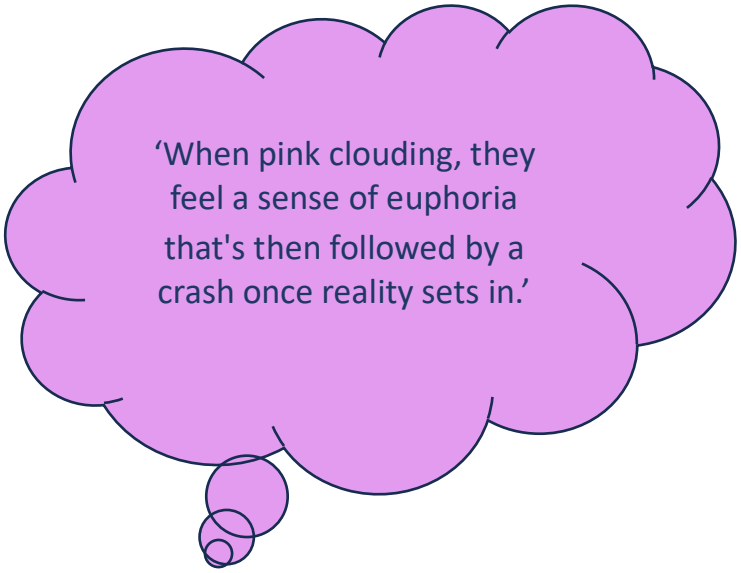
Pink cloud

How the mind

influences our relation

with the reality

of physical disorder



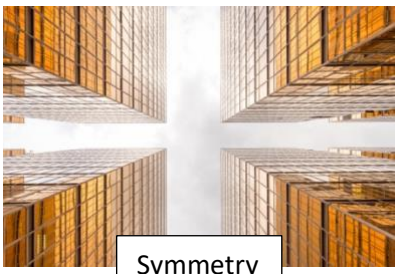
Content

Introduction

Pink cloud is an expression which refers to an addictive condition. In an analogues way, our mind is empowered to experience reality. Thereby we seek for euphoric thoughts, apparently. And I will claim that this goes beyond experience (or physical addiction) and is a metaphysical condition of the human mind. This is embedded in reason.

Reason is like looking to reality through glasses that help us to understand reality.

Glasses influence the way we interpret things, but it goes further. Beyond the way to think reality, ideas are embedded that might be revealed by mathematical approach. Philosophers like Kant and Plato give indications of this logical view upon the mind.



Symmetry

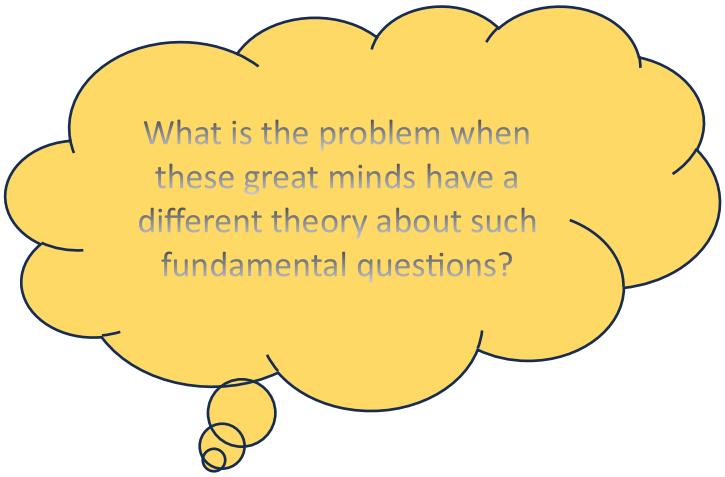
Behind this condition of symmetry and order, physical science and physical laws indicate breaking of symmetry and disorder in real life.We will look at the theory of light of Einstein, principle of uncertainty of Heisenberg and, last but not least, the theory of entropy.

Reason as gift of God creates a condition of tension we have to deal with in one way or another. And being aware of this problem, makes it possible to find a way to do so.

Disorder

This paper is intended to share a philosophical and idealistic view upon the human condition. It is not an official scientific paper and some aspects of theories are limited explained, to keep it more readable and hopefully understandable for the reader. Nevertheless the philosophical and scientific theories do appeal to some knowledge of both. The combination of the two distinguished domains is important to find out what happens if the mind finds out that it has to work with uncertainties on the edge of time and space. Because it is this area where philosophy and physical science and so mind and matter meet.

E. Heemskerk, 21 januari 2024



The answer might be found in the way our mind works, and especially reason.

To explain how it works and what the origin of knowledge is, we will go back in time first. Scientific theories are applied and justified in terms of experimental and objective approach to validate the theories, what we call the scientific method.

Einstein said God does not play dice, Bohr assumed the universe is not deterministic.

Historically, this approach started by the scientific revolution. After the scientific revolution, another more philosophical revolution took place: Enlightenment, with a (second) copernican revolution. Kant thought that the subject constitutes knowledge. We will refer to Kant as main author to judge how knowledge is constituted.

Kant claimed that the human subject structures reality. Knowledge is in origin a product of the mind. The mind works like a window that uses forms of space and time. He calls them transcendental factors of the mind, as a condition to enable us to understand perceptions. In this way, things manifest and reveal themselves as phenomena to our mind. The implication is that the thing in itself (Ding an sich) is not knowable and is not the object of our knowledge, but the limit. So when we look at reality, the human mind has like an anogy of the visual sense, his glasses on so he is empowered to experience reality (the way he does). And this is why (Kant's) philosophy is important and discuss the human condition.

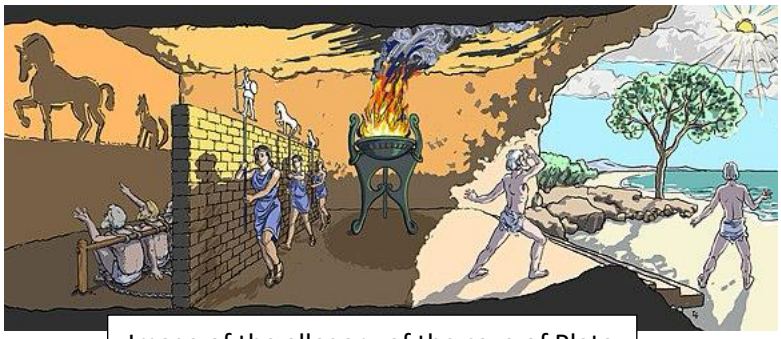


Image of the allegory of the cave of Plato

If you read about the analogy of the cave of Plato, we are pressed to accept that reality is bounded by our senses. Philosophy urges us to step back from regular patterns of thinking to search and ask ourselves fundamental questions about the mind. Plato did so by referring to mathematical concepts and so did Kant. Kant mentioned judgment is not only possible on sensible experience of reality (a posteriori) but is constructed by the mind itself (a priori). An example is that 5 + 7 = 12, which is a synthese by reason alone (without the necessity of an sensible experience).[i] So our mind has the power to extent knowledge without regular experience. The mind has its own rules.

Reason is like a window of glass

Reason sets rules by which the human mind interprets reality. Kants philosophy is interesting but not easy to summarize. In this article we will do some cherry picking and pinpoint and use the philosophy to question the working of the mind and the relation to physical science.

We will start with some information about the way the window of reason works. Kant claimed this window is in basic constituted of schemata which Kant calls transcendental.

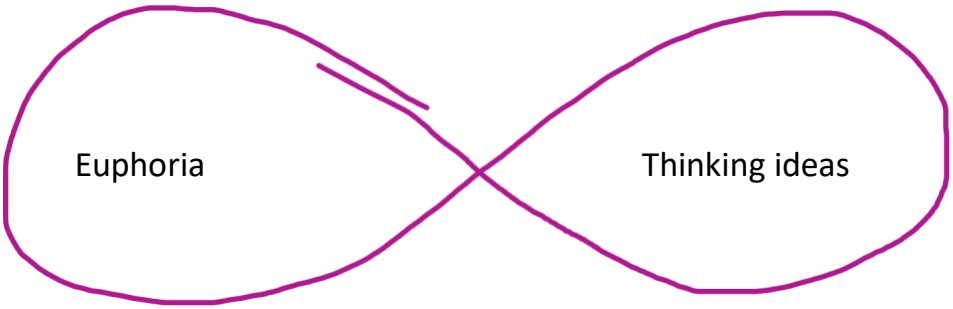
> The mind has by reason its own rules to prescribe the way we experience things.

Schemata are like the rules for the production of images the schemata and are linked to understanding and perception. An important function is that schemata work like rules to understand reality. This is not always easy. For example, reason provides by the way it works antinomies.[ii] According to Kant the rules provide tables we do maths with, to experience time and causal relations in spatial forms. A schema is not an image, but a capacity to form images.

Besides reason has some tools to understand reality that we experience. Like Aristotle, Kant distinguished categories of reason. A category is that which can be said of everything in general, that is, of anything that is an object.
Categories are entirely different from the appearances of objects. According to Kant, in order to relate to specific phenomena, categories must be "applied" through schemata.[iii] That means ‘the window of time’.

So reason enables us to understand the reality of objects in the world. And there are areas in which we develop understanding that do not have a fundamental connection with experience: synthetic judgments a priori.[1iv] These judgments are metaphysical. And with a major step, we enter the world of ideas.

[1] If the concepts are empirical, the intuitions are called examples; if they are pure concepts of the understanding, the intuitions are called schemata. These transcendental schemata meaningfully join the empty "thoughts without content" and the blind "intuitions without concepts. The categories, or pure concepts of the understanding, are a priori logical innate forms that are conditions of the possibility of things in general, or of things as such. A thing can become a known object of thought when an a posteriori sense impression is comprehended through the forms of the categories. Categories and sense impressions are totally different from each other.



For metaphysical ideas we have to learn more about concepts that do not use schemata in order to exhibit their empirical bases: rational concepts (ideas of reason) and Platonic Ideas. Ideas are characterized by a lack of connection between abstract thoughts and concrete sense perception.

Ideas of reason

While pure concepts of understanding, empirical, and pure sensible concepts are directly exhibited and made sensible through schemata, ideas of reason are indirectly exhibited through relations by the use of symbolic analogy. These ideas are God, freedom, and immortality, according to Kant.

Plato's ideas

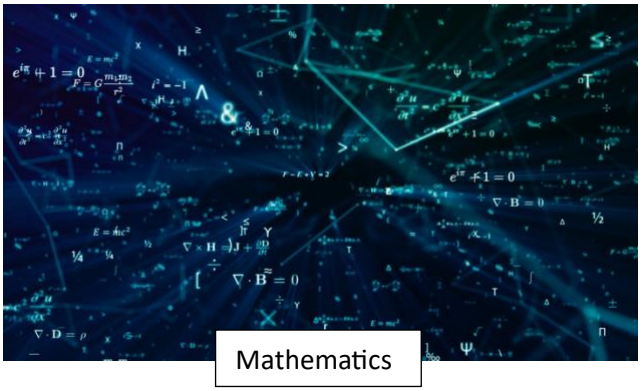
Plato's Ideas (also known as forms or more modern, archetypes) are concepts that function as patterns or models. They are related to objects in the experienced world. Ideas are related to natural objects or their perceptual representations by the processes of participating and copying. The particular objects which we perceive are imperfect copies or reflections of the eternal patterns.
We strive for the highest good, or better, the idea of the highest good. Only philosophers might reveal the authentic forms of reality by mental and philosophical education and training.

According to Kant, we are not able to reach the highest good, wherein the perfect goodness and the perfect happiness are congruent, on earth. We are able to experience satisfaction, that is a negative pleasure of existence. In that case you need nothing, but happiness you cannot manage transcendental salvation in nature.

The fall and introduction of choice confirm the lost paradise we are confronted with. Even holiness in the afterlife is unreachable for creation, and only God is infinite and sacred.[v] Still, despite of this unreachable experience of these ideas, we try to bridge the gap by metaphysical thoughts.

Mathematics is idealistic language, not of nature

Reason imposes perfection and infinite ideas like God, freedom and immortality. We have an imprint to approach these ideas. We know that mathematics and especially algebra (calculus) represents language to express infinite and imaginary numbers. So this science is a way to use reason to develop a pathway to heaven.



Mathematics

It is important to mention that we do not look out the regular window of reasonable understanding, if we think metaphysical ideas in pure form. If a category is not schematized, then it has no reference

to perception. An unschematized category can be thought, but can not be known. If something can never be perceived, it can never be known. Schemata represent things in general as they appear, not as they might otherwise exist. Ideas are not anchored in schemata and do not represent an object. Metaphysical ideas that are not related to time, like heaven, are products of unschematized categories. They can be thought, but not known.

These ideas are related to inner sense. Kant claimed that time is the only proper and appropriate transcendental schema because it shares the a priori category's generality and purity as well as any a posteriori phenomenon's manner of appearance. So time rules the inner sense and outer sense, whereas space seems to rule more the outer sense. So experience is spatio-temporal. Inner sense may be exclusively temporal.

When we use algebra to extent knowledge of the infinite and imaginary numbers, we use a priori concepts. Indeed, the quaternions of Hamilton (a real number and the imaginaire numbers i.j.k) are logical tables, and in a way comparable with the synthetic judgment a priori of Kant. We do not find these tables in sensible experience, but only in our minds. And for some reason, we project these tables upon the universe and tiny things. For example, the mathematical table of Hamilton is the basic principle of quantum physics.[2] Why do we think this is important? We might try to give an answer upon the question if ideas are to be confirmed. But since we are not able to know regulative and infinite ideas, because they lack certain schemata, we turn from the inner sense to the outer sense. We use intuitions to verify or demonstrate the reality of our concepts. In

[2] Verstraete, F., Broeckaert, C., *Waarom niemand kwantum begrijpt en iedereen er toch iets over moet weten*, 2023, Terra – Lannoo, p.33.

that way, abstract thinking lands on the solid ground of knowledge or else it might be seen as a mere idle display of considerations.[vi]

For concepts of understanding we rely on objects in the world. And like we have seen, time is a ruling factor. All events are modifications of one eternily persisting substance.[vii] Furthermore the idea of objects in time, contains the idea of causation.[viii] Especially causality is a central concept of understanding of physical science. But also, and we are not always aware of that, because we take it for granted, symmetry. In physics symmetry is the most powerful concept, and might be judged as God.[3] In reality we observe structure and order, after symmetry is broken. Symmetry is an a priori assumption of the mind, a starting point.
Our mind is preconditioned to presuppose symmetric relations. In abstract algebra, the group theory is used to solve the most complex mathematical problems. But it is also used in quantum physics to explain everything we cannot see in terms of electrons, neutrons, bosons and quarks, from the perspective of symmetry.[4]

Reality kicking in

Time is a transcendental schemata. What does physical science tell us about time? Einstein formulated the property of light (speed) as constant, which might be an axiom. Philosophical it is interesting if this is an axiom of our mind that indeed has to assume this, because speed of light is absolute in terms of time. And time and

[3] Verstraete, F., Broeckaert, C., *Waarom niemand kwantum begrijpt en iedereen er toch iets over moet weten*, 2023, Terra – Lannoo, p. 38
[4] Verstraete, F., Broeckaert, C., *Waarom niemand kwantum begrijpt en iedereen er toch iets over moet weten*, 2023, Terra – Lannoo, p. 48

light have, how do I put this, a symmetric relation. If the speed of light is exceeded (by an object, theoretically), time inverses. Because this is not imaginable, time of being and experiences are related to what our mind tells us to think.[5] We structure reality by reason and so our mind might be biased. Can't we, philosophically speaking, ask ourselves the question that if objects don't have the speed of light, symmetry is broken and so order is provided? Because the symmetry is broken, we are able to observe order that is not symmetric. Pauli spoke of the principle of exclusion.[ix][6] It is the strongest force in nature.[7]

We assume a condition in universe that is symmetrical in analogy to the rule of time. When we think symmetric patterns, we are a priori conscious of divine coherence, in divine beauty (symmetry is the God of nature). This coherence might be effected by the rule of reason to think unity. But this is not an act of nature, but a property of the mind.

Systematic unity has not been experienced in nature. Reason presupposes unity in nature a priori to make the systematic organization of empirical concepts and laws a rational pursuit.[x]

If we look at the results of the study of physical science, we have to conclude that our schemata are pushed to the edge. The Greek oracle of Delphi proclaimed 'know thyself'. Is quantum physics not a discovery of the human mind in reality? The transcendental schemata are possibly not simultaneous applied if intuition is in its application under pressure. That might be the case if we want to search for not seeable matter in time. The theorem of Heisenberg gives us an indication what happens then.

[5] Kant explained in the Critique of pure reason the analogies are rules for the connectivity between experiences or rules for relations between appearances.

[6] A system of particles whose wave function flips sign if any of two identical particles in the system interchange positions is said to follow the Fermi-Dirac (anti-symmetric) statistics, or simply Fermi statistics, and the particles are called fermions.

[7] Verstraete, F., Broeckaert, C., *Waarom niemand kwantum begrijpt en iedereen er toch iets over moet weten*, 2023, Terra – Lannoo, p. 51

The breach of uncertainty by physical science

Heisenberg proved that there is uncertainty at the moment of measurement of a tiny object when we observe the exact location of this object in space or vice verse that there is uncertainty of the specific place of the object when we measure its exact time. Heisenberg claimed that the observator changes things.[8] This is interesting, because this claim opens the question what the role of the observer is in that case. Could this be linked to the way we look out of the window of reason and the rules that precondition how we experience reality? Is it possible that if we abstract from the seeable and reflect our symmetrical mind from the inner world, to the outer reality, symmetry is accomplished in time and space, without a specific object in space? Is there a breach in the way we think if we force the mind to look after the place of the object, and break through the matrix of symmetry and possibility? If we follow the basic rule of time, we have, because of the uncertainty of Heisenberg, to give up causality (in space) and remain thinking in tables of possibilities. Otherwise we have to choose for the uncertainty of time and this has implications for the rule of reason that prescribes causality too.[xi] And what happens then, if we no longer walk with the pink glasses and feed mental conditions with harmonious ideas?

[8] The causality predicts, based upon rules we think, necessitty, but may be the influence of our mental mapping is stronger than what we experience, because of the distance of observable objects, which are quantums? Is this what happens if the limits of our understanding vanish, so a disconnection between spatio temporal forms?

Breaking symmetry to the ground

In contrast to the symbolic and symmetric relations our mind postulates, nature goes its own way.
The laws of thermodynamics give analogues and symbolic concepts. The symmetry is found in the principle of the first law, but if we go through the surface, we find disorder. We are focused upon symmetry, unification y our analogues way of anticipating within the time frame, but the substance we lean on modifies to more disorder. Let we take a closer look.

The laws of thermodynamics are fundamental principles in physics that describe the behavior and transformation of energy in physical systems. These laws provide a framework for understanding and predicting the behavior of energy and its relationship to other quantities, such as temperature, pressure, and entropy.
The most important two parts of the law are the law of conservation of energy and entropy.

The first law of thermodynamics (energy conservation) states that energy cannot be created or destroyed in an isolated system. Instead, it can only be transferred or transformed from one form to another. The total energy of a closed system remains constant.[9xii]

The second law of thermodynamics (entropy) introduces the concept of entropy, which is a measure of the disorder or randomness in a system. It states that the entropy of an isolated system tends to increase over time unless energy is supplied to maintain or decrease it. This law helps explain why some processes are

[9] For this law of conservation is an empirical event, Kant will not have meant the substance of the first analogy. The underlying substance that has to persist is a precondition for the law of conservation of mass.

irreversible and why systems tend to move towards a state of maximum disorder or equilibrium.[10]

So when we take a closer look at reality and physical sciences, analogies of causal relations within spatial temporal modifications, confront us with an increase of disorder. Mentally, the human mind emphasizes the symmetric ideas, in the inner sense to maximize the euphoric moment, but the spatial temporal outer sense hints towards struggle and disharmonious, asymmetric patterns. We experience a less pink world as the rules of our mind ask from us and have to deal with. And there several ways man deals with this relation, that will be discussed shortly and have more to do with mental attitude.

Discussion

One of the problems of the relation between the mind and physical science, is that idealistic philosophy says there is a catch in physical science. We are not able to know the objects itself, and so the outcomes of science are bounded and limited by reason and its rules and ideas.

An asset of physical science is the relative autonomous approach of physical review at a cutting surface of mind and matter. It urges the mind to the edge and beyond to an unknown spatial temporal condition of conceptual thoughts. May be we learn more about our condition in reach and limitation by combining insights.

[i] en.wikipedia.org/wiki/Analytic–synthetic_distinction

[ii] https://en.wikipedia.org/wiki/Kant%27s_antinomies

[10] Symmetry is a fundamental concept in aesthetics and art. It is the balance between different parts of an object or a work of art. Kant argued the human mind imposes order on the world through its cognitive faculties, such as space and time. In other words, the world is not chaotic, it is our perception of it that the modification of the substance disturbs a perspective or increase of symmetry or order.

[iii] en.wikipedia.org/wiki/Category_(Kant)
[iv] en.wikipedia.org/wiki/Schema_(Kant)
[v] pure.uva.nl/ws/files/3322604/4328_UBA003000184_012.pdf p.252, 253, 261
[vi] en.wikipedia.org/wiki/Schema_(Kant)
[vii] https://www.youtube.com/watch?v=1KUw9iHGPYk
[viii] https://www.youtube.com/watch?v=DyGSt3OznZY
[ix] https://www.sciencedirect.com/topics/physics-and-astronomy/pauli-exclusion-principle#:~:text=The%20Pauli%20exclusion%20principle%20stipulates,occupy%20the%20same%20quantum%20state.
[x] repository.library.brown.edu/studio/item/bdr:1129192/PDF/ p.150
[xi] https://www.youtube.com/watch?v=DyGSt3OznZY
[xii] https://www.youtube.com/watch?v=ZNEBndW5E5M