



MOLWICK

2021

CONDITIONAL
EVOLUTION OF LIFE

Museum of future science

José Tiberius



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.

Molwickpedia: molwick.com
Title: General Theory of the Conditional Evolution of Life
eBook: 978-84-15328-75-9
Paperback: 978-84-15328-13-1*
ePUB: 978-84-15365-82-2**
© 2001 All rights are reserved
Editor: Molwick
9th edition: February 2021
Author: José Tiberius
Frontcover: GloFish - Genetically modified. Danio Rerio
Printing

MOLWICK

José Tiberius

<https://molwick.com/es/libros/>
<https://molwick.com/en/ebooks/>
<https://molwick.com/fr/livres/>
<https://molwick.com/it/libri/>
<https://molwick.com/de/bucher/>
<https://molwick.com/pt/livros/>
<https://molwick.com/ar/books/>



Molwick Publishing Catalogue - I

		ISBN (eBook Paper* ePUB**)
	<i>Conditional Evolution of Life</i>	978-84-15328-75-9 978-84-15328-13-1* 978-84-15365-82-2**
	<i>Global Cognitive Theory (Book series)</i>	978-84-15328-73-5 978-84-15328-74-2* 978-84-15964-00-1**
	<i>The Brain and Modern Computers</i>	978-84-15328-14-8
	<i>Intelligence, Intuition, and Creativity</i>	978-84-15328-15-5
	<i>Memory, Language, and other Brain Abilities</i>	978-84-15328-16-2
	<i>Willpower and Artificial Intelligence</i>	978-84-15328-17-9
	<i>The EDI Study</i>	978-84-15328-18-6
	<i>Original Fairy Tales for Children</i>	978-84-15328-00-1 978-84-15328-76-6* 978-84-15964-24-7**
	<i>The Global Scientific Method</i>	978-84-15328-01-8 978-84-15328-77-3*
<ul style="list-style-type: none"> • See Web page, some books may not be edited in paperback, eBook or ePUB 		

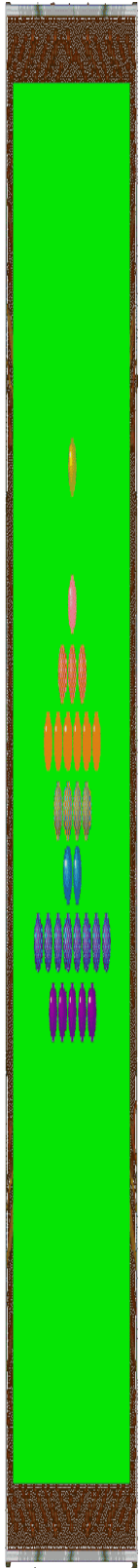
Molwick Publishing Catalogue - II

	<h1 style="text-align: center;">MOLWICK</h1>	ISBN (eBook Paper* ePUB**)
	<i>Physics and Metaphysics of Time</i>	978-84-15328-84-1 978-84-15328-80-3* 978-84-15964-02-5**
	<i>The Equation of Love</i>	978-84-15328-34-6
	<i>Theory of Relativity, Elements, and Criticism</i>	978-84-15328-81-0
	<i>Global Physics</i>	
	<i>Global Mechanics and Astrophysics</i>	978-84-15328-37-7 978-84-15328-83-4* 978-84-15964-03-2**
	<i>Global Mechanics</i>	978-84-15328-35-3
	<i>Global Astrophysics and Cosmology</i>	978-84-15328-85-8
	<i>Dynamics and Global Gravity Law</i>	978-84-15328-91-9 978-84-15328-86-5* 978-84-15964-04-9**
	<i>Physics and Global Dynamics</i>	978-84-15328-36-0
	<i>The Law of Global Gravity</i>	978-84-15328-87-2
	<i>Global Physics Experiments</i>	978-84-15328-88-9 978-84-15328-89-6*
<p>• See Web page, some books may not be edited in paperback, eBook or ePUB</p>		

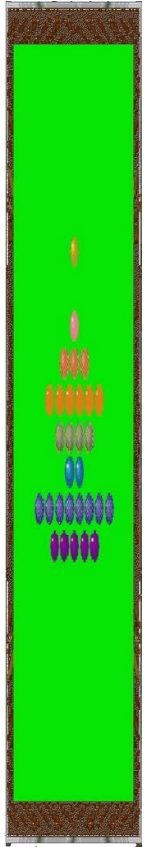


CONDITIONAL EVOLUTION OF LIFE

PAG.

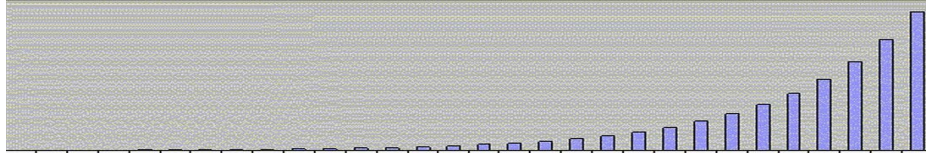


1. General evolution and science	15
a. New theoretical perspectives	15
b. Philosophy and scientific advance	19
2. Evolution, life and vital impulse systems	31
a. Definition of biological evolution of life	31
o Biological evolution	35
o Historical and human evolution	43
b. Origin and broad concept of life	53
o The logical approach	55
o Metaphysical approach	59
c. Freedom of living beings	63
o Vitalism and vital impulse systems	67
3. Criticism of previous evolutionary theories	75
a. Creationism - Intelligent Design	81
b. Lamarck - Charles Darwin	87
c. Mendelian genetics	105
d. Neo Darwinism - Synthetic Theory	109
4. Genetics and evolution	115
a. Evolutionary genetics	115
b. Objectives of life and human evolution	119
o Guaranty and security	121
• Sexual differentiation	127
o Efficacy and optimization	139
• Genotype and phenotype	139
• Resources and natural selection	145
• Dominant and recessive genes	159
o Internal coherence or compatibility	165
c. Genetic variability	173
d. Mechanisms of evolution	183



5. General theory of evolution	191
a. Conditional Evolution of Life	191
b. Conclusions and characteristics	197
6. Empirical evidence	205
a. Theoretical basis for The EDI Study	217
b. The Darwinout experiment	227
c. Menssalina experiment	235
7. CEL simulation with Esnuka	241
8. Developmental psychology	243
9. Theories of human origin	257
a. Creationism, - Intelligent Design,	257
b. Lamarck - Charles Darwin	261
c. Gregor Mendel's laws	265
d. Neo Darwinism - Synthetic Theory	269
e. CEL	275





MOLWICK

MOLWICKPEDIA

Museum of the science of future

Philosophy of evolution, history, and life

New paradigms of Physics, Biology, and Psychology



CONDITIONAL EVOLUTION OF LIFE



1. GENERAL EVOLUTION AND SCIENCE

1.a) New perspectives on the general theory of evolution

The advancement of science is marked throughout history by major revolutions produced primarily by discovering or explaining natural events, formulating ideas, and developing new technologies.

Usually, leaps in science go with names such as Aristotle, Pythagoras, Galileo, and Newton. Nevertheless, their theories were also the product of their times' culture and scientific environment.

Likewise, we cannot forget the influence that philosophic tendencies and religions of different civilizations have had on science evolution. On the other hand, many people consider that each step taken by science brings human beings closer to such philosophical-religious ideas.

This book aims to present the concerns we all have to a greater or lesser extent about fundamental concepts of life and general theory of evolution.

We have attempted to avoid using strictly scientific terms to facilitate comprehension without diminishing the vocabulary's precision.

The focus area has been vast, ranging from the genetic evolution to **sexual differentiation**, the human brain, and **complex systems** that conceptually behave as if they were living beings.

There is scientific news in the successive edition, especially related to **biological evolution** that appeared in recent years but later than the initial essay on the Conditional Evolution of Life –CEL.

This news tries to offer a vision of what, how, and when scientific knowledge advances reach the public. It also cites the confirmation of the propositions of the 1992 **Esnuka** billiards. In this free game, the CEL governs the contained instructions for the color-changing of the balls.

On the one hand, the book discusses the cause of the transmitted genetic information's changes and its effects on the offspring.

Likewise, we present numerous investigation lines, development, and further exploration of a broad subject bearing in mind the innovative approaches.

Evolution



In particular, a direct development has been the **Global Cognitive Theory**. Both theories address intelligence's central theme, its mechanisms, origin, and evolution from various perspectives.

Another related book is **The EDI Study**; providing **empirical evidence** of the main propositions of LCA.

Finally, the book on the Global Scientific Method has a section about the **theory of evolution methodology**.

1.b) General theory of evolution and scientific advance

Every view has a philosophical substratum, including their experimental approaches –even philosophers usually study the concept of perception. Within a model related to the idea of life, this duality is more apparent. Therefore, it is advisable to have both points of view not to mix them and let a different philosophic-religious position affect the acceptance or rejection of the evolutionary theory's scientific content.

In the general formulation of this theory, it is clear its philosophical substance. The formalization needs a brief and concise definition of life. Consequently, the most basic idea appears, “The fundamental characteristic of life is freedom.” Nonetheless, its scientific content does not need this affirmation.

This evolutionary theory's definition helped its development and perfection as if it were a solving puzzle key.

Title II has a brief philosophical exposition of the concepts of evolution and life within the following sections:

- The first one, relating to evolution, refers to its temporal and spatial perspectives: long-term and short-term development, and micro and macroevolution. The **Darwinian Theory** alters this concept because it did not know microevolution on Cellular Biology, and it practically omits the existence of short-term changes in superior animals.
- The second one is about the broad notion of life.

- Lastly, the **vital impulse systems** behave like living beings, at least, concerning their evolutionary processes' characteristics.

In **title III**, there is an initial critique of other theories. Besides, there are a few objections throughout the book, mainly on the ideas of **Darwin**. It appears that he is losing momentum in the science world, given the advances in Evolutionary Biology and Genetics.

New ideas about the evolution of life are in **title IV**, divided into four major sections. The first introduces a general description; the second deals with improvements using a logical argumentation –whose scientific verification is plausible–, the third on sources or origins of the genetic modifications. The last one relates to the means, methods, processes, and mechanisms throughout the changes materialize.

The new thoughts are about the changes in genetic information and its transmission to descendants. The proposals are conceptually closer to **Lamarck** and **Mendel's** theories than to Darwin.

The theory of Conditional Evolution explains the functionality of **sexual differentiation**, allowing greater precision in the concepts of **dominant and recessive** genes. Another practical implication is the possible non-existence of the **missing link**.

The evolutionary jumps are typically the result of two or more branches.

There is also an instructive example of the Logical Verification of Information method (LoVeInf) within a car's evolution.

This title mainly refers to genetics' regular field, searching for the immediate causes of genetic information modifications

that pass on to descendants. Although analogies with the **vital impulse systems** will appear, they will be mainly for exposition purposes.

Next, **title V** focuses on defining the Conditional Evolution of Life –CEL, incorporating its formulation as concisely as possible while conserving its essence.

The analysis of the characteristics of the new evolutionary theory shows its scientific vocation.

The next step is **empirical verification**. **Title**

VI reflects on the difficulty of scientific research for sociological reasons and, at the same time, the relative ease of verifying partial

aspects of it, pointing out experiments refuting Darwin's theory and others that support both Lamarck's and CEL's proposals.

Hence, there is an entirely developed mathematical-statistical model of **intelligence evolution** (1990) to test the **Logical Verification of Information** (LoVeInf).

The results of the **EDI Study** (2002) confirm beyond any doubt the LoVeInf method. Likewise, other specific models could also withstand empirical contrasting.

In 2011, it roused the **Darwin-out** experiment to confirm the EDI Study's **results**. In 2016, the CEL book incorporated a newly designed, more upfront **Menssalina** experiment

Iguana - Cancun



proposal.

Title VII briefly describes the **Esnuka** program designed in 1990 to allow the assimilation of the CEL proposals by introducing them through a billiards game's computer-simulation.

The validation of the purely scientific aspects of the theory would have consequences for the development of Biology and Genetics by providing these sciences with a coherently theoretical base, especially for the advances already made.

It would also give off significant consequences for other branches of knowledge, such as psychology and history. In **title VIII**, there are some hints about these consequences. There is a double purpose for this title. On the one hand, the implications of the Conditional Evolution of Life –CEL– and, on the other hand, to allow a better understanding of the social reality and its historical development.

A brief exposition of the main theories on evolution is in **title IX**.

BIOLOGY NEWS

All of the biology news appeared in the newspaper El País on the indicated date, and they are, to a certain extent, about contemporary topics. In case the biology news relates to an article in an international magazine, it appears following the date.

The science and biology news is not part of the text. In other words, sometimes the book and the story have the same opinion and sometimes the opposite.

In short, it tries to express how academia and general culture is changing for **biological evolution**. At times, the most significant is not the news content but rather the form, the time, the origin, or the effect.

Of course, highlight CEL coincidences and that the primary lines of this theory were fully developed and were public since **11-16-1992**.

A special mention is due to the crucial psychological support that gave the published article in a special supplementary edition in El País 11.26.1992 about the parasite's classic concept from a copycat gene in the text by Eric. H. Davidson (a) –author of the term intelligent genes!

Another interesting article is from 02-10-2002 about the National Conference of Ethology (h) that presents a similar vision of life to the Conditional Evolution.

All of the news is after the CEL

- 1992-11-26 Living systems
- 1992-11-26 Evolutionary discoveries
- 1992-11-26 Regulatory instructions
- 1992-11-26 Enormous quantities of genetic information
- 1993-01-10 Choose the gender of calves
- 1993-01-10 To modify the theory of evolution
- 1993-01-15 Rapid adaptation - The Spanish mountain cats
- 1993-01-15 Recover eliminated features
- 1993-04-26 Wilm's tumor
- 1993-05-12 Men suffer more genetic mutations
- 2001-00-00 Microbes that live without carbon
- 2001-02-19 Horizontal transference
- 2001-02-19 The evolutionary progress
- 2001-02-28 Hitch-hikers
- 2001-03-14 Eukaryotes
- 2001-03-19 The simplest way of life
- 2001-10-04 The language gen
- 2002-01-11 Modern human behavior
- 2002-01-23 Olfactory preferences
- 2002-01-23 Women have an excellent sense of smell
- 2002-02-10 Time waste
- 2002-02-20 Human or a chimpanzee
- 2002-02-20 Rough sketch of the human genome
- 2002-04-05 The genes of animals
- 2002-04-25 Genome of rice
- 2002-05-27 Dyslexia

- 2002-10-02 Evolutionary strategy
- 2002-12-20 Each person is different, but not because of his/her race
- 2002-12-20 Genetic variability
- 2003-02-26 Democratic behavior
- 2003-06-12 Oldest fossils
- 2003-06-21 Modifications in human Y chromosome
- 2003-06-21 Chromosome Y
- 2003-08-14 Human genome and genetic functions
- 2003-09-04 American Indians
- 2003-09-10 Enigma of the bees
- 2003-09-10 The concealed face of the genome
- 2003-09-18 Justice, the primates
- 2003-09-18 We understand almost nothing about the human genome
- 2005-03-30 Backup copy
- 2008-05-10 The inheritance of the acquired characters
- 2008-09-03 Appetite and reproduction
- 2010-01-13 chimpanzee and human Y chromosomes
- 2010-11-24 Resistance of bacteria
- 2010-12-16 Hybrid love and X chromosome
- 2012-09-06 Junk DNA comes to light
- 2014-01-30 What we have of Neanderthal
- 2014-02-06 The mysterious behavior of the X chromosome
- 2014-03-28 Synthetic life is here
- 2016-11-03 La naturaleza utiliza solamente dos sexos(es)
*
- 2018-04-23 DNA structures formed in the human cells *

2. CONCEPT OF EVOLUTION, LIFE, AND VITAL IMPULSE SYSTEMS

2.a) The definition of evolution

If we ask ourselves what evolution is, a good idea would be to consult a dictionary. The General Dictionary of the Spanish Language gives the following definitions:

1. *The action of things developing or transforming by gradually passing from one state to another: the ~ of species; the ~ of a theory, of a policy*
2. *The effect of things developing or transforming by moving progressively from one state to another*
3. *p. ext. Movement, change or transformation, in general: the evolution of a dance*
4. *Movement, change of troop or ship formation for defense or offense purposes*
5. *Fig. - Change of conduct, purpose, or attitude*
6. *BIOL. - Derivation of the species from living organisms, from others already in existence, through a process more or less gradual and continuous*
7. *PHILOS. The hypothesis that attempts to explain all phenomena by successive transformations of a solitary original entity*

The first characterization of things developing and transforming themselves from one state to another is the gradual pace; if it were fast or accelerated, it would be the concept of revolution.

The second observation is there are two primary meanings: 1) “*The action of things developing...*” and 2) “*The effect of...* “. The first refers to the internal dynamics of things that makes them develop or transform. The second relates to its external appearance that is nothing else but the external perception of the effect or result of internal evolution.

Together with the two primary meanings of evolution, internal and external, there are other specific acceptions. In point 6), there is an especial mention of **biological evolution**. The definition only adds the long-term for the typical dynamics of the **species**. It is explicitly talking about the **Darwinian Theory** and its subsequent adaptations; that is, the specific type referred to in point 2).

Sphinx of Egypt
(2620 BC) Museum of the Louvre



The general idea of the evolution of life in biology is different from the above two central concepts of development. In standard biology, it refers to the external perception of the changes or transformations and limits itself to a long-term process.

For the general theory of the Conditional Evolution of Life – CEL–, the concept of evolution refers to both short-term and long-term internal dynamics. Development in the long-term would not be just the addition of changes but instead the differences in each generation.

The next section will explain the consequences of one focus or another of evolution.

2.a.1. The biological evolution

Various aspects hinder understanding biological evolution theories because the immediate or intuitive perception of relationships is low in fields outside the everyday world.

Especially in **complex systems theory**, there are two typical cases: the study on a different spatial scale –either microscopic or macroscopic about our size– and, on the other side, within a long-term analysis.

In biological evolution and genetics, the cellular growth or lower range like DNA, protein, bacteria, or virus is microevolution. Our regular scale, where we humans find ourselves is the macro or macroscopic level. If we were talking about astronomy, the concepts would vary accordingly.

Human beings interact on the microscale in genetics, which implies a non-intuitive world.

When the news talks about 325 billion cells; it makes no difference if it says 830 billion cells; and, not to mention, if it talks about molecules or the number of DNA letters.

When it states the monkeys' genome differs by only 1% from the human, it seems very similar. What would happen if it tells the same, but with the absolute quantity of the known DNA letters in which they differ? As well, what does one DNA letter mean?

Nonetheless, a trick not to get lost is to reason about the fractal theory where specific models maintain their structures when changing the scale. In the case of biological evolution, life would behave similarly in the micro and macro range.

It does not mean at all that it is not possible to adjust some variables or concepts. At times, the change of scale creates a noticeably different model because new forces or relationships come into play. The classic example could be the individual's behavior against the crowds.

An essential element of evolutionary theory is its characterization as internal dynamics or external perception.

Firstly, the simple combination of some elements will always give a subset; that is, a new item will never appear in the mixture, so evolution could not exist. Using a simple analogy of a game with a Spanish pack of cards, a card from an English deck will never appear when distributing the cards. Likewise, the same occurs going backward, that is, to see the origin of life.

As a result, even for the biological evolution understood as external perception, it is necessary to accept internal changes. Now then, if those internal changes are entirely unknown, the standard solution for science is to declare them implicitly or explicitly random.

It needs a considerable imagination to believe with random changes in each card's pattern could appear a card from an English deck.

Moreover, let us look at the significance of choosing one focus or another for some real, but non-biological, examples of modern society:

- **The development of cars**

This example allows us to see two types of approaches. On the one hand, we could argue that the consumers have created the market's demand by making their choice. This demand makes it so that those cars more adapted to their

preferences are bought and allow companies to continue their production.

However, the market reaches an equilibrium when supply and demand are equal. The former will depend on the production cost, including materials, labor, and research and development.

Remaining just with demand as a cause of vehicles' evolution would be ignoring all men and women's efforts to improve labor materials and productivity.

On the other hand, cars' demand and supply result from the car industry's general objectives. We can cite improving performance or velocity, increasing security, and the speediness in transmitting the technological advances to the market.

In short, the demand for cars has always existed; indeed, the Romans would have also wanted to have modern vehicles! The driving force in cars' evolution has been the supply that has materialized each time a different model comes out.

We should take into account that although the example is not of pure biological evolution, the market for cars is a direct result of human activity or man's natural progression.

■ **Personal computers**

This case includes the supply, demand, and all the elements

La Gioconda

Louvre Museum
Leonardo da Vinci



and reasoning in the previous example with greater clarity.

Moreover, there is an additional fact in which software creation is necessarily parallel to hardware development. It would be useless having the Windows 2000 program if we have a personal computer with a chip-type 386 AT, at 16 kHz, and only 640 Kb of memory. In other words, this program would not exist if there were not any faster computers.

Admittedly, in man's biological evolution, the development of specific elements needs others or that some conditions are present.

A new aspect from the previous example is the similarities between the personal computer and the human brain. Deep down, there are two different systems, but with the same purpose: keeping and maintaining a vast quantity of information.

■ **Languages**

Languages are different; they evolve and perfect themselves, but the market laws and demand are not part of a personal system. Nonetheless, the study of any language's general intrinsic objectives continues surprising because it seems quite a bit like **man's evolution** and those previously mentioned.

Language accepts fast changes but always within a structure of increasingly strict grammar rules guaranteeing its continuation. Usually, the linguistic system will try to maintain the coherence of the meaning to hold desirable communication. Of course, it will increase the number of words and concepts associated with them insofar as possible; that is, the subjects' semantic capacity.

This last point is crucial since, in short, it is what is going to give mostly the evolution of language.

- **Modern nation**

The analogy with a state is complicated since there are not any clear market laws here either. However, they appear with greater clarity at the root of the economy's current globalization and other human activity aspects.

Each system will have particular objectives, but it is easy to detect the general goals quickly. In a state or nation, the political system is essential for its development. Nonetheless, its political system tends to relate to its citizens' culture in a broad sense.

On the other hand, the states belong to a different scale from the human level, and the results of any short-term analysis will be subject to countless factors. In a long-term review, their strength will depend on the evolution of the citizens.

- **A person's life**

A more straightforward example is the development of a person because we are intimately familiar with it. Personal goals' success depends on the competition, but the critical factor is the individual capacity and job. That is, own evolution depends on oneself. Of course, surroundings affect the internal dynamics, but inner dynamics are still responsible for the particular advancement.

- **The artist**

The example of the artist is also illuminating some characteristics of biological evolution. Analyzing the development of a famous painter's work throughout life probably allows us to identify different stages in the

painting. For instance, it will be easier to discover the theme or the use of colors or tones.

The evolution of the paintings will be elements like the artist's work, age, economic situation, and the individual position in the face of social development. Otherwise, it would deny the artist's influence on the progression of the work.

In light of these examples, the concept of biological evolution, in the strict sense, refers to the global change of things and not only of their appearance. This view of the philosophy of life will help a better understanding of the origin of life.

2.a.2. Historical and human evolution

Changes of scale can affect a system's particular objectives, and relevant variables may differ from short-term and long-term variables. Likewise, internal dynamics in human and **biological evolution** can change according to the scale.

When speaking about the limits of knowledge, the temporal and spatial horizon may impede the logical reasoning when operating as the perception limits.

The perception of a dynamic system in the long-term would look like a film. The movie will give the effect of the internal dynamics, but not the proper internal dynamics.

Perhaps it is a typical effect of long-term models, that in many cases, the interest is on long-term dynamics regardless of their ultimate causes. You may also try to carry out a partial analysis because you cannot cover the entire problem.

The theory based on natural selection has its internal dynamics. However, it only refers to one of the evolution factors, which operates based on real development.

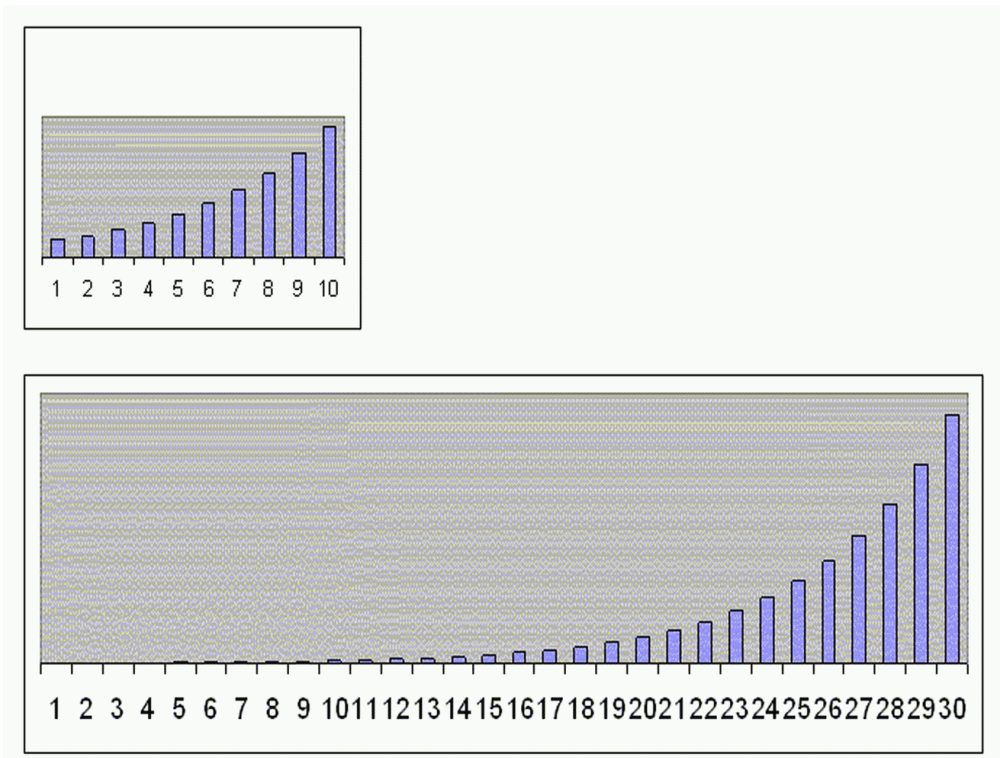
Since natural selection refers to the non-elimination of the better-adapted beings; it needs, on the one hand, to impose a random character on the rest of the possible conditions of biological evolution. On the other, for the long term to produce effects similar to those of real progression.

Information with an excellent presentation of the history of human evolution along the last 160.000 years and our ancestors' geographic routes are in **Journey of humankind - The Peopling of the World.***

A long-term study of the history of humans implies a change of scale. Let us cite a summary of the problems arising to a greater or lesser extent:

- There is a tendency to lose the temporal notion in the long-term analysis and the spatial context of a different scale from the human one.

Exponential growth perception



- Understanding the changes in relations between representative variables
- The same problem can appear about the system's internal relationships, the individual, and their particular objectives.
- Not only can the variables change, but also they can alter their nature. For example, a discrete short-term variable may end being a continuous variable.
- All alterations should explicitly appear when changing the spatial or temporal reference within a specific historical

evolution analysis.

Genetics is on a different scale from the human body, and human evolution needs a long-term analysis.

The next graph shows how long-term analysis eliminates the perception of short-term changes. The figure displays an exponential growth whose ratio is 1.25, but by only triplicating the period, satisfactory visual outcome acts.

NEWS ABOUT THE THEORY OF EVOLUTION

A human and a chimpanzee diverge by a little more than **1% of the genome**, only ten times more than the very difference between two individual humans.

Estimating the genetic difference between humans and chimpanzees lies in no more than 400 million nucleotides (DNA elements) from 3 billion.

El País 20-02-2002 (The 1% could be slightly imprecise)

With the change of scale and despite exponential growth, we cannot stop thinking that, in the second figure, there is hardly any growth during the first 15 periods. It is worth noting that exponential growth is typical of temporal sequence models.

The ability to measure such small differences is lower when the intuitive scale corresponds to the latest period.

Some studies illustrate the limits of the human mind regarding the logical perception of variables and relationships. In other

words, the conclusions could be fragile.

These considerations lead us to think about the implications of understanding only long-term human evolution and eliminating the short-term due to its little perception and sociological acceptance.

Let us quote some of the generally accepted facts of human history that are incorrect or could cause confusion with a misinterpretation:

- The intellectual capacity of the *Homo sapiens* has not substantially changed during the last 30,000 – 50,000 years.
- Making **fire** is a great evolutionary leap in human evolution, keeping in mind the first humans' cerebral capacity to achieve it.
- Another significant milestone for their small intellectual capacity is the discovery of the wheel, indeed by accident.
- Despite human mental capacity, we did not talk much or create large grammatical structures at the beginning of our species. Either it was not worth the time, or we had to wait for the vocal cords to develop through random mutations of the transmitted genetic information.

Scribes - Louvre Museum

Egypt 2500 BC and 1450 BC



- In ancient Egypt, humans developed an excellent

construction ability with the **pyramids**; managing the walls would not fall over for an extended period. There must be a reason they are the only ones of the seven wonders still standing!

- Before the Greeks, **scientific philosophy** did not interest us, except for some honorable exceptions.

Some Greeks believed the practical application of knowledge meant reducing it and, therefore, should only stand in the **world of ideas**.

- Romans technology allowed building **aqueducts** but not a closed pipe since they had not noticed some unknown weakness that water level tends to be the same. The seamen did not realize this despite the nooks where the land and water meet in many places.
- Without knowing the exact origin, another tremendous Roman contribution was beginning to count with sticks, going so far, even representing five **sticks** with a V, which simplified mathematic **calculi** considerably.
- The idea that the Earth was spherical was a little difficult to believe, especially given the moon and the Sun. The half-moon's shape was unknown, not seen anywhere else, even by aiming a light onto an orange in the dark. Finally, thanks to the accumulated knowledge transmitted from generation to generation, 500 years ago, the conviction was spherical and revolved around the Sun. Even though it may have gotten someone into trouble –**Galileo** (1564-1642), the reason could be a generational leap.
- We were fortunate when it occurred to **Newton** (1642-1727). Thanks to his weakness for apples and the trend for thinking during his time, he expanded on his feebleness.

He proved, amazingly, that something similar occurred to the Sun and the moon.

- **Miguel Servet** (1511-1553) was not so lucky about his pulmonary circulation ideas and its role in respiration with the transformation of venous blood into arterial. Admittedly, he did not present them with the same poetic feeling as the apple of Newton.
- There are no doubts about the long-term increase in human intellect, the different scales used to measure IQ – intelligent quotient– need to adjust every 20 to 25 years at most due to the Flynn effect.

Some authors estimate the IQ of some geniuses of humanity, adjusting the IQ to the corresponding era. It could be like double relativity! If there were a similar measure for height, it would turn out that Romans were as tall as Italians are nowadays. Admittedly, it will be another quantum effect of the relativity of space and time!

In short, examples are unlimited; on the other hand, we are sorry for having used a certain irony in these last points; we too have some weaknesses.

There is no attempt to diminish the contribution from those mentioned above; besides, it is quite the contrary since those advances make up part of human evolutionary history. They demonstrate the gradual improvement of the capacity of the human mind since the origin of man.

Going back to the usual seriousness and regarding the previous figures of exponential growth, the *Homo sapiens* have had 4,000 generations at most, according to the latest paleontological estimations. According to some authors, IQ shifts 10 points every 20 years, which means approximately 10

points every generation.

NEWS ABOUT THE THEORY OF EVOLUTION

Found in Ethiopia, the oldest fossils -three skulls from 160,000 years ago

Given the small differences with the skulls of the current species, those responsible for the discovery are in favor of naming a new subspecies for these fossils; **Homo Sapiens Idaltu**, but specifying that by shape and size, they are very close to the Homo Sapiens (the current humans)

El País 12-06-2003 Nature

Advances in biology and genetics show genetic information changes in the short-term evolution, making classic approaches surpassed.

2.b) Theories on the origin of life

These theories are not within the limits of knowledge but rather in the limits of philosophy. The meaning of life is the most direct and challenging concept for a philosopher.

The Conditioned Evolution explanation does not seem to need to enter into philosophical subjects because it is not its primary objective. However, a philosophical foundation helps to capture the global conception of the evolutionary theory. Besides, it is a pleasure, and it is difficult to resist when the script requires it. Indeed, the philosophy of life and its origin are exciting topics.

Club Med - Cancun



There are at least two possible complementary approaches: **logic** and metaphysics or mysticism.

The logic method could use the dictionary definition of life to find its origin, essence, or Life in capital letters.

The definition of life has been changing with time; therefore, it should be better to keep a certain distance from the scientific perspective to attain a more permanent concept.

The second one is a direct approach to the concept of life from within oneself, where words do not count. Thoughts are so fast that we perceive them only as feelings –those genuine **feelings** not needing **logic** because they are coherent.

2.b.1. The logical approach and the broad concept of life

The General Dictionary of the Spanish Language provides us with numerous meanings for the word “life” in exact correspondence to its multiple uses. It would be excessive to comment on all of them, for which we shall stay with the most relevant:

1. *A fundamental internal force through which acts the being that possesses it*
2. *Nature distinguishes plants and animals from other beings and presents itself through metabolism, growth, reproduction, and adaptation to the environment*
3. *The union of the soul and body*
4. *The existence of the soul after death*

Given that the word “being” appears in the definitions, we note two of its meanings:

1. *Essence, or nature*
2. *Entity (that exists)*

The first definition of life is philosophical, and it seems practically perfect. Since it is not sure which beings have that internal force and which ones do not, it points out “... *the being that possesses it.*”

The second concept relates to plants and animals, which are the only beings that seem to possess such force according to human perception, both direct and with instruments. If

science does not have proof, it restricts the concepts; on the contrary, philosophy needs evidence to limit them.

It also displays the classical definition of life with the influence of the natural selection theory, “*Nature that distinguishes the plants and animals... and adaptation to the environment.*” In the end, if we are not yet, we will end up being super adapted!

The philosophy of adaptation “as scientific truth” of life evolution is most convenient for the system. In short, individuals have to adapt to it because it does not make any sense of changing it. Moreover, alternative theories on the origin of life and **human evolution** appear as hateful ideologies like racism or xenophobia. It is not easy to do it any better from an established system!

Perhaps it would be more appealing and correct to say, “*The plants and animals develop and try to improve.*” This way, “*according to the environment*” and “*to extend independence from the environmental restrictions*” would be implicit.

It seems that “evolution by adaptation to the environment” and “conditional evolution” are the same by the environment. However, the difference is significant. The first element stresses the adaptation for survival as the cause of evolution; on the contrary, the second emphasizes living and improving to become independent and surpass the environmental restrictions. Furthermore, the second also refers to logical conditioning.

On the other hand, life's concept could be more precise using an enumeration of necessary and sufficient conditions of life's existence.

The third and fourth definitions are religious about living in this world, “*body, and soul*” and beyond, “*the existence of the soul after death.*” Now then, life is evident in plants and animals, but

scientists have not managed to locate it.

NEWS ABOUT THE THEORY OF EVOLUTION

"Discovery of a colony of **microbes** that live without carbon

They live 200 meters deep in hot springs; it is the first example found on Earth of what life could be under the surface of other planets, in totally inhospitable environments, where there is no sunlight or organic carbon exists."

El País 2001 Nature

It would be much more suitable for life to be closer to energy than matter.

The approach to life as energy corresponds to the broad concept of life. It is a philosophical perspective because it cannot provide evidence. To a certain extent, it shares the religious approach. Still, the underlying support is scientific because it seems more probable from a strictly logical perspective.

2.b.2. The metaphysical definition of life

The second approach to the concept and origin of life comes from philosophy and personal thoughts.

When we ask ourselves, “what are we?” we realize that we do not have the appropriate words because words like “soul” or “spirit” have metaphysical and philosophical connotations. It would not be an essential question if others could respond to it. Then you gradually lose yourself in what you think and write until, finally, naturally, words emerge, words that are not words but poetry. Meaning what it feels like right now!

Windsurfina



Thus, you begin to wonder, to feel the proximity of others on the journey in space and time, and you try to imagine Life without those memories. You realize that it would make no sense. Life without intelligence would not make any sense. Life without Love would make even less sense.

All of them are internal conditions, necessary and sufficient for life. Therefore, any theory on life's origin should consider that those elements or characteristics would exist from the beginning.

The foundation of those characteristics is out of the scientific scope.

Memory appears because memory without an internal system to retrieve information is not memory but a file. Intelligence is precisely that internal system that operates, among others, with concepts filed in internal memory. And Love, just because.

There are also the necessary characteristics, such as space and time.

In any case, each of them involves the others. It always appears another, the Freedom.

Freedom is a frequent topic in metaphysics, but it does not mean that we cannot comment and get closer to the concepts. To exercise Freedom is necessary to have options, which must be in memory. There should be a decision-making system; eventually, to decide without Love?

Freedom and Love are at a superior poetic level than memory and intelligence; Love, being elemental, sounds too poetic to characterize life. Therefore, we prefer to summarize, as “The essential nature of Life is Freedom.”

Nonetheless, from metaphysics and philosophy of Love, or even better, from a poetic characterization of the origin of life, *“The first concept included in genetic information is Love.”*

Finally, creating little scientific poetry or pure metaphysics in saying, *“We have been talking about the scientific existence of the Soul.”*

Is not love more real than reality itself?

2.c) The freedom of living beings

The origin of living beings can be engaging in a personal context. However, it is not relevant for the exposition or validation of the Conditional Evolution of Life's scientific aspects.

NEWS ABOUT THE THEORY OF EVOLUTION

“A Spanish group describes the purest form of life.

How many genes could sustain life? Perhaps 395 are enough. **Buchnera** was a bacterium of free life and very similar to *Escherichia coli*, the most common microbes of the human intestine. The comforts of **symbiotic life** have made it lose 85% of its genes since then.

Buchnera is now halfway between a bacterium and an integral component of the cells of plant louse.”

El País 19-03-2001. Proceedings of the National Academy of Sciences

Energy, or gravity itself, could the origin of living beings if they had some degrees of freedom so small that we would not have the means of perceiving them. Therefore, we would not have another alternative than to include in the corresponding model of scientific behavior random components derived from the gods of science Ale and Hator.

Another example is that we cannot perceive the plants' suffering when they die, and we assume that plants do not like it at all.

We could say the same about small animals.

Nonetheless, the broad concept of life allows the mind to meditate about the evolutionary system's goals with a higher degree of trust in applied logic. In short, what would we do in its place? Of course, Life would have done anything imaginable and much more.

NEWS ABOUT THE THEORY OF EVOLUTION

“Ethology

Some animals display **democratic behavior** in groups. According to a new study, when the deer stand up and the bees dance, they are not merely stretching their legs or indicating where the nectar is. As strange as it seems, they are voting whether to move to greener fields or better-off flowers. Scientists state that the process is subconscious.”

El País 26-02-2003. Nature

The above concept of Life lets to overcome anthropological positions or biological reductionism.

To be precise, regarding positions such as:

- Man is the only rational being (Plato - Aristotle)
- He is a political animal (Aristotle)

- He is unique for possessing the gift of language.
- He is unique for creating (not using) instruments (*Paleontology.*)
- He is unique for transmitting his culture (*Behaviorism* – learning in contrast to instinct)
- Necessary laws govern nature and the cosmos, but only the man has freedom.
- Man is an animal, and in this sense, everything is instinct, that is, the biological pre-determinism. To a certain extent, it is a result of Darwin's contribution (*Innatism.*)

NEWS ABOUT THE THEORY OF EVOLUTION

“In the majority of the trials (carried out in pairs) in which a service or exchange does not follow the **rules of justice**, the primates end the conflict. At times, they rebel by throwing the object of the trial or the received trophy up into the air.”

El País 18-09-2003. Nature

From a scientific or philosophical point of view, human beings are just beings with particular traits, but with living beings' general characteristics and intrinsic to Life.

Ethnocentrism, *cultural relativism*, and *universalism* forget about this last aspect since they refer to the human being with unique characteristics without specifying them concerning the rest of the living creatures.

This philosophical approach would assume all beings are living beings. However, we will continue using the standard definition referred only to plants and animals, given that it is a relevant term to speak about genetics.

2.c.1. Philosophy and theory of Vitalism

2.c.1.a) Vital impulse systems

An adequate philosophical antecedent of Conditional Evolution is the theory of Vitalism.

NEWS ABOUT THE THEORY OF EVOLUTION

“Scientific progress and society

The individual genes in each cell are peripheral elements that follow the whole system's developmental process, and yet, each one is responsible for integration decisions.

Living systems

Perhaps it is too futuristic speculation, but I think it is worth considering how we could use genetic information processing principles. We are learning from the study of complex biological systems.”

El País 26-11-1992. **Eric H. Davidson**

For one reason, the vital impulse systems behave as if they were living beings or have their essential characteristics.

The superior animals are like symbiotic macro-societies of more basic units with a life of their own, like cells.

The problem relates to the complexity of the structure of the

brain. Modularity and connectionism are two thoughtful approaches that could easily be complementary.

The following types are by order of intuitive proximity:

- The first type of vital impulse systems will be those systems whose components are, in turn, living beings – nation, state, beehive, ecosystems.

NEWS ABOUT THE THEORY OF EVOLUTION

“British scientists manage to **choose the gender of calves.**

Besides being expensive since it implies in-vitro fertilization, scientists are quick to add that the technique does not apply to human beings.”

El País 10-01-1993.

- Another type will be the effect of the activity of groups of individuals with a specific purpose. Therefore, the protagonists will not be individuals but the particular object of their actions –economic markets of products.
- Internal dynamics of systems derived from partial qualities of the individuals –languages
- Any work or objective of a living being will have the same evolutionary dynamics as living beings. While developing and achieving the goal, the relationships and conditions make up a vital impulse system –the evolution of computers, a computer program, or a house's construction.

2.c.1.b) Vitalism and characteristics of living beings

The features commented above would be more or less identifiable, but they will be present in all of them in some way.

It is also possible to distinguish between essential characteristics and those derived from the objectives that all vital impulse systems must-have.

Water-skiing



Vital impulse systems should have the following characteristics:

- They should have a decision-making process to choose between different options to achieve their purpose. On the one hand, it will imply the existence of degrees of freedom in the system and, on the other, operative intelligence.
- The system will take the options according to the information available, for which the existence of an archive will be necessary.

The good faith of the system will exist a priori, and, confidently, it will always have it a posteriori.

The system must be a teleological system, that is, with objectives. Even if these cannot be precisely determined, one should always identify the intermediate targets and the methods, processes, and specific instruments for obtaining them.

The objectives will be:

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

If a system complies with the characteristics, it should behave as if it had a genuine vital impulse.

Besides living beings, a practical method of identification of these systems will be to check:

- Systems conceptually delimited according to the proposals of the theory of chaos.
- Systems had behavioral or evolutionary graphics with fractal forms. It would not be surprising if the fractal structure had the shape of an arrow tip; the interpretation of this shape would give some clues about the system's purpose or objectives.

3. PREVIOUS EVOLUTIONARY THEORIES

Science changed a lot in the past century –the 20th century. Yet, regarding the theory of evolution, it has not altered significantly.

Although there are small updates, the accepted theory is the **Darwinian** presented in *The Origin of the Species* in 1859.

Crocodile cancaning



According to Darwin, individuals present random variations, and evolution comes about by natural selection. These variations are also named random mutations to point out their supposedly unguided nature. However, to date, no one knows what statistical distribution these mutations have.

The Darwinian Theory punched **Lamarck's approach**, where

traits acquired during individuals' lives pass on to their descendants. A classic example is the giraffes. According to Lamarck, the first giraffes, by constant stretching of their necks to obtain food, managed to lengthen them and subsequently to breed descendants with it a little longer. Darwin maintained that random giraffes born with longer necks were luckier than the average, survived more, and produced more descendants.

Among the theories of evolution, strictly speaking, we find **Mendel's laws** about genetic inheritance, whose fundamental elements are the combination of genes and their dominant or recessive trait.

At the end of the 19th century, this theory remained unknown and not because Mendel did not try to publish it, as some orthodox fields kept saying for an extended period. Recently, they maintain Mendel's papers contained many formal errors. They will end up affirming he was not an excellent pedagogue, and he lacked assertiveness.

In short, the ideas presented by **Lamarck, Darwin,** and Mendel make up the general body of **biological evolution** regarding the **evolution of the species**. Nonetheless, it is also worth pointing out minor derived theories and others of religious nature.

Regarding the Conditional Evolution of Life –CEL–, nowadays, there is evidence of new processes like:

- **Horizontal transmission** of genetic information with alterations due to **viruses and bacteria**
- Foam type evolution, i.e., close species communicates through some individuals, so it does not follow the typical tree structure, which biologists thought in the past.

Therefore, it should be challenging to find an inexistent **missing link**.

- There is the inheritance of **acquired characteristics**.

The new evidence by academia is not an adaptation of Darwin's theory, as occurred during the twentieth century. Now it makes concepts relative and blatant changing of notions to avoid recognizing past mistakes. It must be the mistake was the design of the books of general education of the population.

According to academia, the discovered inheritance of acquired characteristics is not anymore the evolution propounded by Lamarck. Still, it comes from molecules inherited, although not part of DNA. It seems Darwin was an expert in genetics and epigenetics and distinguished between heritable DNA and other units. Moreover, alleles are no longer different versions of genes for small chemical variations but a gene that fulfills a similar function. However, a gene mutation to its functional allele would be virtually impossible.

Even **Wikipedia** * in Spanish and French has incorporated the concepts of new orthodox, but curiously not in **Portuguese** * or **English** * –*Inheritance of acquired characteristics*.

The previous links are permanent as of the modification date; they may already be with the new orthodox version.

Doing some archeology of science to understand what is happening with theories of evolution and the origin of man, we see that orthodox doctrine has not changed the definition of the Royal Spanish Academy -RAE-, which says:

■ **Epigenesis**

- f. Biol. Doctrine where the living being traits fix in its development, without being established in the fertilized egg.

Epigenetics * is no longer gene expression by environmental conditions –such as the above RAE definition– but any gene expression, even if it comes from the previous generation genetic information, as far as it does not come from DNA. It seems the intention is to incorporate mutations produced in the life of earlier generations without recognizing that Lamarck was right and, incidentally, acknowledging and explaining that DNA and other molecules transmit genetic information.

Either way, the inheritance of genetic information modification produced in the previous generations' life relates to phrases *“the organ creates the function”* and *“the inheritance of acquired characteristics.”* As a modernist expression, we could say **epi-inheritance**.

It is sad to have to remind the scientific community that Darwin's theory was never proven, especially now that it is evident that Lamarck's theory is correct.

Nevertheless, as theories of the origin of man both agree because they are evolutionary theories.

The Conditional Evolution of Life has the philosophical roots of **Lamarck** and **Vitalism**, instead of **Darwin's emergentism theory**.

Let us go on now to carry out a critical analysis of the most relevant evolutionary theories.

Likewise, a brief description of those evolutionary theories is in the section about **human origin**.

3.a.1. Theory of Creationism vs. evolution

We mention Creationism and other religious philosophies because they relate to evolution theories, and many people agree with them in one or another way.

As this notion does not follow the scientific method, the critic cannot base it on logical thinking; only showing our deep respect for religious beliefs.

A similar problem arises studying the existence of the soul-body (*monism and dualism*) and, although to a smaller degree, the concepts mind-brain (*logical behaviorism - Wittgenstein, identity, and functionalism*). They are in the scope of theology and philosophy more than in science.

In any case, religious positions such as Creationism can be compatible with any evolutionary theory, with a metaphorical interpretation of specific explanations of life's origin with a religious character.

**Notredame
Paris**



3.a.2. Intelligent Design

The general theory of the Conditional Evolution of Life – CEL– does not coincide with the Intelligent Design movement, such as the pseudo-tautological idea of the design of the universe to admit biological life, as we know it. However, it coincides with its argument of the existence of a teleological or finalist evolution consequence of an intrinsically vital impulse.

Naturally, it undergoes the same attitudes when some humans confuse Intelligent Design –an evolutionary theory– with Creationism and do not accept its scientific nature. As if excluding a theory’s character without a strong reason was purely an act of pure science!

Although the Conditional Evolution of Life is wholly rooted in the scientific method and experimental research, there is a connection with the Intelligent Design movement. The CEL supports a spiritual vision to the extent to which all religions come together. That is to say, the objective existence of the aforementioned vital impulse that seems to give meaning to life.

However, any scientific evidence of evolution being finalist would not imply, in its case, that other aspects suggested by theory of Intelligent Creationism are correct.

Furthermore, the Conditional Evolution of Life is not a part of this trend or movement.

Nevertheless, the subject of Intelligent Design seems particularly significant for the following reasons:

- It is crucial that part of religion, call it Intelligent Creationism, Scientific Creationism Theory, or Intelligent Design movement decides to make its beliefs compatible with the scientific world's physical reality.

Thus, science, or rather, the scientific community, will find itself forced to the corresponding; that is, not to reject something that it has no evidence to disprove and, therefore, accepting that some ideas like those of Intelligent Design could be valid.

The scientific community also would be obliged to recognize that **Darwin's** preferred evolutionary theory is neither proven nor rigorously formalized. They have made a severe error in the past by accepting it as such.

- The entry into science would prompt a greater seriousness in the Intelligent Design and the Darwinian Theory of evolution or the currently widespread Neo-Darwinism.

For example, both theories should explain the concept of Life, when and how they think the universe began and persisted until the present time. Note that until now, one focused on Life and the other on species!

Creationism and Darwinism should separate from science the non-verifiable assertions –such as a tautology or anything appearing out of nowhere without saying precisely when.

- Another essential element of Intelligent Design's dynamics is the small revolution within its ideas because it will need to place the designer in this world to produce evolution.

That is to say, there is an intelligence producing small changes throughout time, which makes evolution take

place. Therefore, it seems sensible that this intelligence would be tiny, not typically human, and even belonging to a micro-scale. In other words, with Scientific Creationism, humans are no longer the only intelligent beings and with the spirit of improvement.

With the revolutionary movement, the religious sentiment would be transcending beyond humanity regarding intelligence, which is encouraging because it implies becoming more rational.

All needed for modern science is to undertake a similar route and abandon some of its nineteenth-century premises, preventing it from being neutral regarding essential concepts, such as life evolution.

3.b.1. Lamarck's theory of evolution

It depends on environmental factors and is summarized as “*the function creates the organ.*”

We consider Lamarck's theory of evolution as valid but not general. Among other concepts, it should explain the controls imposed by nature to avoid modified characters' development due to non-permanent environmental changes.

Its philosophical implications indicate a creative intelligence different from the human one because there must be adequate mechanisms to create the organ.

There is a brief description of the **Theory of Lamarck** in chapter 9.

3.b.2. Criticism of Darwinism

According to the Darwinian Theory, the cause of evolution is natural selection derived from the combined effect of random mutations and the adaptation to the environment.

There is a brief description of this **theory** in chapter 9.

Despite its general acceptance, it has posed quite a few problems from the scientific point of view, and there has always been significant criticism of Darwinism.

Before the enumeration of the chief critics, there is an analysis of why it beat the theory of **Lamarck**. After the cited count, we will discuss the current difficulties for its rejection at the end of this section.

In the second half of the 19th century, humanist rationalism extended into all scientific circles and found itself at full peak. There were already sufficient indications that the Earth was much older than previously thought; the human being's position in the planet's history needed a scientific theory.

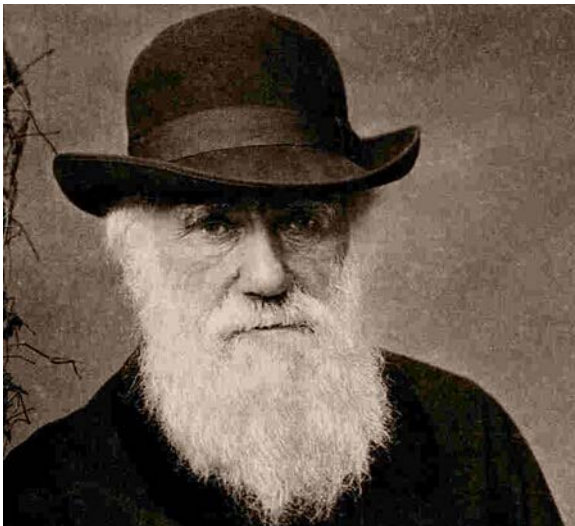
Of course, the new theory had to comply with a seemingly logical condition; it had to remove radically the religious ideas that had hindered the scientific development so much. The scientific community had not forgotten the old problems of Galileo and Miguel Servet. Let us hope they always remember!

The Theory of **Lamarck** seems very logical and reasonable, but it suffered a problem: it offered a leading role to the life outside the human dimension. There was something inside the plants and animals that improved when faced with environmental hitches.

On the one side, the powerful influence of the religious ideas still existing today could not lose a monopoly of spirituality. On the other hand, the scientific community would not openly struggle to shift consciousness and intelligent life to living organisms on an internal scale but different. Although it makes sense, there was not any scientific proof of their existence. In this case, we could talk about the thesis, antithesis, and synthesis; any theory that could resolve the era's contradictions with a minimum rigor would undoubtedly triumph.

Charles Darwin (1809-1882)

(Public domain image)



In this context, the Darwinian Theory emerged, showing the effects of the **species' evolution**; there was no reasonable doubt that man descended from the ape. That we know of, no one has questioned it outside of the strictly religious realm, such as the Creationist Theory. Currently, even the

predominantly religious confessions do not pose a sharp criticism of Darwinism.

Another aspect is that the title of Darwin's work comes about the **evolution of species** and not life evolution, for which it avoids having to define life. It is a problematic concept because it is unclear whether life has a scientific or rather philosophical nature.

The aim is not to deny or diminish the enormous contribution

of Darwin's theory to modern thought in anthropology, but rather to make a positive criticism delimiting its extension to avoid defective implications in society's development. It is worth pointing out that any theory of evolution has many consequences on philosophical and social thinking that pervade any number of individual attitudes and acts; for example, different approaches to particular problems of social justice or efficiency of the educational system.

In addition to the weaknesses noted below, section “**6. Empirical evidence**” lists experiments that contradict Darwin's theory and others that support the Conditioned Evolution of Life.

Weak points of Darwinism are numerous and interrelated; nonetheless, they are in order of importance from a methodological perspective even if it means to repeat some topics while presenting problems of a different nature:

1. Natural selection tries to explain the disappearance of non-optimal genetic modifications by lesser, or lack of, the adaptation of individuals to the environment. Conversely, it does not say anything about the **origin of variations**.

This argument implicitly denies or limits the slightest expression of the very concept of evolution, given that the new beings have the same genetic information as to their ancestors with supposed mutations that can have a positive or negative effect.

The evolution process is not in the genetic information changes but rather the non-continuity of the less favorable changes. There was no biology knowledge at the time, but they knew that something goes from one generation to the next.

Likewise, they indirectly assumed that where there is no natural selection, there is no evolution.

2. The second issue of criticism is that the main argument of natural selection, "what exists is because it has survived and has not disappeared," is a **tautology**. The only possible criticism is to point out the total lack of scientific severity in it.

NEWS ABOUT THE THEORY OF EVOLUTION

The **Spanish mountain cats**, direct descendants of the wild cats of 20,000 years ago, see better during the day than the domestic cats. The relevance lies in proposing a new mechanism of **rapid adaptation** of the species in very few years (between 15,000 and 20,000) in evolutionary terms.

The adaptation of animals to their environment occurs using the death of specific cells, in this case: neurons, during the second half of fetal development.

El País 15-01-1993. Journal of Neuroscience

3. This model only works in the **long-term** or for many generations and eliminates short-term evolution. That is how some ideas emerge, like the Homo sapiens since the beginning practically had the same intellectual capacity as nowadays, unnaturally intensifying the problems of random **evolutionary leaps**.

4. Implicitly, the Darwinian Theory accepts the randomness of genetic modifications, hence the name of random mutations, denying the existence of a real driving force of evolution without any scientific proof, when **logic** appeared to indicate the contrary. The **lack of evidence** is an exact issue of the criticism of Darwinism.

NEWS ABOUT THE THEORY OF EVOLUTION

Complete sequencing of the small human **Y chromosome**

The surprise has been that a fourth is long palindromes: genetic sequences that read equally from left to right as the right to left and consist of two arms.

The investigators think the palindromes, which contain all of the testicles' genes, allow the interchange of information within the same chromosome. Thus, the mutations repair or transmit.

El País 21-06-2003.

5. Darwin did not scientifically show the **randomness** in all genetic information variation cases, nor was it shown later; it became an axiom.

As far as we know, modern Neo-Darwinism still has not told us which specific statistical distribution follows random mutations; it could be the uniform or normal distribution, that of Poisson or that of Fisher. Without a

doubt, it is a great secret of science or a metaphysical mystery.

Under certain assumptions, the method of evolution using random mutations or modifications can be acceptable. We know some bacteria produce different bacteria in a tiny proportion. If there were a change in environmental conditions, such as acidity, those bacteria would survive. After numerous generations, these bacteria would make up the new population. At the same time, it would produce a tiny amount of the first bacteria that, where appropriate, would again allow the survival of the species.

The example tries to prove Darwin's theory but is only a particular case in which generations change rapidly, with enormous descendants.

NEWS ABOUT THE THEORY OF EVOLUTION

The mysterious origin of the resistance of bacteria

It is unknown yet from where the **bacteria borrow genes** to make themselves resistant to antibiotics. The search results for these genes on different grounds have shown to be negative, as explained by Professor Jorge Laborda.

El País 24-11-2010

Neo-Darwinism's argument is not free of criticism since the attempted random mutations are not accidental modifications of elemental letters or DNA units. They

could easily be modifications allowed only in one or various DNA parts, making up an efficient set regarding the new being's characteristics and preserving the **structural code** in its totality. The existent mechanism of natural selection does not itself deny other methods to create the diversity of descendants.

For some reason, natural selection fails to eliminate the supposedly least adapted variant since this evolutionary line does not disappear maintained as the same example shows.

Darwinism's criticism is another severe issue because after taking as proven mutations are random, academia accepts the opposite. The random mutations within groups with specific points would be utterly incompatible with the first randomness so previously established according to the scientific method.

6. In its day, there were criticisms of Darwinism about its lack of the scientific method; definitely, it is a theory supported by inductive reasoning from the observation of particular facts and making general inferences.

The **inductive reasoning** is perfectly valid, but the generalization it makes should comply with specific requirements. One of the conditions is that if one example does not satisfy the theory, it implies its refutation. Let us cite the following cases:

- Genetic changes obtained by **new techniques** are not random but guided; moreover, the mechanism of natural selection is not bringing about the appearance of the new beings, like in the agriculture field. We could argue whether these changes made by humans are

natural or not, but we have to keep in mind that humans, except for contrary evidence, make up a part of nature just as viruses do.

- Likewise, we are aware that **viruses** make changes in the invaded cells' DNA to reproduce themselves. It would not be surprising if they could perform another type of change, such as cheating the immune system in the future, or that the reactions would not transmit in the genetic sphere as a defense against these aggressions.
- Recently, **new experiments** in **evolutionary genetics*** openly contradict the updated Darwinian Theory. They are so numerous we cannot mention all here. Throughout this book, some of them are literal quotes from biology news, appearing after the initial formulation of the general theory of the Conditional Evolution of Life –CEL– in 1990.

NEWS ABOUT THE THEORY OF EVOLUTION

More than 200 identified human genes seem to be the result of the **horizontal transference** of the genes of bacteria (without passing through another organism in the evolution)

El País 19-02-2001. Conference of the American Association for the Advancement of Science

7. The theory has significant shortcomings when it comes to explaining reality. Darwin tried to give **sexual differentiation** a broader sense than the pure specialization of specific tasks because he sensed the necessity. However, he could not explain, except saying it exists because it is one of the best evolution methods.

Of course, it does not explain why the descendants of very genetically close individuals, such as siblings, are not feasible or present severe glitches in superior animals.

It seems **sexual selection**, about which Darwin wrote a book, goes conceptually against natural selection. The first one tries to explain the evolutionary changes, while the second one implies eliminating random modifications for efficiency reasons.

Any farmer knows the preeminence of sexual selection versus natural selection. It makes sense Darwin needed to go to Galapagos Islands to convince the public about the non-relevance of sexual preference; naturally, no farmer could correct him because they were not in the Galapagos Islands.

The irony of life is that present engineers, farmers, or cattle dealers denominate natural selection to **sexual selection** of stallion or seed. Undoubtedly, it must be another conquest of common sense.

8. Another critical shortcoming is the almost impossibility of producing the typically called **evolutionary leaps**; it is difficult to logically argue a change in genetic code's basic structure through mutations. The only option is to resort once again to long-term evolution with the added

advantage of automatically lose the temporal notion. However, the very concept of evolutionary leap impedes using the long-term in evolutionary terms.

NEWS ABOUT THE THEORY OF EVOLUTION

That fusion of two **bacteria** occurred first, and later the **mitochondria** were added.

The more significant evolutionary leap in the Earth's history is from prokaryotes to eukaryotes. The differences are enormous, and the shift is very sudden.

El País 14-03-2001

9. A discussion of other aspects related to **sexual differentiation** and **evolutionary leaps** is in the section about **objectives of evolution**; they belong to the central argument of the CEL and are absent in the Darwinian Theory. It makes sense due to the time difference of both. However, neither the Neo-Darwinian Theory nor the Modern Evolutionary Synthesis says anything on this matter. Quite the contrary, they do not exist because life in the scientific realm has no objective and does not make any sense.

Given previous premises of criticism of Darwinism, there should be strong reasons to persist throughout the entire 20th century with the discovery of Mendel laws and conceptual modifications contributed by Neo-Darwinism and others like

the Modern Synthetic Theory. These modifications suppose an update of the Darwinian Theory to avoid being incompatible with new scientific discoveries. Thus, the theory is the same for the general population.

The reasons are those that allowed acceptance. A scientific theory should be independent of any philosophical or religious approach. Nowadays, to refute the Darwinian Theory, academia should admit the severe mistake in embracing a so weak evolutionary theory along the 18th, 19th, and 20th centuries. Once more, **the sociology of science** of Thomas Kuhn is right when saying the scientific method is not foolproof.

The novelty of the Conditional Evolution of Life –CEL– considers evolution as an internal improvement mechanism of living beings that, given the complexity of problematic aspects, uses multiple systems, methods, or processes, depending on each case according to its specific conditions.

For a large part of society, acceptance of CEL or any other evolutionary theory assuming internal improvement mechanisms would mean a step back. Regardless of the scientific method application, recognizing an intelligent or **teleological evolution** guided by the very interior of living beings sounds like a religious idea about life. It distorts the distinction of the human being (is this not religious?) and attacks the delightful anthropocentrism; in other words, it is unacceptable on principle.

Another significant part of society maintains its religious ideas, and as a result, some comments of the previous paragraph are equally applicable; again, it is unacceptable on principle.

In other words, the Theory of Darwin is very convenient socially speaking and has an active idealist component;

denying short-term evolution does not compromise embedding of some genetic traits related to the desired equality of opportunities. Consequently, Academia makes efforts to keep evolutionary theory's essence.

A different matter is that science considers the unknown random, even against logic. Although this tendency has changed with chaos theory and fractal structures, it is contrary to the butterfly's famous example.

The lack of satisfactory explanations of previous points 7) and 8) allow methodological criticism of Darwinian Theory's essence within biology and genetics despite better comprehension of **sexual differentiation** concerning its effects on germline evolution and sexual equality in society.

There have always been authors against the leading vision in evolutionary theory, although they have not managed to formulate an alternative set of ideas capable of shifting it. On the other hand, the expression of their thoughts could convey a professional marginalization and even considered close to certain **ideologies** that have nothing to do with one or another scientific option; without a doubt, this is due to the imaginary philosophical or social repercussions. Anyway, the reality is not going to change with a better understanding.

The authors' list would be too long. Let us cite distinguished English geologist **Adam Sedgwick** (1785-1873). Regardless of his attack on Darwinian Theory for religious reasons – educated in the Creationist Theory, which was dominant in his time–, after reading Darwin's theory, he expressed:

"You have deserted –after a start in that tram-road of all solid physical truth– the right method of induction."

Despite his creationist education, Adam Sedgwick did not oppose evolution or development in its broad sense. He

believed that the Earth was ancient, as Darwin recognizes in his notes from Sedgwick's lectures at the university.

However, Adam Sedgwick maintained that evolution was a fact of history, and he believed in the divine creation of life during long periods. Darwin's theory's notable objections were the evil and greedy character of natural selection and the scientific method's abandonment.

The Conditional Evolution of Life understands that natural selection is just one evolution method, but it is neither unique, nor general, nor the most important. From a conceptual perspective, this method occurs after the genetic information changes that allow the actual evolution.

The CEL will suffer the risk of being a creationist when criticizing Darwin and racist when talking about intelligence's inheritance as a recurrent example. Let us defend the case because it has been the cause of theory development; therefore, the intention is not to attract attention intentionally. Moreover, it is not easy to design models of evolution that can be statistically confirmable.

The article **Studies on the evolution of intelligence** discusses the **EDI Study** with its incredible results confirming the Conditional Evolution. Besides, the **Darwinout** and **Menssalina** are experiments to verify the scientific theory's extremes, with a much more straightforward methodology than the EDI Study.

3.c) Laws of Mendel

Contrary to Darwin's theory, Mendel's laws have always been a clear example of inductive reasoning. Some controlled experiments give place to an accurate theoretical interpretation within its context. However, we must keep in mind the existing knowledge at the time.

Usually, there is no attempt to present Mendel's laws as a theory of evolution – due to the distortion of the meaning– since just a combination of genes does not produce different traits from the originals.

Mendel's laws introducing previously unknown elements or **mechanisms of evolution** did not help **Darwin** much either. It

is no surprising the scientific community ignored Mendel's contribution for 50 years; hard to understand without the **sociology of science** of Thomas Kuhn.

Due to the dynamics evolution implies, and given the multiple advantages of **sexual differentiation**, the general theory of the Conditional Evolution of Life –CEL– understands Mendel has provided a remarkable contribution in its correct meaning.

Gregor Mendel (1822-1884)

(Public domain image)



Moreover, it maintains its applicability with appropriate conceptual adjustments.

The initial interpretation of genetic heritage laws does not raise any problems since it is accepted, and the general advancement of science has updated it. However, what can indeed pose some serious issues is how schools keep explaining them.

The approach of the concept of the dominant and recessive gene is a little archaic. There can be conceptual difficulties, such as “What happens when two dominant genes come together?” Academia resorts to concepts like **co-dominance**, and it seems the genetic mechanisms are unknown. Nonetheless, scientists know those genetic mechanisms, at least partially, but they cannot elucidate them straightforwardly based on the simple concept of dominance and within the context of general randomness.

A little more challenging to clarify, with the classical ideas, would be the concept of co-recession.

According to the CEL, the concepts of dominant and recessive genes alter their essence in the evolutionary process. A gene is not **dominant or recessive**, but instead, it behaves depending on which another gene is working –the classic thought shares this idea. However, a new concept contributed by the alternative theory CEL is that the behavior depends on genetic information development restrictions. The best example is the verification or non-verification of information between the two sources.

Due to Mendel's laws' relevancy, it cannot be enough to say a gene is dominant or recessive; there have to be arguments explaining why. Mostly, the concept maintains its original meaning because the traditional idea of discrete gene

characteristics –red, white, pink, but not tones in full evolution– is more convenient for the prevailing notion.

Basic concepts of dominant gene and recessive gene cease making sense, and in the event of maintaining, they turn out to be incorrect. The so-called recessive gene ends up being the most powerful and modern when the verification is one of the conditions associated with the transmitted genetic information. Consequently, the CEL changes the terminology, categorizing the gene behaving as dominant as the **significant gene**.

There is a brief description of the **Theory of Mendel** in chapter 9.

3.d.1. Criticism of Neo-Darwinism

Neo-Darwinism is the scientific current that encompasses evolution theories that somehow maintain the essence of **Darwinian** ideas; that is, random mutations of individuals and natural selection.

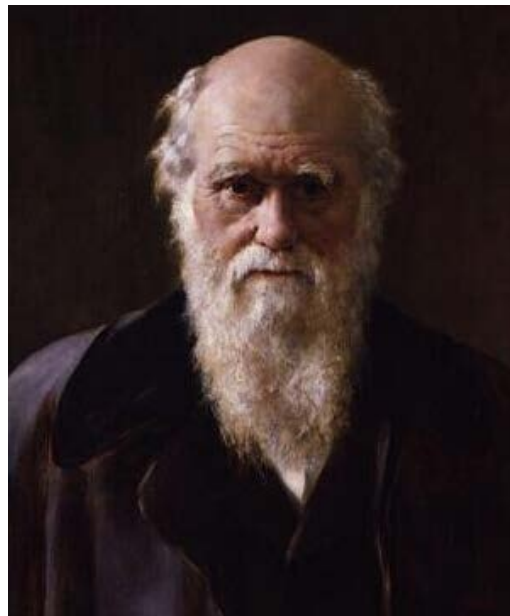
It is a consequence of science development, like **Mendel's laws** and genetics, and affirms that living beings' variations occur in their germination state. However, the problems remain because when science cannot explain something always argues, it is random.

Current molecular biology is discovering how nature carries out genetic verification and other controls – without knowing, a priori, the reasons justifying them– as a scientific article referred to the pieces of DNA called Histones.

Nevertheless, it is not necessary to resort to such in-depth knowledge of molecular biology, given that we know that some proteins, called factors of transcription, activate or inhibit the expression of specific genes.

Charles Darwin (1809-1882)

(Public domain image)



At the end of the ninetieth century the Neo-Darwinism was one thing; in the middle of the twentieth century, something else due to the Modern Synthesis Theory, and later on, it changed again due to the Punctuated Equilibrium.

The Neo-Darwinism maintains because it changes according to its principle of tautological adaptation. When it cannot adapt, academia recourse to biological paradoxes, but they call them isolated cases to avoid Modern Physics' similarities.

The neo-Darwinian theory is still the prevailing doctrine despite the name being considered old-fashioned. Now it is directly accepted that **Darwin** was right though, the reasoning will be the last update; it is not so relevant if it is the Modern Synthetic Theory or the Punctuated Equilibrium.

There is a brief description of the **Neo-Darwinism** in chapter 9.

3.d.2. Criticism of the Synthetic Theory of evolution

It is probably difficult for a non-biologist to distinguish between the trend of Neo-Darwinism and the Synthetic Theory; with the advancement of science, more knowledge appears, and it is necessary to change to subsist.

The Neo-Darwinian theory and the Modern Synthetic Theory –Theodosius Dobzhansky, Ernst Mayr, and George G. Simpson– are natural **Darwin updates**.

The name of the Modern Synthetic indicates it is a group of ideas from the development of genetics and biology. Nevertheless, at the same time, it shows there is not compact scientific knowledge about this subject, which could ensure its fundamental characteristics. Contrary to what academia insistently states, the Synthetic Theory or the Theory of Darwin are everything but scientifically proven.

Both accept the randomness of genetic information modifications; the mechanism is still natural selection, although its range of application has extended to microevolution.

Let us cite two examples:

- The spermatozoon that manages to reach the ovum is its better adaptation for better guidance and more strength and luck. It is not because nature has served from the process of natural selection when it detects some problem in the production of sperm. Like in a small hit or a

temperature change, to intentionally bring about some minor defect in the spermatozoon, it is not interested in stopping the production line for reasons beyond this discussion.

- When an individual is sterile, it is by accident and not because nature has detected some problem in the genetic code and decided it does not want to continue that particular evolutionary line; though, the individual is healthy on the macro scale.

NEWS ABOUT THE THEORY OF EVOLUTION

Appetite and reproduction

Some scientists from the USA have identified a biochemical substance in the brain that regulates appetite and reproduction. Bodyweight and fertility are firmly related, and women who are too thin, for example, can have problems getting pregnant.

El País 3-09-2008. Nature

All criticisms made about Darwin's Theory are equally applicable to Neo-Darwinism and the Synthetic Theory of Evolution. What is more, some of the complaints come from new scientific knowledge.

Nowadays, the topic of random mutations manages to survive to common knowledge about modifications taking place much more frequently in some parts of the DNA. The reasons are not chemical but somewhat logical or functional concerning the genome structure. Regardless, not even academia accepts

the possibility that mutations are not random. It would be a good-bye axiom!

It would be interesting to know which statistical distribution follows famous random mutations; it should be scientific knowledge. Perhaps the expression “random mutations” means that the origin or cause is unknown in most cases.

Finally, to remark that a tautological theory cannot be scientific. Moreover, it is not acceptable to change aspects already proven because one gambles with the scientific method and common sense.

Modern science would have to be humbler and recognize neither the Evolutionary Synthesis nor the genetic modifications' random character is verified scientifically, which will not prevent being the generally accepted theory in the present.

There is a brief description of the **Synthetic Theory of Evolution** in chapter 9.

4. GENETICS AND EVOLUTION

4.a) Evolutionary genetics

This title IV presents new ideas about the origin of life concerning genetics and **species' evolution**.

It has four main sections. Firstly, there is a brief description of genetics and evolution.

The second section stages life's objectives with the fundamental logical argument of why and how living beings' evolution develops.

NEWS ABOUT THE THEORY OF EVOLUTION

Scientific progress and society

These biological systems result from more than a billion years of evolutionary discoveries, rejections, trials, successes, and perfection, which, if they have worked well, many in each step incorporates.

El País 26-11-1992. **Eric H. Davidson**.

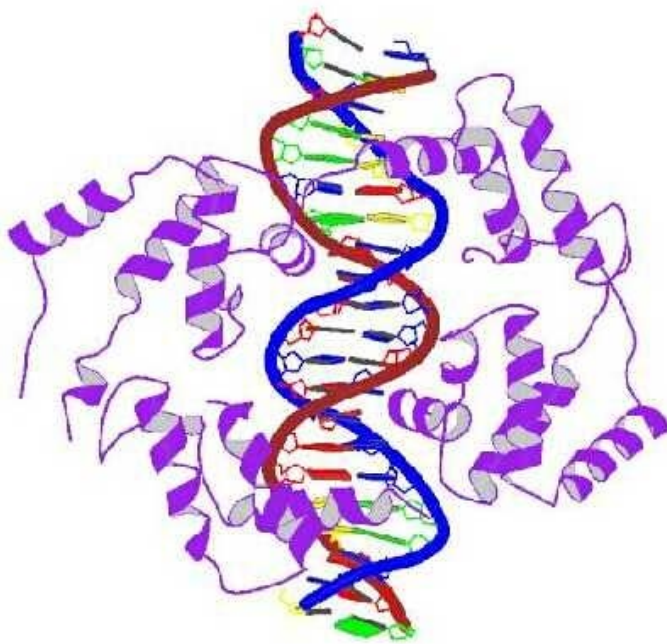
In most superior evolutionary processes, inevitably, there would be genetic changes produced simultaneously by the environment's influence, random mechanisms, and trial and error methods. Some changes will already have verification, **sexual differentiation**, and natural and **sexual selection** will be present.

The next two sections refer to creating primary and accurate terminology concerning genetics and the theory of evolution and cite some examples that may help to familiarize and identify the terms employed.

It is worth pointing out that the purpose is not to explain modern biology or genetic engineering terms like types of molecules, proteins, their three-dimensional forms, specific biological functions, or molecular processes of chemical nature.

Protein HNF1a and DNA

(Public domain image)



On the contrary, the analysis focuses on what nature does, the general procedures and methods that it probably uses, the processes, and the particular conceptual mechanisms.

For example, there are biochemical mechanisms that give place to random processes relevant to the theory of evolution; that is, its functional

character and not the molecular play, which would be more typical of chemistry, molecular biology, or genetic engineering.

The virtue of this approach is allowing any person to understand the reasoning.

However, sometimes the logic can become complicated due to the amount of precision and nuances necessary in the

explanations.

Perhaps the main drawback of this exposition is to include **intuitive** ideas contrary to what academia repeats and repeats with suspicious insistence.

Consequently, one should not seek a perfect understanding of the explanations; instead, one should appreciate the reasoning behind the new proposals, thinking that some may be incorrect but could be in the right direction.

NEWS ABOUT THE THEORY OF EVOLUTION

Furthermore, the research has found numerous sequences **devoid of known function** –they do not run the protein production– in all of the species studied. It indicates that they have been throughout evolution and strongly suggests that they have some biological function.

El País 14-08-2003. Nature

Remember that the knowledge of the **genetic mechanisms** is insufficient regarding its actual magnitude in **evolution theory**.*

4.b) Objectives of life and human evolution

Regardless of a purely philosophical position, Life's final aim is unknown; however, we can indeed analyze some of the instrumental objectives that logically exist or should exist in general.

Without trying to be exhaustive, the discussion will be about the essential objectives, which are being present in man's evolution and all **vital impulse systems**. Equally, the considerations relate to the Conditional Evolution of Life – CEL– support and the contradictions or limitations of other theories.

It is worth disclosing a conceptual interrelation between the discussed objectives and the arguments and examples used; nonetheless, the presentation separates them into the following.

1. Guarantee and certainty
2. Efficacy and optimization
3. Internal coherence or compatibility

4.b.1. Guarantee and certainty in the evolution of living beings

In the **biological progression** of man and, definitely, in all types of living beings and **vital impulse systems**, it will act the supremacy of the species or the individual's system.

This vital conditioning explains many living beings' strange behavior, justified by the necessity of guaranteeing and perpetuating the species. They can even come to killing themselves to serve as food for the offspring in its initial moments.

NEWS ABOUT THE THEORY OF EVOLUTION

The genome of rice

Between 42,000 and 63,000 genes surpasses any animal described until now in the number of genes.

The main reason is the duplication of **70% of rice genes**: many ancestral genes made copies of themselves and inserted the duplicate into another part of the genome.

Initially, those two copies of the same gene are a mere redundancy, but later they can gradually **deviate**, and one of them can acquire slightly different functions.

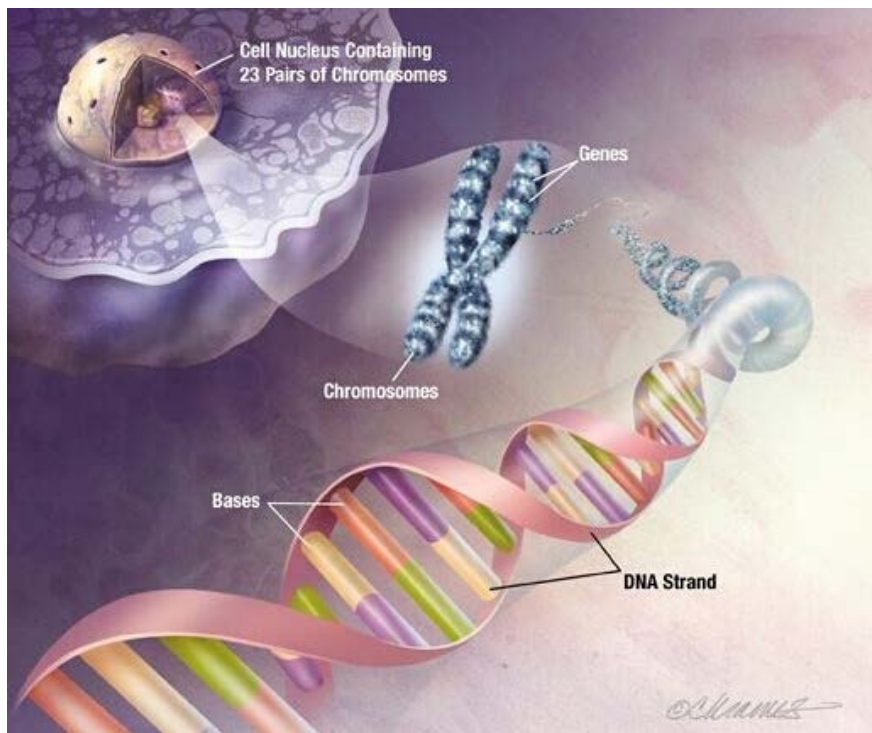
El País 25-04-2002.

In genetics, the total certainty of incorporating modifications to the genome is not always necessary. Sometimes it will be sufficient with a high degree of probability; however, if genetic variation affects one of the new being's complex and vital functions, it would be worthy to attain total certainty.

A solution would be to simulate system operation under the new parameters and relations before incorporating them in the genetic information to transmit, avoiding any variation that may cause an error.

DNA strand, genes, and chromosomes

(Public domain image)



However, the **simulation method** has a limitation; it is impossible to simulate all possibilities in very complex functions. It is crucial to have other ways allowing maximum assurance of the new being's viability. All guarantees seem small after all the accumulated work for the next advanced living creature.

An example would be the **biological human evolution**.

The guarantee is one of the fundamental novelties of the CEL because it represents an advantage of the **sexual differentiation** in reproduction, giving a compelling reason to its existence.

Section **improvement of efficiency** poses the problem of deciding which source to use to develop the offspring with two genetic information sources.

The need for guarantee offers a coherent explanation. The viability of the new being with genetic modifications will ensue if there is a **backup copy of the genome** in case of failure of the innovative changes.

NEWS ABOUT THE THEORY OF EVOLUTION

"Scientists from the Centre for Demographic and Population Genetics at the University of Texas (USA) have explained: "Men suffer more genetic mutations because they produce **more sperm** than women produce ova."

El País 12-05-1993. Nature

Therefore, a chief function of sexual differentiation could be one of the sexes providing an **intact copy** of its genetic packet; in many species, the female ova forms in the relatively initial moments of the individuals' development. On the contrary, it does not occur in males.

Once again, the most well-known clear example is human evolution.

Like developing a sophisticated computer program, there are

always backup copies if the changes do not manage to obtain the anticipated result in similar processes much modest than those of man. **Sexual differentiation** in superior animals could be a little bit similar to those computer programs developed by multiple programmers and needing copies and compatibility.

NEWS ABOUT THE THEORY OF EVOLUTION

The **rate of masculine mutation** is twice the female variation, which indicates that men are the cause of most hereditary diseases, which suggests they contribute more to the evolutionary progress in this sense.

El País 19-02-2001. Conference of the American Association for the Advancement of Science

NEWS ABOUT THE THEORY OF EVOLUTION

Some plants contradict the laws of Mendel. Genetically defective plants in both lines, they have, however, some healthy descendants, as though an unknown mechanism, based on a **mysterious backup copy**, had recuperated the correct sequence in its genes. Spectacular, marvelous, strange, unexpected are some of the descriptions for this discovery.

A scientist believes that the mechanism can also occur in people.

The experts think that there is a backup copy of RNA for all of the genomes.

El País 30-03-2005. Nature

There may be a full or almost complete **backup copy** of the genome mentioned in the previous paragraph. Nevertheless, it is not strictly necessary for the CEL proposals because nothing prevents a genetic modification from incorporating maintaining, at the same time, the previous code. However, it probably does not exist much flexibility in developing the new living being in broadly related functions.

NEWS ABOUT THE THEORY OF EVOLUTION

The **genes of animals** are, on average, larger and more complicated than plants. Each gene can correct itself in various ways, and the evolution –in its most subtle aspects– seems to have played more with the alteration of those corrections –**splicing**– than with the duplication of whole genes.

El País 05-04-2002.

Undoubtedly, biology and genetics' technical and scientific progress will have the last word on guarantee and certainty. Although, there could be two methods or more, keeping in mind the enormous casuistry present.

...

Sexual differentiation and LoVeInf method

Another characteristic of sexual differentiation, complementary and more potent than the previous one, allows Nature to decide which of the two genetic sources use; in other words, how to take advantage of the second source of information.

The advantage is that the new method can verify the genetic information when it is essential to avoid errors by comparing or filtering the two sources.

In the theory of evolution, the central aspect is not the particular mechanism but the method; in this case, the LoVeInf method –Logical Verification of Information.

Let us see some examples to show the advantages of sexual differentiation:

- *Computer spaceships*

Errors in spaceships can suppose a high material and personal cost; therefore, it would be nice to have high reliability that no crucial mistake will take place.

If **three identical computers** do complicated computer calculations, they will verify that the results are correct. In the improbable, although possible case, one of them failed. We could assume well enough the others' output because it would be much more doubtful that two computers nosedived simultaneously and with identical deviation.

The process verifies the information between three sources; nature only has two sexes, **but one brain, many genomes.** *

- *Complex calculations*

An example of two sources could be asking two people the result of a relatively complicated calculation or an event's exact date. If the two people give the same answer, we could be almost sure that both have given the correct answer. Although it could be relatively easy to be mistaken in a difficult question, to commit precisely the same error is not probable. Of course, in those inconsistent cases, some alternative must be available to choose a particular answer.

- *Neural networks*

If the previous example had two sources, a different case could be some Nature functions using two billion little computers or neurons, half of which from the genetic information of an ancestor and the other half with the other ancestor's genetic load.

With this configuration, it is possible to apply the method LoVeInf and to work without its application. For example, a human cognitive process could decide based on the first hundred thousand answers. It would not be impossible that a brain operation, on some occasions, responds to the design of this example.

The last example presents numerous advantages concerning the simple selection of one or another inherited genetic source. First, it allows taking advantage of the two sets of genetic information. Secondly, the same group of cells serves different cognitive functions, even cognitive tasks of diverse nature.

NEWS ABOUT THE THEORY OF EVOLUTION

The mysterious behavior of the X chromosome

In some brains, the X chromosome predominated in the left hemisphere and the father's Y chromosome in the right one. In some mice, the father dominated one eye and the mother the other. The diversity extended to the entire mouse.

El País 06-12-2014

It is like the operability of genetic information of both ancestors could change depending on the different filters or conditions applied and, at the same time, keep the full potential.

The mechanism to carry out the method LoVeInf of sexual differentiation can be as simple as to verify if both genes produce the same protein or not. However, it will not always be possible to maintain this compatibility. If the LoVeInf method carries out a new being's initial processes, it is possible that, once an organ develops with specific characteristics, the option of maintaining different features disappears.

Thus, sexual differentiation seems necessary when arriving at a certain degree of complexity in living beings' development.

The method LoVeInf and sexual differentiation explain the relevance of the unconscious mechanisms in **sexual selection**.

Insofar as possible, the LoVeInf method will keep the compatibility of different filters or conditions on cognitive processes and, consequently, the two genetic sources' maximum potential. It will be easier to preserve adequate flexibility in characteristics associated with continuous variables than discrete ones. What looks like one characteristic will often be a group of somewhat multifaceted attributes due to the different scales, macroscopic and microscopic.

NEWS ABOUT THE THEORY OF EVOLUTION

In any combination, each parent passes on only half of his or her genes to their daughter. However, her **olfactory preferences** are defined exclusively by the combination of genes the father has passed on.

The other half that the father has, but the daughter does not, is irrelevant. Moreover, the mother's genes also unrelated.

El País 23-01-2002. Nature Genetics

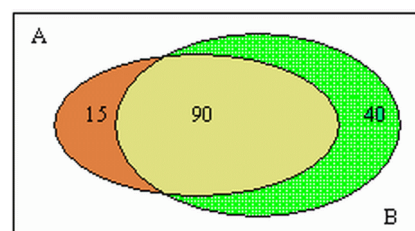
Now, let show more examples to fully understand the LoVeInf method and the advantages of sexual differentiation.

- *Relational intelligence*

It is composed of multiple cognitive sub-functions. To avoid unnecessary controversies, we assume **intelligence** to respond correctly to IQ tests, resulting in a continuous

Relational intelligence

Genetic information



variable with a normal distribution of 100 as average and standard deviation subject on the particular trial.

The diagram shows the intellectual potential associated with two genes; we use the term gene for simplicity; however, it could easily refer to several genetic code pieces situated in different places.

The genetic code of progenitor A has a potential of 105 and B of 130, having shared cognitive functions of 90.

If it is a characteristic for which nature applies the LoVeInf method, the descendant's potential would be 90, while if it were not operative, it would be 145. As one can see, these results are equivalent to those of the Set theory regarding math intersection and addition.

- *Automobile brakes*

This example is fully explained on the Web page about **dominant and recessive genes** within sexual differentiation while talking about cars' evolution.

- *Math example with letters*

If the genetic code of a progenitor had the human cognitive functions: {a, b, c, d, e}

If the method LoVeInf is applied and the other ancestor's genetic code is {a, b, c}, the descendant will have the potential corresponding to cognitive functions {a, b, c}. If the LoVeInf method were not applied would have the potential {a, b, c, d, e}

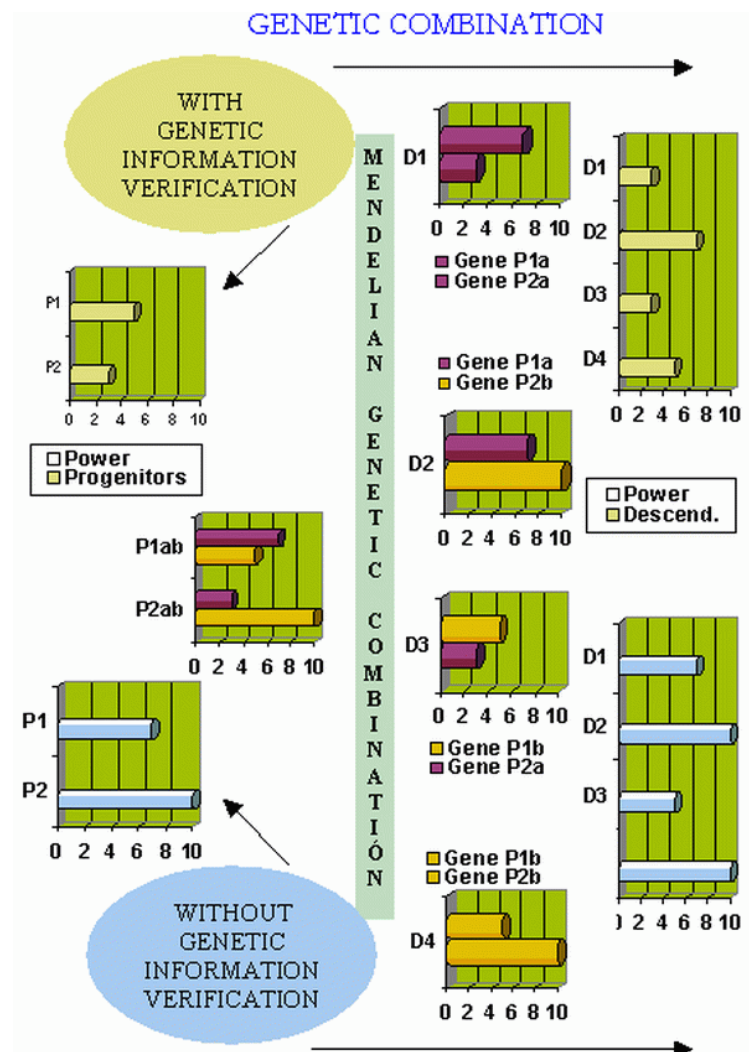
Nevertheless, if the LoVeInf method operates and the other ancestor's genetic code is {a, f, g, h}, the descendant will have the potential corresponding solely to the function {a}. On the opposite case, if the LoVeInf method were

not operative, would have {a, b, c, d, e, f, g, h}

o *Mendelian genetics*

To simplify, in the following diagram of **Mendelian genetics** and sexual differentiation, we will assume that the genetic code of grander potential always includes 100% of the potential associated with the other genetic code. We have also eliminated evolution that would transmit improved genes to descendants.

Method of Verification of Genetic Information (LoVeInf)



The column to the left shows the potential of the two progenitors associated with the genetic codes represented

in the next column, the upper part with the Logical Verification of Information method, and the lower without its implementation.

By our definitions, the progenitors' potential is equal to their genetic code with lesser value when using the LoVeInf method and higher value when it is not operative.

The third column graphically represents the four possible combinations of the progenitor's genes by Gregor Mendel's law.

Lastly, in the column to the right are the potentials associated with the descendant's genes. The upper part is with applying the LoVeInf method, and the lower with the opposite case.

It is worth pointing out that it is a specific method of evolution within sexual differentiation. The aim is not to generalize it at any time, although it could be widespread. Likewise, whether the LoVeInf method is applied or not, genetic codes transmitted to descendants will have the same value, given that the LoVeInf refers to the worth of individuals and not of the genetic code.

The consequences of the Mendelian genetic combination and sexual differentiation from the study of the previous diagram are:

- The inherited potential relates to the progenitors' two genes, without either acting as dominant or recessive genes in **Mendelian genetics**.

The behavior will be somewhat different from the Mendelian significance and depend on the paired gene's potential; the smaller gene will be significant when the

LoVeInf method is applied. This behavior will be relevant because the more significant gene includes the gene with less potential. In other words, the intersection we saw in the figure of the math's Set theory would be a genuinely useful part.

See these roles when applying the LoVeInf method for gene B of progenitor one, given that it is not the significant gene of descendant three, but descendant 4.

- In some instances, the genetic potential fully maintains, depending on the operability of the specific functions carried out.
- When the LoVeInf method applies:
 - There is a 50% probability that the descendants' potential will be the same as the lesser of the progenitor's capabilities.
 - The maximum potential will be that of the second most potent gene whenever it is not from the same progenitor with the most robust gene; in this case, the maximum potential referred to will be equal to the second less potent gene.
- When the LoVeInf method does not apply:
 - Descendants' potential has a 50% probability of being equal to that of the progenitor with the higher potential.
 - The minimum potential will be of the second less potent gene whenever it is not from the same progenitor with the least forceful gene; in this case, the minimum potential will be equal to the second most potent gene.

These consequences of the Mendelian genetic combination and sexual differentiation may verify this evolutionary method's real existence and the supporting theory through the corresponding statistical analysis of specific cases of sexual differentiation.

In particular, the CEL postulates the LoVeInf method is operative for the characteristics measured by an IQ test and for **math memory**, a memory with almost absolute reliability.

Keeping in mind that for intelligence, nature constructs organs according to both genetic sources. The case of not requiring certainty of responses –the opposite of intelligence in the strict sense of the word– would be **intuition**. As we know, the hunch is more potent than cleverness and less reliable. It will be contingent on the quantitative difference between the two genetic codes; more precisely, of the difference between the intersection and the addition of the potential of both genetic sources.

For **semantic memory** and musical abilities, the CEL vindicates the LoVeInf method is not applied; these could, however, be used for empirical verification if there were appropriate indicators.

Finally, it is imperative to mention the **EDI Study**, with sexual differentiation, empirically confirms the LoVeInf method's existence and an additional hypothesis relating to **sexual selection**.

4.b.2. Efficacy and optimization

4.b.2.a) Phenotype and efficacy of genotype

- **Teleological or finalist evolution**

The majority of **genetic variability** cannot be random in genomes or **complex systems** due to the interrelation that changes will necessarily have. Likewise, it would be tough in the case of an evolutionary leap –generating a missing link. If the existence of non-random variability is accepted, it should be easy to admit modifications in the genotype due to environmental conditions, as **Lamarck** suggested.

NEWS ABOUT THE THEORY OF EVOLUTION

Our chromosomes have many **hitchhikers**, ‘mobile elements’ that go leaping through the genome and **inserting new copies** of themselves during the trip. These parasites, which make up almost half of the human genome, destroy but also create.

El País 28-02-2001.

If a cell needed to create a more rigid membrane than its genetic load expected, it must have modified its genotype. If possible, the cell will **incorporate its genotype changes** * to the genetic information of its descendants.

There are always aspects to improve in the phenotype and

not only for environmental purposes; probably, maybe millions in superior animals.

The improvements will be more successful in life and with the mechanism of natural selection. Still, the source of evolution is the first improvement through the non-random **genetic variability**.

For example, in cellular biology could be two proteins with similar structures and independent functions created by different genes. If one of them can perform both tasks with a small modification, it will enhance efficiency.

■ **Sexual differentiation and genetic variability**

Sexual differentiation also allows us to choose between two lines of evolution and achieve the objective of improving living beings and, in short, of life. In some way, there should be a mechanism permitting to pick off the optimal genotype or source in each particular case. If a gene is operative or significant, it should be for some reason or cause, and there was a moment in which its significance showed.

The genetic information or genotype has instructions to develop the new being and **conditions of development** of such guidelines; it is epigenetics in a broad sense. An easy solution could be gene markers to behave like dominant. However, it is very doubtful because there will be a problem when the two genes have the same tag.

Possibly, it incorporates related information, such as **the first generation ***, which included the new code in the genotype, or if it has a structural nature, which would be similar to marking it as dominant, but conceptually different.

Somewhat, it will incorporate information of dependent parts of the genetic code. The development of particular characteristics implies associated fragments.

NEWS ABOUT THE THEORY OF EVOLUTION

Scientific advancement and society

Much to learn

The genes of each organism include all information for its properties, and they encode **regulatory instructions** that, when performing, govern how this information expresses.

El País 26-11-1992. **Eric H. Davidson.**

■ **The backup copies**

A high proportion of the genetic code in the genotype seems not to develop the new being. Suffice to recall news about the human genome attracting the **Y chromosome's** attention regarding how small it is and the number of non-operative genetic codes. It appears nature does not eliminate the modified portion of the genome but keeps a copy just in case. It is uncertain why, but an experienced programmer would effortlessly understand the utility of a non-operative code in the configuration of any computer program could have. In any case, the non-operative genetic code must have a means of identification.

Like a programmer, if living beings had information and methods to reduce the risk of introducing new genetic information in their genotype, they could carry out many

more modifications.

■ **Evolutionary leaps and the missing link**

The evolutionary leap provides another argument to improve the efficiency of the genetic information regardless of its reason and if it causes a missing link or not. The rejection of an evolutionary jump by random mutations is much higher since it would impede the existence of a possible missing link or significant gaps in the fossil registry.

In the first stages of an evolutionary leap will be a lot of redundant genetic code. The next evolutionary step will be a simplification of the genetic code. Once this rationalization finishes, nature will be ready to continue adding small modifications in the genotype that may improve and expand the existing beings' capabilities.

Any vital impulse system will go through these steps. An example would be a **computer program**, which is the easiest to understand. They add code to perform additional functions or improve the efficiency of features already present. However, there comes a time when programmers realize that many additions have identical or very similar parts. Each time there is a modification, it needs many adjustments to maintain its coherence and allow future acquisitions. Then, restructuring is necessary –a qualitative leap or evolutionary leap that will be more than profitable even if it means considerable work. Furthermore, these new versions will be different, causing a potential missing link.

Another clarifying example is the work of joining two programs into one to achieve particular advantages.

The reader can consider real-life examples that have

followed a similar process. Indeed, many historical events had the same dynamics. Let us think about the enactment of a Constitution with effects on the laws to the judicial system.

4.b.2.b) Resources optimization and natural selection

- **The scarcity of resources and natural selection**

Nature is in a world where resources are scarce, and the survival of descendants is not guaranteed.

In general, vital impulse systems need to evolve as quickly as possible. It is not always enough to do it well; they have to be the best because of natural selection mechanisms.

In other words, natural selection is acting as an accelerator in evolution.

One characteristic derived from the evolutionary velocity and the scarcity of resources since the origin of life is the optimization of resources.

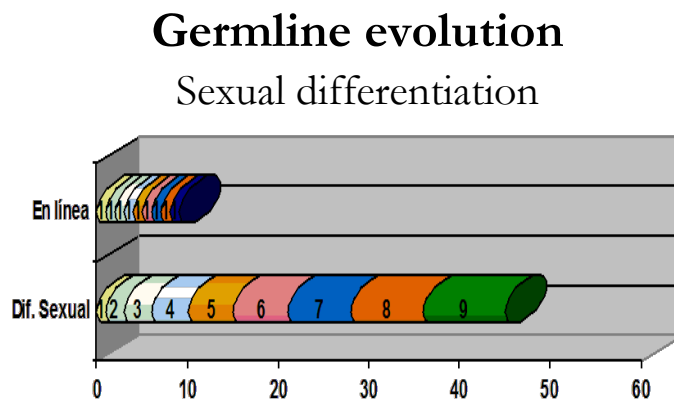
These two characteristics have a special force due to the very design of life that imposes constant competition and struggle. Therefore, they are real objectives of the evolution of **vital impulse systems**.

There is a metaphysical question regarding these objectives, why does the design of life involve many living beings feed on others, and many of them end cruelly?

■ Sexual differentiation and germline evolution

The **sexual differentiation** adopts –besides the other multiple considerations– methods of speeding up changes in genotype, allowing to incorporate functions coming from other living beings' genotype.

In germline evolution, only one individual's experience can transmit to the next generation. The growth of just one line is slow.



If different experiences manage to join, evolution will be more fruitful and let the Logical Verification of Information method –LoVeInf.

The graphic shows the difference between incorporating new genetic modifications with germline evolution and sexual differentiation along generations. Assuming individuals had the same genotype initially, after six steps, accumulated changes with germline evolution would be the third than with sexual differentiation; after nine, the ninth, and so on.

The external origin of evolution will be higher the more mature the individual is, especially in those improvements affecting functions working only in the adult stage. It could

be a biological and not cultural justification of the female preferences for adult males in many species. In contrast, males prefer young females because they have a healthier body to carry out their initial development's complicated and challenging task.

NEWS ABOUT THE THEORY OF EVOLUTION

The solution to an **enigma of the bees** presented 150 years ago.

The *csd* gene was a remarkable invention of the ants, bees, and wasps and their complex societies because it allowed the haplodiploid's progress.

El País 10-09-2003. Cell.

Between germline evolution and sexual differentiation is the **primary or endogamy sexual differentiation**. For example, bees have males, but they always fertilize the queen of the beehive. In this case, it is more probable that one genome passes a complete backup copy, and the other provides some improvements in the genotype. This endogamic nature will not allow the LoVeInf method. However, it could work with a generational gap, so the filter happens between different generations' modifications.

On the other hand, when the LoVeInf method is not feasible, nature would look for the reliability on the goodness of the modifications by other means. For example, **exhaustive testing** will take much time and work, so the sex responsible for producing the changes

should be free of hard work. In any case, the topic of the famous “drones” should have some explanation.

■ **The relevance of genotype optimization**

Going back to the optimization of resources, any repetition of an evolutionary phase is a step back from wasting time and energy.

NEWS ABOUT THE THEORY OF EVOLUTION

It merely deals with getting the best performance possible from the investments made, whether of time or effort.

El País 02-10-2002. National Conference of Ethology

Some species sacrifice the male after the union, so the repetition of an evolutionary step becomes impossible. Visibly, nature takes time very seriously.

NEWS ABOUT THE THEORY OF EVOLUTION

A study about the Spanish mountain cat proposes to **modify the theory** of evolution.

El País 10-01-1993. Journal of Neuroscience

Likewise, we have already talked about the possibility of associating conditions of development with other related traits. Therefore, possible modifications will develop in a generation after the following, guaranteeing changes would be operative after testing their usefulness in more than one

evolutionary step.

NEWS ABOUT THE THEORY OF EVOLUTION

We do not question the theory of evolution, but
Adaptation to different environments using a
mechanism of selective killing of brain cells
before the birth gives the animal the capacity to
recover eliminated features if the milieu
changes suddenly.

This mechanism is an enormous evolutionary
advantage and allows the **domestic cat** to
develop color vision again if it had to go back to
hunting in the daytime.

El País 15-01-1993. Journal of Neuroscience

Optimization and fast evolution may justify this
mechanism. If genetic changes due to environmental
conditions were directly operative in the following
generation, there would be a risk of undoing them.
Likewise, revert all of the changes and adjustments derived
from them, in short, a waste of time.

NEWS ABOUT THE THEORY OF EVOLUTION

The inheritance of the acquired characters

Some experimental studies show some acquired
characters; the fundamental idea is that these

concept characteristics must have passed through the sperm or ovules.

An example is a type of brown rats.

El País 10-05-2008 Big. broken dogmas

■ **Genetic variability and phenotype**

As we have discussed in **Guarantee and Certainty**, with the LoVeInf and others, many more modifications can change the genotype without affecting the new being's viability. The number of genotype alterations carried out in each generation is so high that without the LoVeInf method, the offspring would not have decent future perspectives.

NEWS ABOUT THE THEORY OF EVOLUTION

The small human **chromosome Y** wholly arranged in the sequence contains 78 of approximately 30,000 genes that make up the human genome.

According to the studies, in **one generation**, chromosome Y alters in 600 units.

El País 21-06-2003. Nature

The children of two parents that, in turn, are siblings imply an example. The LoVeInf method is applied, but there are numerous recent and equal modifications. Therefore, its **filter function** will not be efficient enough and will not avoid visible and significant damage to the descendants.

The fact above infers evidence of the number of modifications in each generation and indirectly of its **non-randomness**. It would be the only way for brother and sister to have the same genetic changes.

In addition, keeping in mind the system's complexity and

sensitivity, random mutations' effect on the phenotype would be more dangerous on vital functions. Those tasks practically cannot accept arbitrary changes. A small error would be enough for the non-survival of the new individual, and natural selection does not allow this type of mistake.

We can find examples of random mutations with devastating effects in historical events, such as dropping the atomic bombs at the end of the Second World War in Japan. More cases, although imaginary, in the movies of the 1950s.

NEWS ABOUT THE THEORY OF EVOLUTION

95% of the current **genetic variability** already existed when the species was born.

Seven scientists in the United States, Russia, and France publish today in *Science* the most general analysis on human genetic diversity.

In each person, they analyzed 377 markers in the DNA –called **microsatellites**. They evolve remarkably fast, detecting any minimum hereditary variation since the current humans emerged in Africa some 50,000 years ago.

El País 20-12-2002. *Science*

In **complex systems**, comparing an independent source is the only way to get close to a specific aspect's certainty. Moreover, if changes were always random, the LoVeInf

method would not make sense. Due to the magnitude of the genetic code, they would rarely happen in the same function.

The statistical **EDI** study –**Evolution and Design of Intelligence**– proves the existence of the LoVeInf method.

4.b.2.c) Dominant and recessive genes

The example of the brakes' evolution makes one reflect on the real nature and instrumental behavior of dominant and recessive genes.

Regardless of the molecular mechanisms, dominant and recessive genes are old-fashion and rather basic concepts. Let us see their function within the framework of genetic evolution.

Concerning the **Mendelian genetics** examples, the big question is which of the two genes would express and what happens if both parents' genes are dominant or recessive.

Example of technological evolution

Genetic combination			Results case 1	Results case 2
B	+	B	Basic brakes	Basic brakes
B	+	B+A	Basic brakes	Basic brakes + ABS
B+A	+	B	Basic brakes	Basic brakes + ABS
B+A	+	B+A	Basic brakes + ABS	Basic brakes + ABS

We should bear in mind that the concept of a dominant gene implies discrimination against a character in the new being. Therefore, the analysis includes the possible causes, which will finally lead to a better, faster, or safer evolution.

The next intuitive example of the Mendelian significance of dominant and recessive character uses the analogy within brakes' evolution in cars.

- Two types of genes exist for a particular characteristic of our vehicle: gene type B and gene type B+A.

- Gene type B contains the technical specifications for the car's essential brakes.
- Gene type B+A also incorporates, as well as the car's essential brakes, the technical specifications for ABS brakes (from now on referred to as ABS t.s.)

Regarding the significance and genetic expression, the possible **Mendelian combinations** of the two types of genes would be the following.

1. **The dominant genes are the less evolved ones**

Let us assume that in the event of faulty technical specifications –ABS t.s. – brakes, neither of the brakes system would work –not even the basic ones. However, it is imperative to guarantee the new car's commercial reliability –including the avoidance of accidents– that the brakes must always work –either the basic breaks or the basic + ABS.

Thus, when installing ABS brakes, there must be high reliability that the technical specifications are correct. Only comparing the technical specifications in both genes can ensure this. If they coincide, practically no fault exists, as it would be difficult for them to overlap in one particular flaw.

If one of the genes does not include ABS t.s. or if ABS t.s. appears in both genes but are not identical in both sources, the result will be a lack of ABS brakes. Therefore, in case 1, the dominant gene is type B because its presence forces essential brakes to develop.

Note that gene type B is the least evolved of the two in our example.

2. The dominant genes are the modern ones

In case 2, where, in the event of faulty ABS t.s., the ABS brakes cease to function, but the primary brakes are not affected. Therefore, the new vehicle will be reliable when including the ABS t.s.

Consequently, if there is only one B+A gene, the car would have ABS brakes, as it is just advantageous and poses no risk.

In this last case, the dominant genes are type B+A; because if it is present, it will always manifest itself, and it is still more evolved (modern) than type B.

As we can see, the dominant genes from the first case have become recessive, and the recessive genes dominant. It implies that a dominant or recessive character is relative to the functionality of the coupled source.

Now, adding a new gene type B+A+M. This new type has more modern (powerful) technical specifications than ABS. In case 1, we would find that gene type B+A would be a recessive gene compared with type B and dominant with type B+A+M. On the other hand, for case 2, type B+A would be prevalent with B and recessive with B+A+M.

In developing a new being, a genetic mark is necessary to establish a kind of behavior. An example of a molecular mechanism that allows mark incorporation could be the histones –pieces of ADN– studied by modern molecular biology.

A second question is whether the dominant genes compensate for the recessive genes, or only the dominant genes express. Again, the answer is, it depends. In case 1, due to the dominant character of type B, the result is basic brakes.

However, both recessive genes could develop B+A breaks with positive verification.

In case 2, gene type B+A's dominant character develops the two brake types, and B's recessive traits, only primary brakes. Either way, in nature, it will come across all kinds of cases.

The above explanation is simple, although not as the old-fashioned concept of the dominant or recessive gene. However, it is much less simplistic than co-dominant and co-recessive, which continues not to argue why genes are dominant or recessive under different conditions.

NEWS ABOUT THE THEORY OF EVOLUTION

“There are various ochre pieces carved with geometric motifs in a South African cave over the Indian ocean. This discovery leads us to believe that modern human behavior originated at least **77,000 years** ago, during the African stone age.

Examples of the oldest artistic activity known until now, the cave paintings in Spain and France, were much more modern but also more convincing.”

El País 11-01-2002. Science / Journal of Human Evolution

Nowadays, academia supports the evolutionary process depends on a combination of random mechanisms and natural selection. This argument could apply to bacteria's evolution, bearing in mind that millions and millions of babies are born in short periods. Although they have been evolving for millions of years, their development has not been particularly

significant.

The evolution of man has just been the opposite. Only 2.000 generations of human descendants (if one accepts that modern humans have only existed for 40.000 or 50.000 years). However, few children are born per generation, and the human brain's evolution has been enormous.

How many combinations of direct descendants would be necessary for the Windows 3.11 code to evolve into the Windows 95 using an evolutionary process based on random mutations?

How many combinations would be necessary for the technical specifications of standard car brakes to convert into ABS in cars' evolution?

Perhaps philosophical ideas surrounding genetics and evolution should change to recognize the intrinsic dynamics of genetic development of **vital impulse systems**.

4.b.3. Internal coherence and compatibility: evolution of the species

- **Isomorphism in the evolution of the species**

The first indication of the genetic system's compatibility is the uniformity in its language, the DNA.

Any improvement has to be compatible with the rest of the transmitted genome. There should be a subset of the **genotype** remarkably constant for affecting a lot of vital processes. It is the structural code.

NEWS ABOUT THE THEORY OF EVOLUTION

A year after the official presentation of the rough sketch of the human genome

In the human genome are also many proteins related to the defense system of the organism and, especially, a high number of **repeated sequences and without a known function** that makes up 50% of the total (the genes would only represent 1.5%)

El País 20-02-2002.

The existence of random **genetic variability** or mutations would mean they would affect the **structural code**. The consequences would be disastrous for developing the new being; logically, the modifications generally cannot be random, especially in too complicated cases as the human

genome.

The random method in the evolution of the species is acceptable within specific processes and mechanisms; that is, nature extends the range of possibilities without affecting those functions requiring uniformity and coherence.

The existence of uncontrolled random mutations should lead to the presence of spiders with four, six, or more than eight legs; moreover, they should be born more or less continuously over time. It should be regular to find animals of the same species with more legs and humans with three arms. Modern genetics is indeed acquiring this type of mutation in inferior animals.

The coherence of the modifications also relates to the genetic information the other parent could transmit. Sexual differentiation allows –apart from other numerous considerations– a method for achieving the necessary uniformity and coherence between the two sources of genetic information and the observed isomorphism in the species. We are referring to the **Logical Verification of Information** method –LoVeInf.

■ **Evolutionary leap and the origin of new species**

A related aspect to coherence is the possibility of **evolutionary leaps** in the origin of new species, which will imply a change of the structural code. In other words, any model should justify the **existence of the human genome**. *

When a system evolves, it complicates, and some traits make up its structure while many others are depending on them. Eventually, this structure becomes ancient. There comes a time when it is necessary to change some configuration elements to simplify processes and increase

the evolutionary potential.

With new functions will not operate the Logical Verification of Information method. A simulation method or other condition of control should check the new feature. One solution to assure the continuation of the species could be incorporating the modification to a certain proportion of the descendants.

Fast changes will follow a structural shift that will produce traits related to and dependent on the new functions, for example, the necessity of a particular protein. If a new being does not acquire this new protein by combining genes, it will not survive, given that the dependent traits will remain blocked in the **phenotype**.

NEWS ABOUT THE THEORY OF EVOLUTION

What we have of Neanderthal

Scientists reveal that Europeans and Asians have 1.3% of that population's genes in hair and skin. So, the two species crossed and produced some fertile offspring, those portions of the Neanderthal DNA passed to the next generation, but at a cost, says Akey in Science, because the mixture of both species "was at the limit of biological compatibility.", says geneticist David Reich.

El País 30-01-2014.

The species will be **compatible** * during a specific period

while distancing between themselves. Still, evolution will make them irreconcilable for reproductive purposes, causing their complete separation and new species' origin.

The **sporadic diseases**, one case out of every 10,000 or 100,000, could respond to this argument since usually, they are due to the lack of a protein in the **phenotype** – organism– by two very archaic genes together. These genes are reminiscent because individuals with the new structure, and those from both parents, have not been viable.

NEWS ABOUT THE THEORY OF EVOLUTION

“The responsible gene of a protein called growth factor 2, similar to the insulin (IGF2), is usually marked in people.

The imprinted IGF2 from the mother is typically not active in the child, but when it loses that marking and activates, it produces cancer in infants called Wilm’s tumor.

It is a radical concept in genetics. Because until now, we did not know **cancers caused by normal** genes.

El País 26-04-1993. Nature

Of course, as always, it can sound like natural selection because any mechanism impeding the viability of a being could be part of it, but it would be nothing more than an abuse of the concept in its purest tautological form.

■ **Complementary traits and the origin of the species**

Conditions of the modified code's active development could be other related traits to extend possible improvements.

The balance of complementary traits also concerns with coherence.

When two traits are entirely complementary, their balance is beneficial, given that the resulting potential will be higher. The figure shows the effect of the complementarity factor on a particular characteristic. The outcome should be superior to the simple addition. In the graphic, the example assumes the subsequent potential is the product of the individuals' potential.

The complementarity of intelligence and memory could be each additional component –a typical example can be the human genome– of the processor will increase the potential not in a unit but instead in the total memory quantity.

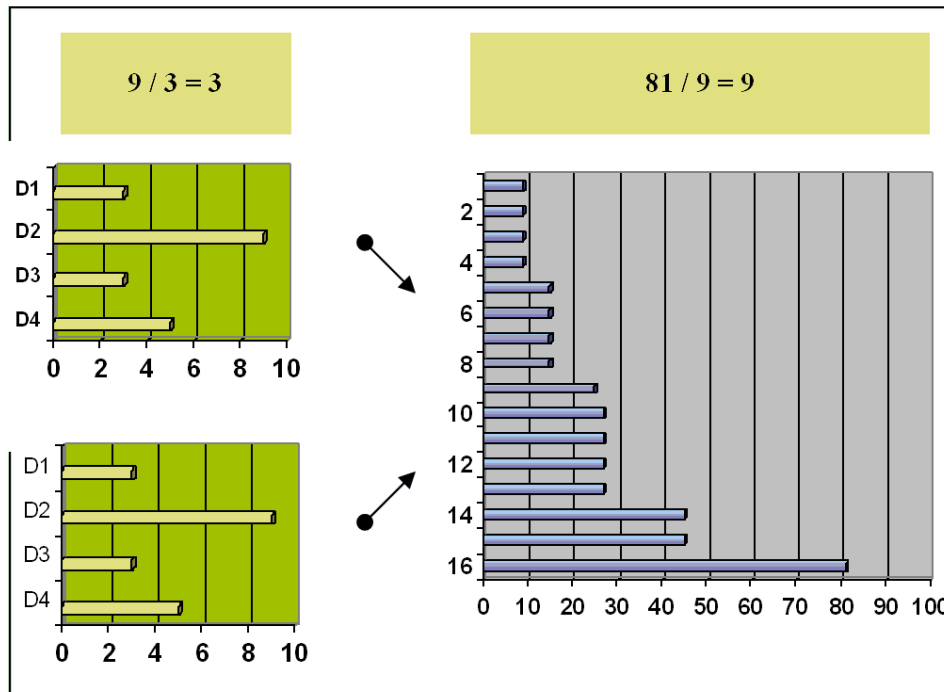
A familiar analogy in the trunk of a car: when going on a long trip and with many junk pieces, one should pay particular attention to fit them all. The grander the ability and the trunk, the more things that can do inside.

In assessing the effect for greater clarity, the ability goes from three to four objects by a unit of volume, and this one from four to six. Then, the skill has increased one, the size two, and the number of objects twelve by the effect of complementarity.

This effect is of extreme importance since the maximum difference of potential of every trait isolated has the

relationship $9 / 3 = 3$, and globally the relation transforms to $81/9 = 9$. It has tripled.

Complementarity of abilities in the phenotype



Enormous differences could occur in potentials associated with multifunctional characteristics, like intelligence and memory. Only with the introduction of another trait, the individual relationship of 3 could go to $729 / 27 = 27$.

Now, we can imagine that three different ape species live in a relatively close habitat. One of them lives mainly in the trees, another on the ground and another near a big river. Suppose the **three species genetically mix** * through their more gifted individuals. It is easy to imagine that the descendants could acquire traits highly superior to their ancestors, and the subsequent mechanisms will end up separating the **new species**. *

The **new species'** babies' only problem will be finding its **missing link** because **it had never existed**. *

4.c) Genetic variability

The main reason for proposing an entirely new theory of evolution is the different approach to the origin and sources of genetic variability.

While for the **Darwinian theory**, the genetic variability is due to random mutations, for the Conditional Evolution of Life – CEL– it is not possible only this character of the genetic variations, bearing in mind the complexity of the living beings and their quick evolution.

NEWS ABOUT THE THEORY OF EVOLUTION

The behavior of animals is always logical because it is the product of an **evolutionary strategy**.

El País 02-10-2002. Congreso Nacional de Etología

These ideas about complexity in evolutionary biology appear in the **objectives of the evolution** section.

Current genetic regulation is similar to modifying a computer program without knowing its full structure, functions, or program language. The intention is not to exaggerate the risks involved in genetic engineering, they undoubtedly exist, but they should be minimal.

When a program is modified, it may stop working, but it is challenging to create a computer virus by accident. With random variability, the new being would not be viable, but that is all. Genetic problems designed deliberately for a bacteriological war would be a different issue.

NEWS ABOUT THE THEORY OF EVOLUTION

Sydney Brenner

Nobel Prize in Medicine 2002

“We know almost nothing about the human genome.”

El País 18-09-2003.

Likewise, the more we know about how DNA works, the more it looks impossible for the complex systems to result from random genetic variability.

The random character of genetic variability is due to not understanding their cause and full functionality. The unknown is usually random for pure conventionalism.

4.c.1. Concept of gene

There is a problem in the terminology of evolutionary biology and genetic variability because it usually has the meaning of the **Darwin** theory of evolution.

The first precision is that we refer to the genetic information that has been or will transmit to progenitors or descendants.

GloFish - Genetically modified Danio Rerio

(Public domain image)



This restriction is crucial, given that almost all cells contain an individual's genome. A genetic modification that **originates in a cell** * not always have reproduction functions. The concept used here includes these changes insofar as they end up moving to the reproductive system in any possible way.

Logically, academia does not admit this approach.

Something else that needs to be clarified is using the expression *changes in a gene* or similars; it refers to expressions like *modifications to genetic code passed on to descendants* to avoid repeating it too often.

We will avoid this practice as far as possible. Sometimes, it simplifies the reasoning; it will even refer to genetic information in different genes when it is not relevant.

NEWS ABOUT THE THEORY OF EVOLUTION

The concealed face of the genome

Nowadays, it is challenging to provide a precise definition of a gene.

We have genes from DNA that produce proteins and RNA genes that do not encode proteins.

The RNA molecules are pieces of a jigsaw puzzle that make up an unknown image.

El País 10-09-2003.

Usually, it seems genetic information and variability are something very complicated: DNA's tridimensional molecular structure. Here, the idea is just the general concept of code regardless of its chemical mechanisms.

This study is a functional analysis and not of biochemical composition. Therefore, genetic information could be like the following examples.

- Source code of a computer program
- Technical definitions buildings

- Technical definitions of a car
- User instructions of a computer program

4.c.2. Types of genetic variability

Let us see some of the multiples classifications that could appear in evolutionary biology:

- **Genetic variations derived from the objectives of the evolutionary system**
 - *Improve the efficacy*
 - Improvement characteristics of materials: new proteins
 - Rationalization and simplification of the structure of the genetic code.
 - Improve the functionality of any element of the genetic information.
 - *Guaranty and security*
 - To create different genetic variations to deal with changes in the environment.
 - Associate the idea of structural genetic information to some of it to know the consequences of any future change or variation.
 - Keep genetic code not operative for possible future utilization
 - *Cohesion and compatibility*
 - Associate the condition of Logical Verification of Information with the other progenitor's genetic information in **sexual differentiation**.
 - Balance development of genes with complementary characters.
 - *Optimization*

- To make risky modifications relying on the mechanism of natural selection.
 - To make chancy alterations counting on the use of the method of **Logical Verification of Information**.
 - Genetic variations to improve the use of the **resources**
- **Depending on the methods of genetic evolution**
 - Trial and error
 - Natural selection
 - Thorough testing
 - Partial testing
 - Initial endogenic sexual differentiation and other variants
 - Sexual differentiation
 - External Logical Verification of Information
 - Backup or historical archives
 - **Cause of genetic variability**
 - Accidental or random mutations/ directed
 - Internal/external (to the individual)

The first would be the group of improvements made to the genetic code, produced due to the individual's learning, working, or life experience previous to genetic information transmission.
 - Endogenous (to the genetic system) / exogenous (environmental)
 - **Nature or expression**
 - Operative code / not operative (genetic garbage –Not a very good term)
 - Discrete / continuous
 - Restrictive (Conditions of external verification...) /

- additive / special
- Variations of genes with complementary character / independents / dependents.
- Immediate / not immediate (confirmation needed in next generations)
- Initial moments (of the new being) / posterior
- Visible (macroscale) / not visible (microscale)

**NEWS ABOUT THE THEORY OF
EVOLUTION**

Junk DNA comes to light.

The first surprise is that the so-called “genetic garbage” has been incorrectly named: 80% of DNA turns out to have some biochemical function. Moreover, 95% of DNA affects the regulation of healthy genes.

El País 06-09-2012

- **By the mechanisms of genetic variability**
 - Random / design
 - Predetermined random between fixed options / Entirely random
 - Simple / complex

4.d) Evolutionism and mechanisms of genetic variability

It is suitable to clarify some similar terms that sometimes have specific connotations, such as procedure, methods, processes, and evolution mechanisms.

4.d.1. Concepts on evolutionary genetics

- **Procedures and methods of evolutionary genetics**

These two concepts are almost the same. For example, **sexual differentiation**, Logical Verification of Information, and natural selection characterize processes, methods, and even evolutionary genetics mechanisms.

Usually, procedures and methods have a conceptual or immaterial character.

- **Process**

A set of activities with a shared goal

- **Mechanism of genetic variations**

A mechanism of genetic alterations would be a singular activity that has an immediate purpose.

A basic outline could be as follows: *A procedure that includes one or various methods, consisting of a group of activities or processes formed by an undetermined number of related mechanisms, generally in a sequential way.*

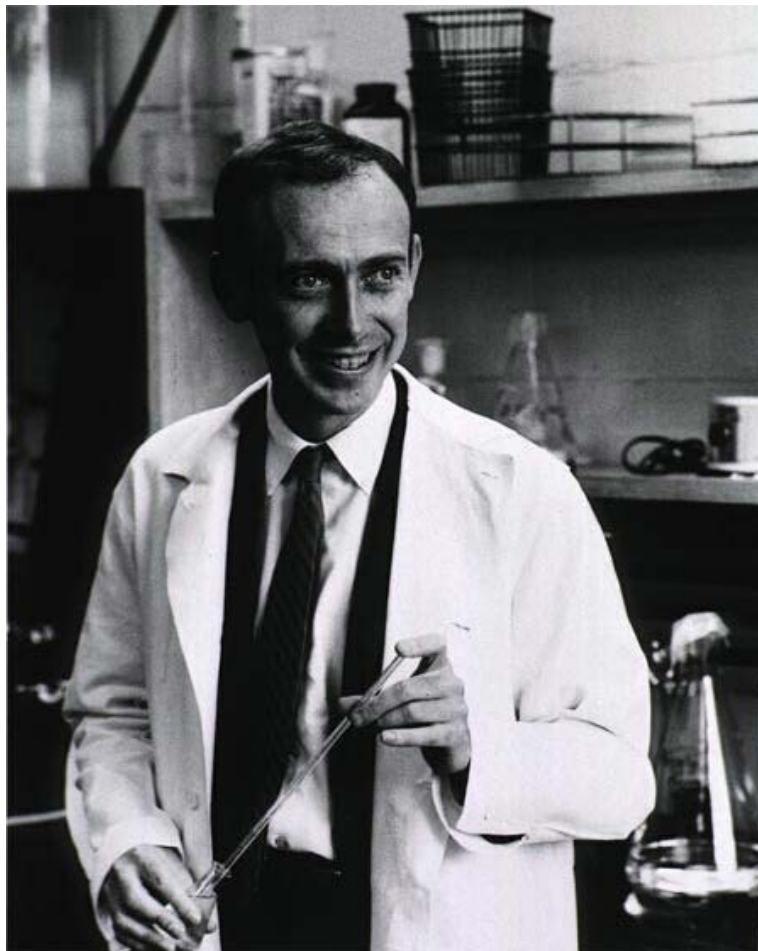
Likewise, nothing prevents various independent procedures or processes from acting simultaneously. There is an evolution

mechanism, which works a posteriori in many cases, so-called Natural Selection, collaborating with the other functions and methods.

4.d.2. Glossary about processes of genetic variability

The mechanisms explain evolutionism according to the scientific method. Natural selection is not the only process.

James D. Watson
(Public domain image)



Among the most relevant are the following:

■ Procedures and methods

○ *Trial and error*

The most straightforward process is typical of microorganisms, which have many descendants in each generation and rely on natural selection.

○ *Natural selection*

From a tautology perspective, it would act as a single, effective evolutionary method, as random modifications alone would not achieve the evolution seen in living beings.

However, in accepting the changes' arbitrary character, the method of trial and error would be more general than natural selection since this does not always operate. It does not seem to have much relevance in human beings, except in the very long term. Nor is it guaranteed that it will act in the future.

Natural selection is a system's exogenous verification method to produce genetic modifications because it works a posteriori.

○ *Exhaustive check of gene expression*

It would be the verification of the results foreseen by the transmitted genetic modifications. In some instances, living organisms can verify the effect of replacing one protein with another. If this verification is satisfactory regarding the functionality, and there is no risk of side effects, the deletion of the information generating the first protein would be possible since it would not affect the assurance objective.

◦ *Partial check of the modifications*

When a system grows and contains innumerable interrelations, an exhaustive check of all the effects caused by a small change will not be possible.

The genetic modification will carry a lesser risk the more prominent the covered range. Informatic programmers know these types of threats.

**NEWS ABOUT THE THEORY OF
EVOLUTION**

Scientific progress and society

A lot to learn

The living systems depend on the management and processing of **enormous quantities of genetic information.**

El País 26-11-1992. **Eric H. Davidson**

◦ *Primary or endogenic sexual differentiation*

Due to the development of more complex beings, the partial verification method's risk increases and will not guarantee the offspring's viability.

The search for new methods to explain evolutionism satisfactorily is required. One possible approach could be sexual differentiation, in such a way that one of the sexes could spend all its energy in developing and verifying new functions. It could be the case of the evolution of bees since there is a sexual differentiation

but an endogamy pairing.

It could also be about keeping an intact copy while the other one has genetic modifications.

- *Sexual differentiation*

The main advantages are in detail in the chapter about the objectives of evolution.

**NEWS ABOUT THE THEORY OF
EVOLUTION**

Synthetic life is here

Chromosomes are the packets in which the genome of higher organisms, or eukaryotes, is distributed. They are much more than a piece of DNA: they package in **complex architectures** formed by hundreds of proteins that interact with the genetic material.

El País 28-03-2014

- *External Logical Verification of Information (LoVeInf)*

A detailed explanation appears while talking about **dominant and recessive genes** in the example relating to the “*Significance and expression of genetic variations: the example of the technological development of brakes in the automobile industry.*”

- *Security copy*

Before the genetic modification, the code can be kept

to a greater or lesser degree to have the possibility of returning to the initial configuration. Another advantage of keeping the old code is using it for different functions, equivalent to having a program or function library.

○ ...

■ **Processes**

- Creation and design of genetic modifications –genetic research at the cell level
- Initial development of the new living being
- The growth of the living being
- Choice of the partner or **sexual selection**
- Execution of pre-established structures –**epigenetics**

The results of some actions can vary depending on the conditions.

A typical example could be the **decision-making process** of the brain.

○ ...

■ **Mechanisms of genetic variations**

- Operational conditions of the genetic information
- Creation of random operations
- A particular activity of the decision-making process
- Feedback - It would always be possible to associate a genetic modification with its age or effectiveness during some generations.

- ...

5. GENERAL THEORY OF EVOLUTION

The Conditional Evolution of Life –CEL– represents, at least, an element of reflection on the long road of scientific knowledge.

The following paragraphs present the main ideas about the theory of life, its nature, origin, and evolution.

5.a) Conditional Evolution of Life –CEL

The new fundamental development in Conditional Evolution is the evolution as an internal mechanism of living beings' improvement that transmits to descendants. Given the complexity of the aspects involved, use many systems, methods, or procedures depending on the particular conditions.

The CEL can summarize as follows:

- *The main characteristic of life is Freedom*
- *All life has an intrinsic tendency to widen the sphere of freedom using evolution*
- *Evolutionary systems, methods, or processes and their configuration depend on specific conditions in each case.*

The broadest sense of **freedom** means the possibility of overcoming determinism or freeing from the bounds of nature's laws of physics, increasing the range of potentials of living beings. Regardless of quantitative aspects, this concept would exist since the beginning of life.

Although this concept is essential to the CEL, it is unnecessary for its validation within a scientific approach.

Specific areas of freedom are so small that they may be undetectable to humans. However, it does not mean we cannot detect their nature through intuition and experimental models. On the other hand, advances in technology are continuously increasing the limits of our intelligent perception.

The term “conditional evolution” does not refer to the adaptation to conditions to survive but improving since the beginning of life to be more independent from the environmental restrictions.

Winsurfina

(Cancun)



Moreover, it refers not only to the environmental conditions and restrictions but also to those conditions derived from its goals, internal logic, and dynamic.

Point three of the Conditional Evolution of Life could seem too general. However, explaining all the methods used by Nature would make a brief and concise presentation

impossible. Moreover, the list would be too long and incomplete.

However, the central ideas of life's evolution are present: the variety of methods and conditions.

At the same time, we can cite the evolutionary mechanism of **sexual differentiation** and Logical Verification of Information (LoVeInf).

There is a brief resume of a global perspective of the alternative theory of evolution below. On the one hand, there are some characteristics of life. On the other hand, multiple conditions can affect change and the ideas behind them.

The causes, methods, or mechanisms of the CEL classifies between conditions imposed by exogenous or environmental factors and endogenous conditions derived from an evolutionary system's dynamics.

GENERAL THEORY OF THE CONDITIONAL EVOLUTION OF LIFE (CEL - 1990)

- **Nature of life**

- Love and freedom (**Creationism** - Adam Sedgwick)
- Impulse vital systems (**Lamarck**, Nietzsche, Henri Bergson, Gaia theory - 1969)
- The tendency to improve (**Intelligent Design** - 1991)
- Different levels of consciousness (**Global Cognitive Theory** - 2002)

- **Evolution of life**

- **Endogenous causes or teleological approach**
 - Guaranty and security (**Sexual differentiation**)
 - **The dominance of the species** over the individual (*Selfish gene*)
 - **Internal cohesion or compatibility** of the evolutionary system (*Isomorphism of the species*)
 - **Optimization** of evolution timeline (**Evolutionary leaps**, sexual differentiation, sexual selection, **Laws of Mendel** - 1865)
 - **Exogenous or environmental causes**
 - **Shortage of resources** (Theory of Natural Selection of **Darwin** - 1859)
 - The function creates the organ (Theory of Lamarck - 1809)
-

5.b) CEL conclusions and characteristics

5.b.1. Main inferences of the general theory of evolution

Every theory of evolution is, at the same time, an opinion on the origin of life. However, some authors attempt to conceal it or avoid openly talking about the possible definition of life.

Chief conclusions from the basic formulation of the Conditioned Evolution of Life –CEL:

- **Development throughout life**

Evolution is a consequence of the development of genetic information throughout the life of living beings.

- **Verification and complementarity**

The relevant concepts for the **species' evolution** are Logical Verification of Information and complementarity between two or more characters.

- **Sexual differentiation**

Sexual

Sexual differentiation



differentiation implies the specialization of **one sex** * in genetic evolution and the other in improving material technology for the new being.

Furthermore, it allows the transmission of a validated copy of the genetic information that guarantees the offspring's viability.

- **Improvement, feasibility, and optimization**

Sexual differentiation contributes the most to the improvement, feasibility, and optimization of superior animals for allowing the **Logical Verification of Information** (LoVeInf) in various processes throughout their lives, with different mechanisms and degrees or variations of said method.

- **Gene expression and significance**

The basic concepts of dominant and recessive genes of **Mendel's law** lose their meaning. If maintained, it is inappropriate except for characteristics of a discrete nature.

The so-called **recessive gene** is, in fact, the most powerful and modern when verification is a condition associated with the transmitted information. Therefore, the CEL changes its terminology, denominating **significant genes** to those restricting the expression of a particular process' functions.

- **Vital impulse systems**

The research methodology of the **vital impulse systems** may be useful for studying complex models.

The vital impulse denotes forces with an internal logic or intelligence at all levels of the system. Its origin cannot be delimited; in other words, the mystery of life, be it

biological or of any nature.

The CEL distinguishes between logical or endogenous causes to any vital impulse system and external or environmental ones, such as natural selection or resource scarcity. Therefore, it allows a more detailed analysis of the various evolutionary stages.

5.b.2. Characteristics of the CEL

- **A scientific theory of evolution**

The **EDI Study** (2002) confirms the most important forecasts of the Conditioned Evolution of Life –CEL.

Subsequently, an additional hypothesis of sexual selection in the EDI Study gave positive results.

Many experiments also provide evidence that perfectly fits the CEL, such as duplicating the rice genome and those cited in the section on **empirical evidence**.

- **A philosophical and scientific theory**

Every theory has its more or less visible philosophical substrate. In this case, the scientific and philosophical duality of CEL is explicit, paying particular attention to the proper separation and independence of its scientific implications and proposing methods of contrasting them.

The formulation tries to express the basic principles of man's evolution, the origin of life, and development in general.

- **Orthogenetic and teleological theory**

It is teleological for assigning the goal of widening the sphere of freedom. It is Orthogenetic for admitting internal factors.

We were aware of this philosophical postulate while formulating the theory, but those characteristics are essential, helpful, and pretty. Nevertheless, from a

scientific point of view is relatively irrelevant to amplify freedom or not. We say relative because, if their consequences are real, it would be logical to accept the principles inspiring it, as long as a more consistent explanation appears.

■ **General theory**

Its formulation tries to express the general principles of the origin of life and its development. It even goes a step forward, thinking that the same principles could apply to any evolutionary system with vital impulse.

It does not deny the established theories; quite the contrary, it incorporates them through the third basic idea mentioned in its definition as particular cases.

Genetic modifications in most superior evolutionary processes due to environmental influences, random elements, trial and error processes, changes already verified, **sexual differentiation**, and natural and **sexual selection** will be present.

■ **Continuant and revolutionary theory**

The CEL is continuant because it incorporates Lamarck, Darwin, and Mendel's contributions, and some regularly ignored trends opposed to natural selection as the leading cause of evolution. Besides, it develops, combines, and modernizes concepts according to the new contributions of advances in science and current culture.

It is a revolutionary theory because its outcomes imply a qualitative change in life's concept and origin. In any case, evolutionary leaps are similar to a new building higher than the old ones and need additional pillars and more advanced general knowledge.

Scientific theory of flying



- **Intuitive and complex systems theory**

The CEL uses the hypothetic-deductive or **validation of hypotheses** method. It is typical for modifying previous theories about **complex systems**, and **intuition** is a substantial source of their suggestions.

The same methodology can be useful to other branches of knowledge studying complex systems that resemble the **vital impulse systems**.

- **Multidisciplinary theory**

The subject studied depends on and affects a large number of disciplines of knowledge.

6. EMPIRICAL EVIDENCE

The CEL (1990) is a theory with roots in Lamarckism and Vitalism. Although it is a general theory, the arguments sometimes refer to the man as being more didactic.

Regardless of the philosophical repercussions, the Conditional Evolution of Life –CEL– contains scientific proposals. Some of them already checked and admitted.

We have presented the CEL proposals in their **formulation** and conclusions, discussed throughout this book, and listed in the **Genetic Variability** and **Mechanisms of Evolution** sections.

Let's look at the scientific evidence of the most notable:

■ **Transmission of genetic information**

Lamarck postulated it, and Mendel demonstrated it. It took the scientific community 50 years to recognize and integrate it with Neo-Darwinism. So much delay is because the genetic transmission of all the peculiarities of the new being's configuration supports 100% of Lamarck's theory compared to natural selection.

The Mendelian combination causes the distinction between inherited and predestined character. Although there is a transmission of all necessary instructions, they are not always the same.

Another way of saying it would be the famous "Inheritance of acquired characters."

Man evolution is a consequence of the development of

genes throughout the life of individuals –CEL.

Modern Darwinism has also adapted the full transmission by bringing the natural selection to the cellular level.

However, character changes are not by accident or by purely random methods but also by intended enhancements. The intentionality comes from very complex and logical modifications in a single generation.

Recently, academia tries to maintain Darwinism by mixing the epigenetics concept –offspring development conditioned to the environment and transmission through RNA instead of DNA. As far as we know, Darwin did not mention where mutations should be.

On the other hand, this point implies a mechanism to move the normal cells' genetic information to the reproductive cells.

Evidence:

- ◆ 1992-11-26 **Regulatory instructions**
- ◆ 2002-04-24 **EDI Study (2002)**
- ◆ 2002-01-23 **Olfactory preferences**
- ◆ 2008-05-10 **The inheritance of the acquired characters**
- ◆ 2017-08-25 **Transgenerational epigenetic inheritance**
- *
◆ 2017-04-22 **Environmental 'memories' passed on ***

And many others

■ **Ensure the viability of the offspring**

There are two main methods: producing abundant offspring with small variations and **sexual differentiation** in complex organisms.

The first one uses random processes and has justified Darwinism despite no proof these processes were unintentional. Equivalently, the modern lottery is haphazard and, of course, designed by man.

In its early days, genetic modifications were random mutations with Darwin, and there was evidence. Later, they are random only at specific points; later on, their name is not mutations, but Darwinism is still the prevailing theory of evolution.

■ **Sexual differentiation**

It is the second method of ensuring said viability. It does not eliminate random processes, but it is difficult to justify their complexity with them. Above all, it verifies specific aspects of a logical or non-random nature typical of vital impulse systems.

The most prominent are:

- One sex transmits a viable copy of the genome

Not just one copy, but many times partial copies of the genome doubled, tripled, or more –CEL.

Evidence:

- ◆ 1993-01-15 **Recover deleted traits**
- ◆ 2001-02-28 **Hitchhikers on the chromosomes**
- ◆ 2002-04-25 **Genome of rice**
- ◆ 2005-03-30 **Backup copy**
- ◆ 2012-09-06 **Junk DNA comes to light**

It is a fact known for scientific advancement. At the beginning of this century and before, there was talk of junk DNA. In other words, the doctrine calmly insulted Nature.

Of course, reducing Life to random processes is not bad either, and more as an example of scientific knowledge. See reflections on why **Darwin's Theory** prevailed.

- Besides, the same-sex specializes in the technology of materials and the offspring's initial development –CEL.

Evidence:

- ◆ 2002-01-23 **Women have a better sense of smell.**

And surely ear and taste

- ◆ 2002-01-23 **Olfactory preferences**

- The other sex specializes in improving transmitted genetic information –CEL.

Evidence:

- ◆ 1993-05-12 **Men suffer more genetic mutations**

- ◆ 2001-02-19 **The evolutionary progress**

- ◆ 2002-01-23 **Olfactory preferences**

- ◆ 2002-04-24 **EDI Study (2002)**

- ◆ 2003-06-21 **Human Y chromosome**

- ◆ 2003-06-21 **Chromosome Y**

- ◆ 2010-01-13 **chimpanzee and human Y**

chromosomes

- ◆ 2016-08-01 **Male-lineage transmission of an acquired metabolic phenotype ***

- ◆ 2016-12-22 **Fears and memories inherited via sperm ***

- The filter function of genetic modifications –CEL

In humans, and probably in all superior animals, the sons between a man and his sister are feasible. Still, they are likely to have serious problems, probably

caused by the lack of contrast of the genetic variations with a real external source. It also gives us an idea of the vast number of variations taking in only one generation, despite general assumptions.

◦ Method of Logical Verification of Information – **LoVeInf**

It is not a logical filter to search for errors but rather to use the two sources of information with logical selectors such as addition or intersection to achieve different results.

The LoVeInf method' scientific evidence comes not only from the initial EDI Study but also from the multiple experiments not carried out but possible such as **Darwinout** and **Menssalina**, and others on cognitive abilities' variables to the extent that there are indicators. The **Global Cognitive Theory** proposes models according to CEL forecasts in its field.

Evidence:

- ◆ 2002-04-24 EDI Study 2002)
- ◆ 2016-11-03 One brain, many genomes *
- ◆ 2017-02-23 Some neurons choose mom's gene, and others select dad's *

◦ Definition of the significance of genes –CEL

The greater precision of the function of **dominant and recessive genes** causes a new definition. Depending on the LoVeInf method, the same gene can behave as prevalent for one role and as recessive.

A characteristic may also require both parents to transmit it.

Evidence:

- ◆ 2002-04-24 EDI Study
- Hereditary nature of intelligence (r^2 up to 0.99 in groups of 10 people) and significance of the chromosome with the least intellectual potential for this case –CEL

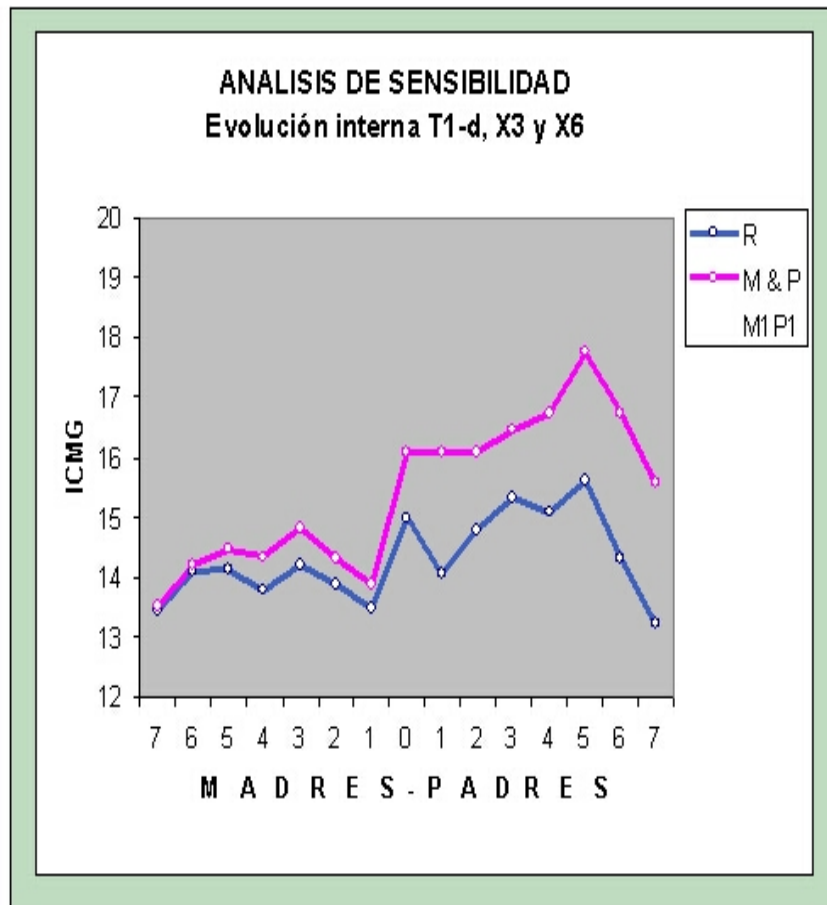
Evidence:

- ◆ 2002-04-24 EDI Study

- Intelligence effect on sexual selection –CEL

The demonstration occurs by incorporating an additional hypothesis on sexual selection in the EDI Study's statistical model in September 2002.

Globus Model Internal evolution

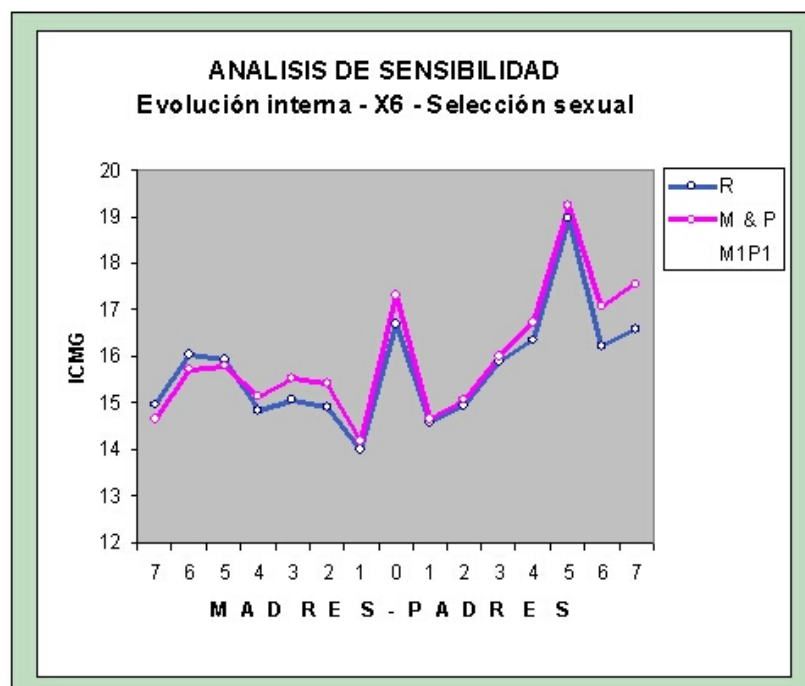


The figure shows the impressive model goodness-of-fit with real data and calculated data according to the CEL and the additional hypothesis.

Evidence:

- ◆ 2002-09-24 Estudio EDI - Hipótesis adicional selección sexual.

Sensitivity analysis Sexy Globus Model with mate selection



- Congruence with relevant historical aspects of human civilizations:

Evidence:

- ◆ 2014-01-30 What we have of Neanderthal
- ◆ Section 8.c) Evolution and economic development

- Congruence with relevant historical aspects of human civilizations:

Evidence:

- ◆ 2014-01-30 *What we have of Neanderthal*
- ◆ Section 8.c) *Evolution and economic development*

- The biological basis of language ability

Some theories support the vision of CEL developed in the Global Cognitive Theory regarding language evolution. After decades, experiments show particular DNA sequences affecting it.

Language evolves, and not all languages have the same number of words or the same precision when it comes to exposing complex concepts such as legal regulations.

Evidence:

- ◆ 2001-10-04 *The language gen*

■ **Evolution in the form of a foam and not a tree –CEL**

The foam form is equivalent to the *missing link's* possible non-existence because evolutionary leaps typically occur by combining two or more different genetic lineages.

It has taken the scientific community 30 years to recognize that Neanderthals, Cro-Magnons, and other subspecies interbred.

Evidence:

- ◆ 2001-02-19 *Horizontal transference*
- ◆ 2010-12-16 *Hybrid love and X chromosome*
- ◆ 2014-01-30 *What we have of Neanderthal*

- ◆ 2017-02-03 [Stone Age and modern populations in East Asia](#) *
- ◆ 2017-02-20 [Interspecies love-ins \(en\)](#) *
- ◆ 2018-03-06 [Two lineages merged, not converged](#) *
- ◆ 2018-08-23 [Daughter Neanderthal and Denisovan](#) *

■ **Simulation with genetic algorithms of CEL**

The free billiard game ESNUKA (1992) allows intuitive assimilation of new concepts.

Sometimes, computerized genetic algorithms for evolution confirm Darwin's Theory. In this case, how could it be otherwise? They ensure the CEL because they have its genetic algorithms.

The only difference is that it appears to be no Darwinian algorithms successfully simulating the evolution of intelligence.

Evidence:

- ◆ 1992-11-16 [Billiards ESNUKA](#)

■ **Other non-Darwinian mechanisms**

Advances in biology and genetics provide knowledge that hardly fits with Natural Selection's theory or its many updates. They do not even square with the Synthetic Theory of Evolution even though its name seems to integrate whatever is necessary to maintain the Darwinian philosophy.

The CEL does not expressly mention the following mechanisms, but they are in the third point of its formulation: *"The systems, methods or processes of evolution are multiple, configured for each case based on certain conditions (and not*

only environmental but also logical)."

Evidence:

- ◆ 1993-01-15 Rapid adaptation - The Spanish mountain cats
- ◆ 1993-04-26 Wilm's tumor
- ◆ 2001-02-19 Horizontal transference
- ◆ 2001-03-14 Eukaryotes
- ◆ 2001-03-19 The simplest way of life

Indeed many others have been discovered.

Scientific innovations can have consequences in philosophy; in other words, aspects considered philosophical could become scientific or vice versa, but the academic community needs time for its assimilation and much more for its transmission to society in general.

A shift in generally accepted notions is a significant barrier, as Thomas Kuhn's sociology of science de Thomas Kuhn states.

At the risk of making redundant repetitions, it took almost 50 years to recognize and incorporate Mendel's laws into the dominant theory, the mixture of Neanderthals and Cro-Magnons, about 30 years. We are not sure about Galileo's heliocentrism because it was a long time ago.

The delays mentioned above are due to sociological and emotional aspects that slow down scientific discussion.

It is possible that with Social Darwinism or the book "The Bell Curve" by Herrnstein and Murray, something similar happens when proposing evolutionary conceptions that do not please certain idealistic ideologies. An idealism that does not prevent accusing scientific positions of barbarities or thinking that the Cro-Magnons had nothing better to do than

exterminate the Neanderthals.

Anyway, it is okay. It is not the first time, nor will it be the last for these attitudes to occur.

Like life itself!

6.a.1. The theoretical basis for The EDI Study

The **EDI Study**, done in 2002, can be found in the corresponding book online. It analyzed more than 500 million coefficients of determination.

One of the main arguments to justify the Conditioned Evolution of Life –CEL– is the **Logical Verification of Information**, transmitted –LoVeInf. To contrast its existence, we must find a model with the following hypotheses:

- Evolution with the method LoVeInf for the studied capacity
- The existence of a function ξ (I) that measures the different potentials of the capacity.

We believe the cognitive ability represented by the IQ test fulfills both requisites of the model.

The possibility of verifying the CEL through the LoVeInf method, the Darwin-out and Menssalina experiments, or others makes the theory scientific.

Other reasons for choosing intelligence are that it is a very controversial topic and, if confirmed, shows a part of the CEL's significant repercussions in the world of education.

There are numerous studies based on individual IQ –intelligence quotient– measurements. The research works have contradictory conclusions, whereas identical twins' studies show 80-85% correlation, while for other types of kin relations, they decrease to 30%.

For us, the conclusion is that genetic inheritance is the leading

cause of the evolution of intelligence, as the high correlation between identical twins demonstrates. The low correlation is due to the incorrect definition of the form the inheritance occurs according to the CEL.

In other words, the low correlations between the IQs of non-twin brothers are due to the Mendelian combination of chromosomes. The correlation between the flower or rat sisters' color in the typical examples of **Mendel's laws** would also obtain low values. We must bear in mind the difference between genetic and predetermined characteristics and their concordance.

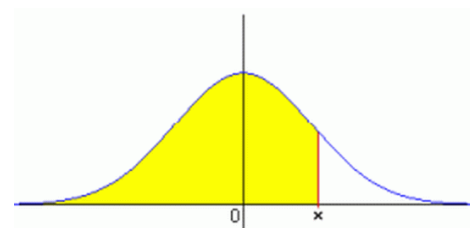
The statistical model could not produce the expected results due to both the chosen variable's multifunctional nature and the possibility that the genetic code could be in various chromosomes, making the model's design much more difficult.

Another possibility is the results showing a heritability of intelligence of 50% and simultaneously that the dominance rules are consistent with the CEL proposals, depending on the **Logical Verification of Information –LoVeInf**, the primary objective of the model.

The IQ refers to the relative position defined within a standardized function ξ (I) of the statistical distribution for its validation process.

The figure shows the shape of the Normal function ξ (IQ) we will use. For each IQ value, the function indicates the accumulated probability that the population's IQ is the same or less than the IQ reference value.

Normal distribution



For example, $\mathbf{x}(100) = 0.5$ and the opposite function $\xi\text{-inv}(\text{Prob.}) = \text{IQ}$, that means, $\xi\text{-inv}(0.5) = 100$.

The function will link each one of its values with the accumulated percentile.

As its name indicates, the percentile is the percentage of the reference population with potential equal to or smaller than the referred distribution value. Thus, the percentile of value 100 of these distributions is 0.50 or 50%, as the mean of the Normal distribution is 100.

Wechsler, Stanford-Binet, and Cattell scales are the most used. They all use a Normal function of an average of 100. However, they differ in the standard deviation: 15, 16, and 24, respectively.

We will use the following case to formalize our model of intelligence evolution. Although many more possibilities may exist, the following reasoning or similar will apply to all of them.

Combining the four chromosomes in agreement with **Mendelian genetic** significance and the LoVeInf method will produce the four different outcomes shown in the figure. The expected mathematical average of the new individual's capacity will be the sum of each case weighed by its probability.

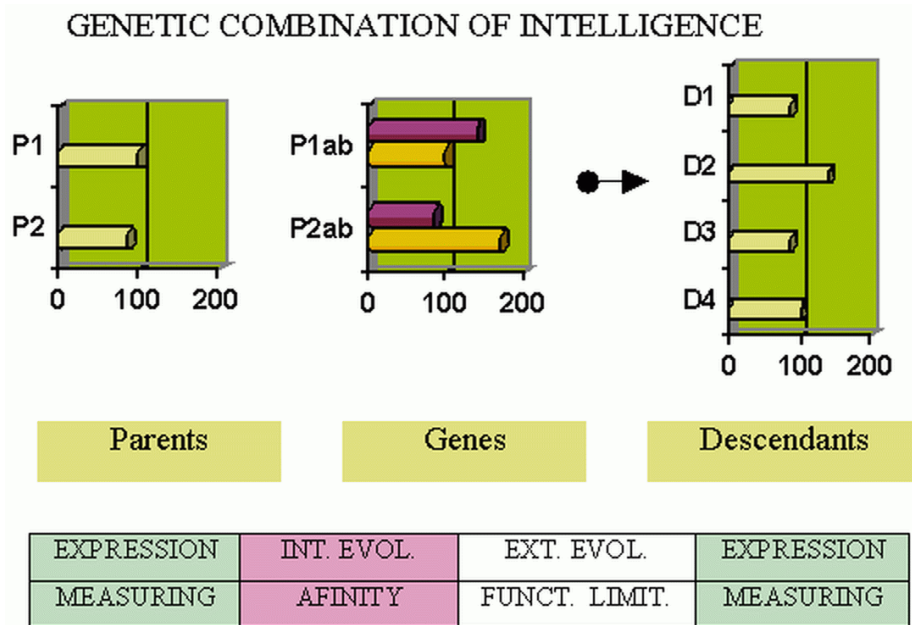
$$\text{EC descendant} = \mathbf{P(D1) C(D1) + P(D2) C(D2) + P(D3) C(D3) + P(D4) C(D4)}$$

The probabilities of all of them will be equal to 0.25. The LoVeInf assumption implies that the significant chromosome will be the one with less capacity. At the most, it would only be possible to express that gene's potential in his integrity.

We will suppose for simplification that the smaller gene's

cognitive ability entirely expresses since, for a specific capacity, the more significant chromosome contains practically all the trimmer's information.

Evolution of intelligence



As the significant gene will be the less potent, the IQ tests cannot measure each parent's more powerful genetic information with current technology since it does not manifest in its entirety.

Therefore, it will be necessary to estimate the second and third adding, limiting as far as possible, the values of C (D2) and C (D4.) If we always worked with probabilities of its mathematical expected average, the errors would compensate when calculating the correlation between dependent and independent variables.

Even if we could measure the most potent chromosome, the randomness of the Mendelian inheritance would remain.

P1a and P2b chromosomes are present in D2, while P1b and P2b are present in D4. Among these three chromosomes, we only know the potential of P1b is 100. Thus, to estimate D2

and D4 (ED2 and ED4) potential, we need to previously assess P1a and P2b (EP1a and EP2b.)

We can reduce EP2b to its expected mean, this is, the average IQ values above P2a. Being the potential related to percentile (ξ -inv) the inverse function, we will obtain the following equation:

$$\text{EP2b} = \xi\text{-inv} [\xi (\text{P2a}) + (1 - \xi (\text{P2a}) / 2)]$$

The intermediate value estimates are not very accurate when measured individually. However, the aim is to obtain unbiased estimates given that, due to the effect of the **Mendelian-chromosome combination**, the deviations' variance will always be very high.

The experiment's positive outcome could show the intelligence evolution is mostly due to genetic inheritance, and it follows the LoVeInf rules.

Once the empirical research's IQ data is available, it will be possible to analyze the correlation between the model's explanatory variables with the explained ones.

Fortunately, the book online of the **EDI Study** (2002) presents the results confirming the proposals of the scientific theory of CEL, $r^2 = 0.96$ and higher.

Regardless of the definition of intelligence in evolutionary psychology as a group of relational functions, there are some simplifications to ease the CEL's model. To make estimations of the evolution of intelligence more coherent, surely it could be necessary to include:

- The internal improvement of the genetic information in each generation could exceed 10% regarding intelligence evolution.

- The affinity filter relates to the lack of full expression of the smaller intellectual power, as mentioned above.
- Another factor could be the effect of the **sexual selection** associated with the correlation of the intellectual power between progenitors' chromosomes.

It is possible to make a preliminary sensitivity analysis for the estimation of the previous parameters.

Afterward, the EDI Study confirmed the three aspects mentioned above.

6.a.2. Research on the evolution of memory and other cognitive functions

The hypothesis of Logical Verification of the Information – LoVeInf– received can be negatively or contrary to the one assumed for intelligence evolution. It would lead to a reformulation of the model to contrast.

Both assumptions are part of the same theory of evolution and occur for different capacities.

NEWS ABOUT THE THEORY OF EVOLUTION

Oxford scientists discover a gene that affects explicitly **language**.

A mutation of the gene, they have named FOXP2. The correlation is perfect: the 15 affected family members carry the mutated gene, and the other 14 carry the normal gene.

The mutation does not function using a breakage spread by intelligence since many affected have ordinary intellectual (non-verbal) levels. Some have intellectual levels that are greater than their non-affected family members are.

El País 04-10-2001. Nature

For reliable or **mathematical memory**, the hypothesis will be the same as intelligence; it will be the contrary for **standard**

memory and intuition.

The issue gets complicated with other cognitive capacities such as language, **semantic memory**, or verbal reasoning due to these cognitive processes' distinctive characteristics.

More comments are on the page **Evolutionary genetics and neuroscience** included in the book *Memory, language, and other brain abilities* of the *Global Cognitive Theory*.

We would expect the contrary hypothesis regarding the inheritance of musical and artistic abilities –like with non-mathematical memory or **intuition**.

The problem with carrying out statistical analyses on these abilities' evolutionary psychology is the lack of reliable data.

6.b) The Darwin-out experiment

The Darwin-out experiment is a proposed study (2011) on intelligence progress to verify the Conditional Evolution of LIFE -CEL- empirically.

The idea arose due to the remarkable adjustment of the September 2002 additional hypothesis of **sexual selection** regarding the initial April 2002 **EDI Study**, which implied a great sensibility of the evolutionary model of intelligence, even for groups of 10 individuals. Of course, it is always interesting to search for a more straightforward and definitive experiment.

To date, the new Darwin-out experiment is just a proposal, but it is possible thanks to the advances in biology and genetics. Moreover, the cost is not high, considering the implications involved.

The objective is to confirm the EDI Study's **results** regarding women's security function in the **sexual differentiation**, the update of genetic information carried out by men, the hereditary nature of intelligence, and its 10% increment in each generation. The Darwin-out experiment's root is a linear discriminant analysis of the origin of the maternal X **chromosome**.

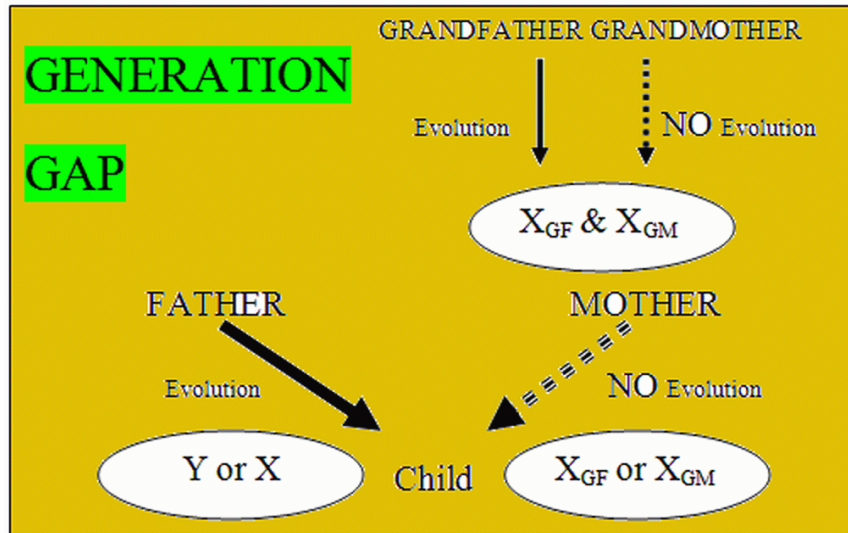
Repeating the EDI Study research on a large scale could revalidate it; however, a different experiment could corroborate it.

Following the **conclusions** outlined in the previous research and the CEL's previsions, if we compare intelligence between

individuals with and without updated **chromosomes** supporting intelligence, that is to say, with a generational gap, we should obtain higher IQ for the former ones.

Quantitative genetic experiment

(Menssalina / Darwin-out)



An individual will always have an updated sexual chromosome, either X or Y, because it comes from the father. The other will not, as comes from the mother. The grandfather could have updated the maternal X chromosome in the previous generation (X_{GF}); conversely, the grandmother did not update it (X_{GM}). We were searching for this characteristic of a generational gap to discriminate between alternative evolutionary steps.

Due to the logic of optimization, intelligence would be mainly in the **sex chromosomes**. Anyway, the Darwin-out experiment would allow us to find the responsible ones.

The new Darwin-out experiment is exceptionally aseptic, as it does not incorporate per se any bias regarding intelligence evolution. What's more, if there were significant biases in selecting the sample, it would not be a problem, as we will discuss.

The experiment consists of two stages.

- **Selection of a random sample**

The first step would be to select a random sample of 100 women of a similar age, same race, and middle social stratum to reduce any possible biases, either genetic or environmental. Then, determine their IQ and the male or female source of the previous generation of the maternal X chromosome. In other words, if it comes from the maternal grandfather (X_{GF}) or the maternal grandmother (X_{GM}).

The sample should not have a significant bias. According to **Darwin's** ideas and **Mendel's laws**, approximately 50% of the maternal X chromosomes should come from the grandfather and the other 50% from the grandmother.

Of course, the larger the sample is, the better. The IQ test used will not influence the results from a gender perspective, whether balanced or not a priori. The selection is composed of solely one gender.

- **Hypothesis to verify**

- The hypothesis to verify is if the average IQ of the sample is above 100, then the proportion of X_{GF} will be above 50%.

Menssalina experiment (2016) offers an exciting sample of 100 members of **Mensa** (an association of people with IQ over 98% of the population). It would make the verification more comfortable. According to the EDI Study outcomes (2002), the proportion of X_{GF} could be 70% or higher. Furthermore, the Darwin-out experiment cost would be small, as the IQ tests would be redundant.

- Another way to test the hypothesis is to rearrange the sample by their IQ.

Now, 50 women with lower IQ will have a lower proportion of X_{GF} and higher X_{GM} than the 50 women with higher IQ.

Darwin-out experiment

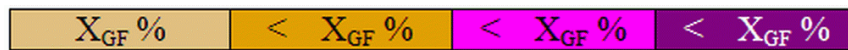
Remove from biases with IQ rearrange sample



Following the same reasoning, we could say that if we make four groups within the rearranged sample, the proportion of X_{GF} should be more prominent, the higher the groups' IQ is.

Darwin-out experiment

A positive correlation between X_{GF} and IQ

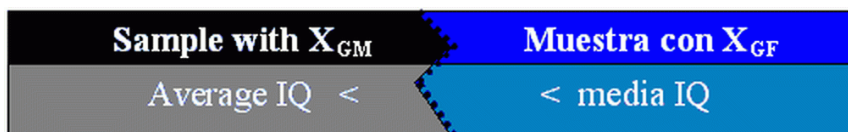


- Another equivalent check is the CEL's proposal on intelligence evolution or direct causality between more modern chromosomes and greater intelligence.

We divide the sample into two groups to verify it. One with X_{GM} and the other with X_{GF} , the first group's average IQ should be smaller than that of the second.

Darwin-out experiment

Groups by the origin of X chromosome



In this case, the number of people in each group does not necessarily have to be precisely half the sample

number.

After having confirmed the hypothesis, the following extremes become evident.

- The existence of evolution of intelligence in each generation
- Realization of improvements in the genetic information exclusively by males
- The elementary functions of intelligence are in the sex chromosomes X and Y or, at least, in one known **chromosome**.
- The randomness of all genetic modifications and the theory of Darwin are incorrect.
- The existence of a teleological intelligence different from the human one

The Darwin-out experiment with a sufficiently large sample and several groups could check the EDI Study's coherence regarding the 10% of human intelligence evolution in each generation.

This empiric research will offer its results without biases, environmental interferences, technical intrusions, or the need for a precise definition of intelligence. Moreover, to understand this experiment, one does not need to have particular academic degrees or make a considerable effort.

A male sample would also do! Although perhaps it would have less sharpness in the results.

The male or mixed intelligence analysis would be identical, scheming the source of the only maternal X chromosome,

from the grandfather or the grandmother.

The Darwin-out experiment's objective is not to deny or explain the possible differences between male and female intelligence but to scientifically strengthen the Conditional Evolution of Life.



When **Darwin-out** finished
the design of the experiment,
he happily went to tell **M^a José**.

‘I’m impressed,’ she told him,
‘And now what are you going to do?’

After thinking for a moment,
Darwin-out confessed,
‘I’m going to invite a friend of mine,
and I’m going to make her a Moon salad.’

To which **M^a José** asked,
‘Wow, cool! How is that done?’

‘It has some pretty little tomatoes and cucumber;
you cut a tomato into two pieces
and each one eats half’,
Darwin-out explained.

Then, **M^a José** exclaimed,
‘how romantic!’

6.c) Experiments with grandpy chromosomes

Menssalina (2016) simplifies the **Darwin-out experiment** proposition (2011) of quantitative genetics, so it would be convenient to read it before.

Menssalina experiment is more powerful and cheaper. It could apply equally to study different **chromosome** development and their participation in many biological processes with possible evolutionary effects due to gender.

It is relevant to highlight that the grandparent chromosomes' methodology could work for any chromosome. They denote independent functional units within the mechanisms of genetic evolution with **sexual differentiation**.



MENSSALINA EXPERIMENT OF QUANTITATIVE GENETICS

We acknowledge that intelligence research relates significantly to the possible social reaction.

Secondly, researching **human intelligence** means, more than anything, knowing the concept itself is subject to many interpretations. There are general intelligence, multiple intelligences theory, somewhat opportunistic emotional intelligence, and negationism.

We would add elegant intelligence, which is usually heard speak very little of it. It would be all the relational abilities of a human being, conscious or unconscious.

A good enough approximation is the existing indicators or intelligence quotients - IQ.

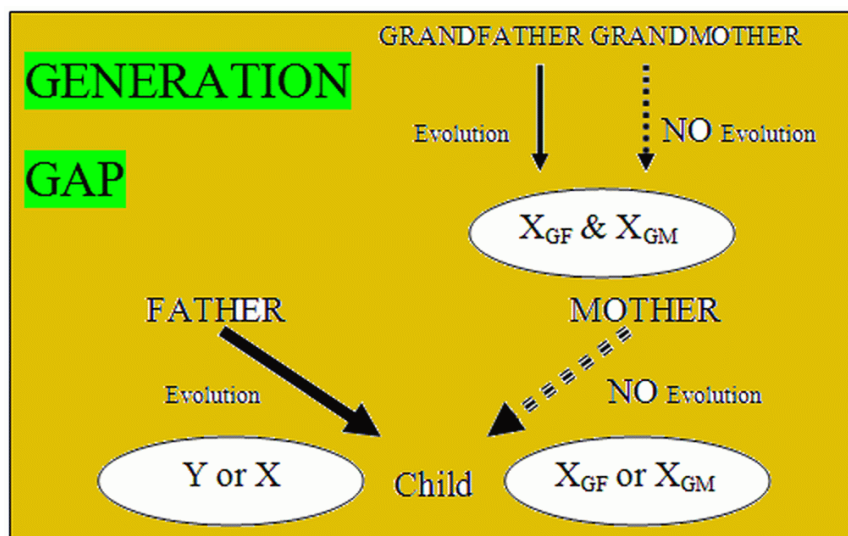
Maybe it is better if we talk about factories. The same factory will create big dolls –or trucks– and little dolls –or cars; it will use the best technology for both. It will use its economic and human resources so that its creatures are as perfect as possible. In other words, it will transfer all its intelligence to its products, of course, in approximate proportion to the sale price and other conditions.

There may be many factories or brands, and there will be differences between them, but all of them will act under the same natural principles.

However, no one will surprise by diverse characteristics, intelligence, or partial skills. Nor should anyone be trouble by dissimilarities between a truck carrying more cargo, a faster car, or an armored transport of large amounts of money.

Quantitative genetic experiment

(Menssalina / Darwin-out)



The proposal aims to revalidate the **EDI Study's results** (2002) on intelligence evolution, confirming the most significant propositions of the Conditioned Evolution of Life –CEL.

Do not be afraid of the different gender functions in the mechanisms of human evolution, even if they affect partial characteristics of intelligence. The subject is known and generally accepted; women are better in some IQ tests and worse in others.

Phases of the proposal:

- **Choosing a sample**

Choose a sample of gifted people of 100 men, women, or mixed, always with a living maternal grandfather or grandmother, always with a grandfather or a maternal grandmother alive. Mensa –the world's largest gifted association– could provide them altruistically.

- **Detecting the source of the X chromosome**

Detect if the X chromosome we all have from one of our maternal grandparents is from grandpa (X_{GF}) or grandma (X_{GM}). We use the grampy X chromosome because it reduces the number of chromosomes to analyze and, at the same time, allow us to discriminate the results by gender.

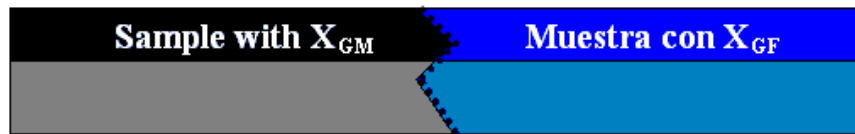
Logically, always maintaining the privacy of the sample

- **Making statistics**

Cheap and straightforward, add and compare

Menssalina experiment

Groups by the origin of X chromosome



■ **Conclusion**

If the grandmothers above win significantly or, on the contrary, the grandparents win with some sigma. We will have to look for more complicated explanations than if the theoretically expected draw occurs.

According to the Conditioned Evolution of Life, the grandparents should win because the gifted sample is extreme within intelligence distribution. Small genetic variations may impede reaching the level of giftedness required –Upper than 98% of the population.

The small differences we try to detect, if they exist, would be due to the known fact that men produce more genetic variations than women do and that intelligence increases with time if there are no external elements to normal evolution.

A generation could be sufficient given the intelligence change in one generation detected in the EDI Study and the high sensitivity of the proposed experiment due to the sample's characteristics. Other possible factors will tend to cancel since they are random concerning the grumpiness above.

A balanced result will suggest no gender differences in the extent of intelligence admitted to entering **Mensa**, * ending with the persistent doubts about it, given the proportion of male members is considerably higher in

every country.

The scientific impact seems guaranteed if the result is unbalanced in favor of one group. For example, the research could be broader, analyzing subsamples by gender or types of IQ tests.

As we have commented, this methodology could be useful for other evolutionary characteristics.

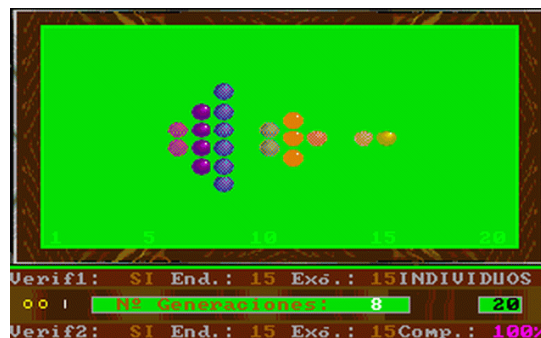
Finally, this proposal seeks to approach the objective truth, whatever it may be.

7. SIMULATION OF EVOLUTION

The free **Esnuka** billiards game simulates intelligence evolution following special rules regulating the balls' color changes on the game table using genetic algorithms from Mendel's laws and those **proposed by the CEL** (1990) confirmed by the **EDI Study** (2002).

Besides, there is a specific option designed to show a fast evolution without needing to play billiards. The figure shows the fractal shape that the balls take and their colors when creating new generations, allowing an intuitive understanding of the effects caused by the available parameters.

Educational games



This option also follows the provisions of the Conditioned Evolution of Life –CEL.

Genetic algorithms are often eminent for proving Darwin's theory. Nothing is further from reality, and genetic algorithms just follow the rules and conditions they have incorporated. There is always a goal or a math function to optimize within the genetic algorithms, closer to a teleological or finalist evolution than Darwinian evolution.

8. EVOLUTION AND DEVELOPMENTAL PSYCHOLOGY

Besides genetics and biology, the CEL gives a greater understanding of how life's evolution could affect many other branches of knowledge, especially social sciences, **complex systems**, and developmental psychology.

As an example, we can cite the **Global Cognitive Theory** about intelligence, memory, willpower, and, in general, the brain's cognitive abilities. These aspects will undoubtedly affect the psychology of education and human development.

The book **Global Scientific Method** includes a new methodology of complex systems based on the CEL called **Conditional Vitalism**.

Although this initial presentation of the CEL aims not to analyze all their possible consequences, we considered it convenient to briefly point out some essential particulars on human evolution and developmental psychology.

8.a) Personal development and social psychology

Regardless of the **Vitalism** philosophy, which upholds the CEL, in the personal context, it would help to comprehend oneself in the sense of understanding the cognitive abilities and the objectives of personal growth, keeping in mind the individual costs that they can involve.

The most illustrative evolutionary psychology example would be the acceptance that certain types of intelligence and memory could be 80-90% hereditary and, at the same time, the possibility that much **higher levels of cognitive abilities** could transmit in the descendants than those manifesting in the parents.

NEWS ABOUT THE THEORY OF EVOLUTION

An experiment directed by two investigators from the University of Chicago has shown that women have an excellent sense of smell, which allows them to distinguish between minor genetic variants of men by doing nothing more than smelling his shirt.

El País 23-01-2002. Nature Genetics

Another example, the female gender seems to have a particular specialization in materials technology since it develops and provides **resources** and materials to the individual in the early stages of development. In turn, it could

imply that it has a more advanced sense of smell; it would also be possible that the famous saying of women having more **intuition** may start to have a scientific basis.

There are still many people thinking –perhaps they are right– the difference in boys and girls' behavior at very early ages is due to environmental and educational factors.

On the contrary, the developmental psychology of boys and girls is different due to natural conditioning.

Within a **family** approach, The CEL could help understand the differences between family members, their origins, their problems, and their advantages.

However, the most relevant effect would be on social psychology. The set of evolutionary ideas accepted until nowadays, outlined in purely rationalist-humanist esthetics, is deeply rooted in current society.

A significant alteration would mean a change similar to the 17th and 18th centuries when the sun stopped revolving around the Earth. Strangely enough, man continues being the only intelligent animal with **feelings!**

The CEL would make up a new social culture once the population overcomes the humanist and anthropocentric rationalism.

The observable scientific and information development in the short-term basis information in all human activity fields is the source of social psychology's new culture.

8.b) Cognitive psychology and development of education

A better understanding of our cognitive abilities from the Global Cognitive Theory could slightly affect personal strategy about the educational system's study and permanence.

Furthermore, this permanence in the educational system must not be understood only in its quantitative aspect but also qualitative; for example, the types of subjects in which a person can be specialized. On the other hand, learning and specialization in the educational system is not the only way to develop oneself. There are different perfectly valid ways depending on the particular characteristics of each person.

Problems due to complex hereditary functions may have a more precise explanation with the CEL. For example, several issues involve dyslexia, which genetic nature is into question due to sociological implications.

NEWS ABOUT THE THEORY OF EVOLUTION

They do not relate written with spoken words and those who lose the word's concept.

There is not a unique criterion about the origin and definition of this problem.

It seems correct **dyslexia** is a genetic difference suffered by some people, it is **hereditary**, and it causes learning problems.

El País 27-05-2002

It is worth remembering the human brain's different ways of functioning when analyzing specific hypotheses regarding education. For some operations, it applies the method of external verification, such as **intelligence and mathematical memory**. For others, it does not use it, such as **intuitive reasoning, the standard memory, and semantic memory**.

These new contributions to cognitive psychology can influence the strategy of public power about the learning system.

8.c) Evolution and economic development

History is full of multiple events, facts, and situations suitable for applying the Conditional Vitalism methodology proposed to analyze **vital impulse systems**.

There are some examples of art development and the historical evolution that called our attention.

Hotel in Playa del Carmen



With the application of the **LoVeInf** method, the mixture of races and subgroups of any species is beneficial in the long term for genetic development in general and intelligence in particular. It could be the leading cause of **evolutionary leaps**. We have explained this effect with greater or lesser clarity throughout the exposition of the General Theory of the Conditional Evolution of Life. In a way, the outcome would be similar to the **sexual differentiation** compared to the germline evolution.

However, this method's application can be detrimental in the short term since the genetic information with the lowest potential is the significant one –in terms of Mendel's laws, it

would be dominant.

The CEL allows the understanding of why the Egyptian Empire lasted more than 4,000 years. The Greek and Roman empires lasted approximately between six and eight centuries, despite being substituted by societies with a noticeably inferior culture, art, and technology.

NEWS ABOUT THE THEORY OF EVOLUTION

Hybrid love

However, there is also strong genomic evidence of hybridization between chimpanzees' ancestors and the earliest hominids, even between Neanderthals and the first modern humans.

Seven million years of separation is just an average difference. The real fact is that there are big genomic blocks between humans and chimpanzees, which are much closer than said average.

Therefore, they separated many years after the rest of the genome. According to scientists from Boston, the extreme case is the X chromosome, which 'is less than 5.4 million years old'. The average is 7 million years because other blocks are almost 10 million years old.

El País 16-12-2010. Nature

The CEL is also congruent with the adoption of monogamous marriage by the Jewish people and the Roman Empire with the Catholic Church's help, although the latter too late to avoid its fall.

During the last period of the Western Roman Empire, significant price increases are detected, which could well reflect prolonged decreases in society's productivity.

Another argument would be the firm establishment of the droit du seigneur during the Middle Ages.

There are many other factors in human evolution. Still, there is no doubt that the increase in intelligence of primitive humans up to the present time has been significant and not always linear and uniform. Environmental conditions are very different across time and geography –how could it be otherwise with Darwin, Lamarck, or CEL!

NEWS ABOUT THE THEORY OF EVOLUTION

There is a 30% difference between chimpanzee and the human Y chromosome.

Given the separation of both species six million years ago, this result shows the human Y chromosome has evolved much faster.

However, in 2003, its sequencing demonstrated its complexity and that it is continuously renewing.

El País 13-01-2010. Nature

The in-depth discussion on human, economic, and technological development is left for another time and, above all, for the reader's consideration. A detailed analysis would be excessive and perhaps too emotional.

On the contrary, for the **French Revolution**, we can point out its most crucial cause. The struggle for freedom and

justice is not exclusive to that historical moment, so it cannot be its direct cause.

Looking at a famous painting of this period, people are in a battle, a protest, or demonstration, but right in the central point of the picture, right in the center, a hand appears firmly gripping a pistol. It could be the immediate cause of the revolution: a **technological change or leap** that radically altered the relationship of forces between the different social classes.

NEWS ABOUT THE THEORY OF EVOLUTION

A morphological study indicates that the **American Indians** coexisted with other populations that arrived from Asia.

Until their extinction, this first population, called Paleo-American, coexisted with the American Indians, of mongoloid features and descendants of a subsequent migratory wave from Asia.

El País 04-09-2003. Nature

Language evolution is another topic of vast scope. With the new approaches, many of its characteristics are understandable. Nonetheless, we are not the first in giving the evolutionary focus as if they had their own life throughout history.

9. THEORIES OF HUMAN ORIGIN

A brief presentation of the general ideas about evolution and theories of human origin such as:

- *Creationism*
- *Intelligent Design*
- *Theory of Lamarck*
- *Theory of Natural Selection of Darwin*
- *Laws of Mendel*
- *Neo-Darwinism (Modern Synthetic Theory and Punctuated Equilibrium)*
- *Conditional Evolution*

See **chapter III about criticism** of these theories of human origin and evolution.

9.a.1. Creationism and other religious theories

The aim is not to explain Creationism or other philosophical and religious trends with a greater or lesser degree of influence of essentialism or evolutionism but to expound scientific theories on evolution and man's origin.

It is impossible to prove the non-existence of a Superior Being. Creationism and other theories based on theological ideas do not have a scientific nature due to science's essence. However, it does not mean that someone cannot believe said

existence and not just by an act of faith.

See [chapter III](#) about criticism of Creationism

9.a.2. Intelligent Design

The Intelligent Design movement has recently appeared as an updated version or modernization of the Theory of Creationism. This movement began in 1991, although it has deep roots in creationism and the **Lamarck** theory.

Although Intelligent Design is not a formal theory, this movement removes itself from the Theory of Creationism as soon as it attempts to explain evolution and human origin within the scope of **scientific research**, which is why we separate it from the genuinely religious theories.

The Intelligent Design movement developed in the early nineties, although the ideas are much older. It implies the existence of a teleological or finalist evolution and, consequently, that theories of random mutations and Natural Selection would no longer constitute the main components of change.

At times, we have to admit that the radical defenders of the Darwin theory and orthodox science remind us of the **Holy Inquisition** and, therefore, have as many religious-philosophical connections as Intelligent Design, or even the most orthodox Creationism.

Intelligent Design attempts to get close to science from a religious point of view, which might not be good enough, but it is a good step.

See **chapter III** about criticism of Intelligent Design

9.b.1. Lamarck's theory of evolution

Lamarck's theory of evolution appeared in his *Zoological Philosophical Work* written in 1809.

His evolutionary theory was as follows:

- Environmental changes generate new needs
- These needs determine the use or disuse of some organs
- Such organs develop or weaken
- The acquired characters are hereditary

Therefore, this theory of evolution is also a theory of human origin.

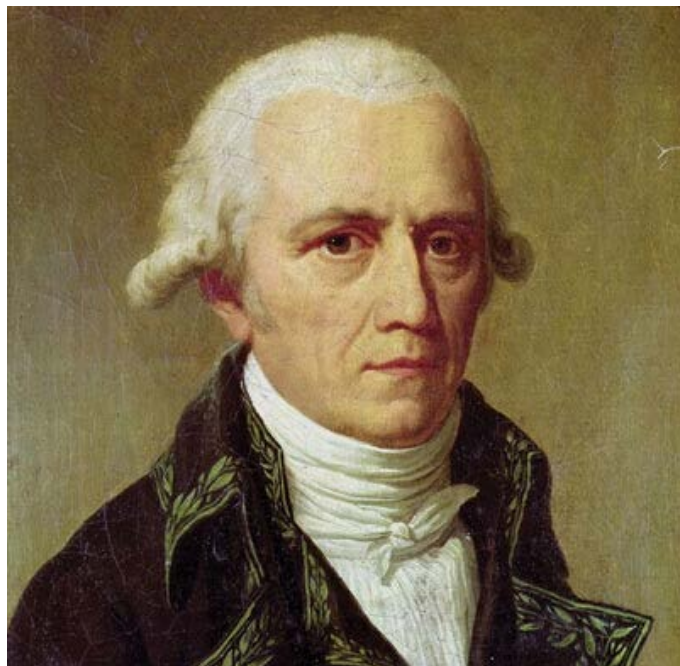
Lamarck's Theory of evolution's famous expression is that *functions create organs*, and heredity determines the change in offspring. Therefore, the human origin is monkey thinking.

A typical example of Lamarck's theory is the evolution of giraffes' necks due to the trees' eating leaves.

See [chapter III](#) about criticism of Lamarck's

Jean-Baptiste de Monet Lamarck (1744-1829)

(Public domain image)



theory

9.b.2. Theory of evolution of Darwin

This point refers to the biological theory by Charles Darwin, the English Naturalist, in his main work, *The Origin of the species*, in 1859.

In contrast to Lamarck's evolutionary theory, Darwin's theory proposed natural selection based on development and human origin. His approach was as follows:

- Individuals display differences
- *Shortage of food leads them to fight for existence*
- *Individuals with superior differences have more chance to reach adulthood, reproduce and transmit these variations to their offspring*

From a philosophical point of view, the Theory of Natural Selection of Darwin base on emergentism.

Later, in his *The Origin of Man and Sexual Selection* (1871), he added a new evolution and human origin factor, **sexual selection**. Male or female chooses partners with more attractive qualities.

The scientific community generally accepted Darwin's ideas (in opposition to Lamarck's), as presented in his work *The Origin of the Species* in 1859. This theory adapts many times with scientific knowledge while keeping its essence: evolution is due to natural selection.

Accordingly, the genetic variations or genes are random mutations; their character is supposedly not directed.

See chapter III about criticism of Darwin's theory

9.c) Dominant character and Mendel's laws of heredity

Gregor Mendel, an Austrian Augustine monk, discovered heredity's rules in his investigations on hybrids in plants (1865).

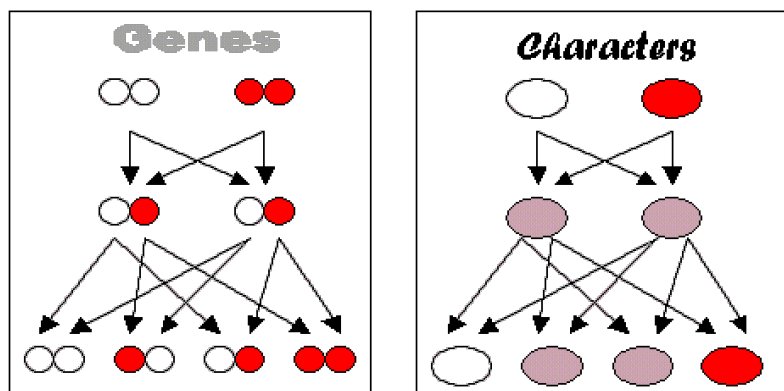
Alongside the theories of human origin and evolution in their strict sense is Mendel's Theory on genetic inheritance, whose fundamental elements are gene combinations and their dominant or recessive character.

The theory of heredity of Mendel consists of the following two laws:

■ The Law of Scission

Factors inherited from parents join the resulting hybrid and separate when the combination reaches the adult stage and produces its sexual cells.

DON DIEGO DE NOCHE



This first law of heredity can become clear using the example of white and red varieties in the *Marvel of Peru* plant:

- The first generation produces all pink flowers. The second generation has one white, two pinks, and one red flower.
- The first generation produces all pink flowers. The second generation has one white, two pinks, and one red flower.

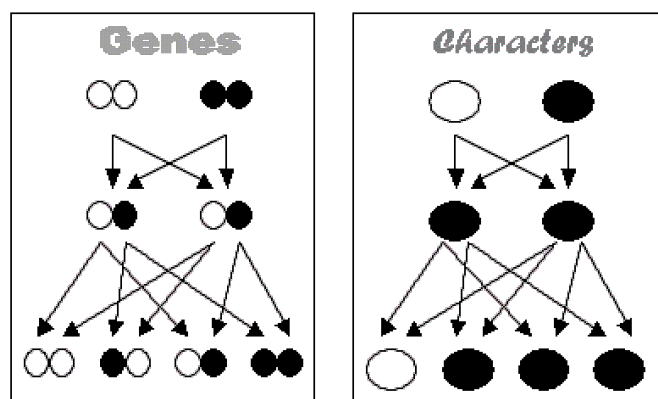
■ The Law of Dominant Character

The dominant character does not destroy the recessive character in the hybrid; it merely conceals it.

An example of the theory of Mendel on this law of heredity is the cross between white and grey rats:

- The first generation produces grey rats. The second has one white and three grey rats.
- The appearance of white rats in a ratio of 1 to 4 in the second generation shows that the white (**recessive gene**) character remains hidden.

RATS



The example of the law of heredity of the dominant character included only one character (mono-hybridization). Still, two or more (di-hybridization or poli-hybridization) can also happen, and the evolutionary

process would be similar, although the possible combinations would grow in geometric progression.

See [chapter III](#) about criticism of Mendel's theory

9.d.1. Neo-Darwinism

The Neo-Darwinist theory is just a theory incorporating current scientific advances in science related to evolution and biology, such as **Mendel's laws**. It continues to deny the influence of the environment or the internal development of living beings a load of genetic information.

Other theories of evolution and human origin are *Synthetic Theory* (Dobzhansky, Mayr, and Simpson), *Punctuated Equilibrium Theory* (Eldredge and Gould), and *Neutralism Theory*.

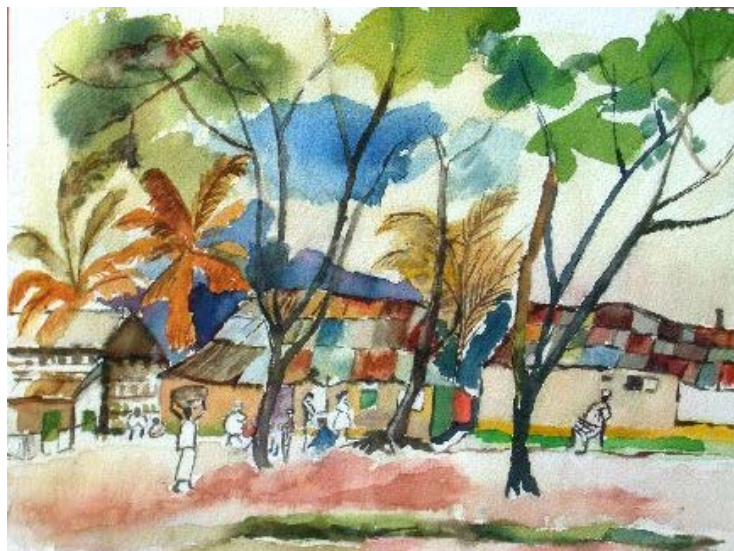
See **chapter III about criticism of Neo-Darwinism**

9.d.2. Modern Synthetic Theory of evolution and Punctualism

The Modern Evolutionary Synthesis has incorporated the latest advances of science in biology and genetics. While Neo-Darwinism contained random mutations within the population, The Synthetic Theory integrates them within genetic information and accepts this mechanism as part of the evolution that, together with the natural selection mechanism, produces development as a whole.

Pequeño Senegal

(Teresa Pérez Barrasa)



The Synthetic Theory or Modern Synthetic emerged around the middle of the 20th century from the ideas of three authors specialized in different branches of evolution: **Theodosius Dobzhansky** in genetics, **Ernst Mayr** in the species of living beings, and **George G. Simpson** in the vast categories of the organisms.

The diversification emerges slowly, usually through gradual changes, and originates in the specialization. Therefore, it is part of the *Gradualism* trend as the initial **Theory of Darwin**.

We can summarize the essential differences between the Modern Synthetic Theory with the Theory of Darwin in the following:

- It incorporates Mendel's Laws.
- Variations in the population due to **genetic variability**
- It assumes the specialization due to the genetic information's cumulative changes and the mechanism of natural selection.

In short, the synthetic theory significantly moved the evolution of a living being to its internal components while maintaining the same emergentist philosophy.

Concerning the **evolutionary leaps** and Modern Synthetic Theory, the controversy is currently present because of the fossil registry, about which there is not a precise position within the scientific community.

The opposite movement would be *Saltationism*.

It consists of the old attitudes defended by the geneticist **Richard Goldschmidt** and the paleontologist **Otto Schindewolf** of evolution in leaps. On the same line, more recently, the Theory of Punctuated Equilibrium or Punctualism appeared due to the contributions from the paleontology of **Niles Eldredge and Stephen Jay Gould** in 1972; the latter incorporates the selection between species to the Darwinian selection between individuals.

Although **Darwin's Theory** is close to gradualism, it could be compatible with Saltationism; both Theory of Punctuated

Equilibrium and Modern Synthetic Theory belong to Neo-Darwinism.

See [chapter III](#) about criticism of Synthetic Theory

9.e) Conditional Evolution of Life

The CEL is a thoroughly scientific theory based on the assumptions that all life has an intrinsic tendency to widen the sphere of freedom using evolution within environmental and logical conditions, which indirectly imply the presence of willpower. It means something “little” it working since the origin of life.

Definition, characteristics, and principal conclusions of the CEL are in **title V of this book**.

Regarding Saltationism and Gradualism, the CEL accepts small and gradual changes while explaining the evolutionary jumps as quick and significant changes of the genetic structure due to the combination of different evolutionary lines to allow a much larger development, like the origin of new species. In other words, **evolutionary leaps** are a logical consequence of the evolution of **vital impulse systems**.

* * *



When *Goblin* finished writing the book,
M^a José told him:

–It seems that you have a phobia about genius;
you’ve bumped *Einstein* and *Darwin* off.–

And *Goblin* answered:

–Oh, come on! I would have preferred
to bang a couple of witches.

Besides,

I really think *Darwin* and I would agree that:

*“It’s funny to see how some animals
deny the intelligence of other animals” –*



©

MOLWICK