ground” of a thing [*ens*],¹ in the widest metaphysical meaning of *nexus*. The “principle” is what contains the ground of something else, and it can be “of being” [*essendi*], “of becoming” [*fiendi*] or “of knowing”

¹ Baumgarten, *Metaphysica*, §14.

[*cognoscendi*],² while the “force” [*vis*] characterizes the internal nexus through which the accidents adhere to the essence of the substance insofar as it is their “sufficient ground”.³ As regards the adherence to the essence of the “modes”, and even more of the “relations”, we need a further determination, that is a ground, which is a “cause” and not a “force”, and which coincides with the “principle of existence” (to be understood under the principle of becoming).⁴ This principle is the ground of the “complement of essence or of internal possibility”⁵ of a thing. Among the meanings of the concept of “cause” expressed by Baumgarten, Kant adopts since the *Thoughts on the true estimation of the living forces*, the “efficient cause” [*causa realitatis per actionem*].⁶ Nevertheless, while Kant adopts this concept in order to explain the “physical influx” among the substances, Baumgarten is a supporter of the “pre-established harmony”. Consequently, for Kant also the action of the force has a causal value, since it can be exerted by one substance on the other, whereas Baumgarten reduces the relationship among substances to a force that is internal to any substance.⁷

The pre-established harmony presupposes a monadist theory of substance, which is attacked by Kant in the third section of the *New elucidation* through the exposition of two principles that are supposed to be deduced from the principle of sufficient ground. The first is the “principle of succession”: “No change can happen to substances except insofar as they are connected with other substances; their reciprocal dependency on each other determines their reciprocal changes of state” (*NE*, AA 1: 410). Here Kant’s main polemical target is Wolff, according to whom “a simple substance is subject to constant change in virtue of an inner principle of activity” (*NE*, AA 1: 411).⁸ Kant brands Wolff’s theory as untenable for several reasons. Firstly, a change requires new grounds that should necessarily come from outside, but it cannot be the case, since the internal determinations that already adhere to the substance are “posited in virtue of inner grounds which exclude the opposite” (*NE*, AA 1: 410). Furthermore, the changes of the internal determinations of the substance cannot derive from a change in their grounds because these grounds are by definition immutable, just as the determinations simultaneous to them. Thus, insofar as the essential determinations are immutable, they cannot be the source of the internal changes of the substance. The Wolffians—so Kant—“have constructed an arbitrary definition of force so that it means that which contains the ground of *changes*, when one ought to declare that it contains the ground of determinations” (*NE*, AA 1: 411). This refers to the *Thoughts*, where the force was defined as the most authentic expression of causality and its peculiar character was represented by “activity”, which characterizes the Wolffian

²*Ivi*, §311.

³*Ivi*, §197.

⁴*Ivi*, §307.

⁵*Ivi*, §55.

⁶*Ivi*, §319.

⁷*Ivi*, §§449ss. See: e.g. *TelF*, AA 1: 18.

⁸ Anyway, in the *Cosmologia generalis* (§§209), Wolff admits that we can account for all the changes that occur in a single element through the changes that take place in another.

principle of change too. Thus, the next step is to understand towards what tends the activity of the force, and that requires further investigating the concept of causality.

Wolff, Baumgarten and Meier share a general concept of cause as a ground whose power is basically logical. Since this ground is an expression of the principle of sufficient ground, which in turn comes from the logical principle of non-contradiction, one can conclude that also this ground has a logical value⁹ Therefore, even the necessity characterizing the derivation of the caused from the cause must be logical. Since the position of the cause is simultaneous to that of the consequence—a principle accepted even by Kant—the determinations deriving from the essential grounds of the substance are simultaneous to these essential grounds both on the logical and the ontological point of view, that is they are immutable as their grounds.¹⁰

The goal of Kant's remarks is to explain the transition from the logical to the ontological plane, but to this purpose the Wolffian theory of causality is clearly insufficient. Since for Kant Wolff's concept of substance lacks indeed intersubstantial relations, his concept of causality cannot be considered *real*. Rather, it is expressed by a mere logical and ideal correspondence between cause and caused. Therefore, the action of the force can only be exerted on the internal determinations of the substance, and the change is reduced to a succession of internal determinations that need another internal principle, in order to become actual. Such a model contradicts the concept of an essence grounded upon determinations whose contrary has been logically excluded. Thus, for Kant there is nothing inside the substance that can produce the change. It must necessarily come from outside, by means of a force expressed through a real causality.

In the third section of the *New elucidation* Kant adopts a complementary perspective as regards the first two sections. Where in the first two sections he aimed at analyzing the principle of sufficient ground and demonstrating its validity, here, by limiting this validity to the contingent reality, he can define the modality of determination of the contingent substances as a mutual causal interaction. In other words, the changes of the external relations of the substance are the cause of its internal changes, since the former contain the "ground of existence" [*ratio existentiae*] of the latter. Thus, the principle of succession explains how the *actual* removal of the predicate opposite to what pertains to the subject is possible in those cases, in which this removal goes beyond the limits of the formal logic. Since such a removal must be operated by an external cause, this requires the substances to be in a *real* mutual relation.¹¹ In this sense, Kant's adhesion to this form of physical influx answers the need of filling the lack of formal logic as it pretends to provide a complete account of contingent reality.

⁹ Wolff, *Ontologia*, §§866-881.

¹⁰ Wolff, *Deutsche Metaphysik*, §§32, 42.

¹¹ On this point see: Reuscher (1977, p. 28).

On the basis of his principle of succession Kant claims indeed to be able to “utterly overthrow the Leibnizian pre-established harmony” (*NE*, AA 1: 412). But even as regards the relation between ground and determination, which Kant discusses in these lines, his criticisms do not actually affect the very Leibnizian conception. They are rather targeted against Wolff’s version of this relation.¹² Kant’s objection rests upon the fact that, once an essential ground internal to the substance is posed, a correspondent determination is in turn immediately and immutably posed. So, a pure internal change is not admitted. Nevertheless Leibniz, differently from both Wolff and Kant, rejects the contemporaneity between the position of the ground and that of the correspondent determination. This allows Leibniz to give reason of the change in terms of derivative rather than first causes.¹³ However, the explanation of change in terms of first causes, or at least of essential grounds, is a goal pursued by both the Wolffians and Kant, though by different strategies. That is why the Leibnizian idealism is still unsatisfying for Kant’s purposes, even if the Kantian principle of succession does not substantially weaken Leibniz’s own position.

By the principle of succession Kant seems to claim that the sensible reality ultimately consists of primitive physical points endowed with physical forces that generate causal interactions. However, since these forces cannot be exposed to change, they cannot be identified with the particular forces that we can observe in our sensible experience. They seem rather to already coincide with the attractive and repulsive forces that Kant will treat in the *Physical monadology*.¹⁴

In this latter writing, differently from the Wolffian *atomi naturae* or the Leibnizian-Baumgartenian monads, the simplicity of Kant’s monads does not prevent them from consisting of parts. For Kant the simplicity of the physical monads consists rather in that even their eventual parts cannot be separated from one another, and such a definition of simplicity cannot be found in any other author of Kant’s time.¹⁵ Nevertheless, once he poses this element of originality, at least programmatically, the development of the *Physical monadology* does not explain how the property of “consisting of parts, which cannot be separated from one another” actually characterizes the simple substance. Thus, in the end Kant’s definition of the simplicity of the physical monads still coincides with the Wolffian definition of simplicity as absence of parts.¹⁶

¹²See: Kaehler (1985, pp. 406-408).

¹³See in particular: Leibniz, *Système nouveau*. In: *Die philosophischen Schriften* 4: 477-487. On this point: Watkins (2005, p. 125).

¹⁴ See: Watkins (2005, p. 129).

¹⁵ See: Wolff (*Cosmologia generalis*, §§186-188), Baumgarten (*Metaphysica*, §§224, 230). On this point: Sarmiento (2005, p. 5).

¹⁶ Pozzo-Oberhausen (2002, p. 354) argue Kant’s fundamental Wolffism in his early age on themes concerning the philosophy of nature not to be surprising, since both Leibniz and Newton are taught in this period in Königsberg through Wolffian manuals.

The second principle introduced by Kant in the third section of the *New elucidation*, namely the principle of co-existence, is actually presupposed by the principle of succession:

«Finite substances do not, in virtue of their existence alone, stand in a relationship with each other, nor are they linked together by any interaction at all, except in so far as the common principle of their existence, namely the divine understanding, maintains them in a state of harmony in their reciprocal relations». (*NE*, AA 1: 412-413)

Kant illustrates here the modalities of the causal nexus among the substances that is required in order for an internal change within any single substance to be possible. The limitation of this treatment to the contingent substances is expressed by the reference to the “finite” substances. Furthermore, it is worth noting that the insufficiency of the mere singular existence of substances for the determination of their mutual relations seems to put Kant’s position close to the doctrine of pre-established harmony. Indeed, if Kant would not maintain to have already ruled out this theory in the exposition of the principle of succession, passages like the following could be interpreted as totally consistent with Leibniz’s and Baumgarten’s position:

«Since, therefore, in so far as each individual substance has an existence which is independent of other substances, no reciprocal connection occurs between them; and since it certainly does not fall to finite beings to be the causes of other substances, and since, nonetheless, all the things in the universe are found to be reciprocally connected with each other - since all this is the case, it has to be admitted that this relation depends on a communality of cause, namely on God, the universal principle of beings». (*NE*, AA 1: 413)

The point on which Kant disagrees with Leibniz and Baumgarten is the real, and not merely ideal, nature of the relation among substances, a relation that is based upon their common dependence on the scheme of the divine understanding. However, the real nature of this relation was already stated in the treatment of the principle of succession, so Kant’s criticism is mainly focused on the insufficiency of the existence of substances in determining their mutual relations. For this reason, the target of Kant’s criticism should be identified with Crusius. Indeed, though Crusius admits the real nature of the relations among substances, he claims that God can only create substances, whose existence poses them *ipso facto* into a real relation.¹⁷ On the contrary, Kant maintains that substances can also be created (with all their internal grounds) so that they have no mutual relations. In this case, the relations would be added later and independently from the internal grounds. Since the mere existence of substances does not necessarily imply their interaction [*commercium*], it can neither give reason of the determinations arising from this interaction, then “it is obvious that, if you posit a number of substances, you do not at the same time and as a result determine place, position, and space” (*NE*, AA 1: 414). Thus, the space occupied

¹⁷ See: C.A. Crusius, *Entwurf*, §327.

[*eingenommen*] or filled [*erfüllt*] by the substances now begins to play a significant role in the determination of the causal interaction among them.

2. The nature of space as a key-problem in the determination of the inter-substantial relations

As it is stated in the *New elucidation*, at point 5 of the *Application* of the principle of co-existence, the concept of space derives from the corporeal substances, and expresses their sensible relation, whose metaphysical ground is constituted by their dependence upon the divine causality. Here Kant mentions a “*notio spatii*”, which is reduced to the “interconnected actions of substances, reaction always being of necessity conjoined with such interconnected actions” (*NE*, AA 1: 415). Thus, though Kant assumes, with Leibniz, the derivative nature of space, he does not conclude, like Wolff, that space is merely subjective. Rather, following Newton, he attributes to the space a reality that makes it an essential element in the relations among the bodies. Indeed, Kant’s rejection of the ontological primacy of space on the physical substances stated by Newton does not prevent him from arguing that the external phenomenon of the universal relation among bodies “is called *attraction*. [...] Since it [the attraction] is brought about by co-presence alone, it reaches to all distances whatever, and is *Newtonian attraction* or universal gravity” (*NE*, AA 1: 415).

Here the force expresses the most authentic essence of causality once more. When Kant criticizes the theories of pre-established harmony and occasionalism, he turns back indeed on the value of the efficient causality, and explains that through the common dependence of substances upon God:

«One is equally justified both in saying that external changes may be produced in this way by means of efficient causes and also in saying that the changes which occur within the substance are ascribed to an internal force of the substance, although the natural power of this force to produce an effect rests, no less than the foundation of external relations just mentioned, on divine support». (*NE*, AA 1: 415).

However, it is surprising that in these last lines of the *New elucidation* Kant even seems to reject the theory of physical influx, which until this point had been defended both in its presuppositions and by the exclusion of the concurrent alternatives:

«[...] whatever determinations and changes are to be found in any of them [the substances], they always refer, indeed, to what is external. Physical influence, in the true sense of the term, however, is excluded. There exists a universal *harmony* of things». (*NE*, AA 1: 415)

But Kant is here simply rejecting a “rough” version of the physical influx, in which we can recognize Knutzen’s and Crusius’ versions. In the *Thoughts* Kant had indeed sarcastically mentioned an “acute author” (*Telf*, AA 1: 21), who was the main supporter of

the physical influx. In this metaphor, some scholars have with good reason recognized Knutzen.¹⁸ His conception of the physical influx still consisted indeed in a mere action of one substance on the other, whose effect was the simple migration of an accident from one to the other, without the common dependence of the substances upon God to be required as presupposition and so without the “universal *harmony* of things”.¹⁹

As we have mentioned concerning the *Physical monadology*, the attempt to ground the physical influx in a new way is intrinsically linked to an innovative grounding of the theory of the simple substance. Despite Kant’s general adherence to a Wolffian theory of the simple substance in this period, some Leibnizian and Baumgartenian elements still remain. Indeed, when at the end of the *New elucidation* Kant tries to ground the relation among substances upon Newtonian concepts, he is nevertheless still refining a concept of “active force” that is basically Leibnizian. In order to overcome this position, which prevents him from embracing the Newtonian view, Kant has to scatter the theory according to which any activity of the substance can be reduced to one of its intrinsic properties. Starting from Kant’s version of the physical influx, a possible answer is in any case implicitly detectable at the end of proposition 7 of the *Physical monadology*. Here Kant maintains that the relational properties of the substance need the intrinsic properties to which they are referred in the same way the accidents need a substance (See: *PM*, AA 1: 482). At the same time, it is worth remembering what Kant has stated in the principle of succession of the *New elucidation*, namely that the changes inside the substance depend on the changes of its relations. Relations that, according to the principle of co-existence, embrace also “place, position and space” (*NE*, AA 1: 414). From these points we can argue that any contingent substance, which as such is exposed to changes, determines its own position in space by virtue of a plurality of relations that it establishes toward the other substances through the forces of impenetrability and attraction.

It is not coincidental that, since the lectures on metaphysics of the early 1760s, when enumerating the first concepts of metaphysics, Kant counts, next to the concepts that “cannot be reduced almost at all”—like “representation”, “contiguity” and “succession”—also space and time, which differently “can be only partially reduced” (See: *Met Herder*, AA 28: 155-158).²⁰ This testifies that, although Kant’s conception of space in this period is still relative, it is objective. That is Kant, like Baumgarten, counts the space among the first concepts of metaphysics. In the variety of the universe—states Kant—all the things have their own position [*Lage*] and the space seems to be divided by the things placed in it. Within space, it is possible to individuate places [*Orte*] coinciding with points, namely entities without parts. Therefore, no point within the space “occupies” a place. However, since we can state through direct experience that within space there are some positions, we must at the same time admit the existence of mutually external determinations [*äußere Bestimmungen*] corresponding to substances. Therefore, where there is no substance, there

¹⁸ See for instance: Kuehn (2001, 93).

¹⁹ On the scheme of the divine understanding as the ground of the relations among substances a significant source of Kant is Ploucquet, *Principia de substantiis et phaenomenis*, §§200-202.

²⁰ See also: Ref 3716 (1762-1763), AA 17: 257.

is no space either. Thus, through the concepts of *Ort* and *Lage* Kant derives a *notio prima* of space as a relative concept that is required by the substances (See: *NDMR*, AA 2: 23-24 and *Met Herder*, AA 28: 29).

In the published writings of the late 1750s and the 1760s this conception of space is particularly relevant. In the *New doctrine of motion and rest* and the *Attempt to introduce the concept of negative magnitudes into philosophy*, for instance, it is placed in a wider discussion concerning the method of metaphysics. Even in the text in which such a discussion reaches its peak, namely the *Dreams of a spirit-seer*, the argumentative continuity with the problems treated in the *New elucidation* and *Physical monadology* is clearly detectable. In the *Dreams* Kant admits indeed the existence of simple material substances and tries to delineate by analogy with them the characteristics of eventual simple spiritual substances (See: *DSM*, AA 2: 323). By doing so, he is clearly integrating the perspective of the *Physical monadology*. In the *Dreams* he argues that, although even the presence in the space of the spiritual substances is mediated by the sphere of their activity, this presence is not a “filling”. Then Kant recalls some features linked to the relational conception of space that had been stated in the *Application* of the principle of co-existence and further developed in the lectures of the early 1760s (See: *DSM*, AA 2: 323-324).

Anyway, it is only two years later, in the writing on *The directions in space* (1768), that Kant marks a fundamental, though not definitive, progress in the elaboration of his peculiar version of physical influx. In this work Kant adheres indeed to Newton’s absolute conception of space, and acknowledges a particular reality to space, whose nature deserves to be further investigated (See: *DiS*, AA 2: 378).

3. *Influxus originarius and influxus derivativus*

Before considering the writing of 1768, we need to consider a *Reflexion* that comes soon after (between 1769 and 1770), in which Kant specifies that when speaking of “influx” we always need to admit the possibility of a direct influence of one substance on the other since “originally a substance cannot affect another substance, because substances do not suffer from one another, unless it is claimed that substances suffer from one another insofar as suffering is at the same time an action” (Ref 4217, 1769-1770, AA XVII 17: 461). Here Kant still adheres to the Baumgartenian thesis according to which even the suffering of one substance from another can only be represented by the suffering substance itself in the form of an action of its own, whose content expresses this suffering (See: *Met Herder*, AA 28: 51-53).²¹ On the basis of this position Kant divides the physical influx into *original* [*originarius*] and *derivative* [*derivativus*], and states that “The former takes place if the formal ground [*ratio formalis*] is internal [*domestica*] to the substances; the latter if this ground is external [*peregrina*]”. The first case represents the influence that the substances could exert on one another only by virtue of their existence, and coincides with Knutzen’s and partially with Crusius’ models, both rejected by Kant. Insofar as this ground assumes

²¹ See: Baumgarten, *Metaphysica*, §§463.

instead a causal value, that is its effects go beyond the limits of the internal relations between the substance and its accidents²², it is a “cause external to the world” and coincides with an “extra-mundane being [*ens extramundanum*]”. Kant concludes that “The interaction [*commercium*] of the substances in the world is carried out through derivative influx, that is it is a natural interaction arising from a common dependence” (Ref 4217, 1769-1770, AA 17: 461). It is basically the principle already introduced in the *New elucidation*, according to which the interaction between the substances is based on their common dependence on the same creative cause. Here this principle explicitly alludes to the concept of “wholeness” [*universitas*], which will be thematised in the *Inaugural dissertation*. The *Reflexion* ends indeed with the statement: “The nature of the universe as such (since the whole nature is the nature of all the substances) consists in the conjunction and the completeness [*completudo*] (for this reason it is said wholeness [*universitas*] of the things)”. Thus, although the reality of a physical influx among substances, which is grounded on their dependence on a common cause, is for Kant here preferable to the ideal interaction proposed by pre-established harmony or occasionalism, nonetheless this solution still entirely depends on a fundamental supersensible assumption, like the divine causality.

Yet Kant had in 1768 already posed the key-concept for the foundation of his version of the physical influx, namely the absolute space as a condition of the sensible intuition. One may then ask what still retains Kant, almost two years after this text, from employing this concept of space in order to complete his version of the physical influx. With this concept he could indeed explain *how* the mutual interaction among substances is *concretely* realized. Nevertheless, there is a problem that affects the very concept of space, with respect to which, in the transition from the writing of 1768 to the *Inaugural dissertation*, Kant makes a decisive “correction”. If we indeed analyze the definition of the space provided in the *Inaugural dissertation*, we observe the disappearance of one of the predicates that characterized it in 1768: in 1770 there is no more reference to the “reality” of space (and time). Actually at the end of the writing of 1768 Kant had already admitted that this predicate of the space, though intuitive in the internal sense, created difficulties when one wanted to grasp it by “employing the ideas of reason” (*DiS*, AA 2: 383). In the *Inaugural dissertation* Kant speaks rather of “*conceptus spatii*” and “*idea temporis*” and associates them one another by the definition of the “*intuitus purus*” (*ID*, AA 2: 398-404). Compared to 1768, Kant seems to understand that, since space exists prior to the substances whose interaction is enabled by it, the “reality” of its function cannot be empirically established, but should rather lay in the understanding. Thus, between 1768 and 1770 the space keeps its absoluteness, in the context of a general adherence to the Newtonian model, but its peculiar reality is stated in the subjective and transcendently ideal sense that will also characterize it in the *CPR*. This transition is taking place exactly in the period of the *Reflexion* 4217, and it is therefore safe to assume that in that fragment Kant had not yet developed the concept of space as a form of the subjective intuition of the phenomena.²³

²² See: *Ivi*, §§459ss.

²³ See: Ref 3950, AA 17: 362; 4077, AA 17: 405-406; 4078, AA 17: 406; 4086, AA 17: 409-410. All these *Reflexionen* date from 1769.

In the *Inaugural dissertation* this conception of space has immediate consequences on the emendation of the physical influx, which is one of Kant's goals. In §22 Kant claims indeed that the primitive interaction among substances, insofar as it rests upon "the subsistence founded on their common cause", gives room to a "*generally established*" harmony, whereas the harmony "which only occurs in virtue of the fact that each individual state of a substance is adapted to the state of another substance" is an "*individually established harmony*". The interaction arising from the first kind of harmony is "real and *physical*", while the second is "ideal and *sympathetic*" (*ID*, AA 2: 409). Kant adds that "physical influx (in its more correct form)" represents the most general form of the relations among substances in the world. He states that this interaction is always and unavoidably "*externally established*", even in the case in which it is "obtained individually for the states of each substance" (*ID*, AA 2: 409), which would be the case of pre-established harmony and occasionalism. Yet the fundamental distinction between the physical influx and the two alternative theories, that is what determines the reality of the first, again depends on the nexus that unites the mundane substances as all dependent on a single creative cause:

«Thus, if as a result of all substances being sustained by one being, the *conjunction of all substances*, in virtue of which they form a unity, were *necessary*, then there would be a universal interaction of substances by means of *physical influx*, and the world would be a real whole. But if not, the interaction would be sympathetic (that is to say harmony without true interaction), and the world would only be an ideal whole. For myself, indeed, although the former of these alternatives has not been demonstrated, it has nonetheless been rendered fully acceptable for other reasons». (*ID*, AA 2: 409)

Furthermore, although in the *Scholium* the space is defined as the "universal and necessary condition of the co-presence of all things", it can also be called "Phenomenal omnipresence [*Omnipraesentia phaenomenon*]". "For the cause of the universe"—Kant states indeed—"is not present to each and every thing simply in virtue of the fact that that cause is in places in which they are. It is rather the case that places exist, that is to say, that relations of substances are possible, because the cause of the universe is inwardly present to all things" (*ID*, AA 2: 410). Thus, we can maintain that the emendation of the physical influx that Kant mentions in §22 consists not only in the dependence of the substance on a common cause, but also in conceiving space as subjective form of intuition, an idea that in 1768 was not present yet.

On the one hand, the emendation of the theory of physical influx sketched in the *New elucidation* is here actually fulfilled, since Kant does not only avoid the mere migration of accidents from one substance to another, but he is also able to "think" the interaction among the substances through the conditions of their sensible relations. On the other hand, Kant still poses one of the principles of the sensible world, namely the space, as dependent on the formal principle of the intelligible world, namely the creative cause. Nonetheless, in 1770 this dichotomy is totally placed within the dimension of the knowing subject.

4. Space as the form of God's omnipresence

From 1771 Kant deepens the model of 1770 as he recalls the juxtaposition between the terms “original” and “derivative”, and employs this set of terms not only for the concept on “influx”, but also for that of “interaction”. In a *Reflexion* of 1771 Kant specifies indeed that an original influx of one substance on the other can only be admitted without further “middle-substance”, so this original influx pertains “only the sustaining substance [*substantia sustentatrix*]”. Similarly, in case of an interaction, namely a “mutual influx”, no mundane substance could be supposed to have towards another substance such an original causal relation as the author of the whole world has towards the whole of the mundane substances. As a consequence “No interaction of substances [...] is original, each is derivative; insofar as it is sustained by something else” (Ref 4438, AA 17: 546). In a *Reflexion* of 1776-1778 Kant adds that “Physical influx is either naturally original or derivative, the latter is rational” (Ref 5422, AA 18: 178).

It is worth noting that here the derivative influx is defined as *rational* because Kant, close to the critical turn, feels the necessity of a comprehension of the totality that should be grounded on a conceptual representation of the subject, a representation that supposes the forms of the sensible intuition. Already in some *Reflexionen* of this age he had sketched the principle—then formalized in the *CPR*—according to which “the *a priori* conditions of a possible experience in general are at the same time conditions of the possibility of the objects of experience” (*CPR*, A111).²⁴ This principle well illustrates the new perspective from which Kant considers the problem. In the *CPR* he no longer speaks indeed of a *world*, but of *nature*, which could be either *materialiter spectata* as “lawfulness of appearances [*Erscheinungen*] in space and time”, or *formaliter spectata*, insofar as “all appearances [*Erscheinungen*] of nature, as far as their combination is concerned, stand under the categories”. Moreover he does not speak of “substances” anymore, but of “appearances” (that is phenomena), meant as “representations of things that exist without [we have] cognition of what they might be in themselves” (*CPR*, B163-166).²⁵ This overcoming of the dualism between sensible and intelligible world, as it was meant in the *Inaugural dissertation*, also enables Kant to overcome the classical objection against the physical influx of the soul on the body. He can indeed demonstrate that the pretended qualitative dualism between soul and body is actually fictive. Since we cannot know things as they are in themselves, it makes indeed no sense at all either pretending to know the essence of the simple substance, nor claiming about the heterogeneity between the material substance and the *res cogitans* (See: *CPR*, A389-396). Both the terms of this comparison should rather be brought on the same level, namely that of the representation of reality provided by the transcendental subject on the basis of his experience.

²⁴ See also: Refl 4757 and 4758 (1775-1777), AA 27: 703-708.

²⁵ For the different senses in which Kant speaks of *world* and *nature*: see *CPR* A418-419/B446-447. See also: Afeissa (209, pp. 161-165).

This perspective is already recognizable both in the *Reflexionen* and the lectures on metaphysics of the end of the 1770s. Here Kant divides the derivative interaction in “hyperphysical influx”, which embraces pre-established harmony and occasionalism, and “physical influx”, which “refers to the laws of nature” (*Met L₁* AA 28: 213).²⁶ These laws of nature correspond to the joint system of categories and pure intuitions that allows to conceive nature as a whole. Indeed, once Kant has established that the “connection” [*Verknüpfung*] between God and the world is a “connection of derivation” [*Verbindung der Ableitung*]²⁷—which means that God is not entangled in the mutual determinations among the parts of the world (*Met L₁*, AA 28: 212)—, he adds that space, as a phenomenon, “is the infinite connection of substances with each other” (*Met L₁*, AA 28: 214). Of course the language in the lectures is more academic than in the printed works. This is the reason why Kant still talks about “substances”. Nevertheless, the critic approach is already clearly recognizable when Kant states that if we *sensibly* imagine the connection among substances—a connection that the purely intellectual approach limits to its divine foundation—then space is “the highest condition of the *possibility* of the connection” (*Met L₁*, AA 28: 214). Therefore, space falls within the conditions of possibility that allow imagination to operate the transcendental synthesis by which a subject is able to represent nature as a whole “according to general laws” (See: *Met L₁*, AA 28: 214 and *Met M_{rong}*, AA 29: 868).

In his last course on metaphysics, in the mid-1790s, Kant maintains that Newton’s definition of space as the *organon* of God’s omnipresence is wrong, insofar as “space is nothing in itself; and cannot be thought as something in itself actually existent through the connection of things” (*Met Vig*, AA 29: 1007).²⁷ The harmony between substances, that is, the above mentioned relation “according to general laws” can be realized only as harmony *in commercio*, through the physical influx, and not as harmony *absque commercio*, that is, as one of the possible modes of the hyperphysical influx (*Met Vig*, 29: 1008).²⁸ The specific reality of space that Kant had already discerned between 1768 and 1770 can now be achieved through its integration with the general laws of the human understanding.

Since the *New elucidation* Kant had indeed meant to make use of Newton’s dynamics in order to account for the way in which the most original link between substances could be represented by the human understanding. In order to achieve this result, it was not enough for Kant to ascribe to space a reality which was ontologically prior to substances, since this would have put space at the noumenal level of that divine causality, of which it should be the intelligible expression. The specific relation between space and the divine omnipresence that Kant had discerned since his lectures of the early 1760s—when he had defined space as “the first act of the divine omnipresence” (*Met Herder*, AA 28: 103; *Nach. Met. Herder*, AA 28: 888)—is specified at the turn of the critical period, when he defines space as *one* phenomenon of the divine omnipresence (*Met L₁*, AA 28: 347; *Met M_{ron}*, AA 29: 866).

²⁶ See also: Ref 5428 (1776-1778): AA 18: 179.

²⁷ In this context Kant recalls a definition of space as “symbol” of this omnipresence. This definition was already present in Refl. 4208 (1769-1770), AA 17: 456.

²⁸ See also: *Met. Dohna*, 28: 665; *Met K₂*, AA 28: 758.

Only in his last lectures, however, Kant deduces from the transcendental determination of space its definition as “*formal condition*” of the representation of nature as a *totum reale*. Here Kant achieves the passage that was foreshadowed in the *CPR*. Space is indeed no more conceived as a mere condition of the nature *materialiter spectata*, namely, as a condition of the mere simultaneous presence of all phenomena. It becomes “the *form* of the divine omnipresence”, insofar as this latter “is expressed *in the form* of a phenomenon, and *through* this omnipresence of God all substances are in harmony” (*Met Vig*, 29: 1008, emphasis added).²⁹

Since space expresses in the phenomenal reality only the *form* of the divine omnipresence and it is not problematically defined as a phenomenon of this omnipresence *tout court*—that is, also of its *matter*—it is possible that all other phenomena are in harmony *through* space. One could ask how this can be concretely realized, insofar as this harmony should express the *real* totality of nature. But here, Kant concludes, our reason cannot see further.

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TelF *Thoughts on the true estimation of living forces*. Trans. J. B. Edwards and M. Schönfeld. In Immanuel Kant: *Natural Science*, edited by E. Watkins, Cambridge: Cambridge Univ. Press, 2012, pp. 1-155.

NE *A new elucidation of the first principles of metaphysical cognition*. Trans. D. Walford and R. Meerbote. In Immanuel Kant: *Theoretical Philosophy 1755-1770*, Cambridge: Cambridge Univ. Press, 1992, pp. 1-46.

PM *The employment in natural philosophy of metaphysics combined with geometry, of which sample I contains the physical monadology*. Trans. D. Walford and R. Meerbote. In Immanuel Kant: *Theoretical Philosophy 1755-1770*, Cambridge: Cambridge Univ. Press, 1992, pp. 47-66.

²⁹ See also: *Met K₂*, AA 28: 732.

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- DSM* *Dreams of a spirit-seer elucidated by dreams of metaphysics*. Trans. D. Walford and R. Meerbote. In Immanuel Kant: *Theoretical Philosophy 1755-1770*, Cambridge: Cambridge Univ. Press, 1992, pp. 301-360.
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