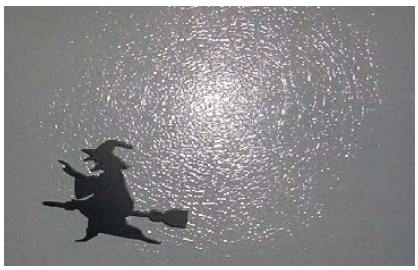
THE GLOBAL SCIENTIFIC METHOD



GLOBAL EDITION

Hobbies: chess, padel and philosophy among others

José Tiberius is the main author of Molwick publisher books.

With over 40 million visitors and two million books downloaded in PDF format, he is undoubtedly one of the most widely read authors in Spanish of scientific essays in the current millennium.

There are more than 10000 links to Jose's website, where his books on theoretical physics, theory of evolution, quantitative genetics, cognitive theory, philosophy of science, metaphysics, and children's stories are showcased in five languages. Many of these links –to all these different fields– come from universities, projects done by university students and blogs created by teaching professionals and Educational Specialists.

Moreover, it is interesting to note that these links are usually together with links to Wikipedia or pages such as National Geographic.

♦

The only antidote for the egocentrism
of pure reason is Love.

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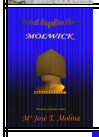	*Global Cognitive Theory (Book series)*	978-84-15328-73-5 978-84-15328-74-2* 978-84-15964-00-1**
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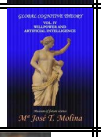	*Willpower and Artificial Intelligence*	978-84-15328-17-9
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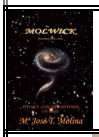	*Physics and Metaphysics of Time*	978-84-15328-84-1 978-84-15328-80-3* 978-84-15964-02-5**
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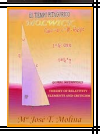	*Theory of Relativity, Elements, and Criticism*	978-84-15328-81-0
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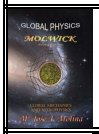
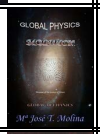
	*Global Mechanics and Astrophysics*	978-84-15328-37-7 978-84-15328-83-4* 978-84-15964-03-2**
	*Global Mechanics*	978-84-15328-35-3
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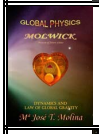	*Dynamics and Law of Global Gravity*	978-84-15328-91-9 978-84-15328-86-5* 978-84-15964-04-9**
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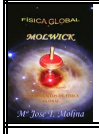	*Global Physics Experiments*	978-84-15328-88-9 978-84-15328-89-6*
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THE GLOBAL SCIENTIFIC METHOD **PAG.**

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Museum of the science of future

Philosophy of evolution, history, and life

New paradigms of Physics, Biology, and Psychology

GLOBAL SCIENTIFIC METHOD

1. PHILOSOPHY OF SCIENCE

Our planet, the Earth, is one of the billions of planets, infinite perhaps, in the immense Universe. Since the very beginning, living beings have tried to understand life and seek out the logic of the world, which explains the origin and the development of philosophy.

In order to understand why both the evolution of science and the scientific method have considerably failed with the acceptance of very weak paradigms and theories from the common sense viewpoint, *Molwickpedia* books include some remarks on the philosophy of science.

Many of those remarks are now present in this book of the Global Scientific Method.

The thinker - Rodin

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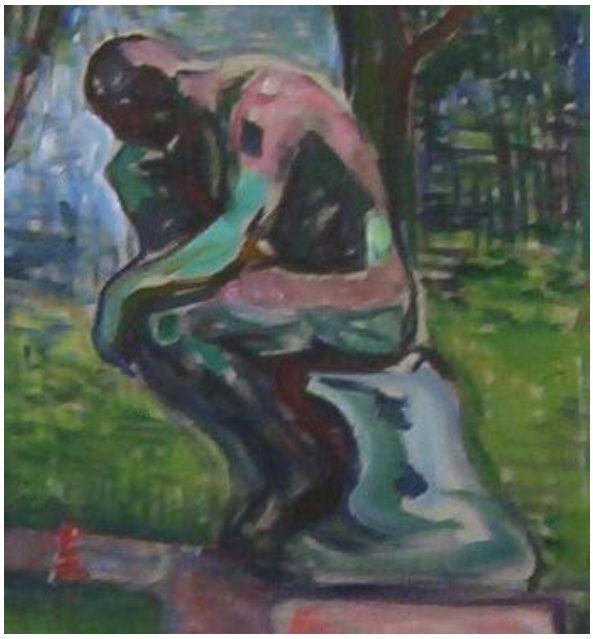


At the same time, the defense of the current scientific method seems vital because it is one of humankind and life's great conquests. However, it would be convenient to cast off some of the nineteenth-century millstones and twentieth-century obstacles, among which we would emphasize their atheistic complexes and utilitarian shroud, respectively.

1.a) Concept of science

If we contemplate the concept of science or ask ourselves what science is, we will have to turn to an external discipline, the philosophy of science.

Without doctrinal presumptions, philosophy divides into three broad groups: the methodology of pure philosophy or epistemology, the study of scientific knowledge or philosophy of science, and metaphysics, or meta-science, if preferred.

Philosophy analyzes the world of what can be possible, and science is limited to the proven world. If the philosophy of science has no proof, it restricts concepts, while general philosophy needs proof to limit a concept.

The Philosophy of science understood as a level of reasoning which leads to the concept of science and not as an academic discipline that uses many Latin or Greek words and quotes countless authors. It is like the self-limitation that the little boy philosopher sets for himself to discover those wonders of the new world that have profound common sense.

The aim of this book is not to be an exhaustive treatise about the scientific method; on the contrary, it just presents some reflections on certain relevant aspects.

Chapter I dedicates a whole section to scientific knowledge and another one to its sources and characteristics.

Perception, intuition, and logic are the three weapons used by man to strengthen his control over nature. As we will see, the so-called scientific method has variants based on these three instruments.

Perception and logic are the two polar concepts, while intuition would be in the middle, which allows it to formulate theories that surpass the theories developed through logic and perception or the combination of both. To a certain extent, all theories are a combination of the three.

On the other hand, even from the philosophy of science perspective, we cannot deny that sometimes madness made possible science evolution, by proposing topics that previously seemed impossible. On other occasions, what has made science advance has been love, which perhaps Newton referred with his beautiful story of the apple.

Chapter II discusses the characteristics of the scientific method, criticizing some parts of its terminology and proposing a more straightforward categorization of its stages and steps. Taking the opportunity, there also two novel scientific methods and a brief section about the sociology of science regarding the acceptance of new theories.

For sociological reasons, like an unattainable idealistic perfectionism, the philosophy of science distorted in the twentieth century with an almost constant rejection of unquestionable advances of logical and scientific knowledge, while embraced the illogical as far as it represented the interests of individuals or groups. Perhaps this happens because the development of both the philosophy of science and the very concept of science is still in the stage of intrepid adolescence.

In other words, the scientific community tries to hide its limitations in the complexity and supposed nature's lack of logic; yet these apparent characteristics are the reason for its existence; because human beings still have not understood most of nature's complex logic.

Chapter III of this book talks about the philosophy of science applied to complex systems research.

Regarding scientific advance, the *Fairy Tales* book has a horror story about the Sly ones of the Inquisition, which, as far as possible, is better to ignore. He who warns is not a traitor! In other words, this book devotes to modern skeptics.

Chapter IV focuses on revising the most relevant historical errors that the scientific method has made and continues making since it uses a philosophy of science adapted to sociological needs.

Let us look at some examples lacking common sense and its regular recurrence.

- *The existence of extra solar planets*

  Why has the existence of planets not been scientifically accepted until their detection, and yet there is no problem admitting that the speed of light is constant in the entire universe with no proof either?

  Of course, the probability of planets existing outside of the solar system was very close to one, for the probabilities that the human brain handles typically.

  Probability is, without any doubt, an element linked to the concept of science.

  The logical reasons for their existence are much more potent than the discoveries that indicate their existence.

  Science did not accept it because it was not necessary nor urgent, but in fact, most humans thought that they did not exist or had unreasonable doubts, which is quite different from being almost sure. On the other hand, the mere possibility of absolute certainty is not easy to achieve due

to the influence of philosophy.

- *The existence of extraterrestrial organic life*

  Likewise, from a logical viewpoint, there can be no reasonable doubt of the existence of organic life outside of our planet or solar system, accordingly with the game of purely mathematical probabilities.

- *The existence of other concepts of life*

  Other modern or classic concepts of life have a more immediate problem; there is no proof of their existence on Earth. That is fine. However, another thing is to deny it, as many scientists, with Darwin leading the group, attempt to do. With denial occurs the same as with affirmation: It needs proof!

  Given the significance of an accurate interpretation of the scientific method and the goal of personal impartiality, when evaluating the new concepts in evolution, a special section has been included in chapter IV mentioned above. It deals with the limits of knowledge from personal and social psychology and the sociology of science that could affect the acceptance of one or another evolutionary theory.

  The book Conditional Evolution of Life has a detailed exposition about both the criticism of Darwin's theory and an alternative proposal.

- *The controversy about the definition of intelligence*

  This subject has emotional connotations. Not only are there attempts to deny its genetic nature (at least, it is evident at a biological species level!), but even to reject the existence of the very concept of intelligence and the possibility of its quantification.

At the same time, the term emotional intelligence does not present any problems, although there is no test for its quantification.

A natural development of the Conditional Evolution of Life has been the Global Cognitive Theory divided into four books about the brain, intelligence, memory, and the will.

With greater success than expected, the EDI Study - Evolution and Design of Intelligence demonstrates the innovative theory about the elegant intelligence, based on the longitudinal data from families' IQ (father, mother, children, siblings, and twins) from the *Young Adulthood Study, 1939-1967*

- *Physical reality*

The temptation of simple explanations of reality must be resisted, as well as to adamantly reject some aspects of witchcraft or black magic within the domain of the philosophy of science, such as:

- Empty space with content
- Negative energies
- Objects that are in two places at the same time
- Tautologies presented as scientific theories
- Effects preceding their causes, or things that go out before going in
- Instruments that change their measurement without their measuring mechanisms being affected
- Forces at a distance or pure telepathy
- Dimensions and imaginations that cannot be confirmed or refuted

Effects on the physical world of pure mathematical abstractions

- Playing on words and language requirements in physics

Finally, as expected, chapter IV contains sections about both Classical and Modern Physics.

1.b) Scientific knowledge vs. personal knowledge

An element of the experience is the methodological doubt since it is healthier to understand things than to learn them. However, of course, one needs to set up individual limits on personal knowledge as there are things that we do not understand but accept because they are generally accepted. To this extent, personal scientific knowledge is much more limited than general scientific knowledge.

There is the distinction between general beliefs, although scientific, and what an individual thinks, believes, or accepts as solidly valid, so solidly that it cancels out the possible contradiction with the generally accepted scientific knowledge.

On infrequent occasions throughout student life, there are reasonable doubts about the veracity or correctness of the subject matter made up part of generally accepted scientific knowledge.

In my personal experience, the first thing I remember was Darwin 's theory of evolution due to random mutations and the approach of the dominant and recessive genes, which refer to the **Laws of Mendel.** Luckily, a structured set of alternative or complementary ideas in line with the knowledge and reflections about life appear in the book on the General Theory of Conditional Evolution of Life (CEL)

The second time doubting the generally accepted scientific knowledge, which, due to its characteristics, is very similar to the previous, was the supposed non-hereditary character of intelligence defended by the official doctrine of psychological and economic sociology. I have always thought that there is a significant influence of genetic inheritance on brain abilities

due to my education, experience, and nature.

Also, in Molwickpedia, there are a four-book series on brain abilities, titled the Global Cognitive Theory, and the EDI Study, which is empirical research scientifically showing the hereditary character of relational intelligence, and the very existence of theological or finalist evolution.

Albert Einstein's relativity of time was the third element, not transparent, and even less clear when, subsequently, trying to comprehend essential explanations in other books about Modern Physics. As previously discussed, the problem was not to understand it but to believe many people do not know what they are talking about. Excuse the expression!

After entirely understanding the concept of time relativity of Modern Physics, it looks like an attempt to complicate the unknown and protect professional and national interests. Nevertheless, Molwickpedia has an additional seven books Physics and Metaphysics of time and space.

The previous four doubts are of great transcendence for being linked to essential concepts of our life, such as love, time, evolution, intelligence, and inheritance. At the same time, we must keep in mind that physics, biology, genetics, and neurosciences have progressed a lot lately.

The tree of knowledge

The last considerable methodological doubt refers to the famous expression of the *Golden Age of Castilian literature;* it never made sense to think that the Castilian literature that

followed were inferior. It would be more like that the famous golden age corresponds to an adolescent stage and of rapid growth, but not of maximum splendor.

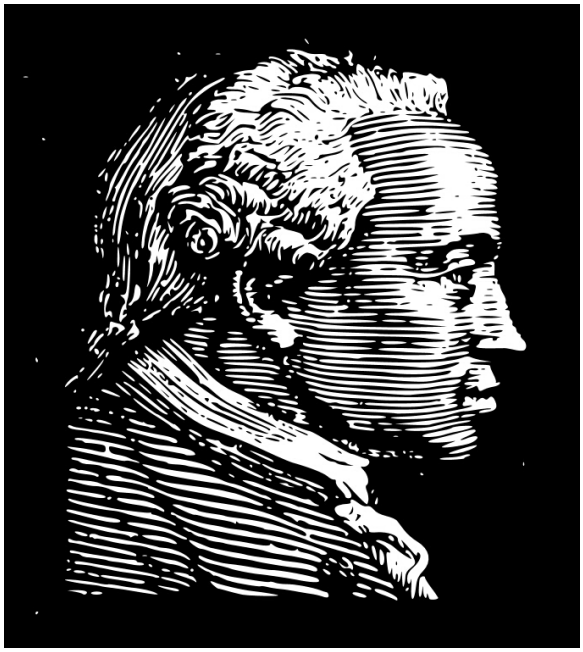
Better said, hope not to end up writing a book about the growth and characteristics of languages as vital impulse systems.

1.c) Knowledge sources and its characteristics

Humans have an innate tendency for learning.

The commonly categorized popular knowledge is so broad and complex that it uses contextualized expressions to transmit concepts that otherwise would be very complicated or would take too long. *Curiosity killed the cat* is like the previous paragraph phrase but does not commit to anything.

Immanuel Kant



On the other hand, from the first sentence, one could begin to question its accuracy: *Why only humans? Is it innate? Is it instinctive or not? Is it only a tendency, or is it an intrinsic and permanently operative characteristic? Is it produced only in the consciousness or also in the unconscious?* That is how we would proceed until ending, asking *what a being is?*

More formally, if the origin of human knowledge comes

exclusively from experience *(empiricism* -**Locke),** or the contrary *(innatism* -**Leibniz),** or a past engagement of both *(apriorism* -**Kant)**

The effectiveness of widespread knowledge, however, has a great inconvenience due to its characteristics in that it is unreliable and very often ironic because a slight contextual variation can change its meaning. In other cases, it just attempts to cheer up life with humor employing ideas crossing the mind, and at times even deliberately inverting the elements of cause-effect.

In order to avoid this entire series of disadvantages of human knowledge emerges the scientific method that, in its strict version, counts on three basic principles to be accepted among most of the community. They also tend to note various specific methods according to the subject studied with greater or lesser acceptance, and they usually tend to refer to systems with complex characteristics.

It could be general knowledge is to the scientific method what intuition is to logic in that both have the same sources: perception, intuition, and logic. They share problems related to the contextualized elements and the difficulty of the cause-effect separation.

Furthermore, creativity can be included as a source of knowledge as much popular as scientific. An example of a source of popular knowledge would be the phrase: *think the worst and you will not be far wrong,* and an illustrative example of the creativity as a source of scientific knowledge would be: *the madness of genius.*

The scientific method aims for objectivity and certainty in its conclusions, which is why it has few errors. On the contrary, widespread knowledge does indeed make them, but, on

occasions, it is much more efficient in transmitting a complex idea; in fact, we all use it regularly.

In respect to the characteristics of the sources, logic should not make mistakes either; otherwise, it would no longer be logical and would then be considered pure speculation.

The intuition does indeed make mistakes since, despite not having the desired certainty of the reasoning, it continues with partial arguments reaching conclusions that it cannot confirm nor deny. Upon freeing itself from the servitude of certainty, its potency is much higher than that of logic.

As it accumulates partial arguments, its margin of error increases and, therefore, its efficiency decreases. However, at times, after long reasoning or thought in which the conclusion curries a raised margin of error, the resulting efficiency increases significantly. Given the conclusion, reliability could increase by other means, and the source of knowledge would move from intuition to be creativity.

It could be the case of the Conditional Evolution of Life in that its philosophical approach is rather adventurous and clashes with the most common beliefs and approaches within society. Its hypotheses of genetic functioning are quite bold, but, eventually, *it proposes a way of empirical testing! And accomplishes it!*

Of course, sometimes, the evidence against a position can be overwhelming, and, even so, it persists in following the reasoning with a margin of almost intolerable error. If it eventually manages to discover a way for empirical validation, **madness** would be the 5th source of knowledge, or what one could consider in a way **love,** or better said, the **madness of love.**

Another distinct characteristic of the binomial perception-

reality is the connection between scientific theory and reality and is extensively dealt with by the **Vienna Circle.**

There are three interpretations of the relationships between theory and reality (observation): *reductionism, realism,* and *instrumentalism*, or *conventionalism.*

Reductionism circumscribes the scientific theory to the world of the observable, converting itself into the simplification of watching. Realism allows certain non-observable entities but requires them to be real, that is, that they exist independently from the mind. On its behalf, instrumentalism or conventionalism deems it a useful instrument that allows making predictions.

Sincerely, utilitarianism versus rationality seems more technical than scientific, although they are trendy topics even, they could last centuries.

2. THE SCIENTIFIC METHOD

2.a) What is the scientific method?

The first characteristic of the scientific method is its conventionalism, which serves as a framework of the generation of objective knowledge. That is why multiple characteristics exist according to the perspective with which they are classified, studied, and even named.

The scientific method expression has different meanings, and, very often, it confuses a specific personal or social group with relative ignorance about the complexity of the concept. As its very name indicates, it represents the methodology that defines and differentiates scientific knowledge from other types of knowledge.

The philosophy of science creates the scientific method to exclude all that has subjective nature. In other words, what comes from common sense itself and obtains general acceptance by the scientific community and society.

Not everyone will agree with the previous paragraph as there are various trends of the philosophy of science that is, in turn, derived from the different concepts about reality, perception, and theories.

On the other hand, we know that there are things whose nature is precisely subjective. The scientific approach to these elements is sophisticated and typically carried out through the lesser scientific methods, which are for specific branches of knowledge.

There are three basic types of the scientific method *(inductive*

reasoning, deductive reasoning, and *hypothetic-deductive or hypothesis testing)* applied in the natural sciences –physics, chemistry, biology– in contrast to the commonly categorized social sciences –economics, politics. Among the latter, we can cite: *hermeneutical, phenomenological, dialectical, functionalism, structuralism.*

Despite receiving the same designation as **scientific methods,** we are referring to approaches not only different but belonging to a different scale. For instance, talking about the world of transportation technology, one type would refer to parts like nuts or bolts, and the second type to motorcycles, cars, trucks, boats, planes, or rockets.

In other words, there are three elemental types, and the rest are combined types from the previous that try to define a complicated structure and that, therefore, are found on a macroscopic scale relating to the first.

Likewise, the concept of time is associated with that of life and, by extension, with that of love. *Nevertheless, the existence of love is not scientific!* Nor do we know very well what life is, and what are the derivatives vital impulse systems.

Here we come to an essential problem with some branches of science that do not want to and cannot recognize that life and love exist with the corresponding exercise of their freedom. It is as if freedom were the enemy of knowledge and science in that the later attempts to discover laws that explain events and where it fails, it imposes its god: **randomness.**

We find a prototype of agnosticism in **Laplace** (1749-1827) when he says: *"If in a particular instance we become aware of the exact situation and velocity of all of the particles of the universe, we could deduce through calculations all of its past and future."* This affirmation needs an act of faith because freedom may not be scientifically proven, neither disproven.

Most likely, it is about time to change and perfect the very concept of science and the scientific method. Not always when using very orthodox or rigid practices, best results are achieved; frequently, the relation could reverse when a specific limit exists.

2.b) Inductive and deductive reasoning

The three primary methods (inductive, deductive and hypothetical-deductive or hypothesis testing) are to the natural sciences (physics, chemistry, biology) as opposed to the so-called human sciences (economics, politics)

Aristotle (384-322 B.C.)

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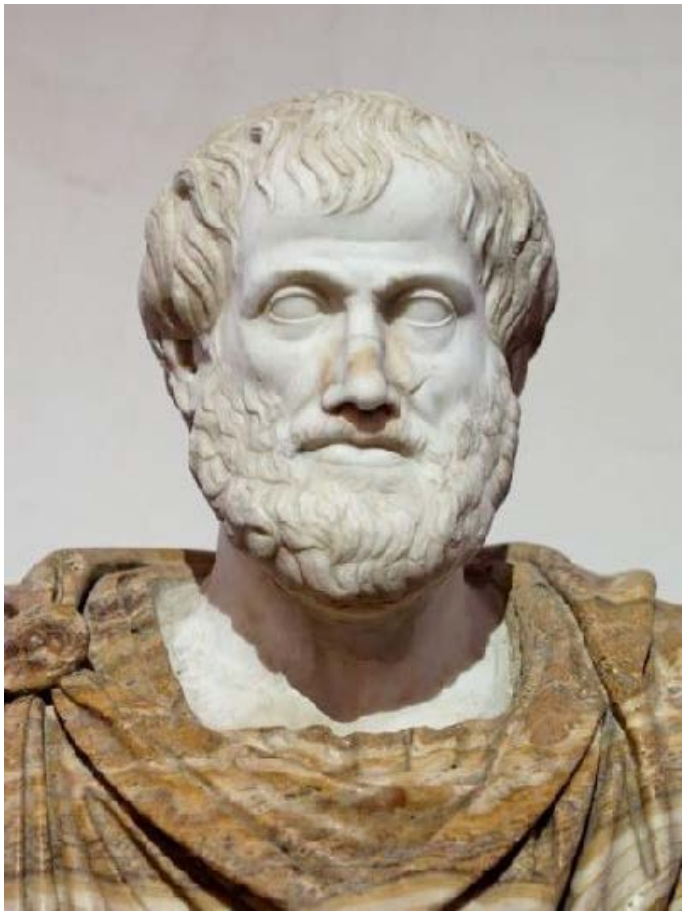

The first thing which caught attention was the fact that the first two scientific methods have a problem as the name is difficult to distinguish, given that in a language context they can represent just one concept with two statements: reasoning in one direction or the other, from general to specific, or vice versa.
Logically, the problem derives from the conceptual difficulty of clearly separating the elements of scientific reasoning from the other; the chosen terms do not help retain these two concepts in the memory. The first name of the third scientific method does not help much either.

Both deductive and inductive reasoning can go from general

to specific and vice versa, in one direction or the other. Both use logic and conclude, have philosophic substratum elements, and tend to be susceptible to empirical testing.

Although deductive reasoning or logic is more appropriate for the formal sciences and the inductive reasoning of the empirical sciences, nothing prevents the indiscriminate application of a scientific method, or any other method, to a theory.

Without trying to create a controversy on this subject, the fundamental difference of deductive and inductive methods is that the first aims to indicate, through pure logic, the conclusion in its entirety based on a few premises. So that the veracity of the conclusions is guaranteed; that is if the applied logic is not invalidated. It is the axiomatic model proposed by Aristotle as the ideal scientific method.

On the contrary, the inductive method creates laws based on the observation of facts, by generalizing the observed behavior; actually, what achieves is a type of generalization without obtaining a demonstration of the laws mentioned above or set of conclusions through logic.

Such conclusions could be false and, at the same time, the partial application of logic carried out could maintain its validity. For that reason, the inductive method needs an additional condition; its application would be valid if no case does not fulfill the proposed model.

The hypothetical-deductive method, or the hypothesis testing, does not raise any problems in principle, given that its validity depends on the results of the appropriate empirical testing.

The hypothetical-deductive method tends to be used to improve or clarify previous theories according to new knowledge, where the model's complexity does not allow

logical formulations. Therefore, it has a predominantly intuitive character and needs, not only to reject a theory but also to impose its validity, the contrasting of its conclusions.

One could suggest the deductive reasoning, intuitive reasoning, and hypothesis testing as denominations for the three primary variants of the scientific method, or for that matter, any set of words that refer to their fundamental differences or elements and do not raise any problems for the semantic memory.

The Conditional Evolution of Life fits in perfectly with a theory based on the hypothetical-deductive, or hypothesis testing method.

Darwin's theory of evolution, on the other hand, would fit in the inductive reasoning; but despite finding opposing examples, the scientific community does not invalidate it but adapted to square off any triangle. Why would it be?

As was previously mentioned, every theory should be able to withstand refutation; however, a theory that does not allow refutation by any conceivable fact is not scientific. The impossibility of disproving a scientific theory is not a virtue but a defect.

2.c) Stages of the scientific method

Presentation, validation and acceptance are the three major stages of the methodology of science.

Within the three basic types of the scientific method (inductive reasoning, deductive reasoning, and hypothesis testing or experimental study), each one has its stages and depends on each author or form of describing and presenting them.

In the previous section were criticisms about some elements in the scientific methodology and the complication its terminology poses for the memory. Now then, when speaking about the steps and stages of the scientific method, something similar occurs: it seems that more than steps of the scientific method, each method has its staircase.

Recognizing the methodology of science is complicated and full of nuances with serious implications, and given the importance of the scientific method, let us present a classification of the stages of the primary scientific methods and their elements to simplify it for non-experts or laypeople.

There is no doubt that this tree of science would have leaves of all shapes and colors. Let us look at some comments and clarifications about this tree.

From this perspective, although the element perception does not work equally in the different proposed methods, nor does it represent an essential difference, it will be in the first step of planning to a greater or lesser extent.

The stages of the methodology of science reflect the importance of the phases through which a theory passes until

becoming generally accepted and goes on to make up part of the scientific knowledge.

There is a clear difference in the essence of the experimental study or hypothesis testing and the two other primary methods; therefore, they belong to different stages. Galileo mentioned this division; there are only two methods: deductive reasoning and inductive reasoning, and two processes: the experimental and the rational. We agree with **Galileo,** although the names could refer to **logic** and intuition respectively, which is in line with the importance of the different mental elements or processes that support them and the reliability associated with the mentioned processes.

The tree of scientific knowledge would consist of the following:

I have also added the creativity method because it uses elements of the intellectual capacities that clearly differ from logic and intuition.

STAGES
METHODOLOGY OF SCIENCE

1. **Presentation and steps of the scientific method**
   - Planning
   - Elements of reasoning
     - Logic
     - Intuition
     - Creativity (**Jump** and madness)
   - Conclusion
2. **Validation stage**
   - Hypothesis testing (Verification or Disproof)
   - Common sense (Galileo – **Veus vei**)
3. **Acceptance.** (Sociology of science)
   - Scientific Community
   - Society as a whole

Even a theory based on the deductive reasoning should pass the validation stage since it can be refuted by some logical contradiction on the basis of the planning or an error in the applied logic.

2.c.1. Elements and steps of the scientific method

The intuitive reasoning comes closer to the logical reasoning or logic-deductive reasoning when intuition works with very high reliability; in this case, it would be the equivalent to the classic inductive reasoning. On the contrary, when reliability is lower, it would be more like the experimental study or classic hypothesis testing due to both looking like a trial and error system.

The three steps of the scientific method configuring the first stage of the methodology of science are: planning, reasoning, and conclusion, which are common to the three proposed methods, and the main difference is the elements of reasoning regarding the type of employed arguments.

Presentation, validation and acceptance are the three major stages of the methodology of science.

The novelty here is the new scientific method *Salto or Jump* or that of creativity, which does not have its base in logic or intuition but rather in the absence of them; or even in deliberately leading them to the contrary. When the intuitive reasoning works with low reliability, it comes close to the Salto or Jump method. It is a method that the popular knowledge knows very well, and sums it up in the phrase: *think the worst and you won't be far wrong.*

The taxonomies of the second step of the scientific method, the elements of reasoning, are seldom perfect or straightforward because the words tend to have several meanings, and, at times, are too broad or too strict. For example, sometimes, creativity leads to a solid built-in logic,

and then it would go outside of the Jump method. Other times, creativity goes far from the logic that becomes madness or deals with an expression of love. Hence, the term Jump method is more appropriate, even though it would be more technical to call it the creativity method.

Sometimes, the method can be accepting something is contrary to what it seems, although almost impossible. Moreover, the argument can be repeated. Logically, the reliability of the conclusion will be low, but at times the result gives an exciting surprise: the conclusion is confirmed contrary to expectations.

Then, because of the positive verification, a new path to verify the theory with logical or intuitive reasoning is visible. Nevertheless, the relevance of this method has been the first step. The second way was only a tool for articulating the hypothesis testing of the validation stage.

2.c.2. Validation of a scientific theory

- **The hypothesis testing or experimental study**
- **The Pop-up or Veus Vei method**

The second stage of the scientific method is the validation of scientific theories. When speaking about the stages of the scientific method, the hypothesis testing of an experimental study is in the second stage instead of next to the other two classical basic methods according to the classification of the scientific methods quoted by **Galileo.**

STAGES
METHODOLOGY OF SCIENCE

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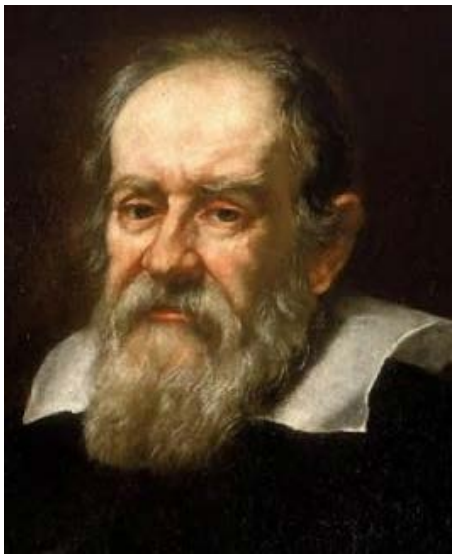
1. **Presentation and steps of the scientific method**
   - Planning
   - Elements of reasoning
     - Logic
     - Intuition
     - Creativity **(Jump** and madness)
   - Conclusion
2. **Validation stage**
   - Hypothesis testing (Verification or Disproof)
   - Common sense (Galileo - **Veus vei**)
3. **Acceptance.** (Sociology of science)
   - Scientific Community
   - Society as a whole

Regarding the validations stage of a scientific theory, the current doctrine is not complete because it only accepts the hypothesis testing within an experimental study and not the purely rational or common sense like Galileo also indicated.

The current scientific hypothesis testing of an experimental study is present, however, as desired; for example, it turns out that the constant of gravity is universal, and no one has walked around the world to confirm it. Besides, it is not clear that it would be like that because it is a pretty obscure topic.

Galileo Galilei (1564-1642)

(Public domain image)



An opposite example is the existence of planets revolving around other stars. Until recently, their existence was not scientific, and no one with the least bit of common sense could think that they do not exist, keeping in mind the number of stars. It seems humans still find themselves in a heliocentric growing stage with relativistic fever following the Ptolemaic stage.

The second scientific method of the validation stage, based on common sense, is **Jump or Pop up** because it is self-sufficient, some things cannot have more evidence than themselves; they are apparent or common sense, we could say they jump into view. Another very descriptive naming is the **Veus Vei** method from the famous game of *I spy with my little eye* –veo veo in Spanish– of the little boy.

It is worth repeating, because it seems many people forget that error elimination or refutation not only arises in the hypothesis testing of an experimental study, but it can also be of logical nature. For example, when it reaches a logical impossibility or a mental paradox invalidating the premise, that is, an ad absurdum situation within what we have called the *Pop-up* method or *Veus vei* method.

In other words, the paradoxes, let us say of twins or effect-cause, indicate the presence of errors in the proposed theory.

Of course, mistakes can always happen with any method, but scientific knowledge is a dynamic concept, and previous theories can always be refuted; indeed, even the names can improve.

Concerning the two philosophical positions of the hypothesis testing, the verification, according to the Vienna Circle, as well as the Popper falsifiability, seemed reasonable and very similar.

2.c.3. Acceptance stage - Sociology of science

The third stage in this vision of the methodology of science is Acceptance. In 1962 in a book about the structure of the scientific revolutions, **Kuhn** carried out a marvelous analysis of the evolution of science in the medium and long-term.

Other positions like the accumulation of knowledge or the credibility of **Popper** also seem reasonable, although the point of view could be different.
One thing is to test and validate a scientific theory, and another for the experts of the corresponding scientific community to have the time or willingness to read theories outside of the prevailing paradigm.

Like the sociology of science adequately points out, this stage is the cause of the majority of the problems in science and its methodology.

It looks like the best scientific method in this stage is the *sudden death* method, which consists of letting 500 years, or whatever necessary, go by until someone reads a theory, while the author is trying to go unnoticed by the skeptics. Nevertheless, it is not a complaint but a reality.

3. The methodology of complex systems scientific research

- **The sixth method: Conditional Vitalism**

Regardless of the consequences that the Conditional Evolution of Life (CEL) could have in the scientific and technical fields, this theory means a research methodology for complex systems.

The CEL is the result of applyingpure logic to the essential instrumental objectives of Life, and the concept of internal improvement of genetic information as the motor of evolution; in other words, the new theory of evolution is an extraordinary case of the methodology of vitalism research.

This sixth method –let us recall the three basic scientific methods of the argument of a theory and the two scientific methods for its validation– is different from the previous in that it is not a primary scientific method but rather a compound method consisting of various forms of the argument and empirical research.

Consequently, the sixth method of the Conditional Vitalism would belong to the theory of the complex systems conveying a distinctive methodology of science under its characteristics of scientific research.

The section related to the Vitalism of the CEL mentioned above theory discusses the characteristics of living beings and, by extension, the complex systems with vital impulse.

Once a complex system is conceptually defined, the first stage of scientific research will be to study which factors or

elements affect it or technical conditions.

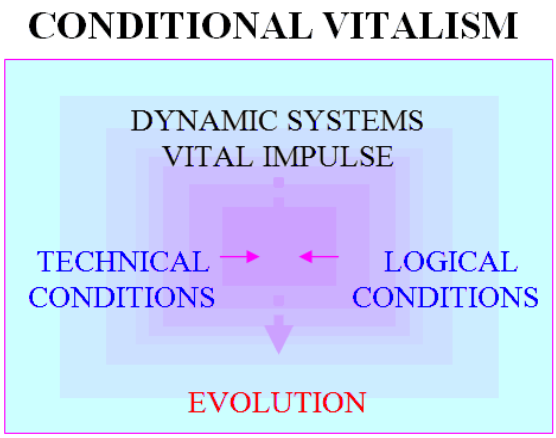
These systems must have a purpose and intermediate objectives that scientific research should identify as a second stage, such as specific methods, processes, and instruments for its attainment.

The goals correspond to the logical conditions.

- Improvement of efficiency
- Guarantee and certainty
- Internal coherence and compatibility
- Optimization of the resources

To the extent that a system meets the essential characteristics of living beings and the new method can identify an enough set of derived elements, the complex system will behave as if it had a genuine Life impulse.

The characteristics of the methodology of complex systems resemble a bit of Chaos theory as an attempt at structuring elements that, briefly, seem wholly inconsistent or independent of each other.



The characteristics of fractals and their mathematical representations also relate to the new methodology. A pretty example is the dynamic fractal of the flame of a bonfire.

Nevertheless, the topic is not so novel since it is the argument in which the modern economic theory upholds. The entire

economic theory derives from the additions of individual preferences and alternative uses that come to collect the vital impulse from the individuals.

In other branches of knowledge, knowing the instrumental objectives of a complex system, the same methodology could give surprising results.

Let us think about which is the motor and the forces moving the economy, research in general, or that of the political system. In cases of elevated levels of complexity, the use of partial analysis models is advisable.

Even if the consequences of the Conditional Evolution of Life were far-reaching, we must be conscious that vital impulse systems have existed and have followed their internal dynamics even though we now may understand them better. Before Galileo, the Earth had also been revolving around the Sun!

4. HISTORICAL ERRORS OF THE SCIENTIFIC METHOD.

4.a) Research methodology

It is not easy to understand why there are enigmatic paradigms; the scientific method made such big mistakes and kept making them. **Kuhn's** sociology of science explains not only the reasons but also the difficulties to admit and rectify the previous errors.

Concerning the constructive criticism, an additional complication is that when a person realizes that there are significant flaws in the orthodox doctrine, begins to distrust even the most essential elements.

This chapter will discuss the foremost errors with particular reference to the research methodology of the theory of evolution for being absolute absent and far away in some islands, and the dynamic development of the Modern Physics, that is, of each stage of history.

Many of the problems derive from the very same misunderstanding of evolution and the egocentric humanism, despite the initial contribution of Darwin when showing that humans come from apes.

Before exposing the mistakes made in each science branch, let us look at some of their general causes:

- **Life aesthetics**

  How can it be understood that intelligence has not changed in the last 2000 years? This generally shared assertion would imply it has taken enormous leaps in early stages because it seems evident there are quite a few differences between humans and their ape-cousins.

  The page about the historical and human evolution of the CEL book cites some of the consequences, and relevant facts of man's biological evolution and its stages of research methodology. Moreover, it describes some erroneous elements, which will affect derived arguments.

  Therefore, it will be necessary to find other elements making up for the mistakes from the structure produced to be compatible with the part of reality that is not open to loose interpretations.

  The same argument can apply the language research methodology. The general idea is that all languages are in the same stage of development and have a similar number of words. There are no precise statistics on the evolution of the number of terms of each language throughout the recent history of humankind. Logically, it should be some relation between the number of words and the intellectual capacity of the individuals.

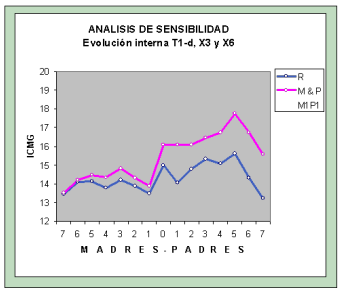
  However, it is more appealing to say language is an innate characteristic in all humans, and that the variations among some other groups, current as well as historical, and some other individuals are random. Each one has its aesthetics, but the scientific methodology tries to reach the objective

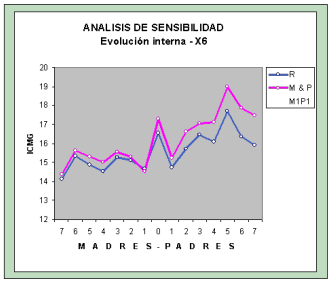
truth.

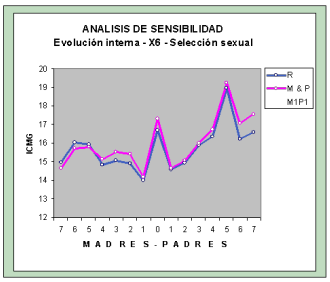
Furthermore, the aesthetics of reality may be better than usually thought at first impression. An appealing objective of life is to find the divine aesthetic of the essence of existence.

- **Complexity of science**

The EDI Study







On the other hand, the success of specific scientific theories relates to the possibility of conveniently explaining the complexity of reality for the different acting groups of society, without visibly leaving the scientific methodology.

Suffice to say scientific research is always in the limits of the unknown.

The most challenging aspect of criticizing a theory is to understand it well enough. Another problem is to convince oneself that the scientific community is wrong. It would be funny to make a criticism, and receiving a reply like: "*That is figurative speaking, a metaphor, and no scientist believes it.*" Well, many people continuously do it and in every possible sense, and usually without understanding what they are saying!

One day at university, talking with a graduate in physics about various topics related to time, he said that he could not continue because I did not know what time was. He did not have time to explain it because it was very complicated. We agreed to end the conversation quickly,

but our thoughts did not coincide with the objective reasons for the impossibility mentioned above. I have always known what time is!

- **Unattainable objectives**

  Another big mistake belongs to the research methodology of learning and psychology. It has been the rejection, or excessive criticisms of specific proposals that were correct, but did not offer absolute certainty. Of course, it is fine not to guarantee what is not sure in complex systems, but that should not mean not recognizing the value in the majority of the cases, and, therefore, with these limitations, maintain the opportune doctrinal positions and not go on to the contrary.

- **Ad hominem fallacy**

  An important issue is the ad hominem fallacy or to argue against someone for the lack of an academic degree instead of arguing against the reasoning. When there is no argument, we could cite the fairy tale of The sly ones of the Inquisition.

- **The lack of humbleness in science**

  On various occasions, there is a tendency to say that there is evidence for a specific topic when there is not. Perhaps it is more probable or verisimilar in one stage of the research, but it is not the same.

  This behavior hinders the constructive criticism of individuals that accept the supposed validation of the established theories.

4.a.1. Scientific methodology and psychology on biology

Within the scientific methodology, all theories are susceptible to improvements or alterations due to contextual changes. A typical case is a technological evolution, when contributing new knowledge that allows greater accuracy and delimitation of the models or, simply, its substitution by others.

According to the sociology of science and social psychology, new theory success depends on the scientific methodology and its acceptance or rejection by the scientific community and society.

In this sense, certain contextual elements of social psychology and sociology of science can be a severe obstacle to the acceptance of new ideas, especially in biology and evolution. A typical example throughout history will be the initial problems of Galileo's theory (1564-1642), one of the leading creators of the modern scientific method.

The Conditional Evolution of Life stumbles across lots of difficulties when it comes to being judged due to represent an alternative theory of evolution and the enormous implications of social and educational psychology as well as personal psychology that its acceptance would have.

An example of the scientific resistance to change from its ideological roots!

Although eventually, the alternative theory of evolution could be assimilated and accepted, it needs time so that the subconscious can go on reorganizing. It would not be at all surprising upon reading the following paragraphs for the

reader to touch the back of the neck. The subconscious does not like to review basic concepts of its psychology that it considers definitively formed. It will need to work on its revision; besides, it will consider it unnecessary, given that it cannot be mistaken in such basic and essential concepts of human psychology.

NEWS ABOUT THE THEORY OF EVOLUTION

"Each person is different, but not because of his/her race. 95% of the current **genetic variability** already existed when the species was born.

Few ideologies would have caused more hate, death, and suffering than **racism.** The belief that the human species has groups whose origin, color, and appearance indicate innately inferior moral, emotional and **intellectual qualities** to those of the group (generally of white skin) that formulate the theory."

El País 20-12-2002 Science.

The last few paragraphs concern personal psychology, but the problem is more severe since specific changes in biology and evolution are unpopular with many people, which provokes negative pressures within the field of social psychology, given that it studies how an individual's relationships with others are affected.

Let us try to break down or neutralize preconceptions of social and personal psychology that can negatively influence the assimilation, the attempt to comprehend the proposals of

the CEL, or get a neutral application of the methodology of learning.

The preconceptions are not, nor in the very least, harmful in of themselves. On the contrary, they are necessary to avoid the repetition of constant thoughts and reasoning; precisely because of their function, the preconceptions can act as a real limit to the learning and understanding of specific innovations.

The following contextual elements increase risky preconceptions:

- **Personal psychology**
  - *Philosophical-religious*

    The alternative theory of evolution has a dual nature, but there is no incongruity between its philosophical aspects and the scientific methodology. Despite all of this, there is no doubt that it will be hard for religious people to follow the argument because they do not want to change or even doubt or revise some of their firm concepts about biology and evolution.

    Likewise, an agnostic person is not in favor of the work of thinking that there are intelligent beings different from humans because, to that person, there is no evidence, even if it is very reasonable. Furthermore, because it will sound like a religion - the existence of intelligence in all living beings.

  - Another type of personal approach can be that of convenience: *Look how now we will have to change a bunch of ideas. They are just ideas, and I am busy now! Besides, with the ideas I have, it suits me fine! I do not understand anything about modern biology and genetics!*

- The advanced **age** of a person can have a negative effect.
- Imaginary consequences

  Other personal and specific situations, such as personal consideration to one's intelligence, can affect the CEL. If some people are not very intelligent, they would not like to think their children cannot be intelligent either. As far as this topic is concerned, the *CEL* explains, within the scientific methodology, the conditions and why they could have brainy children.

- **Social psychology**
  - The beauty and goodness of a model are aspects utterly independent from the goodness of its scientific methodology. Many people will not be willing to accept a theory declaring that intelligence has an innate nature, only because it does not seem fair to alter the equal opportunities in their personal and social psychology. It is a fallacy of the God complex.
  - Another current topic in social psychology is sexual equality. In the area of modern genetics and biology, there are many differences between the two sexes, but whatever attempt to explain the reasons or consequences will create a significant initial rejection, despite the guaranties of the scientific methodology applied.

    Indeed, an alternative theory of evolution will touch on delicate issues. Of course, there is the principle of sexual equality in the sense of balance of the qualities. Nonetheless, It is not a good policy to make biased comparisons on differences that they could easily be

entirely accurate. There is a high level of subjectivity in valuing the differences, something we will not even try. It looks more appropriate to believe in a dynamic and natural equilibrium between sexes.

- To a certain extent, another problem with social psychology could be racial.
- We can find similar social and personal conditioning according to the education received, like social class or nationality.

- **Sociology of science**
  - Despite the scientific methodology, any theory about life would have different approaches according to its era. Many theories that we know of today as entirely inoffensive, they were revolutionary and dangerous in their time.
  - Nowadays, there is extensive freedom of expression, but we are still humans, and many ideas are hard to accept. Also, due to social psychology and the subsequent effect within the sociology of science to specific modern ideas on biology, genetics, and evolution, there is no doubt that the subtle scab of the Holy Inquisition may come off when these ideas are open in public.
  - The technological advances have considerable influence since they augment the field of scientific research methodology while allowing further testing or rejection of theories. Notably, in biology and genetics, we find ourselves in a new phase due to the technical advances in informatics.
  - The modern society of information is changing not

only the way of working in all branches of science but the methodology of learning itself, given that they have at their disposal the latest advances among them. Moreover, anyone can publish new ideas on the internet without any kind of social filter, even if it means a substantial effort.

4.a.2. Scientific methodology and the theory of evolution

The theory of evolution of Darwin is one of the biggest mistakes of modern science, although it is correct about the origin of man from an anthropological point of view.

Science should be humbler and acknowledge there are many ways of justifying life and evolution, and that due to its intrinsic limitations, it has not been able to prove nor dismiss the essence or either one.

A similar analysis but more extensive about this evaluation is on the page of Criticism of Darwin's theory in the Conditional Evolution of Life book.

Troubles posed to the scientific research methodology are:

- **The very definition of science**

  There is no doubt that in its time, the concept of science was revolutionary and meant a radical distinction from philosophy; consequently, its disassociation from religion, which posed a genuine problem for the progress of science.

  For this reason, the slightest indication of metaphysics in science had to fade away. The problem appears specifically along with the concept of life and its evolution.

  As geology was revealing evidence that the Earth was millions of years old, something had to amend, and the

theory of **Lamarck** needed a living being as an entity with intelligence and finality on a human being internal scale. Society was not ready despite being obvious.

Another solution would have been a loose biblical interpretation in the sense of taking the passages of creation as a metaphor, but nor the church neither the scientific community was willing to give up their agenda.

The only remaining option was to design some mechanism that could fit into the scientific methodology and theoretically lead to the evolution of life. **Darwin** decided to go to great lengths to argue his theory of evolution of the species instead of rationalizing it with evolutionary processes and elements in Europe. The main effect is that with the distance, it was easier to accept and, above all, impossible for personal verification.

The rest is well known. It is incredible, but scientists said there was evidence of random mutations or whatever within a proper scientific methodology and before knowing about Mendel laws!

- **The theory of Natural Selection is a tautology**

  It is more than evident that all living beings exist because they have survived their lineage.

  Furthermore, the natural selection theory includes a rather destructive philosophy in the sense that the objective of life is to survive. Adapting to the environment seems to be a consequence of this objective, although one could also change the environment to survive; of course, the reference is not only about the little birds on the Galapagos Islands.

  We never know, scientists have even empirically proven

that the objective of life is just that. Who knows if people using this kind of scientific methodology understand it or just believe it.

- **It does not explain evolution**

  Although something was suspicious, they did not know how information was transmitted to create a new being. That is, genetics did not exist. Well then, genetic mutations or variations are just concocted and problem solved.

  They also said there was evidence that the mutations were random; nevertheless, that part of the theory has updated a few times and more to come. It would explain the insistence on adaptation.

  Scientist still do not know which type of statistical distribution have famous mutations, despite their randomness. Randomness is the God of science; when it cannot deduce any rule, it states the changes are random!

  Curiously, the scientific community ignored Mendel's laws for 50 years. According to extensive sources, his studies were in his desk drawers. Nowadays, we all know he tried to publish his ideas, and prominent scientists rejected them.

  Another criticism of Mendel's laws was that his statistics were not reliable.

  Indeed, the laws of Mendel threatened the theory of evolution in one of its most volatile affirmations.

- **Long-term abuse**

  The mechanisms of natural selection can be so slow that they need to act in the long-term. In many cases, natural

selection theory is reasonable but creates significant problems with accelerated changes in the evolutionary processes of living beings –like intelligence. The tendency is to deny such changes or to send them to the past, and the problem solved.

In short, the Darwinian theory of evolution rejects short-term evolution.

- **Unlimited adaptation to other scientific and technical progress**

  Despite the evolutionary mechanisms of species that do not fit in with Darwinism or its updated versions, it is still unrecognized that Darwin's theory has some considerable gaps.

  On the contrary, the arguments are adapted and strengthened to limits outside of any logic or scientific methodology.

- **The influence of fashion in scientific methodology and the theory of evolution**

  A good example was only yesterday (June of 2003) when an article about the genome in a newspaper as formal as they can be. Among other things, it said, *"The Y chromosome, which is much smaller than its counterpart, the X chromosome, was considered practically a fossil with very few genes and heading towards extinction due to accumulating genetic defects…"*

  How impudent! It is not the first time that something similar appears, and the scientific community does not reject or criticize it; if it were the other way around, it would be as if the world were sinking.

4.a.3. Physics research

Physics should be a science presenting fewer problems because of its subject. If Newton's apple falls to the ground, it falls regardless of the ideologies or interests of any kind. However, the interpretation of reality can vary for diverse reasons. The theories and knowledge of physics have changed throughout history, and at times, completely disproving the previous theory.

Some apples have fallen after thousands of years of being discovered, like the dance of the planets.

Galileo and the Inquisition

(Public domain image)

The biggest problem of the physics research is the new theories because basic definitions are never deductive and they deal with the unknown. There will always be a set of alternative theories proposing adventurous solutions, and the population in general will take years or decades to assimilate the complexity of its era.

An illustrative example of the topic is the ancient witches in which we all have the concept of the pseudo-scientific explanations that were invented in order to gain power in the tribe. But if we analyze it from the point of view of their era, we would then realize that they were true modern scientists.

Let's look next at some concepts of classical physics and

modern physics that, in my opinion, attack common sense and distort the methodology of science by dulling the argumentation in the subject matter.

- **Classical physics**
  - *The concept of energy*

    The concept of energy is the acceleration of the mass of a unit of space, and yet it does not have mass. It seems to be one of those mystical mysteries. Furthermore, there is a transformation between mass and energy, and they are like two expressions of the same.

    In short, the newly acquired concepts in physics are always somewhat imprecise and changeable for which they should not be considered unvarying.

Energy = mass * acceleration * space
= mass * velocity²
= kg * m² / s²

♦ Energy has no mass ??

At least, it must be a relation.

  - *The potential gravitational energy - Negative energies*

    The potential gravitational energy of mass m in a point of space is the effort that the gravitational field exerts to move mass m from said point to infinity. According to the definition, the potential energy is always negative, and its maximum is always zero. It does not help the mind when thinking about it.

The relationship between gravity, potential gravitational energy, kinetics, and electromagnetism sets one to think about the true nature of gravity.

When something does not seem like sure science, solutions are required to be able to progress. The existence of negative energies, conventionally or not, is an excellent example of what not to do with a suitable methodology of physics since a conflict presents itself in primary references to the brain when arranging concepts.

- *Bond energy*

  Bond energy is released when protons and neutrons join together to form an atomic nucleus. It would be better to call it released energy rather than bond energy since precisely this energy is not present in the bonds of an atomic nucleus.

  This case is not as severe as those previously mentioned, but the concepts and titles that do not correspond to the meanings of the words defy all logical reasoning, especially if it is common practice and if the meaning is precisely the opposite to expected.

As a rule, negative elements in physics unfolds the brain limits in complex reasoning.

The page potential energy in the on-line book of the Law of Global Gravity contains additional comments.

4.a.4. Scientific research method of Modern Physics

If the methodology in General Physics has problems with some concepts, in Modern Physics, the examples are more abundant, such as those from the Theory of Relativity and Quantum Mechanics. The book on the Theory of Relativity, Elements, and Criticism thoroughly discussed numerous problems.

It is not that the Theory of Relativity of Einstein is false, but it has some relatively correct and some reasonably inappropriate aspects. Above all else, it is one of the theories that most complicate the knowledge of reality and the progress of science.

As was expected, the maximum exponent of the degradation of the scientific research methods occurs in the theories of the last generation that give the impression of struggling to see which one says something more surprising. It is the consequence of engaging the usefulness as the philosophical essence of the scientific method.

At least, it is encouraging when the scientific community declares the Theory of Relativity incompatible with Quantum Mechanics.

Let us debate some aspects related to the scientific methodology concerning Modern Physics.

- **Theory of General Relativity**

  It is not easy to understand why a theory that unnaturally and quite radically breaks away from such basic concepts like time and space came to be accepted.

  It is revealing that with a relativistic philosophy, one can come to generalize the behavior of light on Earth to the whole universe. This behavior repeats in other branches of science –the human egocentrism is incredibly persistent.

  In a sense, Albert Einstein's GR at the beginning of the past century had an opposite facet the theory of Natural Selection 50 years before. While Darwin's theory ruled out any aspect having to do with life and its very own will, GR continuously enforced characteristics of life onto one of the branches of science.

  On the one hand, it fitted Lorentz's mathematical formulas of relative positioning. On the other hand, since no one understood it, it looked very posh, and seemed to respond to something very complicated; the individual variation of the perception of time in real life or the possible real variations of internal time, which is dealt with by the online book Equation of Love.

  The Special Theory of Relativity, despite having mathematical ideas that allowed a significant advance in science during the past century, it contains a series of physics assumptions entirely erroneous.

  Beyond the relative relativities of time and space, due to being abstract concepts, TR affirms time and space depend on each observer and speed, implying different times and spaces exist simultaneously and in the same place.

  There is so much emphasis on the maximum speed of light

that it applies to theoretical speeds like separation speed and arbitrary reference systems. In addition, when applied to thought experiments, which are impossible to prove empirically, the results can be consistent with any philosophical theory.

In short, quite a few strange things can occur, and they do happen because of an excessive philosophical and mathematical influence on physics.

The Theory of Relativity goes to the extreme of introducing watches that, starting from the same measurement, end up showing different times, and arguing it is not due to a measurement error. How impressive and bold!

Logic concepts are essential and not complicated formulas because if the research method abandons the first, the second gives us absolutely nothing, nothing that we can understand.

Einstein's Theory of Relativity gets lost in formulas for some satisfactory results, which, without doubt, collect together real rules on nature's behavior. However, conceptually they utterly mix up due to the mathematical veil.

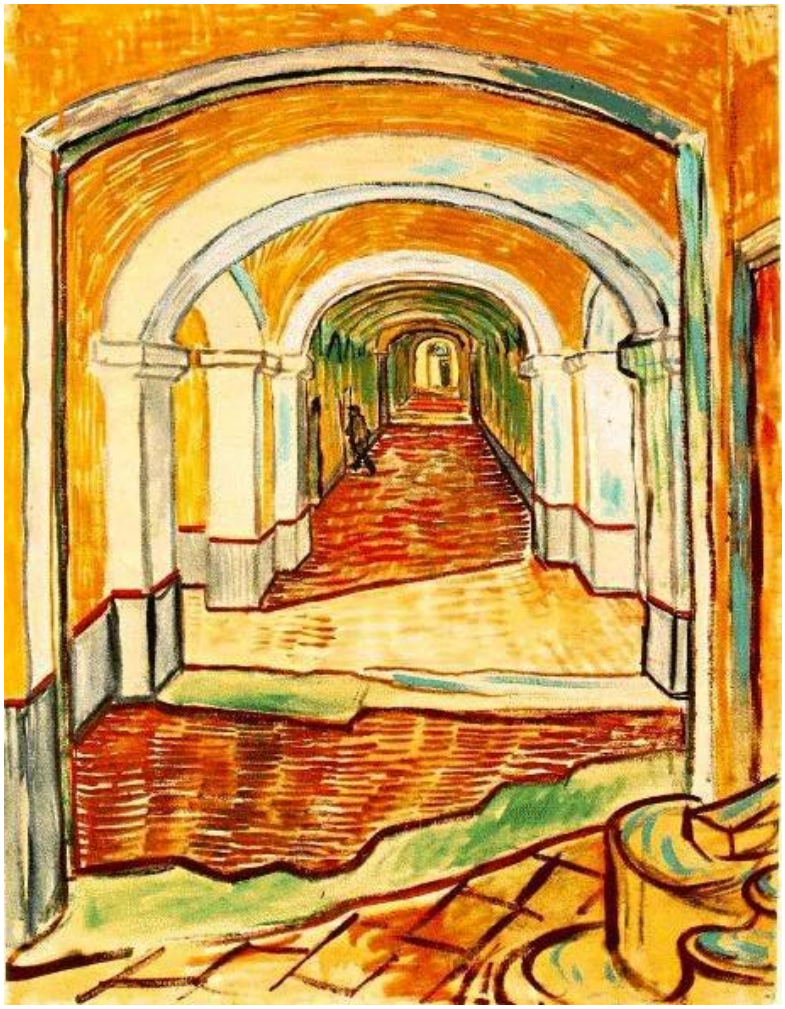
The name scientific research method actually should be the technical research method because it will create technical advances. At the same time, the conceptual knowledge vanishes to the point that hardly could be scientific knowledge.

Time and space are pure conventions and nor wrong, neither right. Classical time does not alter by any means except changing the convention. To add the correct aspects of TR to classical Physics, there was not a need to

change the convention of time and space.

Corridor asylum - Van Gogh

(Public domain image)



Expressions such as space-time continuum, the speed of time, gravity as a geometric effect, or constant change of units of measurement of the entire International System do not seem the most adequate for something calling itself a scientific research method. More comments about this issue are in the books on Global Physics.

- **Quantum Mechanics**

  Quantum Mechanics takes an even bolder step in frightening neurons than the Theory of General Relativity.

  Some new concepts are hard to grasp, but the idea that the cat is alive and dead at the same time is exceptionally awkward to imagine as an example related to the research method.

It is tolerable when something is unknown that the principle of uncertainty applies, but that the effect of the physical phenomenon could precede its cause even makes the neurons get up and dance poH piH.

Likewise, the concept of being in two places at the same time should exhaust the patience of the scientific methodology.

Now then, Quantum Mechanics have a peculiar characteristic, its incompatibility with relativity. At the same time, the academy repeats countless times throughout a century that the Theory of Relativity and Quantum Mechanics are both truthful; it must be a paradox instead of a scientific affirmation.

- **The String Theory**

  Without a doubt, the prize goes to the String Theory with its suit of tailor-made dimensions.

  The great idea is since it is unknown where the mass-energy goes when absorbed by a black hole the creation of two dozen additional dimensions where everything is possible. Once solved the issue of unification, surely there are available dimensions in case of absolute necessity, for example, to explain a white fountain or a neuron star.

  Just as well, they cannot empirically prove it. However, it is curious why not, if there is evidence that space stretches and that time contracts, then it is possible to prove anything.

* * *

♦

When **Globin** finished writing the book,
he calls **Mª José** to tell it to her and he happily says:

–The first thing that must be done
is to calm down and accept the impossible :)–

Mª José answers back:

–If I didn't know you, you would constantly surprise me;
undoubtedly, *so much irony is not good*.–