

# Kant's Two-World System and Aquinas's Metaphysics of Participation: Clarifying the ambiguity between logic and physics in transcendental philosophy

*El Sistema de dos mundos según Kant y la metafísica de la participación de Tomás de Aquino: Una aclaración de la ambigüedad de la lógica y la física dentro de la filosofía trascendental*

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**Abstract:** As academic debate over Kant's transcendental philosophy continues, important ambiguities remain to be addressed. His Critique of Pure Reason is focused on presenting only the formal conditions for the possibility of knowledge in experience, and yet in the Third Analogy of Experience he inserts a material condition. The drafts of the Opus postumum reveal a Kant struggling to reconcile his physics with his transcendental philosophy, with positions that go directly against the first Critique. These ambiguities are inherent to Kant's view of reality, while Fabro's presentation of Aquinas's philosophy of participation allows for a clearer explanation of our knowledge.

**Keywords:** Immanuel Kant, Thomas Aquinas, cogitative, participation.

**Resumen:** *Mientras el debate sobre la filosofía trascendental kantiana sigue, aparecen ambigüedades relevantes dentro del sistema. La Crítica de la Razón Pura presenta sólo las condiciones formales de la posibilidad del conocimiento en experiencia, pero luego en la Tercera Analogía de Experiencia Kant pone una condición material. Los escritos del Opus postumum muestran a Kant intentando de compaginar su física con su filosofía trascendental, con posturas que van directamente contra el proyecto de la primera Crítica. Estas ambigüedades inherentes a la visión kantiana de la realidad reciben una aclaración importante en la presentación hecha por Fabro de la filosofía tomista de la participación.*

**Palabras clave:** Immanuel Kant, Tomás de Aquino, cogitativa, participación.

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Kant's problem of the bridge continues to puzzle philosophers and scientists 240 years after his *Critique of Pure Reason*. He himself phrased the overall problem in 1772 thus: "What is the ground of the relation of that in us which we call 'representation' to the object outside of us?"<sup>1</sup> Following Kant's leading, driving question, we wish to discover what allows for the interplay between the mind and things. What is the basis (*Grund*) for such interaction? Admittedly, this question goes back much further than Kant, to Parmenides, Plato's world of the Ideas, and Aristotle's theory of abstraction. However, Kant's presentation of the problem has conditioned modern day theories of knowledge in science to such a degree that it is important to understand his attempts at a solution. In this article, I plan to give an overview of Kant's lifelong endeavors and the problems he attempted to solve from the time he published his doctoral thesis in 1755; through his *Critique of Pure Reason* (CPR); and finally to his *Opus postumum* (OP) drafts which he finished in the middle of 1801 without actually publishing them. By understanding his most famous work CPR within the broader context of Kant's philosophy, we hope to make better sense of his conclusions, as well as the work's inherent flaws that he later had to revisit.

If we use the image of the bridge (alluded to by Kant himself in his response to J. Eberhard<sup>2</sup>), we may imagine the two separate shores as the mind/ourselves and bodies/things, and the bridge as somehow connecting those two shores. Throughout the forty-plus years of Kant's philosophical career, his understanding of things as physical bodies changed significantly. I refer to his understanding of physical, material bodies as his *physics*. With his publication of the CPR in 1781, Kant turned to study "the shore" of the mind and its knowing. This consideration of the mind and how it knows, I refer to as his *logic*, broadening that term to include his epistemology and theory of knowledge.

What are bodies or things? How does our mind come to interact with them? What allows for our mental representations of extra-mental bo-

<sup>1</sup> I. KANT, Letter to M. Herz, as translated by B. TUSCHLING, "Apperception and Ether: On the idea of a Transcendental Deduction of Matter in Kant's *Opus postumum*", 210.

<sup>2</sup> Cf. I. KANT, "On a discovery whereby any new critique of pure reason is to be made superfluous by an older one", 304-305, [AA 8:212-213]. Except for citations from the *Critique of Pure Reason*, the Akademie edition reference is given in brackets, as referring to the original German.

dies and reality? Kant's different solutions depended heavily on both his physics and his logic, and which of the two gained preference at various points throughout his career. In his several attempts to span the gap between the mind and things outside of it, Kant gave preference to one shore or the other – either by making representations of bodies determined by the mind (as in CPR) or of the mind dependent on bodies (as in his ether proofs from the OP). This paper seeks to highlight the ambiguities present between Kant's logic and physics, following the lead of Burkhard Tuschling and Jeffrey Edwards.

Faced with the ambiguities inherent in Kant's transcendental philosophy, I will present Cornelio Fabro's adaptation of Thomas Aquinas's philosophy of knowledge. Rather than two separated worlds – physical and mental –, Aquinas presents a coherent, united world, thanks to the doctrine of participation. Such participation is what explains the interaction between ourselves and things in sensation; it also explains the real communication between the senses and the understanding, which Kant left unclear. Finally, the participation of substances and accidents allows us to gain knowledge, not just of appearances, but of things themselves. Such a philosophy of knowledge appears more apt to found our real knowledge of the world, rather than Kant's idealism.

## I. Kant's initial view of the physical world

In order to understand Kant's thought, it is helpful to place him in the context of 18<sup>th</sup> century philosophy. Gottfried W. Leibniz is an eminent example of the rationalistic school of philosophy, influential for Kant. Leibniz's theory of physics consists in monads acting in completely preestablished harmony. Monads are utterly isolated from each other, and any interaction or physical contact between them is only apparent and not real<sup>3</sup>. Alongside this fundamental isolation of monads, Leibniz attributes two basic characteristics to monads: (1) they are dynamic and (2) they have perception. Leibniz holds that every monad (not just the human mind)

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<sup>3</sup> Cf. G.W. LEIBNIZ, *The Monadology*, 51, in *Philosophical Essays*, 219. "In simple substances the influence of one monad over another can only be ideal, and can only produce its effect through God's intervention, when in the ideas of God a monad rightly demands that God take it into account in regulating the others from the beginning of things".

perceives the entire universe like a mirror<sup>4</sup>. The reason monads perceive all that happens outside of them is that they already contain all perceptual images inside themselves, as if they had been previously programmed to perceive outer reality and react in response. Leibniz derides the Scholastic and empirical notion of ‘species’ or images that we would form of things from the outside: He likens those images entering the mind as birds entering a birdhouse<sup>5</sup>. Because monads have pre-conceived perception of the world outside of themselves, Leibniz bridges the gap between things and the mind by innate, pre-established perception and a corresponding programmed dynamics.

Kant takes issue with Leibniz’s physics and logic. In line with modern physics, Kant initially holds bodies as clearly impacting each other in *real* physical interaction and not mere appearance, as Leibniz would have it. In response to Leibniz’s theory of perception as innate and pre-established, Kant strives to understand the connection between mind and things as real: “What is the ground of the relation of that in us which we call ‘representation’ to the object outside of us?”, to cite Kant’s guiding question. By understanding Leibniz’s monad theory, we better grasp Kant’s logic and physics as a counterproposal to Leibniz.

Kant begins his philosophical career with a series of theses, including his 1755 *Nova dilucidatio*. This work is situated before Hume’s awakening Kant from his “dogmatic slumber”<sup>6</sup>, and so in his thesis we find an initial presentation of Kant’s physics. In *Nova dilucidatio*, Kant follows Leibniz in holding bodies as fundamentally isolated from each other; at the same time, Kant holds a mechanistic view of physical interaction between bodies in action and reaction<sup>7</sup>. This juxtaposition with Leibniz’s monadology from the start of his career is a key element in Kant’s thought. With the growth of the mathematical and empirical sciences, mechanistic philoso-

<sup>4</sup> Cf. Ibidem, *A New System of Nature*, in Ibidem., 143-144. “God originally created the soul (and any other real unity) in such a way that everything must arise for it from its own depths [*fonds*], through a perfect *spontaneity* relative to itself, and yet with a perfect *conformity* relative to external things”.

<sup>5</sup> Cf. Ibidem, *New Essays on Human Understanding*, 378-379. “To speak of sheerly ‘giving’ or ‘granting’ powers is to return to the bare faculties of the Scholastics, and to entertain a picture of little subsistent beings which can fly in and out like pigeons with a dovecote”.

<sup>6</sup> I. KANT, *Prolegomena to any Future Metaphysics that will be able to come forward as Science*, 10 [AA 4:260].

<sup>7</sup> Cf. Ibidem, *Nova dilucidatio*, AA I: 414.

phy became the standard viewpoint for scientists. This viewpoint considers that all bodies act on each other through physical impact or contact. This outlook is based on the corpuscular or atomic theory of small particles constituting larger ones, as so many building blocks<sup>8</sup>. In his 1755 doctoral thesis, Kant combines this mechanistic idea of physical interaction between bodies with Leibniz's isolationism. He allows for a real *commercium substantiarum* (exchange between bodies) as possible only by a special act of God<sup>9</sup>. Thus, where each body is perfectly constituted on its own in Leibnizian isolationism, bodies do in fact interact physically with each other by God's action. In Kant's youth we find vestiges of Christian faith coming into play – much like in the thought of Descartes, Locke and Leibniz. Kant would later shed those religious wrappings by developing his theory of dynamics.

What are bodies? What constitutes substances outside of us? The Kant of the *Nova dilucidatio* held bodies and substances along the lines of classical physics, as that which undergoes change and motion. Bodies' accidents, such as shape and location, may change through external influence, while the body stays "the same" in its core identity. Over time, physics brought Kant to consider the importance of the forces of attraction and repulsion, which are prevalent in collisions between bodies. Mechanics sees repulsion as the basic impenetrability of bodies, which causes impact motion between bodies. But an opposing force is also at play among bodies, in attractive forces such as gravity. These two opposing forces of repulsion and attraction gradually became for Kant the defining concepts of body. Bodies are constituted by forces, in that they are held at an equilibrium between the counterbalanced forces of repulsion and attraction<sup>10</sup>. Together with mechanistic forces, Kant also adopts Leibniz's dynamism of monads; for Kant, bodies are not only constituted by forces but are also in constant influence, active and passive, between one another. With this new dynamic view of physical bodies, Kant can get rid of God's special act, which he had needed in his doctoral thesis to explain *influxus physicus* between bodies. This new dynamism of bodies overcomes Leibniz's isolationism and allows for a world-whole of interacting bodies in systems.

<sup>8</sup> Cf. E. FÖRSTER, "Introduction", xxxiii.

<sup>9</sup> Cf. B. TUSCHLING, "Apperception and Ether", 193-194.

<sup>10</sup> Cf. I. KANT, "Metaphysical foundations of natural science", 222 [AA 4:510-511]. "No matter is possible through mere attractive force without repulsion".

We see a considerable change in Kant's physics between his 1755 doctoral thesis and his CPR and *Metaphysical Foundations of the Natural Sciences* in 1786, where he expounds on his dynamic understanding of bodies. Returning to our image of the bridge between the shores of the mind and things, the shore of things and material bodies outside of us has changed significantly, by becoming dynamic bodies constituted by force and in constant interaction through influence or force. This dynamic view of the world would then play a surprising and unexpected role in Kant's CPR.

While the rationalist school, especially Leibniz, influenced Kant considerably, the empiricist school also had its impact on the Königsberg philosopher. David Hume levels a serious attack on human knowing and scientific theory by denying any basis for cause and effect; he holds causality as coming completely from our mind's habit of thinking. The fact that in the past I saw a moving billiard ball as "causing" another ball to move on impact does not justify foretelling any future collisions and subsequent motion of billiard balls. Our mind simply forms a habit of foreseeing future events, based on the belief that the future will be like the past; there is nothing about things themselves that we perceive through the senses that justifies such universal statements and predictions<sup>11</sup>.

Kant himself admits how deeply Hume's criticism affected him<sup>12</sup>. Kant now needs to adapt his physics to justify scientific laws, and so he comes to consider more carefully how we formulate representations and concepts of things outside of us. In the end, however, Kant cannot agree with Hume, and continues to hold as a clear fact our possibility of formulating laws in physics<sup>13</sup>. How to justify universal judgements in laws becomes the main

<sup>11</sup> Cf. D. HUME, *An Abstract of a book lately published; entitled, A Treatise of Human Nature, &c. wherein the chief argument of the book is farther illustrated and explained*, 14. "Tis evident, that Adam with all his science, would never have been able to demonstrate, that the course of nature must continue uniformly the same, and that the future must be conformable to the past. What is possible can never be demonstrated to be false; and 'tis possible the course of nature may change, since we can conceive such a change".

<sup>12</sup> Cf. I. KANT, *Prolegomena to any Future Metaphysics that will be able to come forward as Science*, 10 [AA 4:260]. "I freely admit that the remembrance of David Hume was the very thing that many years ago first interrupted my dogmatic slumber and gave a completely different direction to my researches in the field of speculative philosophy".

<sup>13</sup> Cf. I. KANT, *Critique of Pure Reason*, B4. Future reference to this work as CPR and the A and B edition page number, where applicable. "It is easy to show that in human cognition there actually are such judgments [as we are looking for, viz.], judgments that are necessary and in the strictest sense universal, and hence are pure a priori judgments".

problem in the CPR. At this juncture the two areas, logic and physics, become involved in one single question for Kant: "How am I to understand that, because something is, something else exists?" (NM 2:202). Kant is asking how "the relation 'reason-result' or 'antecedent-consequent' can be understood as a causal rather than a logical relation"<sup>14</sup>.

Hume's criticism holds causality in the laws of physics as completely a product of the mind's imagination; Kant must show how we come to formulate universal concepts in scientific laws, with a basis in things outside of us. In order to answer Hume, Kant must span the gap between the mind and things by showing that bodies objectively interact according to universal scientific laws. The two shores are brought into play in one general problem: "How can one existent be thought to be related to another in such a way that things constitute a real world determined by universal causality and physical interaction?"<sup>15</sup>. In scientific laws and the determination of physical events, are they merely expressions of the mind's fabrication, or do things themselves provide a sufficient basis for them? We now turn to consider Kant's study of the mind in the CPR, as he tries to discover the ground or basis for the relation of the representation inside of us with things outside of us.

## II. The *Critique of Pure Reason* as Kant's Copernican revolution to logic

Hume's attack on causation forces Kant to review the human powers of knowing and representation, and his CPR may be seen as his attempt to justify our capacity to formulate synthetic judgements, *a priori* to sensorial experience. Synthetic *a priori* judgements are universally necessary statements regarding sensed phenomenon, such as predictions according to scientific laws in physics. From the outset, Kant hold this capacity as clearly within our power<sup>16</sup>, and the CPR is aimed at showing *how* our mind comes to formulate such universal synthetic judgments.

The answer that Kant proposes in his transcendental philosophy of the *Critique of Pure Reason* may be summarized thus: the only reason we may attribute universal causality leading from one concept of a thing to the concept of another is that "we neither have, nor can have, experience

<sup>14</sup> B. TUSCHLING, "Apperception and Ether", 195.

<sup>15</sup> Ibidem, 209-210.

<sup>16</sup> Cf. I. KANT, CPR, B4-5.

of things existing in themselves, but ‘only of our representations’<sup>17</sup>. Kant transfers all the weight of our scientific knowledge and synthetic *a priori* judgements to representations, appearances, and phenomena, as opposed to things in themselves, or noumena. By shifting such categories as causality as applying *only* to our appearances and not to things in themselves, Kant believes he has solved Hume’s problem and justified the possibility of synthetic judgements *a priori* to experience. Kant needs only consider the mind’s conceptual scheme and the categories through which it filters all experience, in order to discover where our universal knowledge comes from. He thus focuses on the *formal* conditions of knowing, as based on the mind’s categories, and considers the *material* conditions in sensed perception as mere stimuli for our mind’s activity. The three categories of Relation are of particular interest here: substance, cause-effect, and simultaneous community.

When we consider the object of any experience, we discover three constant relations: the object’s permanence in time (the category of substance); the succession in time of certain effects upon certain causes (the category of cause-effect); and the simultaneity of several objects, independent of each other, while mutually influencing each other (the category of community). While Kant adopts such classical terms as “substance” and “causality”, the radical shift in his paradigm cannot be sufficiently stressed: concepts such as permanence and succession in time are attributed to things *by the understanding*; there is nothing in things or bodies that would justify the idea of substance<sup>18</sup>. “Substance is known *only* by the action of attractive and repulsive forces, inasmuch as the former ground the attractive capacity of matter and the latter its fundamental property of impenetrability. These forces are thus constitutive features of the empirically employable concept of matter; and by direct implication, they are constitutive for the concept of substance *as appearance*. (Cf.

<sup>17</sup> B. TUSCHLING, “Apperception and Ether”, 198.

<sup>18</sup> Cf. I. KANT, CPR, A42/B59. “All our intuition is nothing but the presentation of appearance. The things that we intuit are not in themselves what we intuit them as being. Nor do their relations in themselves have the character that they appear to us as having. And if we annul ourselves as subject, or even annul only the subjective character of the senses generally, then this entire character of objects and all their relations in space and time—indeed, even space and time themselves would vanish; being appearances, they cannot exist in themselves, but can exist only in us. What may be the case regarding objects in themselves and apart from all this receptivity of our sensibility remains to us entirely unknown. All we know is the way in which we perceive them”.



A265/B321)<sup>19</sup>. The mind's categories of substance, causality, and community only reach as far as the phenomenon within us; how things might be outside of us is utterly unknown. Kant can overcome Hume's criticism by attributing causality to the mind's *a priori* formal conditions of knowing.

This shift in paradigms can be seen as a shift from physics to logic because Kant now places all the weight in the mind's conceptual scheme in the 12 categories. Tuschling summarizes the transcendental shift present in the Third Analogy:

The concept of a *commercium substantiarum* is not the concept of an *influxus physicus* of physically or metaphysically conceived atoms of things existing of themselves, but only refers to a relationship between substances as objects of our empirical representation, and makes possible the empirical relation of simultaneity, thereby establishing an empirical *influxus physicus* of the objects of the world as it appears<sup>20</sup>.

Kant has now sufficiently justified how we formulate scientific laws: they are only ever in the mind.

We must bear in mind that nature is intrinsically nothing but a sum of appearances, and hence is not a thing in itself but is merely a multitude of the mind's presentations. If we bear this in mind, then we shall not be surprised that we see nature in its unity merely in the root power for all our cognition, viz., in transcendental apperception; we there see nature in that unity, viz., on whose account alone it can be called object of all possible experience, i.e., nature. Nor shall we then be surprised that, precisely because of this, we can cognize that unity *a priori*, and hence also as necessary<sup>21</sup>.

Natural laws stem only from the mind's powers and conceptual scheme; there is nothing outside of the mind that justifies such things as gravity.

What does this new position in Kant's logic imply regarding his physics? Technically, the CPR regards only the *formal* conditions of knowle-

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<sup>19</sup> J. EDWARDS, *Substance, Force, and the Possibility of Knowledge*, 50. Emphasis added "as appearance". See also 160-161.

<sup>20</sup> B. TUSCHLING, "Apperception and Ether", 197.

<sup>21</sup> I. KANT, CPR, A114.

dge, not any material conditions, and so we should not expect any changes in his physics per se. However, surprisingly enough, his dynamic view of matter does come into play when he explains the transcendental category of community. In the “Third Analogy of Experience” - as he titles the section on the category of community - Kant posits “matter everywhere” (*allerwärts Materie*) as a condition for our perceiving bodies simultaneously<sup>22</sup>. If bodies stand in constant interaction through influence and force, then non-empty space is filled with those forces; as we saw in Kant’s physics, force not only constitutes individual bodies through the counterbalance of repulsion and attraction but also fills space with the influences of bodies on each other<sup>23</sup>. It can only be through this non-empty, influence-filled space between bodies that we can conceive of a simultaneous, interacting community of substances. Matter everywhere can be seen as this non-empty space. This notion of *allerwärts Materie* appears only once in the CPR, yet it implies the presence of physics in Kant’s transcendental logic. The formal category of community must imply a *material* condition necessary for experience (matter everywhere); this goes beyond the *formal* conditions that Kant had supposedly set as his limit for his *Critique*. “It is entirely unclear how [Kant] could uphold rigorously the distinction that he draws between his transcendental theory of experience and his dynamical theory of matter if the concept of material force plays an essential role in the proof of his transcendental principle of the dynamical community of substances”<sup>24</sup>. This small ambiguity in the Third Analogy is a relatively minor chink in the seemingly seamless armor of the *Critique*: why does Kant introduce a material condition such as matter everywhere?

Based on his dynamic view of matter, Kant posits a material condition for objects of possible experience in his transcendental philosophy. Considering the three categories of relation - substance, cause and community - we find a strange mix of Kant’s logic and physics. On the one hand, substance and causality have little or no basis in things outside of us, and are attributed completely to the object by the mind’s categories. On the other hand, the possibility of simultaneous, interacting community requires a

<sup>22</sup> Ibid., A213/B260. “We cannot empirically change place (and perceive this change) unless matter everywhere makes possible the perception of our position”.

<sup>23</sup> Cf. I. KANT, *Metaphysical Foundation of the Natural Sciences*, 243-244 [4:534-535]. See also J. EDWARDS, *Substance, Force, and the Possibility of Knowledge*, 36-37; 50-51.

<sup>24</sup> J. EDWARDS, *Substance, Force, and the Possibility of Knowledge*, 55.

material, physical condition outside of us, “matter everywhere”. How are we to understand this matter everywhere within the framework of the CPR's overall project of no knowledge of bodies?

The *Critique* received heavy criticism from its first publication in 1781; if all we know are our representations and not things in themselves, how are we to justify things outside of us? What type of relationship are things supposed to have to the representations we formulate of them in our minds? Kant seems to have given up too much in his response to Hume's criticism and has left us as knowing only our representations and never things themselves. Important physical notions such as space, time, substance, and causality have all become purely formal conditions that allow for experience. There is not anything in things that would allow for such an idea of space outside: it is “in us”. Things outside of us lose their subsistence and independence of our thought, as Kant skates very close to Berkeley's *esse est percipi*. The gap between things and the mind seems to have been forced open so wide that the mind can only know itself and its own perceptions.

### III. The *Opus postumum*: an attempt to salvage things outside of us?

Given the fierce criticism of his transcendental philosophy in the CPR, Kant continues to consider possible solutions to the problem of things in themselves and how we know them. Ultimately, he still seeks for the basis (*Grund*) of that in us which we call representation of objects outside of us. Kant's *Opus postumum* may be seen as an attempt to rescue transcendental philosophy from apparent solipsism<sup>25</sup>. The OP was written as drafts for a work most likely to be published as: “On the transition from metaphysics to physics”<sup>26</sup>. From the purported title, Kant sought to proceed from his transcendental philosophy regarding the mind's conceptual scheme to his physics. These drafts were written mostly between 1796 and 1801 but were not actually published until the 1930's<sup>27</sup>. Tuschling reads the OP as revealing a Kant who privately entertained solutions such as Fichte's absolute idealism, even if he had publicly rebutted that very solution<sup>28</sup>.

<sup>25</sup> Cf. B. TUSCHLING, “Apperception and Ether”, 216.

<sup>26</sup> Cf. E. FÖRSTER, “Introduction”, xxix-xxxviii.

<sup>27</sup> For the reasons why it took 130 years to reach publication as well as the proper dating of the writings, see *Ibidem*, xvi-xxix.

<sup>28</sup> Cf. B. TUSCHLING, “Apperception and Ether”, 215.

Where his CPR had centered the solution of knowing on the mind's *formal* conceptual scheme, in parts of his OP, Kant focused primarily on the *material* condition for possible experience. "Matter everywhere" came out in a single instance in the CPR of 1781; in his 1786 *Metaphysical Foundations of the Natural Sciences*, Kant dedicated the entire second part to Dynamics, as what explains all natural phenomenon. This dynamic view of matter now becomes "supreme" in the OP, as he dedicates several pages to the material condition of experience.

In order to bridge the gap between the mind and things, Kant posits the supreme material condition for experience as the ether. He considers that a single dynamic continuum fills all of space, and that space itself is hypostatized, or substantiated, as a single material being, called primordial matter, the caloric, and the ether. This ether permeates all things and since it is self-moving, it explains and causes movement in the bodies it penetrates<sup>29</sup>; Kant even calls the ether something like a world-soul<sup>30</sup>. With this "supreme condition of experience"<sup>31</sup>, he can now place ourselves and things in relationship to each other: "By means of the coexistence of [all the parts of cosmic space, it] produces a community of all bodies, and at the same time, puts the knowing subject into the condition of possible experience even of the most distant object"<sup>32</sup>. What bridges the gap between our minds and things outside of us is this one permeating ether; thus, apperception and the ether are seen as two corresponding principles that allow for knowledge, and it would appear that the bridge of knowing between subject and object has been successfully spanned.

In the ether proofs of the OP, we may see Kant's dynamics in physics coming to the rescue of the problem his logic in transcendental philosophy had created. From early on in his career, Kant considered space as filled by influence, and bodies as constituted by force. In the OP Kant concludes that such a force is a reality in and of itself – a single, elastic being that permeates all bodies and allows for both *influxus physicus* among bodies, as well as our perception of things. In the CPR, space-time, substance, and causal interaction were supposed to be "in us", as mental conceptual schemes. In the OP, space becomes a trait of the ether *outside* of us; that same ether is what constitutes

<sup>29</sup> Cf. I. KANT, *Opus postumum*, 92 [AA 21:584]. Future reference to this work as OP.

<sup>30</sup> Ibidem, 85 [AA 22:548].

<sup>31</sup> Ibidem, AA 21:554, as cited by B. TUSCHLING, 208.

<sup>32</sup> Ibidem, OP 21:562, as cited by B. TUSCHLING, 207-208.

bodies and moves them to interact. The entire project of his CPR seems to have lost relevance, if not abandoned altogether. As Kant tries to reform his transcendental philosophy to make up for its shortcomings, he is forced to change directions in his OP. We are now back where we started, regarding the bridge between the mind and things, or between original apperception and primordial matter (to use Kant's OP terminology).

Kant's CPR logic had answered Hume by restricting our knowledge only to our representations and not as of things themselves. Kant's OP physics deduced the existence of primordial matter as necessary for experience. Which depends on which? Do things depend on the mind's conceptual scheme, as the CPR would have it? Or does the *I think* of apperception depend on the ether outside of itself, as its supreme condition for the possibility of experience? This latter position is one possible reading of the OP, in Tuschling's opinion. We can see primordial matter or ether as "the supreme condition of possibility of experience", and so the determining condition for apperception's knowledge. Kant had already proposed a similar view in 1770: "[The mind] senses external things only through the presence of one sustaining common cause; and space, which is the sensuously cognized universal and necessary condition of the compresence of all things, can therefore be called *omnipresentia phaenomenon*"<sup>33</sup>.

There is a second way of understanding the dependence or interaction of the ether and apperception. This second interpretation is based on the part of the OP dedicated to what is known as the *Selbstsetzungslehre* (On self-positing); there, Kant considers that it is the self, or apperception, that affects itself in outer intuition, and ultimately ends up positing or creating itself. The ether is not simply an external condition of experience, even a supreme one; it actually *depends* on the apperception<sup>34</sup>. Reality's dependence on the mind is characteristic of idealism. Kant had termed his philosophy in the CPR as *transcendental* idealism: he held things to exist outside of us but completely unknowable; the limit of knowing is our appearances with-

<sup>33</sup> I. KANT, *Inaugural Dissertation*, 2:409-410, as cited by J. EDWARDS, 178.

<sup>34</sup> Cf. I. KANT, OP, 191 [22:85]. "I am' is the logical act which precedes all representation of the object; it is a *verbum* by which I posit myself. I exist in space and time and thoroughly determine my existence in space and time (*omnimoda determinatio est existentia*) as appearance according to the formal conditions for the connection of the manifold of intuition; I am both an outer and inner object for myself. What is subjective in the determination of myself is, equally, objective by the rule of identity, according to a principle of synthetic *a priori* knowledge". See also 22:367; 22:444; 22:465.

in our mind<sup>35</sup>. In his later reflections of the OP, Kant's idealism reaches new levels of dependence on the mind: "The mind of the human being is Spinoza's God (as far as the formal determinacy of all objects of the senses is concerned) and transcendental idealism is realism in the absolute sense"<sup>36</sup>. No longer can this be called "transcendental idealism", where the mind's conceptual scheme determines and produces our representations of things; this is "absolute" idealism, as Edwards points out: "the phrase 'realism in the absolute sense' is employed in an interpretation of self-positing which identifies the self-legislative cognitive activity of the *human* subject with Spinoza's God"<sup>37</sup>.

While the OP only serves as a draft-collection and is not a formal, final publication, we catch a glimpse into Kant's own endeavor to reform his transcendental idealism at the end of his career. Kant's problem of the bridge had not been able to keep the two shores independent of each other. His CPR's solution of Hume's problem had left us knowing only our own representations and not things themselves. His OP solution, inspired by his deeply engrained dynamic view of matter in physics, leaves us either determined completely by the ether as the supreme condition of the possibility of experience, or else we (or original apperception) are the absolute, ultimate cause of things and ourselves. Having reached these two possible solutions that would absorb one shore in the other, might we go back and try a different bridge than what Kant's physics and logic offer?

I propose that Kant was unable to bridge the gap between ourselves and things, because he failed to grasp the real interplay between the senses and the understanding, as well as the real basis of qualities and appearances in things outside of ourselves. Due to the drastic separation that he placed between sensed intuition and the understanding's categories, he had to invent the schemata of the imagination as a mediation; such transcendental schemata fail to communicate from the senses to the mind. They only work

<sup>35</sup> Cf. I. KANT, CPR, A490-491/B518-519: "Everything intuited in space or time, and hence all objects of an experience possible for us, are nothing but appearances. I.e., they are mere presentations that—in the way in which they are presented, viz., as extended beings, or as series of changes—have no existence with an intrinsic basis, i.e., outside our thoughts. This doctrinal system I call *transcendental idealism*".

<sup>36</sup> I. KANT, OP, 21:99, as cited by EDWARDS, 189. "*Der Geist des Menschen ist Spinozens Gott (was das Formale aller Sinnengegenstände betrifft) und der Transscendentale Idealism ist Realism in absoluter Bedeutung*".

<sup>37</sup> J. EDWARDS, *Substance, Force, and the Possibility of Knowledge*, 190.

from the mind to the senses. If the senses cannot communicate anything of objective value, their role is insignificant in knowing. Kant failed to consider the process of sensation more closely. On the side of things, Kant did not hold sensed appearances as having any basis in things, beyond their existence. Such drastic skepticism of sensed appearances is certainly common within modern philosophy, but nevertheless it is quite gratuitous. If Kant was unable to decide between the mind and things outside of ourselves, I propose that his system lacked the important principle of *participation*, prominent in Aquinas's philosophy. We now turn to follow Cornelio Fabro's presentation of Aquinas's theory of knowledge, as obtaining adequate knowledge of things outside of ourselves, while keeping a proper distinction between the mind and physics.

#### IV. Aquinas on the participation of our faculties in knowing

How do the senses and the mind interact in knowing? Kant holds that our senses provide the matter in perception, while the understanding provides the form, in the a priori forms of space and time, along with the twelve categories. In order to join the two sides, sensation and understanding, Kant proposes the mediation of the transcendental imagination (*Einbildungskraft*). Cornelio Fabro criticizes the heterogeneous nature of the two sources of knowing, so separated by Kant that they are incapable of any real communication. Kant gratuitously posits the imagination, as ultimately based on reason's spontaneity in structuring an otherwise chaotic, unorganized intuition. "Since for Kant the schema has only one source, as coming from above downwards, we must grant it along with the categories an autonomous, synthesizing function. Such a function eliminates all possibility of mediation"<sup>38</sup>. Given his overall revolution towards the mind, Kant leaves the imagination as dependent on the mind, and so all knowledge originates from within the mind itself.

Fabro proposes a more coherent and progressive manner of human knowing, based on Aquinas and Aristotle's philosophies. Between the senses and the mind we find the intervening internal faculties, including the common sense, the imagination or fantasy, memory, and the cogitative. Aristotle had already indicated the receptive nature of the senses,

<sup>38</sup> C. FABRO, *Percezione e Pensiero*, 198. All translations of this work are the author's.

in the principle of μεσότης, as able to judge between two extremes. The further internal faculties were developed by the Arab philosophers and adopted by Thomas Aquinas<sup>39</sup>. It is above all the cogitative faculty that allows for a real communication between the senses and the intellect. The cogitative is able to grasp the concrete, particular thing present in sensed perception, because it is able to perceive the *intentiones* or suitability of the object for itself. “Thanks to the union and participation that it has with the intellect, the cogitative can apprehend the singular both according to the singular intention, as well as the substantial intention”<sup>40</sup>. This understanding of the meaning of the concrete object is what allows us to make sense of individual things. Thanks to the memory, the cogitative gains experience, as increasing familiarity of particulars that allows it to recognize sensed objects more easily and readily. This experience of things is what leads us to universal concepts, thanks to the cogitative. “We proceed as if gathering from many into one, that is, the many different sensible forms give rise to experience of them. From that experience we gain universal knowledge”<sup>41</sup>. This gathering is what the term “cogitative” refers to. Thanks to the growing familiarity with particulars in experience as *experimentum*, the cogitative provides the phantasmata, for the intellect to induce the essentials, on a universal level.

All knowledge starts in the senses: “Whatever is in our intellect must have previously been in the senses”<sup>42</sup>. This goes in precisely the opposite direction than Kant’s theory, which involves the understanding applying its categories to sensed intuition, via the transcendental imagination. Aquinas can allow for such a communication from the senses to the intellect, thanks to the inner sense faculty of the cogitative. Both the cogitative and the external senses depend on the intellect, as participation in the intellect’s ability to know. That is why our perceptual knowledge progresses from particular, present sensation to cogitative recognition of types of things, and finally to universal concepts of essence. “By participation the cogitative can be called

<sup>39</sup> Cf. M. A. GARCIA JARAMILLO, *La cogitativa en Tomas de Aquino y sus fuentes*, 40-43; 60-61.

<sup>40</sup> C. FABRO, *Percezione e Pensiero*, 252.

<sup>41</sup> T. AQUINAS, *In librum B. Dionysii De divinis nominibus expositio*, Bk. 7, L. 2. Author’s translation. “Quasi congregantes ex multis ad unum procedimus sive multa dicantur diversa sensibilia per quorum experimentum universalem cognitionem accipimus”.

<sup>42</sup> T. AQUINAS, *On Truth*, Q. 2, a. 3, ad 19.



the perceptual faculty of concrete objects: 'The former apprehends the individual thing as existing in a common nature, and this because it is united to intellect in one and the same subject' (Aquinas, *In De Anima*, Bk. 2, L.13, n. 398)<sup>43</sup>. Our growth in knowledge from the external senses to the cogitative and intellect is due to the increasing power of each faculty. In the Neoplatonic model of participation, the higher sphere is what causes the lower one to act, in a process of emanation. The cogitative emanates directly from the intellect, and so participates in the intellect's ability to grasp things, to a certain level. The senses emanate from the cogitative, and so participates in the cogitative's ability to judge, as sight judges colors for instance.

Thus we find that in our sensible apprehension we reach results that are intrinsically superior to those of animals, both as far as content as well as value; sensible apprehensions manage to almost reach [*toccare*] the realm of the intellect. It is the notion of participation, as a sort of touching or rubbing up against, that defines the original insight of Thomas's epistemology<sup>44</sup>.

The Thomistic principle of participation allows for real communication between the cognitive faculties, as based on the human soul's informing the entire body, even the external senses.

## V. Material things' motion towards us in sensation, as participation

Sensed knowing is understood by Aquinas to be a sort of assimilation and change in us, but of a very particular sort. "Cognition takes place by assimilation, not indeed by natural assimilation but by intentional assimilation. For the stone itself is not in the soul ... but rather the species of the stone is in the soul"<sup>45</sup>. The key element in our assimilation of things outside of ourselves is the intentional species. Sensed perception implies a change in us, that depends on things outside of us for activation of the senses. Such dependence means passive receptivity; this passivity in change strictly speaking implies the loss of such passivity at the end of the change. Fa-

<sup>43</sup> C. FABRO, "Il problema della percezione sensoriale", 58. Author's translation.

<sup>44</sup> C. FABRO, *Percezione e Pensiero*, 183.

<sup>45</sup> T. AQUINAS, *On Evil*, Q. 16, a. 8 ad 10.

bro explains the two-faceted special status of the intentional species thus: “While the species is ontologically an accidental quality of our soul, gno-seologically [regarding our knowing] the intentional species is the object to which the species refers and re-presents. This is because the species is determined by the object and repeats the object’s structure in the faculty and the in the soul”<sup>46</sup>.

As they intentionally assimilate objects, our senses do not change in this strict sense: Our eye does not become red, just because it senses the color red.

As a receiver is to what it receives as a potency to its actuality; and as actuality is the perfection of what is potential; so being acted upon in this sense implies rather that a certain preservation and perfection of a thing in potency is received from a thing in act. For only the actual can perfect the potential; and actuality is not, as such, contrary to potency; indeed the two are really similar, for potency is nothing but a certain relationship to act<sup>47</sup>.

Our senses are able to perceive things, as a type of change that implies assimilation, without a loss of the senses themselves. Such assimilation in the senses is thanks to the human soul’s ability to become all things. “Through his soul a man is, in a way, all being or everything; his soul being able to assimilate all the forms of being—the intellect intelligible forms and the senses sensible forms”<sup>48</sup>. Thanks to the senses’ participation in the soul’s capacity, they can assimilate and “become” the sensible forms they receive from outside.

How is it that things transmit information about themselves to us? Where does such motion come from? Aquinas mentions the motion of inanimate objects towards us in sensation in his work *De potentia Dei* 5, 8.

This latter action of a body does not aim at the transformation of matter, but at communicating a certain likeness to its form to the “medium”, which may be compared to the spiritual “intention” which things impress on the senses or intelligence: thus the air receives the light of the sun, and the “medium” receives a reflection of coloured images. Now both these actions are caused here below by the heavenly bodies.

<sup>46</sup> C. FABRO, *Percezione e Pensiero*, 61.

<sup>47</sup> T. AQUINAS, *Commentary on Aristotle’s De Anima*, Bk. 2, L. 12, 366.

<sup>48</sup> *Ibidem*, Bk. 3, L. 13, 790.

Delbosco sees this text as dealing with Thomas's teaching on participation. Even material bodies share or participate in the motion of spiritual creatures, in that they "move" by transmitting their likenesses through the proper medium.

To act "per motum" is something proper of bodies. However, bodies also have the capacity, on a limited and defective level, of a certain type of action without movement. We see this type of action in how they spread their formal perfection, and so determine intentionally the cognitive faculties of whatever is within their reach<sup>49</sup>.

Such sensible forms rely on things themselves for their being, and arrive to the senses as their activating principle, in sensation. They are not merely appearances configured by the a priori forms of the *Ich denke*. Fabro notes the ontological dependence of sensible appearances on things: Sensible "appearances are 'expressions' and signs (*Anzeigen*) of proper aspects, inasmuch as they do in fact move us to be persuaded about reality. This persuasion is aroused in our consciousness, as a conviction resulting from sensible things, just as the water's boiling is the effect–manifestation of the water's heat"<sup>50</sup>. The motion of bodies towards us in sensible forms is the objective condition for our knowledge in sensation; the subjective condition is the sense faculty's ability to receive such forms, as its capacity to judge between two certain extremes. Aquinas is able to found our knowledge of things outside of ourselves, thanks to his close consideration of the senses and of appearances. He is thus able to solve Kant's problem of the bridge, by the principle of participation. On the part of material bodies, they participate in spiritual creatures in "spiritual", immaterial motion by spreading or emanating their sensible forms. On the part of the human knower, the senses' and intellect's participation in the soul's ability to become all things allows for their real interaction.

<sup>49</sup> H. DELBOSCO, "El problema de la "acción intencional" en el conocimiento sensible", 120.

<sup>50</sup> C. FABRO, *Percezione e Pensiero*, 402.

## Conclusion

“How can one existent be thought to be related to another in such a way that things constitute a real world determined by universal causality and physical interaction?”<sup>51</sup> Thus Tuschling captures the motivating problem that drove Kant throughout his career. It combines both his epistemological problem of how we form universal concepts regarding things and his physical problem of bodies existing outside of us, and forming a world-whole according to laws. Throughout his career, Kant toggled back and forth between the two spheres of knowing and being, logic and physics, without considering their proper traits and methods of study. If he did not bridge the gap between the mind and things, I propose that it was because he did not consider bodies in their own right, nor did he pay proper attention to the mind’s way of knowing through the senses. Bodies would seem properly considered as substances independent of the mind, with their own structure and consistency; to reduce things to mere forces is to dissolve them beyond recognition. On the shore of the mind, Kant might have found it helpful to consider more closely the intrinsic unity and undeniable duality of the senses and the mind. By not acknowledging the proper role of sensed perception in the subject, and the underlying metaphysics of things, Kant ran continually in circles, searching for the ground of knowing.

Aquinas’s philosophy of knowledge, based on Aristotle’s metaphysics and anthropology, allows for both physical interaction of bodies, as well as universal thought and causality. The distance between singulars and universals is able to be bridged, thanks to the participation of the senses in the intellect, through the faculty of the cogitative. Such a faculty is truly the “reason of particulars”<sup>52</sup>, as grasping the present concrete thing, in light of the intellect’s grasp of its essence. Fabro incorporates the findings of Gestalt experimentation and Piaget’s developmental psychology in children, as supporting evidence for the Thomistic view of human knowing. Current theories of knowledge, especially in the area of the empirical sciences, would gain solid foundation if they were to draw more from Fabro, Aquinas, and Aristotle than from Kant.

<sup>51</sup> B. TUSCHLING, “Apperception and Ether”, 209-210.

<sup>52</sup> Cf. T. AQUINAS, *Quaestiones disputatae de veritate*, Q. 10, a. 5.

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