*Open Letters to Iain McGilchrist*

First Letter

# *On Iain McGilchrist's Implicit Physiological Confirmation of Kantian Stereoperspectival Epistemology*

Marcel Chelba

Second, revised and expanded English edition

Translated by Marcel Chelba, with the assistance of DeepL and ChatGPT

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References to *Open Letters to Iain McGilchrist* should cite the author as **Marcel Chelba**.

Passages from **Book I: Open Letters to Iain McGilchrist** may be cited by section number (§) and, where appropriate, by page number.

**Example:**
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Unless otherwise indicated, all translations from German and Romanian are by the author.

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# **Book I:** *Open Letters to Iain McGilchrist*

## Author's Note

The connection between *Kant's transcendental aesthetics* and *quantum mechanics* was already pointed out by me as early as 1986, in my Bachelor's thesis entitled *Modelling in Physics and Its Epistemological Significance* (Faculty of Physics, West University of Timișoara, Romania). In that work I argued for the first time that the objects of quantum mechanics are analogous to the Kantian *thing-in-itself*, in that they share the same *epistemological ambiguity*: they are, partly, products of *experience* and, partly, products of *imagination*.

The idea of *stereoperspectival epistemology (an epistemology based on the synthesis of two complementary cognitive perspectives)* emerged in my mind much later, as a *cybernetic solution to Kantian epistemological dualism*. As soon as I arrived at this idea, I began searching for *physiological evidence* of the *dualism* and *apriorism (innatism)* characteristic of Kantian epistemology.[1]

Thus, the following question remained open for me:

If, alongside *sensibility*, nature has also endowed us with a *second source of knowledge*—a *transcendental* one, tasked with providing *a priori* all the possible *forms* of our *empirical intuitions*—then there should also exist *physiological evidence*

[1] These *physiological indications* are not intended to ground transcendental epistemology in empirical science, but rather to reveal a *structural convergence between Kant's transcendental insights and the neurophysiological organisation of the human brain*.

that, for instance, *Descartes' analytic geometry had somehow always been present in the human mind, and that it was in fact discovered by Descartes rather than invented.*

I quickly found numerous *physiological indications* supporting this hypothesis (which I shall present in a forthcoming letter addressed to Iain McGilchrist).

But what about *non-Euclidean geometries*?—I asked myself—because they seem to be purely *imaginary creations* of our own minds.

This question required several years of interdisciplinary investigation and philosophical reflection.

It was precisely in the course of this inquiry that I discovered Iain McGilchrist's interviews on YouTube (and later his books).

The epistemological, moral, and cultural interpretation that Iain McGilchrist gives to *cerebral lateralisation* proved perfectly suited to my problem. Hence the enthusiasm expressed at the beginning of this letter.

On the basis of the *neurophysiological case material* presented by Iain McGilchrist, I reached the following conclusion: *Euclidean geometry* and *Aristotelian logic* correspond to the cognitive paradigm of the *left hemisphere* (the executive, factual, discriminating and pragmatic hemisphere—our *autopilot*, as I call it), whereas *non-Euclidean geometries* and *non-commutative logics* represent the cognitive paradigm of the *right hemisphere* (the legislative, moral, protective, symbiotic, and pacifist hemisphere).

Iain McGilchrist's contribution to contemporary philosophy and epistemology is extraordinary. Yet what I believe is still missing—not only in his work, but in the entire contemporary scientific world—is a *new epistemological*

*paradigm*: a *conceptual framework* adequate to the new empirical findings.

According to *Kant's transcendental aesthetics*, however, such a *paradigm shift* can occur only along a *transcendental path*—that is, through a reflective and synthetic act of *reason* (the *faculty of principles*, par excellence).

Science is not a *crippled bird* that flies with one wing or hops on a single leg; it advances only by using both wings and both legs, in *alternating steps*.

Kant's theory of knowledge has a *dual structure* analogous to *stereoscopic vision*; for this reason I refer to Kantian epistemology as *stereoperspectival*.

Although the concept of *stereovision* was not yet available in Kant's time, he was already thinking in such *stereoperspectival terms* from an early stage, as suggested by his frequent use of *visual analogies* (e.g., *Standpunkt*, *Gesichtspunkt*, *Horizont*).

Kant had already begun to think in *antithetic terms*—in *antinomic (complementary) perspectives*—as early as *Dreams of a Spirit-Seer* (1766).

This *dual structure of cognition* becomes explicit in the *Inaugural Dissertation* (1770), where Kant defines *sensibility* as the *subject's receptivity to the presence of objects*, while the *understanding* is the *faculty of representing objects that cannot be given in sensibility* (AA 2:392–393).

In the *Critique of Pure Reason* (1781/1787), this *dual structure of cognition* receives its fully developed formulation:

> "Nur so viel scheint zur Einleitung, oder Vorerinnerung, nötig zu sein, daß es zwei Stämme der menschlichen Erkenntnis gebe, die vielleicht aus einer gemeinschaftlichen, aber uns unbekannten Wurzel entspringen, nämlich Sinnlichkeit und Verstand, durch

deren ersteren uns Gegenstände gegeben, durch den zweiten aber gedacht werden."[2]

"Unsere Erkenntnis entspringt aus zwei Grundquellen des Gemüts: deren die erste ist, Vorstellungen zu empfangen (die Rezeptivität der Eindrücke), die zweite das Vermögen, durch diese Vorstellungen einen Gegenstand zu erkennen (Spontaneität der Begriffe). Durch die erstere wird uns ein Gegenstand gegeben, durch die zweite wird dieser in Beziehung auf jene Vorstellung (als bloße Bestimmung des Gemüts) gedacht."[3]

"Gedanken ohne Inhalt sind leer, Anschauungen ohne Begriffe sind blind. Der Verstand kann nichts anschauen, und die Sinne nichts denken. Nur daraus, daß sie sich vereinigen, kann Erkenntnis entspringen."[4]

"Die Synthesis überhaupt ist, wie wir künftig sehen werden, die blosse Wirkung der Einbildungskraft, einer blinden, obgleich unentbehrlichen Funktion der Seele, ohne die wir überall gar keine Erkenntnis haben würden, der wir uns aber selten nur einmal bewusst sind. Allein, diese Synthesis *auf Begriffe* zu bringen, das ist eine Funktion, die dem Verstande zukommt, und wodurch er uns allererst die Erkenntnis in eigentlicher Bedeutung verschaffet."[5]

"Das erste, was uns zum Behuf der Erkenntnis aller Gegenstände a priori gegeben sein muss, ist das *Mannigfaltige* der reinen Anschauung; die *Synthesis* dieses Mannigfaltigen durch die Einbildungskraft ist das zweite, gibt aber noch keine Erkenntnis. Die Begriffe, welche dieser reinen Synthesis *Einheit* geben, und lediglich in der Vorstellung dieser notwendigen synthetischen Einheit bestehen, tun das dritte zum Erkenntnisse eines vorkommenden Gegenstandes, und beruhen auf dem Verstande."[6]

"Wir erkennen den Gegenstand, wenn wir in dem Mannigfaltigen der Anschauung synthetische Einheit bewirkt haben."[7]

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[2] **Immanuel Kant**, *Kritik der reinen Vernunft*, A15/B29
[3] **Immanuel Kant**, *Kritik der reinen Vernunft*, A50/B74
[4] **Immanuel Kant**, *Kritik der reinen Vernunft*, A51/B75
[5] **Immanuel Kant**, *Kritik der reinen Vernunft*, A78/B103
[6] **Immanuel Kant**, *Kritik der reinen Vernunft*, A78-79/B104
[7] **Immanuel Kant**, *Kritik der reinen Vernunft*, A105

"Allein die *Verbindung* (coniunctio) eines Mannigfaltigen überhaupt, kann niemals durch Sinne in uns kommen, und kann also auch nicht in der reinen Form der sinnlichen Anschauung zugleich [B 130] mit enthalten sein; denn sie ist ein Actus der Spontaneität der Vorstellungskraft."[8]

"Folglich ist die Einheit des Bewusstseins dasjenige, was allein die Beziehung der Vorstellungen auf einen Gegenstand, mithin ihre objektive Gültigkeit, folglich, daß sie Erkenntnisse werden, ausmacht, und worauf folglich selbst die Möglichkeit des Verstandes beruht."[9]

"Der logische Paralogismus besteht in der Falschheit eines Vernunftschlusses der Form nach, sein Inhalt mag übrigens sein, welcher er wolle. Ein transzendentaler Paralogismus aber hat einen transzendentalen Grund: der Form nach falsch zu schließen. Auf solche Weise wird ein dergleichen Fehlschluß in der Natur der Menschenvernunft seinen Grund haben, und eine unvermeidliche, obzwar nicht unauflösliche, Illusion bei sich führen."[10]

"Indessen ist die Schlussart in beiden selbst der gemeinen Menschenvernunft ganz angemessen, welche mehrmal in den Fall gerät, sich mit sich selbst zu entzweien, nachdem sie ihren Gegenstand aus zwei verschiedenen Standpunkten erwägt."[11]

*"Hier ist nun der Ort, das Paradoxe, was jedermann bei der Exposition der Form des inneren Sinnes (§ 6) auffallen musste, verständlich zu machen: nämlich wie dieser auch so gar uns selbst, nur wie wir uns erscheinen, nicht wie wir an uns selbst sind, dem Bewusstsein darstelle, weil wir nämlich uns nur anschauen, wie wir innerlich affiziert werden, welches widersprechend zu sein scheint, indem wir uns gegen uns selbst als leidend verhalten müssten; daher man auch lieber den inneren Sinn mit dem Vermögen der Apperzeption (welche wir sorgfältig unterscheiden) in den Systemen der Psychologie für einerlei auszugeben pflegt."*[12]

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[8] **Immanuel Kant**, *Kritik der reinen Vernunft*, B129-130
[9] **Immanuel Kant**, *Kritik der reinen Vernunft*, B137
[10] **Immanuel Kant**, *Kritik der reinen Vernunft*, A341/B399
[11] **Immanuel Kant**, *Kritik der reinen Vernunft*, A461/B489
[12] **Immanuel Kant**, *Kritik der reinen Vernunft*, B152-153.

This is the *Kantian epistemological matrix* and its *general structure* is eminently *paradoxical*:

"Diejenigen, welche noch nicht von dem Begriffe loskommen können, als ob Raum und Zeit wirkliche Beschaffenheiten wären, die den Dingen an sich selbst anhingen, können ihre Scharfsinnigkeit an folgendem Paradoxon üben und, wenn sie dessen Auflösung vergebens versucht haben, wenigstens auf einige Augenblicke von Vorurtheilen frei, vermuthen, daß doch vielleicht die Abwürdigung des Raumes und der Zeit zu bloßen Formen unsrer sinnlichen Anschauung Grund haben möge."[13]

Despite the fact that the object and its image in the mirror of our senses appear *identical* in every detail, when taken together as a single *whole (system)*, they are *completely different things* and, as such, cannot take one another's place; just as gloves cannot be transferred from one hand to the other, despite the fact that, taken point by point, they are identical, as Kant goes on to say in the *Prolegomena*, in the same context.

In other words, when viewed point by point, the gloves are identical (isomorphic and symmetrical, as if one were the mirror image of the other); viewed together as a single whole (system), however, the gloves prove to be different objects which, although still isomorphic, are nevertheless non-interchangeable—their *isomorphism* is a *crossed isomorphism* (they are *antisymmetric*, in the sense I have proposed).

The fact that the *objects of our empirical experience* appear identical to their *representations* is nothing more than an *illusion*, because, in reality, through our sensory intuition we do not *determine things as they are in themselves*, but only the *form under which they can appear to us*.

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[13] **Immanuel Kant**, *Prolegomena zu einer jeden künftigen Metaphysik*, AA 4:285-286

In short, the *epistemological paradox* to which Kant refers is that, *when considered in detail, things seem to have an autonomous existence in space and time (they appear identical to their representations)*; yet, *when considered together as a single whole (system), they appear to be nothing more than appearances constituted by the subjective conditions of our experience (the apparent coincidence between things and their representations is merely formal and illusory, though pragmatically useful)*.

The incandescent core of the *Critique of Pure Reason* is the *Antithetic of Pure Reason*—the chapter in which Kant presents the *four cosmological antinomies* (in essence, *four paradoxes*) [14] and their *epistemological resolution* through a *clear distinction between perspectives of thought*.

The *paradox—in my view*—consists in the *alternating play of epistemological perspectives*, a kind of *perpetuum mobile* of thought that is not only impossible to stop or exclude from our lives and thinking, but that it would even be wrong to suppress, because this *play of perspectives* gives rise both to our *scientific knowledge* and to our *consciousness (self-awareness)*.

The *bird of science* possesses not only two wings and two legs, but also *two eyes*; otherwise, it would be unable to estimate distances and would collide with every obstacle along its path.

*Sensibility* and *understanding*, *physics* and *metaphysics (speaking generically)*, are the *two eyes of the mind*, which, only through the

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[14] For an earlier formulation of this idea, see: **Marcel Chelba**, *"Antinomia raţiunii pure şi paradoxele logice,"* in *Logică şi ontologie* (Bucharest: Editura Trei, 1999). English rendering of the titles: *"Antinomy of Pure Reason and Logical Paradoxes,"* in the collective volume *Logic and Ontology*. The volume is in Romanian and has not been translated. (Hereafter: **Antinomy of Pure Reason and Logical Paradoxes**).

*synthesis of their representations*, are able to generate a *genuine object of knowledge*.

This is why the return to Kant has today become absolutely necessary.

The time has come for *metaphysics*, within *science*, to take the next step forward, in order to illuminate and guide our empirical groping towards new horizons.

The *epistemological parable* proposed by McGilchrist *("Master–Emissary")* is a *revelatory metaphor*—what I call in this letter *one of the great acts of pattern recognition of our time*. Yet science cannot stop here—the step forward made by McGilchrist is only a new beginning.

The *rehabilitation of metaphysics as a science of the whole* (Kant's unfinished project), together with the *revealing of the immanent connection between modern science and Kantian epistemology*, formed the central axis of *Introducere Critică* (2004)[15]—my debut book.

It is this same scientific project on which I continue to work even today.

Iain McGilchrist has provided the final elements that enabled me to bring to completion and fully articulate a philosophical project first initiated by Kant two centuries ago.

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[15] **Marcel Chelba**, *Introducere critică. Despre posibilitatea metafizicii ca știință în perspectiva filosofiei critice kantiene* (Crates, 2004)—***Critical Introduction: On the Possibility of Metaphysics as a Science in the Perspective of Kantian Critical Philosophy*** (English translation of the title; the book is in Romanian and has not yet been translated). (Hereafter: ***Critical Introduction***)

# **First Letter:** *On Iain McGilchrist's Implicit Physiological Confirmation of Kantian Stereoperspectival Epistemology*

Dear Iain,

You can't imagine how happy I was when I discovered you on YouTube.

This man, I thought to myself, is looking for the same thing as I am, but he started his digging at the far end of the tunnel, on the other side of the mountain, exactly where I would have wanted to end up.

You started from empirical experience and are trying to reach metaphysics, in order to give your empirical certainties an intelligible form (*Gestalt*), and I started from metaphysics and am trying to reach empirical experience, in order to give my theoretical (metaphysical or transcendental, in Kant's sense) certainties an empirical content. For, as Kant put it in his own way, ideas without empirical content are pure fictions, and our sensible perceptions, without integrating concepts, are just *groping in the dark*.

I quote here the famous passage from Kant—which you also quoted in *The Master and His Emissary: The Divided Brain and the Making of the Western World* (2009)—but I will reprint it a bit more extensively (for other readers):

"Wollen wir die *Rezeptivität* unseres Gemüts, Vorstellungen zu empfangen, so fern es auf irgend eine Weise affiziert wird, *Sinnlichkeit* nennen: so ist dagegen das Vermögen, Vorstellungen selbst hervorzubringen, oder die *Spontaneität* des Erkenntnisses, der *Verstand*. Unsre Natur bringt es so mit sich, daß die *Anschauung* niemals anders als *sinnlich* sein kann, d.i. nur die Art enthält, wie wir von Gegenständen affiziert werden. Dagegen ist das Vermögen, den Gegenstand sinnlicher Anschauung zu *denken*, der *Verstand*. Keine dieser Eigenschaften ist der andern vorzuziehen. Ohne Sinnlichkeit würde uns kein Gegenstand gegeben, und ohne Verstand keiner gedacht werden. Gedanken ohne Inhalt sind leer, Anschauungen ohne Begriffe sind blind. Daher ist es eben so notwendig, seine Begriffe sinnlich zu machen (d. i. ihnen den Gegenstand in der Anschauung beizufügen), als, seine Anschauungen sich verständlich zu machen (d. i. sie unter Begriffe zu bringen). Beide Vermögen, oder Fähigkeiten, können auch ihre Funktionen nicht vertauschen. Der Verstand vermag nichts anzuschauen, und die Sinne nichts zu denken. Nur daraus, daß sie sich vereinigen, kann Erkenntnis entspringen. Deswegen darf man aber doch nicht ihren Anteil vermischen, sondern man bat grosse Ursache, jedes von dem andern sorgfältig abzusondern, und zu unterscheiden. Daher unterscheiden wir die Wissenschaft der Regeln der Sinnlichkeit überhaupt, d. i. Ästhetik, von der Wissenschaft der Verstandesregeln überhaupt, d. i. der Logik."[16]

So, you look to metaphysics for an adequate *conceptual framework*, *interpretative models*, and *categories* (classification criteria) to make your impressive collection of empirical data intelligible, and I look to the physiology of feeling and thinking for empirical confirmations of the Kantian epistemological apriorism, which I find perfectly coherent.

Empirical certainties seek their legitimacy (universality) in the intellect, and theoretical (transcendental) certainties seek their probity (connection with empirical reality) in sensibility.

[16] Immanuel Kant, *Kritik der reinen Vernunft*, A51–52/B75–76. (The italics are Kant's emphasis; the underlining is mine.)

Sensibility and intellect are two fundamentally different faculties of knowledge that seek and court each other in a true nuptial dance of feeling and thinking.

Science is the cosmic marriage between heaven and earth, in which the concepts of metaphysics are wedded to the thrills of sensibility.

Science without metaphysics is not possible.

Despite all the persecutions it has endured down the ages from materialists, empiricists, and pragmatists, or rationalists, logicists, and positivists, *Metaphysics* sits quietly and works on in the kitchen of the natural sciences, like *Cinderella*.

In Kant's view, as you know, *metaphysics (as a science)* seemed like a kind of *Hecuba* (the queen who was dethroned and driven away by her own relatives). This is precisely why the fundamental epistemological aim of Kantian critical philosophy was to restore the *dignity of metaphysics as a science*—but not in the sense of Aristotle, who, as in his father's *drugstore*, saw in the *natural sciences* only *a system of cupboards and drawers for the storage of our empirical knowledge*, but in a new, subtler sense, which gave the *imagination* the leading role, not *sensitivity*.

In Kant's view, *science* is in fact a *game of imagination and perception*, in which *imagination* is always one step ahead and *perception* is always following in its footsteps—to confirm it or not.

If the natural goal of evolution is *knowledge* (in order to spot opportunities and dangers as quickly as possible), then the most efficient way to develop knowledge is not by *refining the senses* but by *refining the imagination*, for the *quickest perception is anticipation*.

*The true vocation of the imagination is the anticipation of empirical reality*, but not as *existing in itself and for itself* (as Hegel would have said), only as *being possible*.

Man has not reached the top of the food chain on Earth because he has the most *refined senses* (he is mediocre in that respect), but because of the most *prodigious imagination*.

The main function of the brain and the entire nervous system, from the periphery of the sense organs to the outermost layer of the cortex, is not the *perception of reality*, but its *anticipation*.

If *sensation is the product of empirical reality* (the imprint it leaves in our sense organs), *perception is the product of imagination*. *Perception* is a subjective work of *archaeological reconstruction of a superseded empirical reality*, altered or even suppressed precisely by our *act of knowing*—an epistemological phenomenon evident in *quantum mechanics*, but present in all the other sciences. For example, *the way opinion polls influence opinions—in politics, sociology, psychology, marketing*, etc.

Sensations are just the shards of empirical reality and the synthesized products of our *productive imagination* are the material with which we fill in the gaps between these shards. The more plausible this *virtual historical reality* is, the stronger the belief will be that what we perceive is *historical reality itself*.

Right from the outset, without the synthetic (*a priori*) concept of the *thing-in-itself* we could not literally perceive any object as such. What is an *object*? Does nature tell us where an object begins and ends? We are the ones who distinguish objects in nature by a kind of epistemological cutoff governed by our own sensibility and our own interests, *that is* by our own *attention* (in your terms).

Nature is an 'aggregate of objects' or a 'machine' only to the extent that we perceive and conceive it as such.

But, as you point out, this is not our only way of seeing nature. It is specific only to the *left hemisphere* (the *analytical hemisphere*, I would call it).

Fortunately, we also have a *right hemisphere* (the *synthetic hemisphere*)—our saviour hemisphere when the *left hemisphere*, in its procedural (algorithmic) euphoria, is rushing madly, like a train without brakes, towards a precipice.

The *left hemisphere*, I would suggest, functions as a kind of *cognitive autopilot*, shaped by nature to handle routine decisions in familiar situations, and its help is important when, during flight, fatigue, or boredom set in. But as soon as flight conditions take an unexpected turn for the onboard computer, the *real pilot (right hemisphere)* must take control and responsibility for the flight. The *left hemisphere*, in its algorithmic loyalty, always feels *innocent*. Moral responsibility for those actions is always assumed by the *right hemisphere*, because it is the *Master* (the creator of the software), and that is how it should be.

Of course, the *autopilot software* must be continuously upgraded. With each new unforeseen situation solved *ad hoc* by the *right hemisphere*, the *left hemisphere* is enriched with new *successful algorithms* and each time it becomes convinced that it now knows everything and can operate independently.

The difficulty in upgrading the left hemisphere's software lies in the fact that, for every constructive initiative of the *right hemisphere*, the reaction of the *left hemisphere* is conservative, that is, it resists change—just like HAL, the *autopilot* of the spaceship in *2001: A Space Odyssey* (Arthur C. Clarke's science fiction story and Stanley Kubrick's film),

which decided to eliminate the entire crew in order to save itself.

When faced with new challenges, the *success rate* of solutions proposed by the *right hemisphere* must be well above 50 per cent for the *left hemisphere* to be persuaded to alter its behavioural reflexes. Experiments have been conducted to determine the *probability of success* required for a woman or a man to change a habit or a concept. It appears that this *success rate* is considerably higher for women than for men. Women take *risks* much more *cautiously*, which is natural, given their *maternal instinct*. I take this to be a *physiological confirmation of the conservatism of the left hemisphere* (that is, of women, in a broad sense).

The more we progress in knowledge (the more crushing the amount of accurate knowledge we accumulate), the more indispensable and self-sufficient the *left hemisphere (*Emissary*)* feels, and to exactly the same extent its desire to free itself from the tutelage of the *right hemisphere (Master)*.

The *political history* of the world moves in the direction of satisfying the interests of the *left hemisphere*, that is, *standardization*, *regulation* and *bureaucratization* of our mundane existence.

The *spiritual history* of the world moves, by contrast, towards satisfying the interests of the *right hemisphere*, namely, *the pursuit of a global vision of the world*, *in the service of a more secure and responsible art of living*.

# **Part I.** *Epistemological Foundations*

## § **1.1.** *Directed Scientific Perception*

*Scientific experience* is nothing more than *a form of directed perception*, *a way of putting questions to nature about our own hunches*.

> "Als *Galilei* seine Kugeln die schiefe Fläche mit einer von ihm selbst gewählten Schwere herabrollen, oder *Torricelli* die Luft ein Gewicht, was er sich zum voraus dem einer ihm bekannten Wassersäule gleich gedacht hatte, tragen ließ, oder in noch späterer Zeit *Stahl* Metalle in Kalk und diesen wiederum in Metall verwandelte, indem er ihnen etwas entzog und wiedergab: so ging allen Naturforschern ein Licht auf. Sie begriffen, daß die Vernunft nur das einsieht, was sie selbst nach ihrem Entwurfe hervorbringt, daß sie mit Prinzipien ihrer Urteile nach beständigen Gesetzen vorangehen *und die Natur nötigen müsse, auf ihre Fragen zu antworten*, nicht aber sich von ihr allein gleichsam am Leitbande gängeln lassen müsse; denn sonst hängen zufällige, nach keinem vorher entworfenen Plane gemachte Beobachtungen gar nicht in einem notwendigen Gesetze zusammen, welches doch die Vernunft sucht und bedarf. Die Vernunft muss mit ihren Prinzipien, nach denen allein übereinkommende Erscheinungen für Gesetze gelten können, in einer Hand, und mit dem Experiment, das sie nach jenen ausdachte, in der anderen, an die Natur gehen, zwar um von ihr belehrt zu werden, aber nicht in der Qualität eines Schülers, der sich alles vorsagen lässt, was der Lehrer will, sondern eines bestallten Richters, der die Zeugen nötigt, auf die Fragen zu antworten, die er ihnen vorlegt. Und so hat sogar Physik die so vorteilhafte Revolution ihrer Denkart lediglich dem Einfalle zu verdanken, demjenigen, was die Vernunft selbst in die Natur hineinlegt, gemäß, dasjenige in ihr zu suchen (nicht ihr anzudichten), was sie von dieser lernen muss, und wovon sie für sich selbst nichts wissen würde. Hiedurch ist die Naturwissenschaft allererst in den sicheren Gang einer Wissenschaft gebracht worden,

da sie so viel Jahrhunderte durch nichts weiter als ein bloßes *Herumtappen* gewesen war."[17]

In Kant, *the primacy of imagination over perception is not ontological* (as in Berkeley), but *epistemic*.

Concepts do not *condition* the *existence of objects*, but merely *enable* (*allow*, in your terms) their *perception as such*.

It's like the *Perky effect* you mentioned:

On a white screen, in broad daylight, without our knowledge, the pale image of a waxing moon is projected. There is a lower limit to the paleness of that image, at which, if we are not told that an image of moon is being projected, we see nothing, and if we are told, for example, that the image of a 'banana' is being projected, we will immediately recognize the 'banana' on the screen, even in detail. This is what the experiments have shown.

In other words, if we are given *a priori* the concept of an object, we distinguish the object and are convinced of its real existence—but in fact we see only the object of our *mind's eye*[18] and do nothing more than *recognize* it in the flood of impressions that constantly inundates our sensitive faculty. We don't see the 'moon' on the screen, but the 'banana' we expect to see.

What Mary Cheves West Perky (1874-1940) brought out in her experiments is exactly what Kant called *transcendental subreption*, or *transcendental amphiboly*: the permanent (natural) *confusion* we are always making between *imagination* (*Vorstellung*) and *perception* (*Wahrnehmung*), that is, between the

[17] Immanuel Kant, *Kritik der reinen Vernunft*, BXII-BXIV. (The italics are Kant's emphasis; the underlining is mine.)

[18] Frontal and parietal systems that guide *gaze* and *movement* based on *internal visual representations*.

*objects of pure intellect* (*Begriffe*) and the *objects of sensibility* (*Anschauungen*).

## § 1.2. *'Erkennen' and Imagination*

The fundamental verb of Kantian epistemology is *erkennen*, not *kennen*.

*You cannot see what you cannot imagine a priori as being possible*— this is, in my view, the *motto* of *Kantian stereoperspectival epistemology*.

In Kant's view, empirical knowledge is a kind of *pareidolia*— a process of *recognizing*, in the data provided by the *senses*, the *synthetic a priori forms* provided by the *intellect*.

It is like a *Chinese shadow theatre*. The charm of such a theatrical performance lies precisely in the *recognition*, in those shadows, of heroes and stories known in advance. Otherwise, you literally 'see' (that is, *understand*) nothing. *You look at the world like a calf at a new gate*, as a Romanian proverb says. That is, *you see something* but you don't know *what you see*, you don't *recognize* the *gate* of your house. You have taken all the right steps to return home, yet you are completely confused. In the meantime, the owners have painted the gate a different colour (let's say). The same thing happens with 'empirical reality': by the time we perceive and conceptualize it, it has already changed or metamorphosed.

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End of Preview