

Realism as *hypercorrelationism*: Kant, Meillassoux, speculative realism and transcendental philosophy

Realismo como hiper correlacionismo: Kant, Meillassoux, realismo especulativo y filosofía trascendental

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Citar como: Romero Contreras, A. (2024). Realism as hypercorrelationism: Kant, Meillassoux, speculative realism and transcendental philosophy. *Desde el Sur*, 16(3), e0041.

ABSTRACT

The present paper offers a brief confrontation between Meillassoux's speculative realism and Kant's transcendental idealism/empirical realism, as well as the critique the former addresses to the later. Meillassoux claims that Kant cannot think the object independently of the subject, what he calls «correlationism». Our *hypothesis* is that the radical separation demanded by Meillassoux renders knowledge of the real impossible. Methodologically, we offer a conceptual analysis in both authors as well as their corresponding implications for epistemology and ontology. We conclude that a subject-object separation fails to explain the link between things and thoughts. Kant, on the contrary, delivers the grounds to explain the contact between things, intuitions, and concepts. This entails a more subtle analysis of the world and subjectivity offering different intersecting levels. These different levels are *linked differently*, offering the picture of a hyperconnected world, instead of a simple subject-object divide.

KEYWORDS

Metaphysics, ontology, idealism, Kant, Meillassoux

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RESUMEN

El presente artículo ofrece una breve confrontación entre el realismo especulativo de Meillassoux y el idealismo trascendental/realismo empírico de Kant, así como la crítica que el primero dirige al segundo. Meillassoux afirma que Kant es incapaz de pensar el objeto independiente del sujeto, lo que llama «correlacionismo». Nuestra hipótesis es que una separación tan radical como la que demanda Meillassoux hace imposible el conocimiento de lo real. Metodológicamente, ofrecemos un análisis conceptual en ambos autores, así como de las implicaciones de sus posiciones para la epistemología y la ontología. Concluimos que una separación sujeto-objeto no logra explicar el vínculo entre cosas y pensamientos. Kant, por el contrario, ofrece las bases para comprender el contacto entre cosas, intuiciones y conceptos. Esto implica un análisis más sutil del mundo y la subjetividad, que ofrece diferentes niveles que se cruzan entre sí. Dichos niveles se vinculan recíprocamente de manera diversa y brindan una imagen de un mundo hiperconectado, en lugar de una división simple sujeto-objeto.

PALABRAS CLAVE

Metafísica, ontología, idealismo, Kant, Meillassoux

1. Introduction: postmodernity and the real

All sorts of realist philosophies have been vindicated in the recent years. It coincides with the decline of phenomenology, hermeneutics, and heirs, including philosophies of an unconscious and pre-individual subject, constructivism, philosophy of language (the so-called linguistic turn) and postmodernism. The expansion of these philosophies took place at the expense of the concept of reality, naturalism, and an ontological reflection on space. Unconscious, subjectivity, language, and temporality constitute a conceptual chain, which in turn sustains the philosophical horizon now in decline.

The decline of language philosophy and social constructivism can be attributed, to a great extent, to their incapacity to offer a proper framework to understand and cope with current issues like climate change, and recent advances in science and technology. A general state of confusion, disorientation, the lack of far-reaching concepts, as well as novel ways to *conceptualize* our times has forced us to interrogate the real again in *positive* terms and not as something unfathomable, incapable of being

symbolized, something that cannot be thought, expressed, or grasped in any way. Further, we aim at a theory of the real akin to *science*, but not to some simplistic physicalism. Such a realism should offer subjectivity a place, tracing again the *boundaries* between domains, like subject-object, mind-spirit, nature-spirit, or matter-form.

2. Speculative realism, correlationism and the real

In recent years speculative realism has given the realist cause a new impulse. The autonomy of nature, the vastness of the universe in space and time, the role recognized to chance across different domains of nature, the admission of emergent properties, and formalized science constitute its new coordinate. Speculative realism should be welcomed for putting the question of the real in the center of philosophical concerns after a long reign of phenomenology, hermeneutics, the linguistic turn, pragmatism, constructionism, and postmodernity.

We must credit speculative realism for two reasons: a) it has provided us with a precise characterization of our epoch as the times of the decline of hermeneutics and the linguistic turn, showing that a new assessment of the real is needed; b) it has correctly identified the key figure of our times regarding realism: Kant. Now, they claim that the very first step to ground such a realism requires thinking the «object» by itself and in itself, *independent* of all subjectivity. This path seems to directly collide with the standard interpretation of Kant, widely accepted today, that we have no access to things in themselves. One of the main representants of speculative realism, Q. Meillassoux, identifies Kant as the beginner of this paradigm, identifiable and valid up to postmodernism. The question we want to address in this paper is if the aimed realism can be developed without or even *against* Kant.

The thesis I propose is that Kantianism is not only not hostile to realism, but its very condition. The «great outside» of the real is already «inside» because we are tangled up with and in the real. The problem of the «external world» and its underlying topology (separating inside-outside) can better be expressed in terms of *connections*: subject-object, subject-subject and object-object. In Kant «subject» and «object» will prove to be more than isolated points or spaces, showing rather internal and intricate *reciprocal relationships*. It is not separation of subject and object what paves the way to realism, but the explanation of their multiple relationships, that which makes the object *thinkable* and the subject *real*. The correlation subject-object will have to be taken as *real* itself and not as an impediment to access reality. Now, it is obvious that the subject-object correlation is real but not different to thing-thing relationships, and yet,

botch connections are connected to each other. For this reason, I will show why a radical synthesis of the heterogeneous or a non-trivial continuity will have to be asserted.

Meillassoux holds that Kants subject-object fundamental correlation, as expressed in the *KrV*, is the main obstacle to be overcome by realism, such that we should manage to think the object without the subject (and vice versa). We claim, on the contrary, that it is not the *suppression* of that correlation, but a *proliferation of correlations*, a *hypercorrelationism*, what can constitute a viable realism.

3. Meillassoux: correlationism and separationism

For Q. Meillassoux, one the main representants of speculative realism, postmodernism, constructivism, and the linguistic turn have their roots in the so-called «Kantian catastrophe» (Meillassoux, 2008, p. 125), according to which we don't know things in themselves, but only as they appear to us, namely as they conform to *our cognitive apparatus*:

the central notion of modern philosophy since Kant seems to be that of correlation [...] the idea according to which we only ever have access to the correlation between thinking and being, and never to either term considered apart from the other. We will henceforth call correlationism any current of thought which maintains the unsurpassable character of the correlation so defined [...] Correlationism consists in disqualifying the claim that it is possible to consider the realms of subjectivity and objectivity independently of one another [...] we never grasp an object «in itself», in isolation from its relation to the subject, but it also becomes necessary to maintain that we can never grasp a subject that would not always already be related to an object (Meillassoux, 2008, p. 5).

For him realism starts by separating subject and object in order to know the real by itself. This stance could be named *separationism*. *Separationism* consists, symmetrically opposed to correlationism, in the thesis that we can know subject and object as independent terms. This is an epistemological thesis. But we should ask how it is *ontologically grounded*. How is it possible at all to know the real in itself while being radically separated from it? Or, to put it milder terms: can we say anything about the real *without saying at the same time something about us*?

This position entails the classical separation subject-object, but it does not seem to address the classical problem of dualism involved in it. If correlationism offers a simply connected space (immanentism), separationism offers a discrete topology (transcendence).

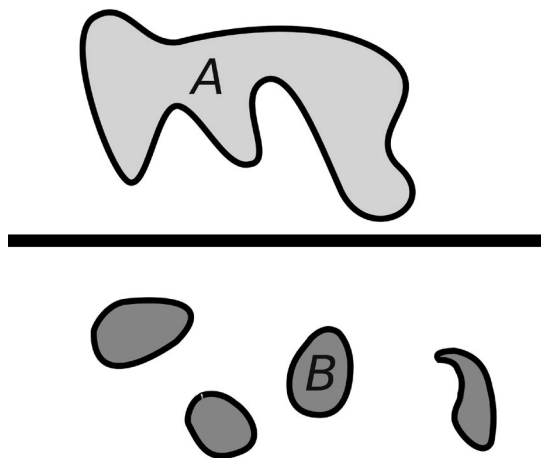


FIGURE 1. Example of two topological spaces. Above the line, a simply connected space; underneath, a discrete space.

Note. Public Domain. <https://shorturl.at/ZB3Nu>

Indeed, if we separate subject and object, we gain the real as *independent* of subjectivity, but at the expense of formulating a dualism where two modes of being are supposed. But if we have two modes of being, they cannot *touch* each other, so we cannot bring them together again to make knowledge of the real possible. Even if mathematics can express abstract relationships without reference to any subject, the real problem is that of the *origin* of knowledge. Knowledge is knowledge of something, involving two sides: the knower and the known. Now, if we take the immanentist thesis and make thought and being homogenous, either we reduce the real to subjectivity (as some transcendental philosophies do) or we reduce subjectivity to a thing among others (as some naturalists but also realists do). *The real problem is how to maintain ontological diversity and connection at the same time; not an ontological difference* that, while separating being from beings, offers in the end a traditional unity (being) for the multiplicity of beings (the totality of beings).

Of course, real things have no need of humans. But *how do we know it? How do we become conscious of our own contingency?* To say that we are not necessary and thus, the correlation subject-object begs the question, for we need to establish first this certainty if being contingent. Radicalizing the correlationist argument (i. e. that everything is contingent) by saying that the very correlation subject-object is contingent needs first to explain how the correlationist knows that the contents of the world are contingent. As we will see, the only way to do this is by *comparison between perspectives*: of time, space, point of view, conceptual framework,

and *not between subject and object*, inside and outside. Because how is it possible to erase us from the experienced world? *Wouldn't it be sounder to say that we are in the equation because we are real?*

In any case, being *conscious* of being limited (i. e., self-consciousness resulting in the certainty that consciousness is not the absolute place, the last instance of being) has two contradictory outcomes. First, we declare ourselves to be bounded or constrained by time, space, language, culture, power, class, etc. But at the same time, it would be impossible to *know this* if we weren't above such limitations. Someone living within some absolute given boundaries does not know such boundaries, unless one has a glimpse of the very boundary, seeing thus beyond the declared limitation, but not necessarily *transcending it*, at least not *in every aspect*, for boundaries are not simple, one-layered. Subjectivity is thus not a mere limitation, but, as Kant would have it, a *condition of possibility*, a *restriction*, proper of the real, that makes *possible* to interact with other real beings. Being real means, among other things, to be limited: it exists in certain domain, and localized under certain coordinates, like time and space. This makes possible for beings to interact (in a given domain) with other things. Even if there are no absolute gaps in the world, what would leave us in an unthinkable archipelago of parallel, unconnected worlds, there is no simple layer where all connections (of a single type) deploy. All things touch each other to constitute a single world (if we lived in one, how could we know about another disconnected from ours?), but they do not touch completely, nor in the same plane, nor at the same time and place, nor with a unique type of connections. The problem consists in thinking the levels, dimensions, perspectives of an unlevelled world, instead of a flat ontology, where being is interpreted univocally (see Brassier, 2015).

How do we arrive to the idea about an external world? Meillassoux has right in vindicating *separation*. Real things are *independent* of us, but also relatively independent of other things, for they are *individuals*. They are also relatively independent of already given laws, for new beings and new relationships can emerge in the universe. There is discontinuity, break, emergence. But if such a discontinuity is taken too far, it loses all its purpose, for the real can be anything at any moment for no reason, which turns to be rationally trivial. Meillassoux claims that things are not only independent from us, but also independent from a structured space-time, affirming an «absolute necessity of contingency». But such contingency only reaches beings and natural laws, not formal rules. Meillassoux separates form and content, formal laws, and actually existing individuals. Everything is possible if logically and mathematically consistent. To assure absolute validity of the formal, it must be separated from reality and

existence, which has no rule as is subject to absolute contingency. But with this, he loses the most important trait of mathematics for the sciences, namely, its «unreasonable» capacity to model the real world. Mathematics is both abstract and beyond all concrete application *and* surprisingly useful to describe concrete phenomena. But math is disconnected not only from subjectivity, but also from the real and concrete world. Instead, we see an empty affirmation where everything is formally and abstractly possible, but not actually, for real possibilities demand restriction and a structure where individuals and reciprocal relationships can be deployed.

The separationist thesis entails a purification of reason even more radical than that of Kant, precisely overlooking the biggest problem of transcendentalism: *applicability to the real*. For Meillassoux the affirmation that everything is possible is the ontological equivalent to Badiou's «events» (restricted to the human sphere). But an absolute cut in the natural world runs against all principles established in science about conservation of matter and energy, the space-time continuum, symmetries in the standard model. «Law» remains an ambiguous word. But sciences like physics do not establish a collection of isolated laws, but spaces of reasoning to explain a wide range of phenomena, which in turn cannot be separated from mathematical models. There is no clean separation between formal and empirical laws. Not everything is materially possible thanks to general frameworks established mathematically. In other words, mathematic establish restrictions and possibilities to what can happen. Since we formulate laws in mathematical terms, not every law is possible, for it would violate mathematical axioms. Now, contrary to Meillassoux' thesis, for current sciences determination does preclude the emergence of new beings and laws. On the contrary: «the new» does not contradict former laws in the same level. Intelligence and language are considered usually as emergent properties, but they do not run against the behavior of particles or against the laws of evolution. They «invent» new levels of reality. Such new levels of domains coexist with former ones, not necessarily in the same plane.

4. Kant's multicorrelationism

We have surveyed some difficulties in Meillassoux' realist enterprise. We characterized his position as a «separationism». Several «cuts» are visible. First, the separation between subject and object; second, the separation between things and between laws, so that it seems that we have a non-ordered set of them; third, a cut in the middle of the scientific continuum of the world such that absolute possibility is affirmed on the basis of an indeterminate yet infinitely determinable universe. Continuity is radically broken at several levels. Now, Meillassoux claims that Kant stands at the antipodes of his philosophy as the main representant of

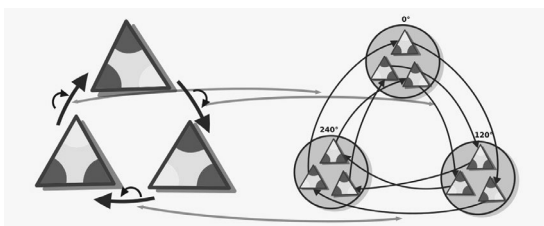
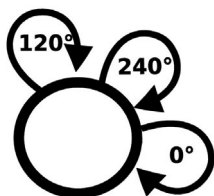
correlationism. He is right in pointing out that a correlation of two simple terms (two simple elements or points) A (subject) and B (object) does not allow to answer the question of what belongs to one term and what to the other. In fact, it makes no sense trying to discern it. We can also not establish directions of interactions, for $A \rightarrow B$ is not equal to $B \rightarrow A$. At least not *if* we set ourselves either in A or in B exclusively. We can «observe» the relationship A-B either from a point of view C, or, through a transit from one side to the other, stating at least that «going» and «coming back» are not reciprocal relationships. $A \rightarrow B$ means the subjective apprehension of an object, while $B \rightarrow A$ means a subject being affected by the object. These are the simplest representations of being and thought, or sensibility and thinking.

Kant's Copernican turn is usually interpreted as the thesis that we are not determined by objects; on the contrary, objects are determined by us, so far they are forced to adapt to our cognitive and sensual conditions. Kant does claim that we cannot know things in themselves, that knowledge is limited to how they are for us. Senses do not receive the world unfiltered: they structure it through the two main forms of intuition: time and space. They are said to be absolutely subjective. At the same time, all the relationships we establish between objects depend on our cognitive framework, our concepts of understanding (we find all such claims in *KrV* A 42/B59-60). These affirmations do not seem to allow further interpretation. However, Kant says that his aim is a *critique* of knowledge, that is, a knowing of the act of knowing. Such an enterprise demands both an access of reason to itself, and a distinction between an absolute object (things in themselves) and an absolute subject (subject of knowledge). But for Kant the access of reason to itself necessarily reveals the real in reason. Not the real as reason, but in and through reason. How can Kant discriminate between object and subject, the formal and the material, the a posteriori and the a priori? On the one hand, we must be that rational being actually existing that can investigate itself; but at the same time, the means to distance from this immediacy must be at hand, such that we do not run after our own tail in circles. We must be absolutely in subjectivity to see it really and beyond it to apprehend it. But what is the «other side» out of which we can see subjectivity as subjectivity and not as the absolute?

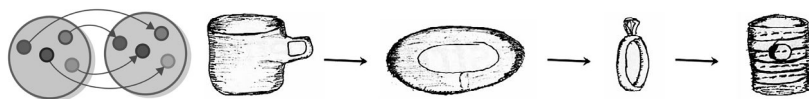
We speak of the real in the moment in which we lose it. Why? The question on something real has only meaning if there is a break in the everyday life. A smooth experience of reality requires no philosophy. It is clear that we speak of «the real» because we admit the possibility of error, of falsity, lie, «what is not the case», etc. There must be some relative break in

the world itself so that the very doubt about the reality of the world can emerge.

Let's think again about our two terms A and B. We want to know something about A. Either there is a direct access of A to itself, or we know A by its interaction with B. Now, if we take an arbitrary example, that of movement, we cannot if A or B move absolutely, but only *in relation to one another*; we can only state a *reciprocal* distancing or approaching. We need an arbitrary point of reference (the coordinate 0,0) in a place (R^2 or the plane, for example) to be able to say whether A or B move, that is, a shared or common space, by which we can establish relative positions. In this case, we can analyze A and B independently because we have a *third* element, serving as a point of reference. The same goes for the more abstract relationships between subject and object. It is impossible to say anything about any of the terms isolated. It is logically meaningless. If we take A and B to be spaces, and not points, then we can move inside A and inside B, being able to establish several relationships: $A \rightarrow A$, $B \rightarrow A$, $A \rightarrow B$ and $B \rightarrow A$. That is, every arrow may represent not one, but a collection of relationships. Only through a complex space of points of view can we begin to establish elements and relationships.



FIGURES 2 AND 3¹



FIGURES 4 AND 5²

1 A representation (left) and an example of a monoid (right), where we appreciate a rich relationship of an object to itself through a single operation.

2 A directed relationship between two sets (left) and an example of a morphism or map between two topologically equivalent figures (right).

They are not points anymore. They may have an internal structure of their own. But to state the independence of both spaces, we need to know if they have a common boundary. If they do, then to know one, implies a relative knowledge of the other, for they share the set of points belonging to the boundary. If they are discrete spaces, without any connection whatsoever, then they constitute two absolute independent spaces that share no common space, such that if we claim that reality is to be found on one, then the other disappears *ipso facto*. If we consider that the space called subject can know the space of the object, there must be some intersection or some invariant in the transit from one order to the other, there must be a «structure preserving map». *In all cases, we need to establish some kind of relationship.*

Kant's Copernican turn has been interpreted as the confinement of ontology within the boundaries of epistemology. The *quid facti* is preceded by the *quid juri* until the latter absorbs the former without remainder. Isn't he rather closer to Ptolemy, making objects turn around us? Meillassoux writes:

when philosophers refer to the revolution in thought instituted by Kant as «the Copernican revolution», they refer to a revolution whose meaning is the exact opposite of the one we have just identified. For as everyone knows, in the Preface to the second edition of the *Critique of pure reason*, Kant presents his own revolution in thought under the banner of the revolution wrought by Copernicus —instead of knowledge conforming to the object, the Critical revolution makes the object conform to our knowledge (Meillassoux, 2008, p. 190).

We will try to show now that the Copernican revolution is possible only on two premises: a) to show how subject and world are inextricably connected, b) but without constituting one single solid piece, and c) that this connection requires for objects to be already ideal (to have structure) and subjects to be real (being a thing).

Regarding the critical revolution Kant does not state that now we *impose* our terms to nature from the outside, but that the latter is forced to *answer the questions we pose to it* (*KrV* B XIII). We are not schooled by nature. We are the ones who question it. But what does this mean? The importance of Copernicus is not the content of his theory, i.e. putting sun at the center of the universe. The real radical break would be introduced by G. Bruno much later arguing that if space is infinite, then it lacks any center. Copernicus constitutes a break for he allows to radically move the point of view of the observer. The whole world is transformed merely by changing the center.

But subjectivity is not the center in the same fashion as the sun is our system. Subjectivity is the whole system capable of varying the point of view. Now, the term «point of view» has a double meaning. Materially means the possibility of changing the current arrangement of things *differentially* so that we can run experiments and establish causes and effects or even only correlations. Ideally means that we can arrange data in different systematic and formal ways. To experiment means to vary conditions differentially in a system to establish determinate relationships. But we could not know anything about the world if it was not connected at all, i.e., constituted by fundamental atoms, which are not substantially affected in the composite beings they create combined with other atoms. Form remains absolutely exterior. To experiment means in the end the possibility to change our position in the world and the framework to interpret it. No picture of the universe is complete, but not because thought is finite, because all pictures depend on certain conditions. We need to vary the thinking eye to make appear the world differently. Thought consists in the combination of variation and invariance such that different «maps» of the world can be made, even if in the end they cannot be glued together to constitute a big atlas.

But how is this possible? How can we vary what is given, *form it and deform it* without betraying it? The only answer is because neither us nor the world are made of a single piece, and because the inner relationships of the world, of thought and of thought and world are neither unique nor simple. We do not know the world either absolutely immanently through intuition, nor abstractly from the outside, imposing forms over some undifferentiated matter (hylomorphic stance). We are in the world, but not fused to a set of connections. As Sloterdijk has rightly claimed, the ultimate question of contemporary philosophy is the world, but not according to the classic topology of the great sphere:

If we imagine the world as the ancients once did, as a giant container, the subject of philosophy would appear as a big globe, so big that it contains absolutely everything [...] Today [...] we are no longer blithely able to approach the great totality. [...] For us, the so-called question of being is the *synousía* question, the issue of social intercourse. Being as *togetherness* implies a four-place relationship because it describes the existence of somebody with somebody and something in something. This formula describes the minimal degree of complexity that must be construed to arrive at a concept of the world (Sloterdijk, 2017, p. 159).

The question of the world can be both ontological and critical recognizing that relations are both real and ideal, both part of the world and

part of our cognition. Now, the link must be some invariant in a throughout variation. Not only from «world» to «subject», but across the world, from world to subject and across subjectivity. The critical project is one of structural analysis, about which elements are involved and how they can be arranged accorded certain degree of freedom and a certain restriction. Conditions are always what at the same time make something «possible». As soon as we suspend all restrictions, the world disappears or becomes trivial. Contemporary philosophy has privileged indeterminacy, possibility and chance as breaks in the world and with the world. But one may consider this thesis seriously only when the world has been deprived of all its creative forces, and where determination is seen as a fall in some prison, instead of a restriction, precondition for the opening of concrete possibilities.

As Kant states in the very first lines of the *KrV* metaphysics is inscribed in our human nature, for it is grounded in pure concepts of understanding. This led to the error shared by all dogmatics, namely, that we do not need the empirical world to produce knowledge. The transcendental illusion is «rational» in some sense, for it obeys our impulse for absolute conceptualization overarching the totality of being. But illusion arises in the *use* of reason. This means that we have freedom in how to apply our concepts. We are not stuck to them as some intellectual glasses we cannot take off. Transcendental philosophy was not a statement about human's finitude, but about human's freedom in thought, while remaining faithful to things. It was a philosophy of legitimate and universal knowledge, not of historically and linguistically restricted «interpretations» of the world.

The citation of Sloterdijk is inspired by Heidegger's *Sein und Zeit*. In it, the question of being-in-the-world is analyzed as the fundamental structure of human (*Dasein*) existence. In this sense, both Sloterdijk and Heidegger remain trapped in simple correlationism, where human affairs constitute not the center, but the metaphysical cement of the world. This constitutes a theory of «habiting» the world through different spatiotemporal configurations. But this again, such a world is very small, it's only human. However, Sloterdijk already recognizes the problem of relating subjects and things in a complex environment or space, making the «synousia», «togetherness» the fundamental question of philosophy and, as we would add, of realism tout court. There is truth in Heidegger and Sloterdijk as they renounce to speaking of the world as a sphere and a *container*, such that the question of the inside and the outside loses all relevance. The subjective realm is more limited that the world, as this includes all that ignored, no generated, not understood and constituting no phenomenon for humans. Yet all this conditions his very existence independent

of all understanding and apprehension. Yet, such a vast world is potentially understandable it can *potentially* form part of a discourse, an explanation an *Erlebnis*.

What alternative offers Heidegger to the classical concept of the world as a big container? A *sheaf of relationships* among beings (*Verweisungsbezug*, *Verweisungs-ganzheit*, *Verweisungs-zusammenhang*). This creates a web of relationships, but what ultimately gathers this multiplicity is human understanding through language. However, the model is right as it allows to think the world through multiple relationships and not through an operation of inclusion-exclusion. Indeed, Meillassoux speaks of the «great outdoors» (Meillassoux, 2008, p. 17) promised by realism, the ultimate liberation from the prison house of subjectivity. It is easy to see the classical underlying topology inside-outside, a simple topological figure that the theorem of the Jordan curve captures:

If J is a simple closed curve in \mathbb{R}^2 , then the Jordan curve theorem, [...] states that $\mathbb{R}^2 - J$ has two components (an "inside" and "outside"), with J the boundary of each (Pasechnik and Weisstein, n. d.).

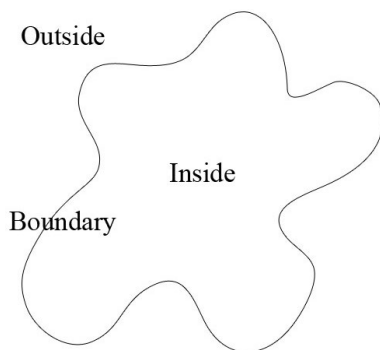


FIGURE 6³

Subjectivity is the inside, the real, the outside. But nothing is said about the nature of the *boundary*. Because even if remain in the container scheme, much can be said of the outside, through the inside, for the inside has access to a common boundary. The suppression of the relationship, i. e., of the boundary perpetuates the interpretation of subjectivity as exception in nature and as subtraction in politics, as an abstract interruption of an order, a miraculous *creatio ex nihilo* or a *deus ex machina*.

3 Jordan's curve theorem. We see the three elements created by a closed curve: inside, outside and the boundary.

In the classical geographical model, where subject and object are treated as separate spaces, they are defined exclusively. The inside of one is the outside of the other. Another option is to allow one to be a subset of the other. In any case, since they are *independent* spaces, they allow a certain view of knowledge as conformity or adequation of the thing to the intellect. The correlationist view of the world as a sheaf of relationships dispels the problem of adequation situating the subject in that very net of connection but making error impossible. Now, Heidegger says that breaks in the world do occur when something breaks (Heidegger, 1967, p. 75). A ruined hammer, for example, makes the relative structure of the word appear. But such a break is partial, a mere point in an otherwise intact structure.

The other side of the coin is acknowledged by G. Harman (2002), saying that the broken and useless hammer *is still something*, it still exists, beyond its social relevance and human meaning. This has led him to ask where the real world is: in the constituting particles of the object, in its hermeneutical apprehension or in some «third table» (Harman, 2012). But we would like to say that *every level has its own reality*, as it supposes a group of elements capable of interacting, being effective among each other through certain relationships in a certain domain, forming part of a single world, in which subjects are included.

Can we retain the epistemological relevance of adequation of things and thoughts and the fact of being always already in the world? We can answer positively but only if we renounce to a simple topology where objects must be either fully inside or fully outside of the subject, without further nuances. This is precisely what Kant can offer. Kant described his position in a double fashion: both as transcendental idealism and as empirical realism. We already mentioned the passage where Kant states the impossibility to grasp things in themselves. But it only does justice to his transcendental idealism. In the second edition of the *KrV* Kant included a «refutation of idealism» to dispel all ideas about a pretended seclusion in subjectivity.

5. Kant, realism, idealism and hyperconnectivity

It is actually Kant's *radical materialism* the reason why he affirms that things must affect us, touch us. We enter in the chain of causes and effects because we are also things. For Kant we do know real things:

If I say: in space and time intuition represents both outer objects [*Objekte*] as well as the self-intuition of the mind [*Selbstanschauung des Gemüts*] as each affects our senses, i.e., as it appears, that is not to say that these objects [*Gegenstände*] would be a mere *illusion*. For

in the appearance [*Erscheinung*] the objects, indeed even properties [*Beschaffenheit*] that we attribute to them, are always regarded as something really given, only insofar as this property depends only on the kind of intuition of the subject in the relation of the given object [*Gegenstand*] to it then this object [*Gegenstand*] as appearance [*Erscheinung*] is to be distinguished from itself as object! in itself (*KrV* B 69-70).

Objects and properties must be considered as real, not as mere appearances for us, but Kant says that the fact that this is *stated* by us, and in us, forces us to *take into consideration* our position in the equation. The link between things and knowledge is assured, but it is neither trivial, nor instantaneous. Things take time to be given and elaborated in intuitions, imagination and understanding. But this also grants some degree of freedom in arranging things for understanding. How can we claim to know the real without any contact whatsoever? And what could we say about things besides what is revealed of them to us, as real beings (us and them)?

Subjects must be real in the *same* way as things in order to be reached by them, but not only, i. e. they must also be ideal in order not to interact but to think things. The subject is something *more* than a mere thing but *also* a thing. One should note that Kant does not speak of objects in general, but of *Dinge*, *Gegenstände* and *Objekte*. They correspond to different *individuations*, to use Simondon's terminology, in different registers or domains. One could say *grosso modo* that *Dinge* refers to things in themselves, *Gegenstände* to objects given in intuition, and *Objekte* to ideal objects in understanding. Which one is the real one? *All of them*, but in a different sense. The reality of beings does not have to do with independence respect to thought. They are rather autonomous. The German word *Selbstständig* fits very good the idea of autonomy as standing on its own feet.

Now, absolute autonomous things, i. e. atoms and or substances would be considered finished objects. But this is incorrect on every level. Not only are natural objects subject to constant processes of morphogenesis and transformation, but there is also, this is Kant's contribution, a translation from things to perception, perceptions to schemes and schemes to concepts. This is the very nature of the process of knowledge: a constant change of base and a conservation of information. Descartes' wondered how an injury, produced by a mere physical contact between things could be translated into the sensation of pain, something only proper to mind. Things are prolonged and deformed in subjectivity. But there is also real contact. This requires the subject to be also a body capable of grasping real relationships.

Reality requires a relative autonomy, but also always some relationship to other things. There are never isolated things in the universe, but collections: of atoms, cells, tissues, animals, words, thoughts. Being real means that some object or process exists in some domain (or world, or environment) entering in actual and possible relationships with other objects. Actual means forming part of systems and structures. Possible, because a system is never pure actuality, there exists a corresponding «space of possibilities» or «phase space». And it is also radically possible because nature allows the emergence of new beings, relationships, and domains (for example, the level of elementary particles does not entail necessarily the existence of living systems, the latter emerged at some point in the development of the universe). There are already given possibilities (as the six faces of the dice), and some more abstract, let's call them «virtual spaces» out of which new beings, relationships and domains may emerge. Where is being in this picture? Not beneath, as a ground or as elementary particles. Not above, as totality. In the relationships, actual, possible, and virtual.

Therein lies Kant's lesson: *there is no metaphysical system because there is no single «relationship» valid across all domains of being*. But there are nonetheless several relationships that allow to move across different domains. Being is deployed in and through relationships. So called «properties» of things are also understood in systems of relationships. In Newton's laws force appears linked to mass and acceleration. Acceleration is a relationship between distance and squared time. Time and distance are continuous structures isomorphic to \mathbb{R} , etc. We never find pure particles. Even particles are associated with a wave function. And particles and waves need to be inscribed in some relational systems of spatiotemporal coordinates. Things are real because they exist for a third and not only for themselves. This existing for a third is called a relationship. Relationships are the way things touch each other. They are also directed. Sensation is the result of a directed relationship going from the thing to the subject $B \rightarrow A$; apprehension runs in the opposite direction, from the subject to the object $A \rightarrow B$. Now, Kant recognizes at least two types of the relationship: $A \rightarrow B$. One is thought, in which thought is applied to the information of the thing in us. The other is action, where thought is applied to material things, included our own body. As Fichte recognized, existing socially means having both intelligence and a body, as the «instrument» of realization of will. The relationship between free will, effectuation and the material world are the set of relationships that define a minimum for action.

G. Harman (2012) cleverly observes that material things never touch fully. That is, when a thing A and a thing B enter in contact it is true that

A does not touch with all its being and that B is not touched without remainder. A glass of water and a table do not touch fully, not even if we idealize the surfaces in contact. There is a part of the thing that remains untouched by other things. But these are precisely relationships, a partial touch among things, amounting to their interactions. This is also valid for the encounter of subject and object: it is partial, in «shadings», in perspective. Now, perspective is not a deformed way of perceiving the real, but a mode of the real. Things touch each other partially, but also according to certain domain. Two bodies touch disregarding color, that is, their contact does not change color. But the contact of water and milk, does. Objects interact in determined dimensions or perspectives. To ask what the thing in itself is has no meaning whatsoever outside a relationship, actual or virtual, in a determinate domain. Even if we declare properties «possessed» by determinate individuals, such properties are defined relationally and only exist insofar they can affect other beings.

To put in slightly differently, we never have pure individuals in the world, but elements with certain reciprocal relationships in some structural context (usually time and/or space). It is true that, as Harman says, no structure exhausts individuals, they are never reduced to the «place» they occupy in a system or structure. But this does not mean that individuals exist suspended in the void. So far individuals are in perpetual formation and in relationship to other individuals they are fully relational. We could say that there are never pure individuals, substances, or atoms, but also never structures. The individual and the structure are poles.

There are never structures without individuals involved or at least with some degree of individuation, and there is no individuality but in a set of relationships. Regarding immanence and transcendence, the world deploys in the middle. The world, another word for being, is always more than one (immanence, unity) and less than two (transcendence, dualism). Within the one, no relationship is needed, there is absolute proximity of everything to everything. In the case of dualism, or separation we don't need relationship either, for the relata have no contact whatsoever. In a purely continuous world, all beings are said to exist in the same fashion, according to the same criteria and relationships. In a radically disconnected universe, there is no world. What we face is the problem of multiple modes of being but interlaced in different manners, through different relationships. We displace the problem of identity vs difference to the problem of relationship, always a mixture of variation and invariance. Identity and difference are but poles of a whole region of possible relationships.

We should here pose the transcendental question: how do we know it? Kant says that we only know phenomena, not things in themselves.

This is accurate and means that knowledge is made of representations. All we find in subjectivity are representations. They constitute the native elements. But they are not all equal, even if they all belong to the common space of an I. Intuitions, schemes and concepts are of different nature. This is Kant's fundamental thesis: that concepts and intuitions are ontologically different. This also holds for subjectivity and things.

But the real problem is *how to synthesize the ontologically different*. We cannot separate thought from experience directly and immediately. If we think an object, we have to assert that fact we are thinking it. It is however not through separation from us, and through some formal procedure that we know real things. On the contrary, it is analyzing our own representations, that we find the print of the world. Intuitions and concepts are both representations, *Vorstellungen*, and are equally at hand for our cognitive apparatus. But regarding their *origin or source*, they point at two radically different directions. I can always trace a concept to more concepts and eventually to the structure of human understanding. But we cannot trace intuitions to concepts. Concepts imply activity, intuition, on the contrary, passivity. The difference between activity and passivity found in us is the key to postulate two sources of knowledge: intuitions and concepts. This is also the reason why Kant does not construct a system, because there is no final synthesis nor a common ground uniting being and thought, no first principle, no totality. Now, we could not state this fundamental difference between passivity and activity if we couldn't variate the relationship between intuitions and concepts.

In the «refutation of idealism», Kant defends himself from the accusation of absolute idealism. He says, I quote:

I am conscious of my existence as determined in time. All time-determination presupposes something *persistent* [*Beharrliches*] in perception. This persistent thing, however, cannot be something in me, since my own existence in time can first be determined only through this persistent thing. Thus, the perception of this persistent thing is possible only through a *thing* [*Ding*] outside me and not through the mere *representation* [*Vorstellung*] of a thing outside me. Consequently, the determination of my existence in time is possible only by means of the existence of actual things [*Existenz wirklicher Dinge*] that I perceive outside myself. Now consciousness in time is necessarily combined with the consciousness of the possibility of this time-determination: Therefore, it is also necessarily combined with the existence of the things outside me, as the condition of time-determination; i. e., the consciousness of my own existence is at the same time an immediate consciousness of the existence of other things outside me (*KrV* B 275-276).

I cannot explain the resistance, persistence, and insistence of the world by means of concepts and my own subjective forces. I have to conclude that there must be something beyond me but proving itself in me. Time, the primary subjective mode, presupposes space. When I walk through a house, I experience its structure temporally, part after part. But I know that this sequence is bounded to my experience and not the spatial structure of the house. I don't confuse the form of the house with the form of its presentation. But I can do this because I am allowed to walk the house many times, in different directions, proving how the constant change in presentation does not affect the (invariant) form of the house. But this only tested in experience, where I can walk the house differently.

The same is valid for primary and secondary qualities. In *After Finitude* Meillassoux affirms that real properties of things are only those which can be described in mathematical terms. Secondary qualities, on the contrary, are purely subjective. He claims that only first are real. Konrad Lorenz addressed an analogous problem asking for the relationship between transcendental apparatuses and different species. It a fair question to ask whether we share the forms of intuition with other animals. He argues that our subjective constitution is not simply an empirical configuration bounding our experience to certain corporeal limits, but a way in which we apprehend a region of the world from a certain perspective and mode. Seen from evolutionary theory, our a priori constitution is a structure that captured some features of the environment.

Our categories and forms of perception, [structures] fixed prior to individual experience, are adapted to the external world for exactly the same reasons as [...] the fin of the fish is adapted to the water before the fish hatches. No sensible person believes that in any of these cases the form of the organ «prescribes» its properties to the object [...] evidently some properties of the thing-in-itself which is at the bottom of the phenomenon «water» have led to the specific form of adaptation of the fins [...] which have been evolved independently of one another by fishes, reptiles, birds, mammals, cephalopods, snails, crayfish, arrow worms, etc. It is obviously the properties of water that have prescribed to these different organisms the corresponding form and function of their organ of locomotion (Lorenz, 2010, p. 233).

Perceiving, for example, cannot be a hallucination, but an objective «preinterpretation» of the world upon which our very subsistence depends. A radical mismatch between perception and environment would entail death. This is why the distinction between primary and secondary properties makes no sense. There is a *continuation and a transformation* from water to a phenotype capable of delivering intuitions about some

trait of water that allows an organism to perform this or that action. A color is real for a species so far life may depend on the capacity to perceive it or discriminate it from others. Things in themselves are not some last instance, nor individuals independent of concrete relationships, but on the contrary, there is reality where there are relationships among beings than can affect/condition each other.

It is easy to recognize in science differences of level, aggregations, local and global relationships. A simple example of water. At human scale it is a continuous matter, the very icon of fluidity. But at the molecular level it is discrete. Globally it is a neutral molecule (O^{-2} and H^{+1} , $H^{+1}=0$), but locally partial charges persist (positive on the side of hydrogen and negative on the side of oxygen). The isolated elements, hydrogen and oxygen, feed fire and make it possible, respectively. Together, they gain the property to put it out. Again, which one would be very last instance, while there are effects on different levels, modes, and scales? Even time and space are «individuated» in different levels and perspectives. We need a continuous space-time to describe the universe from the standpoint of relativity theory. But a discrete space operates in an atom's quantic levels of energy. The space of perception is non-metric, but vague and with fuzzy borders. Some organisms move according to light, as we see in tropisms in several plants. The time of the clock is not equal to the cyclical time of circadian rhythms. We also live life as a line ending with death, and as set of cycles (years, birthdays) at the same time. This is why the question of the real is not about the last elements, the last instance, or the totality, but about the perspective that deploys a section of the world.

6. Final remarks

Kant may be seen as a philosopher that adheres to hylomorphism. Things in themselves can be seen as matter, and the subject, as form. But such a distinction reappears *within* the subject, for intuitions provide the matter that understanding will form through its pure concepts. But even in pure understanding representations constitute the matter to be formed in judgements. Judgements, as all representations, are the matter ultimately unified by the transcendental unity of apperception. How can such a transit take place from one domain to another? The first thing to note is that form and matter are relative terms. But the question on how matter and form can touch. The section on schematism can provide an answer. The transcendental deduction showed that we cannot explain a priori synthetic judgements like those of mathematics without supposing *universal concepts*.

Necessity does not stem from intuitions, but only from concepts. The subject as reason must be above sensibility. This is, by the way, Meillassoux' position regarding the cosmos. There is an absolute break between mathematical laws and the empirical natural world. Everything is possible in the latter, but mathematics, on the contrary, operate as a natural transcendental with an axiomatic constitution. Everything may change from one moment to the other, but not mathematics, and certainly not logic. The principle of non-contradiction is safe from absolute contingency, suffered by the empirical world. Everything is possible in the natural world if there is absolute necessity in thought, a true cosmic transcendental. But Kant does not think that forms govern the world from the outside, for there are not two big sides: subject and object, but a series of concatenations of relative terms. As we said, concepts must be applied to intuitions in order to explain a priori synthetic judgements, but also experience in general. This necessity is proved in the transcendental deduction. But it is a *quid juri*, something we have to accept to explain the factum of science. The *quid facti*, how do concepts actually apply to intuitions is not solved. This is the task of imagination through schematization. Kant says that there is a heterogeneity (they are *ungleichartig*) between concepts and intuition. Kant writes:

Now it is clear that there must be a third, which must stand in homogeneity [*Gleichartigkeit*] with the category on the one hand and the appearance [*Erscheinung*] on the other, and makes possible the application of the former to the latter. This mediating representation must be pure (without anything empirical) and yet *intellectual* on the one hand and sensible on the other. Such a representation is the *transcendental schema* (KrV, A 138, B 177).

There is polemics surrounding the role played by transcendental schemas. It might be argued that the only problem Kant addresses is that of subsumption of empirical particulars in pure concepts corresponding to the table of categories. This is obtained through the determination of time, a form intuition. A sequence of events in time may be subsumed in the category of causality; duration can be subsumed in the category of substance. But time is here nothing but a perception of order. Not pure order, not pure empirical material, but forms appearing in the sensible, the structuring of intuitions. Schematism is the «third» element rendering intuitions conceptual and the concepts intuitive.

Now, this would not be possible if intuitions hadn't already some form or structure. Indeed, the illimited variety given in sensibility is already structured according to space and time. And it would not be possible if categories were not capable of being instantiated in some matter. Intuitions

are material and ideal in some sense; concepts are ideal and material in another. There is the possibility of approaching them because they coincide partially, the formal part of one may touch the formal part of the other, but always more or less matter bounded. But if we pay attention, we can see how the problem of the real requires an analogous solution.

The problem matter-form appears within subjectivity. It is also a valid scheme within things, for example, in classification in genres and species. But it may also hold for the relationship of subject and object. It was Fichte's merit to state clearly the ultimate problem of transcendental idealism. If Kant said that the enigma of philosophy, the «x» was the thing in itself, Fichte considers that the ultimate enigma is that of relationship between subject and object. This link is expressed linguistically as predication «I am I» and mathematical through identity «I=I». But interested in a first principle, he turned the concept of synthesis, which should gather the heterogeneous, in a problem of self-reference. In his *refutation of idealism*, he makes to claims. First, that things must affect us so we can know them, and the permanence of the content of a perception comes from the thing, not from us. This means that a pure law of understanding, causality, is supposed to be real, a real relationship.

If an encounter between things and humans is possible, but not necessary, they must be in the same space, such that they can *eventually* encounter each other. And, because the duration of intuitions is attributed to the duration of the contact between thing and subject, we already presupposed the reality of time and space. But what we find in time and space is not representations, but matter, some form of substance. As we can see, because subjectivity is linked to a body, which is linked to the world of things (in some region and mode), we have access to the border, or to the set of relationships between us and the world. This relationship is double: it shows the world as representation for us, but in this representation, we appear as members or parts of the world. This double inscription is unavoidable. The real world starts to grow and reveals some structural homologies with the subjective world. And through the variation of the layer and elements of both sides, we investigate the very border and the links taking us from one side to the other. This is how we progressively sort what is subjective, what is non-subjective, and how both are real in different but yet connected modes.

This is finally how science works: transferring structural elements from one domain to another, preserving some and losing and adding information. Meillassoux shows in *After Finitude* that there is a problem on how to understand the time-space structure prior to the existence of subjectivity. Ancestral facts like the big bang are of this type. Now, the correlationist

concedes that his very existence is contingent, and thus, necessarily the correlation man-world. Now this contingency does not follow from concepts, but from our real constitution. Everything is contingent, even me. But the question of internal validity is not the question of objective validity. If not everything can be said about the world it is not because some linguistic rule prohibits it, but because we have no empirical grounds to assert it. This coincides with Kant's position: we may have pure concepts and even count with pure mathematical objects than can be applied to phenomena, but this is not sufficient to claim knowledge, a material contact is demanded. This is why concepts without intuitions are empty.

The whole world of mathematics is still empty until there is some real contact with things. There is no intuition of the big bang. But it is also not a theoretical reconstruction. There is a *material link* between the big bang and the world we measure: the background radiation. We are connected by a concatenation of events. And of course, even if logic and mathematics are nor some empirical feature of humans, there is a history of matter allowing progressively the existence of intelligence in the world, and not above it. But it is also not possible to show a flat and simple concatenation from the big bang to human concepts. There are multiple links, transitions, transformations and translations among different domains, scales, perspective, in sum a hypercorrelated or multiconnected (=non-trivially connected) universe, to which only a hypercorrelationist realism can do justice.

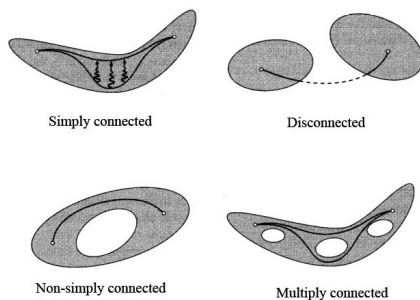


FIGURE 7. Different types of spaces regarding connectedness.

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Contribución de autoría

Arturo Romero Contreras cumplió con todas las funciones CRediT.

Fuente de financiamiento

Autofinanciado.

Potenciales conflictos de interés

Ninguno.

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Recepción: 11/2/2024
Aceptación: 10/5/2024