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New insights into the processes of biological evolution and human reproduction provided through a dialogue between science and Qur'an

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Abstract – In this paper I present new insights into the processes of biological evolution and human reproduction in the light of a dialogue between the current scientific knowledge and Qur'an verses. I demonstrate how this dialogue could provide new complementary information and a more comprehensive state of each of these two processes. After clearing up some confusions and uncertainties related to the biological evolution process I propose a new vision for this process considering that the Creator (Allah) of the entire Universe had organized and supervised the emergence of living beings depending on a wonderful evolutionary plan. As this vision is hopefully in agreement with my interpretations of related Qur'an verses, I concretize it from them. One of scientific paintings deduced from these verses shows how our humankind emerged at the top of a complex network of evolutionary stages evolved from the earth like the emergence of the upper part of the top of a tree. To the second biological process 'Human Reproduction' Allah gives a more accurate designation 'Human Picturing Creation' insisting on the fact that the major acts of this process do not happen randomly but under His supervision. Moreover Allah given to the major elements of this process, wonderful designations including some unnoticed details through superb rhetoric formats peculiar to Qur'an. At the end of this paper I point out that my interpretations of Qur'an verses, based on new rigorous methodology, are generally different from the existing ones showing how the latter include errors and distortions making them incompatible with science. More bad consequences, such as terrorism, have been the result of erroneous interpretations of some verses on socio-political issues. To solve this problem of erroneous interpretations and related false considerations that have accumulated through the ages and were merged into cultures of Muslim societies, I call for a "First International Real Renewal of Islam"

Key words: Qur'an interpretation, Biological evolution, Supernatural Creator, Limits of science, Human reproduction, Picturing creation, Human gametes, Human zygote, Human embryogenesis, Real Renewal of Islam.

Introduction

This study comes to be added to a series of previous ones (e.g., [Chaabani 2018; 2019](#)). Although these studies concern different issues, they have a shared purpose of contributing to provide modern interpretations of Qur'an verses following a new rigorous methodology (see [Chaabani 2019](#)) and an original dialogue between science and Qur'an. This study concerns two issues, the processes of biological evolution and human reproduction, to each of them I will provide new insights in the light of a dialogue between the current scientific knowledge and Qur'an verses through their profound meanings hidden under the superb metaphors and brevity peculiar to the Qur'an text. Namely, I will show how this dialogue could lead to a report of combined information, which in spite of their two different origins (divine origin and human source), are in an attractive compatibility and a creative interaction.

As this study would interest, in addition of academicians, a broad people group belonged to several intellectual categories, I have opted to present some brief theoretical reminders aiming either to clear up some confusions or to set comparisons and to make easier the understanding of what I present and discuss. In a first section devoted to the biological evolution process, I will show why, despite its centrality in the life science and its intellectual and technological dynamic, it yet represents a continuing debate. Among other things, I will demonstrate that there is no conflict between the general idea of biological evolution process, strongly supported by science, and Qur'an. In a second section devoted to the second biological process 'Human Reproduction' and its major elements, I will show how Allah given them accurate wonderful designations, which include some unnoticed details through superb rhetoric formats peculiar to Qur'an.

As (1) my present interpretations of Qur'an verses, different from the existing ones, show how the latter include errors and distortions making them incompatible with science, and (2) other interpretations of verses on socio-political issues are false and urge to do criminal acts such terrorism, I will end this paper by proposing a First International Real Renewal of Islam (FIRRI) that could permit a radical resolution to all these erroneous Qur'an interpretations and other related fabricated considerations that have accumulated through the ages and were merged into cultures of Muslim societies.

Biological evolution

1. The notion (general idea) of biological evolution

Brief history of its emergence

Evolutionary thought has roots in antiquity: some ancient Greek scholars had mentioned some related innuendos such as the possible transformation of animals from one kind into another. Then some medieval Islamic scholars provided more developed suggestions as a preliminary state of what we call nowadays biological evolution. For example the Iraqi thinker and writer Amr ibn Bahr **Al Jahis** (800-868), in his famous animal book, was the first to discuss food chains, and as an early supporter of environmental determinism he presented the mechanism of "natural selection" and the passage (transition) of living beings from one state to another during their struggle to survive (for review see [Zirkle 1941](#); [Bayrakdar 1983](#); [Aguther & Wheatley 2008](#)). Later Ibn Khaldoun (1332 - 1406) in his book “*Muqaddimah*” ([Ibn Khaldoun 1377](#)) presented this issue in more accurate explanations that I have already translated from Arabic in a previous paper ([Chaabani 2012](#)) as follows:

“..... See how the world set up started from minerals, then plants and then animals following a wonderful hierarchy. The last horizon of minerals is related to the first horizon of vegetation that has not seeds such as grass, while the last horizon of the other more evolved plants such as vine and date palm is related to the first horizon of simple animals such as snail and shellfish that have only the power of touch sense. The meaning of relatedness is that the last horizon of each beings stage is ready with curious tendency for becoming the first of the next stage. Thus, the animal world widened and its species increased and ended, in a gradual constitution, to the human possessor of thought and vision that are absent in the most evolved animals, the world of monkeys, in which the sense and perception are met but without reaching the acquisition of thought and vision”.

Then he adds:

“This world with all beings is in a situation of arrangement, disposition, connection between reasons and causes that give an intelligent relation between all universes and horizons and possibility of transformation of some beings to others”.

These suggestions of Ibn Khaldoun (Oriental scholar) done in 1377 could be considered as an excellent preliminary outline of what we call nowadays the notion of biological evolution. Five hundred years later, Darwin (Occidental scholar) presented the first sufficiently detailed empirical investigation on this process including some of its hypothetical mechanisms in terms of what is called ‘Darwin’s theory’ (Darwin 1859).

Definition of the notion of biological evolution

Unfortunately the notion of biological evolution is often combined with theories of biological evolution even at the educational books. Thus I insist on presenting it separately as follows: In the light of current knowledge the notion (general idea) of biological evolution is a consequence of genetic changes in beings over time. These genetic changes could occur at a small scale within a microevolution or at a large scale within a macroevolution. The microevolution covers only genetic changes, which occurred in a population of a given species and passed on from one generation to the next; while the macroevolution is the historical process of transformation of a species into other descendant species suggesting that all of life can be traced back to one common ancestor and simple living beings were once the ancestors of complex ones. However it is important to underline that, contrary to theories, the notion of biological evolution describes the process and accepts it as an evident reality without proving how this very complex process was carried out.

Scientific support for the notion of biological evolution

- Unity of composition of all living beings

Molecular biology findings provide the most detailed and convincing evidence available for biological evolution: they demonstrate the unity of molecular composition of all living beings. In fact all living entities (from bacteria to humans) have the same basic structure of the genetic material, DNA, composed of four nucleotides. The code used to translate nucleotide sequences into amino acid sequences is essentially the same in all organisms, namely there is a universal language of DNA. Moreover, proteins in all organisms are invariably composed of the same set of 20 amino acids. This unity of composition reveals the genetic continuity and a common ancestry of all organisms.

- Fossil records

Other scientific arguments come from fossil record. To date, Hundreds of thousands of fossils, found in well-dated rock sequences, represent successions of forms through time and manifest many evolutionary transitions.

- Structural similarities at the anatomic, embryonic and molecular levels

Studies of comparative anatomy reveal structures homologies that reinforce the common descent: For example, the skeletons of humans, mice, and bats are strikingly similar, despite the different ways of life of these animals and the diversity of environments in which they flourish.

Comparative analyses were also done on embryonic development and vestiges. They show that vertebrates, from fishes through lizards to humans, develop in ways that are remarkably similar during early stages, but they become more and more differentiated as the embryos approach maturity. The similarities persist longer between organisms that are more closely related.

Moreover, nowadays structural similarities are well demonstrated at the molecular level leading to determine evolutionary relationships among organisms. For example many studied genes have been found in common between organisms and the differences in their sequences increased in proportion to evolutionary time. This conclusion, among other things, has contributed to establish the concept of a molecular clock useful for indicating the time in the past when species started to diverge from one another. For example a molecular comparative analyses combined to fossil evidence is consistent with placing the human-chimpanzee and human-chimpanzee-gorilla speciation events at approximately 6 and 10 million years ago (Mya) showing that in 30% of the genome, gorilla is closer to human or chimpanzee than the latter are to each other (Scally *et al.* 2012).

2. Theories of the biological evolution

Theories of biological evolution go far beyond the notion of biological evolution by suggesting some corresponding mechanisms and trying through desperate attempts to provide how the macroevolution works. Several theories have been proposed; currently the more recognized is the “Neo-Darwinian theory or modern synthetic theory” but it remains debatable and arguments for and against it are shown (e.g. Meyer *et al.* 2007).

Some mechanisms of evolution (fundamental forces of evolution) - Mutation, gene flow, genetic drift, and natural selection - are presented and retained as convincing at the microevolution level. However at the macroevolution level, although some possible mechanisms were proposed, any of these theories has provided a convincing scenario showing how macroevolution works, namely how these mechanisms with unknown ones can together work and provide the great harmonious evolutionary biological process with its superb complexity well oriented and well supervised during more than 3 billion years from the emergence of the first organism to the emergence of humankind.

3. Strategies for introducing a new vision of the process of biological evolution

In this study I will present a new vision of the process of biological evolution based mainly on reasonably informed decisions reached after the presentation and the discussion of confusions and uncertainties related to this process. Four major confusions or uncertainties need to be explored: (a) confusion between the notion and theories of biological evolution, (b) confusions regarding the creation–evolution controversy (c) reluctance to accept the fact that science has limits, and (d) reluctance to accept the existence of a supernatural creator power.

a) Confusion between the notion and theories of biological evolution

People in conversation often have not the same consideration in mind as to what “biological evolution” could mean. I think that such misconception could concern some simple misunderstandings and/or a major confusion. The simple misunderstandings are due in large part to the inability of biologists to communicate effectively to the general public. However, the major confusion, more widespread in general public and scientists including biologists themselves, is due to the lack of distinction between the general idea of biological evolution, strongly supported by science, and its various theories in which researchers after the acceptance of the notion (general idea) of the biological evolution try to show how this evolution works by proposing some mechanisms that unfortunately remain far away from achieving a complete convincing scientific scenario at the macroevolution level.

As I will explain in the following, this confusion is one of major causes of the eternal dispute between creationists and evolutionists. For example many evolutionists, particularly atheistic ones (material evolutionists), profiting of this confusion, try stupidly to pass off theories of evolution as a scientific fact. In return, classic men of

monotheistic religions often declare that these religions are against biological evolution and, profiting of this confusion, they argued, among other things, the fact that theories of evolution, at least in part, could not be supported by science.

Even in the presentation of the history of the process this confusion often exists. In fact, the term 'biological evolution' is usually associated with the name of Charles Darwin; but Darwin did not invent the notion (general idea) of this biological process because it existed at preliminary outlines several hundred years before him. However he is the first who present a theory on biological evolution and not the first who presented the notion of this process.

b) Confusions regarding the creation–evolution controversy

Generally, humans have the tendency to establish or consider two ideas diametrically opposed and to line with one of them. The problem is that the resulting debate could persist stupidly eternally while often the more correct and complete idea would be an intermediate one. A good example on such tendency is the creation–evolution controversy, which involve a continuous cultural dispute. Some authors attempted to resolve this problem by trying to harmonize creation and evolution in some versions of the process of biological evolution often more and less inspired from Christianity. Among these versions I can quote the evolutionary creationism or theistic evolutionism and the Intelligent Design Creationism (for review see [Scott 2004](#); [Lamoureux 2008](#)).

I believe that the creation-evolution controversy represents a false problem, because it is based on ambiguous terminologies:

- The term 'creation' is generally used to describe bringing something into existence particularly the act of producing something for the first time. In this sense, it often describes something involving artistic or scientific and technological talents. Thus, the real meaning of the term "creation" is limited to the act of given existence of something or living being without given any information about how it was done. Hence when one says God created all living beings, he has to precise the way following it the act of creation was accomplished: separately or through an evolutionary plan.
- However, the term 'evolution', in its sense limited to the notion of biological evolution, means the way in which different kinds of living organism are believed to have developed from earlier forms during the history of the earth. Namely it means the way of the emergence of living beings rather than the act itself of given existence or

creation. Hence the real meanings of both ‘creation’ and ‘evolution’ would not show any real rivalry, and, therefore, the expression ‘creation vs. evolution’ appears absurd.

Even the meaning of terms derived from these two words would represent some ambiguity. For example the conventional meaning of ‘creationism’ is the belief, among other things, that the various forms of life were created separately by God out of nothing. This meaning is against the notion of biological evolution strongly supported by science and as I will show in the following pages is not compatible with the Qur’an. However, the conventional meaning of another derived term ‘evolutionism’ represents some vagueness: it generally means the acceptance that all living things evolved from a few simple life forms. But such meaning remains incomplete because it does not inform us how this evolutionary evolution of beings was done. Consequently this term should encompass at least two different opinions:

- The first is to accept that this evolutionary evolution of beings had been happened naturally (automatically and / or randomly and / or following some specific Laws of the nature!!!), this scientifically could not be accepted; because although after Darwin some biologists have tried to propose some other mechanisms, they are not managed to show how these mechanisms can work and provide the great harmonious evolutionary biological process. Moreover as I will present below this opinion is incompatible with the Qur’an.
- The second is to accept that this evolutionary evolution of beings had been planned and supervised by a great supernatural power (God for believers). This opinion is compatible with Qur’an and as I will explain in the following it represents the most logical and convincing opinion.

c) Reluctance to accept the fact that science has limits

Science could be considered as the product of a harmonious combination between the logic and observations generated thanks to our brains and related organs of senses. The latter possess limited capacities imposed by their general biological structure and physiological organization. Therefore, it is reasonable to consider that science would have limits. This is not in contradiction with the continuous progress of science because the increase of discovered scientific findings could help us to use more and more efficiency the potential capability of our brains and try to go beyond the aptitude of some of our organs of senses by using invented technologies such as the microscopy. Namely the increase of scientific knowledge could move away the limits of science without abolish them. In other words, each step of the progress of science leads

to a more informed logical reasoning and more expended noticeable world to the detriment of the hidden world. But in spite of the continuation of this progress, some issues have been remained stagnant without any related scientific progress and very likely they would belong eternally to the unnoticeable world.

d) Reluctance to accept the existence of a supernatural creator power

The word ‘supernatural’ is used to indicate several things included in what is called the ‘supernatural world’. Here I will only speak about the possible existence of a supernatural power that had created this universe with its Laws and systems, and continues to supervise it. To avoid repetitions, this issue will be discussed below within the presentation of my new vision for the biological evolution process that I call Supervised Evolutionary Emergence of Organisms (SEEO).

4. The Supervised Evolutionary Emergence of Organisms (SEEO)

Taking into consideration the conclusions deduced from the clearing up of confusions and uncertainty stated above, I present and discuss my vision for the process of biological evolution SEEO. This vision is based on two major considerations (**a** and **b**).

a. Firstly, I accept the fact that a great supernatural power (or God for believers) had from the beginning planning the formation of the entire universe with its Laws and functional systems. This consideration could be discussed and supported as follows:

When some scientists do not find a real scientific explanation to an event or a satisfactory answer to a question, they go beyond the scientific understanding by using questionable terms such as ‘randomly’ or ‘by chance’ or by expressing some unconvincing philosophic ideas such as the so called naturalism and materialism. For example, regarding the process of biological evolution some scientists have considered it as has been occurred randomly. Taking this line of thought further, they consider that even the entire Universe came into being by chance arguing, among other things, that all the Universe including what we call ‘nature’ (all elements and living beings of the Earth) is only composed of matters that we conceive and that science is competent to explain them to such an extent that we can’t accept as true the existence of a supernatural power. This is not accurate and unacceptable particularly because as I have shown above the science has limits and to go above and beyond these limits we are obliged to think to a supernatural power. Moreover it is impossible to accept that such Universe, so much complex and perfect in its constitution and functioning under

determined Laws, was created randomly. Therefore the term ‘randomly’ is simply used in disregard of the evident existence of Universal Laws.

In fact it is generally accepted that Universe is strictly governed by Universal Laws. The more extended common one is the Law of Cause and Effect. It is firstly expressed by the Greek Philosopher Aristotle in 350 B.C. who considered that for every effect in our life, there exist specific causes. Then several scholars have given more emphasis to it particularly the great Muslim Philosopher Ibn Rushd (more known under the name Averroes) (1126- 1198), in his book ‘The Incoherence of the Incoherence’ (*Tahāfut al-Tahāfut*). Supporting strongly the existence of Law of Causality among other Laws created with the entire Universe by God, he believed that the perfect regulation and coordination of systems observed in the world reflects that in the divine mind, and the invalidation of the argument of causality, by saying by chance, is the invalidation of divine wisdom and the Lord's Laws. Ibn Rushd considered also that human being is the product of the overlapping of complex causal relationships due to his emotions, actions and behaviors because he is part of nature, governed by its Laws and subject to its rules; but he is able to be free by realizing its causes thanks to scientific knowledge, reasoning and wisdom. He notices also that there is a very ingenious process of creation that confirms the reasonableness of the world in terms of its complete and perfect regularity; this regularity means that the various things and facts are connected to a network of causes and information that the mind can discover them (see [Averroes](#)).

Later, occidental scholars referred to this Law such as the French philosopher Voltaire (1694-1778) who said that: words like luck, chance and coincidence were invented to express the known effects of the unknown causes (see [Arouet](#)); while Ralph Waldo Emerson, American philosopher (1803-1882), said the Law of Cause and Effect is the "Law of Laws", and supporting the fact that nothing happens by chance he considered that every action (including thought) has a reaction or consequence (see Emerson). In addition of this Law several major Universal Laws are pointed out (e.g. [Trefil 2002; 2003; Foundation for consciousness development 2016](#)).

I think that if a real scientist dispels from his mind all questionable philosophic ideologies and the fact that he is believer or atheist he will not try to go stupidly beyond scientific limits but, after a deep thought, he would be obliged to accept the presence of a great creator power; then he can call it a “supernatural power” if he is atheist or “God” if he is believer. In this way innumerable scientists have accepted the presence of this

great creator power that even we cannot conceive it we can see and conceive its great and miraculous effects. For example the two contemporary biologists [Coyne \(2010\)](#) and [Carroll \(2012\)](#) declare: there could be scientific evidence for the supernatural, and even for the existence of God, and the physicist [Myers \(2012\)](#) rejects the consideration of science as having an a priori obligation to methodological naturalism, and acknowledges the theoretical possibility that scientists might have to appeal to a supernatural cause, but he declines to call such a cause “God”.

In accordance with all evidences stated above I believe that is reasonable to accept that a Great Creator Power (God: Allah) had already created this Universe with its infinite systems and Laws such as the more known and extended one: the Law of Cause and Effect. This law means that nothing happens by chance and every effect has a specific and predictable cause and every effect could become the cause of something else. Therefore the universe has been always in action showing related successive events (causes-effects) within infinite processes and systems. But although all these systems could work automatically, I believe that they are continually under the supervision of God who intervenes (very likely via His angels) from time to time for guiding some events and processes towards specified states (in the following sections of this paper I will give some examples of such events).

b. In a second consideration, I accept the fact that the Great Creator Power (Allah) had created all organisms according to an evolutionary plan that biologists have been revealed some of its aspects within the notion of biological evolution presented above. But regarding the mechanisms of this evolution: if within each species a microevolution could happen at least in part automatically under the Law of Cause and Effect within systems already set by Allah, the macroevolution including the creation of the first organism and the accomplishment of the emergence of each new species from a previous one on the one hand, and the super harmonious orientation of the entire evolutionary process on the other hand were extremely complex at a point that they surely accomplished thanks to a substantial and continual supervision of Allah. For all these reasons I designate my vision for this process ‘Supervised Evolutionary Emergence of Organisms’ (SEEO).

5. Attractive compatibility and creative interaction between my vision SEEO and Qur'an

As explained above I believe that the creation-evolution controversy represents a false problem. Moreover, considering it as a battle of science vs. religion seems absurd; because the term religion is a general and vague term that would include all different religions. Even if we intend only the three monotheistic religions the problem of vagueness persists: in fact, (1) the original sacred writings of the Judaism and Christianity had been very likely somewhat modified (for review see [Feldman & Hata 1987](#)), and (2) although the unique Holy book of Islam "Qur'an", exceptionally protected by Allah (God), has been remained without modifications until nowadays, innumerable books containing ancient questionable interpretations of Qur'an verses, uncertain narrations, warps, fibs, and archaic customs that have nothing to do with Islam, were stupidly considered as explain and complete the Islam. Consequently, if we want to compare scientific knowledge with the real saying of Allah (God) we must only considered the unique book of Islam: the Holly Qur'an, which according to my modern rigorous interpretations shows no contradictions with science ([Chaabani 2006, 2011, 2013, 2015, 2018, 1019](#)).

In the following I will show how my SEEO vision based on clear and rigorous scientific reasoning agrees strongly with my interpretations of Qur'an verses related to this subject. Hence the present study as some of my previous ones (e.g., [Chaabani 2018, 1019](#)) contributes to a modern reading of Qur'an verses related to scientific issues. In other words in this study I will present new examples showing again how through a modern rigorous reading of Qur'an verses one can reveal wonderful scientific signs that could show what I call 'scientific paintings' when they outlines accurate scientific information hidden under a dress of superb Arabic rhetorical modes that only the light of knowledge and wisdom can penetrate it ([Chaabani 2019](#)).

** Allah orders us to research how living beings were emerged:*

Allah said what means "Say (*to humans*): walk (*and travel*) in the earth for seeing how He started the creation (*of living beings*). Then Allah will originate the afterlife? Allah has power over all things" (Sourat 'the Spider' 'Al-Ankabut', verse 20). In the first sentence of this verse Allah urges us to roam the earth anywhere looking for the origin of life and how the

emergence of living beings was done. This is possible by the discovery of remains and fossils hidden, at different epochs, in innumerable places of the world continents. Thus Allah encourages us, since more than 14 centuries, to explore the different steps of emergence of living beings and, therefore to found a scientific field that we call nowadays Paleontology.

** Two circumstances regarding the man creation were indicated in Qur'an*

In several verses related to man creation, Allah refers to one of two events, either that of the emergence of our species, or that of the individual creation of each of us in a female genital tract.

1. Regarding the first event leading to the emergence of humankind, Allah said what means "...The humankind had been in no something mentioned for a (*long*) stage of the huge era" (Sourat 'the Human' *Al-'Insan*, verse 1). Some explanation for this verse was given in another similar one (Sourat 'Mary' *Maryam*, verse 67) where Allah said what means "Is human does not remember that We created him before when he was not something". This in accordance with the first verse would mean that Allah had begun to supervise the creation of humankind during a very long era when he was not something mentioned, namely before his emergence. Moreover in other verses Allah explains that this creation had begun by the formation of the earthy and clayey nature, common to all living beings, in reference to the first biological molecules (particularly the primal DNA or RNA World). For example:

- in the verse 36 of Sourat 'Yaseen' *YaSeen*, Allah informs us that all couples of living beings are evolved from the same earth elements involved in the growth of plants, and from their selves (in reference to their genetic materials, DNAs, carrying their species and individual characteristics) and from what we do not know.
- in the verse 26 of Sourat *Al-Hijr* Allah said what means: "And we had already created humankind from Salsal from (*and/or in*) black clay soil (with possible stinky odor) susceptible to modifications during long periods". According to another verse, by *Salsal* Allah would designate DNA (see [Chaabani 2019](#)).

Taking into account my interpretations of all these verses and related ones, I can summarize the first unique event leading to the emergence of humankind as follows: Aiming to create humankind Allah began by supervising the formation of his nature, first biological molecules common to all living beings, from and in black clay soil.

From this beginning until the emergence of humankind a very long period was passed in reference to the successive emergences of the other living beings before.

2. Regarding the event of individual creation of each person in a female genital tract that has been happened continually since the emergence of humankind, I will present detailed interpretations of the Qur'an verses related to this event in the second section of this paper.

** Allah informs us that each the two human creation events happens according to successive stages*

Allah said what means “What is the matter with you that you do not want to admit the Greatness of Allah (13). He has created you according to successive stages (14). Have you not seen how Allah created the seven heavens one above the other (15), setting in them the moon as a light and the sun as a lamp (16). And Allah evolved you from the earth as plants (17) (Sourat ‘Prophet Noah’ *Nooh*, verses 13, 14, 15, 16 and 17).

In the second verse (14), “He has created you according to successive stages”, Allah informs us that He created us according to successive stages. As I have explained in my previous papers (Chaabani 2006; 2018; 2019), one of the superb and unusual Arabic rhetorical modes that I have revealed as peculiar to Qur'an is “the complementarity between two (or several) meanings for the same expression (or word)”: it concerns the case when the same word or the same sentence (verse) could have simultaneously two meanings (not opposing but complementary). In this way, I consider that this verse refers simultaneously to the two events of our creation (stated above) informing us that both were happened through successive stages. This is in agreement with scientific knowledge:

- First the creation of our species had begun from the formation of our nature (first biological molecules common to all living beings) that happened very likely according to some stages from the simple elements to the simple molecules, then to the complex ones. Then from all these products had been created all living beings through successive stages mainly oriented from the simple organisms to the more complex for reaching the superior one that of humankind.
- Secondly, the individual creation of a human being that happens in a female genital tract is also done according to successive stages: formation of a zygote as result of union of two gametes (male and female) after coupling, then this zygote evolve through

successive stages of embryonic development leading to the emergence of a new individual (newborn). In the second section of this paper I will show that all these embryogenesis stages revealed by biologists were already indicated in Qur'an.

The last verse (17), "And Allah evolved you from the earth as a plant", would have also two complementary meanings that come to confirm both meanings of the second verse (14): He evolved our humankind from the earth like a plant and He evolved us individually from the earth like a plant. These two meanings seem somewhat strange if we do not take into account simultaneously the superb metaphorical modes of the Qur'an language and the scientific knowledge on this issue. In fact each of these two meanings combined with the related one of the second verse would present a metaphorical painting that outlines hidden accurate scientific information:

- I have illustrated the first metaphorical-scientific painting in [figure 1](#): it shows how the humankind was evolved from earth through several successive stages included in a complex network similar to that of the ramification of branches of a plant (tree). Thus, the successive emergences of living beings categories must be in continuity (like the ramification of tree branches), each kind emerged from a precedent, and therefore they happened according to an evolutionary plan. In other words, Allah informs us that He had created living beings from earth according to successive evolutionary stages crowned by the emergence of our kind. Such representation ([Fig.1](#)) illustrating my interpretation to Qur'an appears somewhat similar to diagrammatic trees "tree of life or phylogeny tree" proposed by some scholars.

- I have tried to illustrate the second metamorphic-scientific painting in [figure 2](#): it shows how each of us was emerged through successive stages from the uterine wall (endometrium) of his mother like the emergence of a plant from earth; knowing that the verse includes another metaphor whereby the uterine wall (at its receptive state) is designated 'earth'. A clearer use of this metaphor appeared in other verse where Allah said what means "Your wives are a plowed earth for you, thus come to them by coupling as long as you like...." (Sourat 'the Cow' *Al Baqarah*, verse 223): here by wives Allah refers particularly to their genital tracts where spermatozoids of their spouses, would be thrown like seeds in a plowed earth. Thus taking into account this metaphor, [figure 2](#) shows an evident similarity between the manner of the developments of a plant from the earth and that of a new human being from the uterine wall (endometrium). However this similarity was somewhat alluded by biologists by using the term 'implantation' of the

blastocyst and the corresponding verb ‘implant’ means to plant firmly, as into the ground.

** Allah alludes to two major mechanisms of the biological evolution*

Allah said what means “And your Lord (Allah) creates what He wants and selects the most beneficial (*among beings*)...” (Sourat *Al Qashash*, verse 68). In this verse Allah refers to what we call nowadays ‘natural selection’ as one of the major mechanisms involved in the evolutionary process, but He announces that it has been happened under his supervision. Namely living beings with favorable adaptations to their environment are able to survive, to reproduce, and Allah selects the most beneficial ones that could be doing well with the great complex evolutionary process already planned by Him.

In another verse Allah said what means “Praise be to Allah, Who created the heavens and the earth, Who made the angels messengers with wings, - two, or three, or four (pairs), He adds to Creation as He wants, Allah has power over all things” (Sourat ‘The Originator’, *Fatir*, verse 1). In this verse Allah alludes to another major mechanism of the evolutionary process. It concerns the addition by duplications that could take part during the going past to a more evolved being: in fact Allah gives us a simple example (evolution of the angels by duplication of their wing pairs) that any one can imagine it whatever his epoch and the level of his knowledge. But nowadays thanks to the progress of science at the molecular level we can understand what is meant by this verse: In fact through this simple example Allah would intend to duplications at the molecular level that we call nowadays ‘gene duplications’. In fact such duplications in the genetic material are among the major mechanisms of the evolutionary process that had played a key role in the emergence of novel traits and in adaptation. Moreover gene conversion between duplicates plays an important part in the early stages of the evolution of duplicated genes (for review see [Innan & Kondrashov 2010](#)). For taking part in the superb harmonious evolutionary process, such duplications must not happen randomly but in determined suitable circumstances in coordination with other mechanisms under the supervision of Allah Who had already settled the great complex schedule of the evolutionary process that staggered on about three billion years.

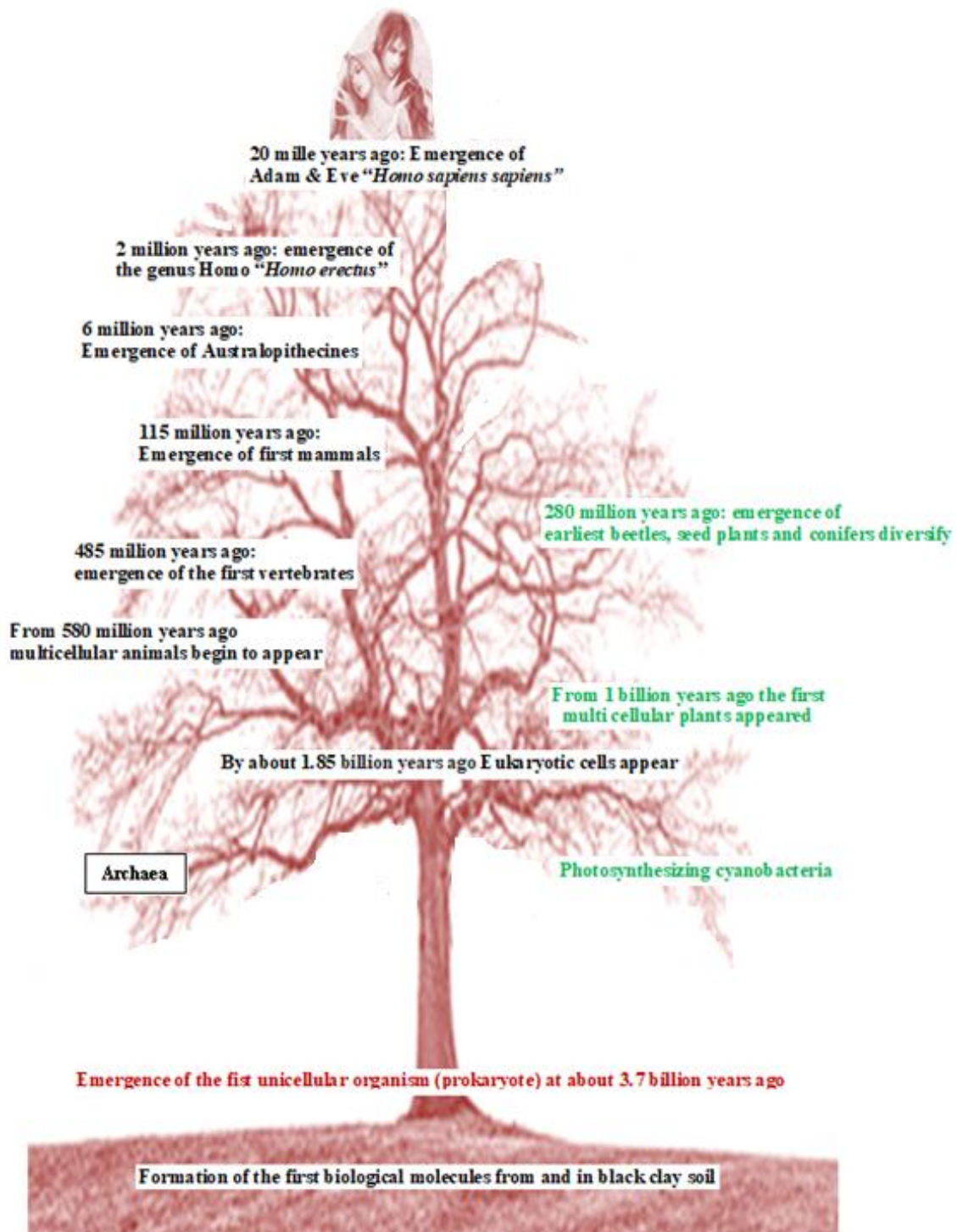


Fig. 1 Qur'an bright idea on the biological evolutionary process:

It shows how the humankind was evolved from earth through successive stages within a complex network similar to that of tree branches ramification. Namely living being categories had not been emerged separately, but like the case of the tree branches, each kind emerges from a precedent. In other words, through this metaphoric Allah would inform us that He had created living beings according to an evolutionary plan crowned by the emergence of our humankind '*Homo sapiens sapiens*'.

I have added to this metaphoric-scientific painting only some major evolutionary stages with their approximate timings according to current scientific data (Ehrlhard 2017; Chaabani 2014).

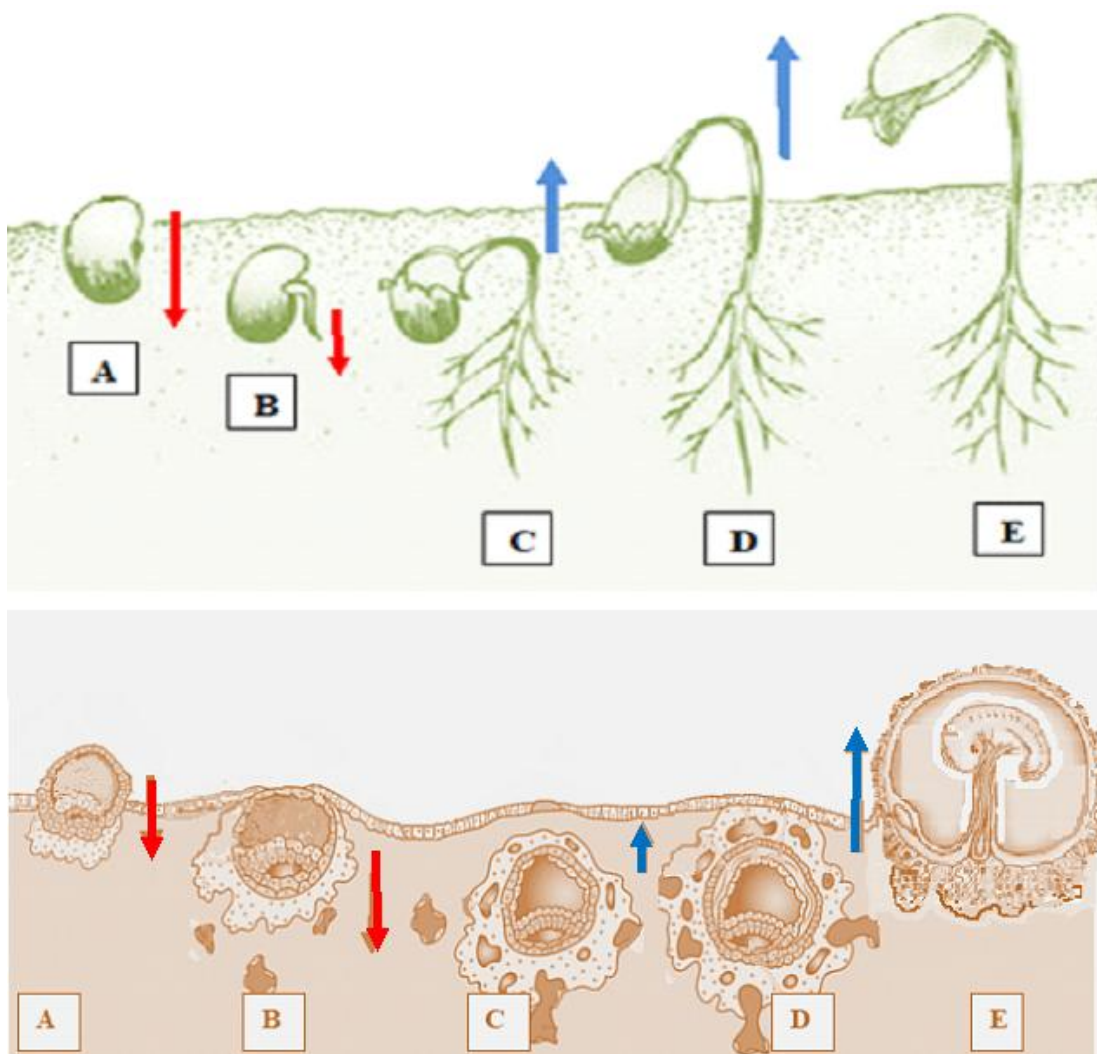


Fig. 2 Qur'an bright idea on the similarity between the emergence of a plant from earth and that of human fetus from the uterine wall of his (here) mother.

A and **B** represent stages of the beginning of development of a plant in earth:

If the seed is not completely inside the soil, it tries to **sink into** the soil for finding a more adequate condition and particularly for given rise to the radicle that **moves downward into** the soil (the radicle represents the origin of roots that provide water and nutrients to the new plant throughout its life).

The same compartment is shown during stages **A** and **B** of the beginning of development of a human fetus in a receptive uterine wall (similar to a plowed earth): the blastocyst **sinks into** the uterine wall (endometrium), which, swollen with interstitial fluid, vasculature, and nutrients, provides a hospitable environment for embryogenesis. Then **downwards** from the bottom of the implanted blastocyst begin the formation of the placenta (the placenta provides, among other things, nutrition and gas exchange, and removes wastes).

While during the stages **C**, **D**, and **E** a plumule moves away from the soil, **in the opposite direction** of the radicle development, for sending out leaves of a plant that can start photosynthesizing. The same compartment is shown during the stages **C**, **D**, and **E** an embryo appears within the blastocyst which growth with its development **in the opposite direction** of the placenta development. At the end of the embryogenesis the developed embryo surrounded with its protective liquids and membranes grows in fetus, exceeds the endometrium surface and takes up the uterine cavity.

Human Reproduction

1. Designation of the biological process leading to our individual creation

** Inaccurate scientific designation*

The term reproduction, in a general sense, means making a copy. However, it is used as scientific term in biology to designate the process by which living organisms replicate themselves. Although the accurate significance of this term go well only with asexual organisms, it is used conventionally even for sexual organisms. In fact the latter do not regenerate, like asexual organisms, by simple cell duplication given new organism identical to the initial one but they regenerate following a different way during it a male and female haploid cells (called gametes) fuse together to form a diploid cell (called zygote) that develop into a new organism. This sexual mode of reproduction is the dominant one and concerns almost all eukaryotes. It reaches its high degree of development in mammals particularly in primates headed by humans. Thus biologists have kept for all organisms with sexual mode the term 'reproduction'. In the case of humankind, 'human reproduction' designates the process by which a couple (father and mother) begets offspring. Hence such terminology remains inaccurate but traditionally accepted. However, another conventional scientific designations 'procreation or breeding', rarely used, seems relatively more suitable because they could allude to a biological process by which new offspring are produced from their parents.

** Accurate designation provided in Qur'an*

Regarding what we designate nowadays 'human reproduction' Allah said what means "He pictures you in your mothers' wombs as He wants. There is no God except Him, the Dear and the Wise" (Sourat Al-Omran, verse 6). Generally Allah uses the term 'creation' or the verb 'create' for the appearance and the formation of all things in the universe including all living beings headed by humans, but here He substitute this general term 'create' by 'picture' for revealing a key feature peculiar to our individual creation in our mothers' wombs.

In fact when we want to picture an object by drawing on a paper (or other plan material like a plan rock) or by materialization in tri-dimensional model by sculpting, we follow one of three major usual manners:

- Directly from the object itself or a photo of it.

- From imagination of a known object.
- From accurate data (measurements and/or characteristics) regarding the object that we want to picture or to materialize in 3D. For example, this manner is applied in engineering such the construction (materialization) of a building based on data and details recapitulated in corresponding plans. It is also applied in a new forensic technique (yet in development) called DNA phenotyping: it consists in the **creation** of a simulated face behind a crime by **picturing** based on data deduced from some genetic markers present in DNA found for example in a drop of blood or hair shafts acquired in criminal investigations.

This last manner of picturing would be that intended in the verse above. In fact in the case of humans (and other beings following similar sexual mode) after the fusion of two gametes (male and female) in a unique cell called zygote; the latter contains a DNA material where all characteristics (general ones related to the species and individual ones) are stored and from which a new person would be pictured (materialized in 3D) during embryo development stages. Thus Allah would call our individual creation in the uterus of our mothers as a ‘human picturing creation’ (materialization in 3D from given information). This designation already existed in the Qur’an since the 7th century is by far more accurate and more modern than the classic current scientific one ‘human reproduction’. Thus in the future, scientists could, instead the use of the ‘human reproduction’ designation, speak about a ‘human picturing creation’ or its possible synonym ‘human phenotyping creation’ (or just ‘picturing creation’ for designate this process in all sexual animals.

2. Characteristics of human picturing creation: compatibility and complementarity between scientific knowledge and Qur’an considerations

For a better understanding of this issue I begin by presenting brief scientific reminders on the first event (fertilization) of this process:

In the case of human male, the sperm production is a continuous process, initiated at puberty and continuing throughout life. After each ejaculation, associated to the male orgasm that culminates the sexual intercourse, about 250 millions of sperm are free into the vagina of the spouse. Sperm numbers are progressively decreased as they migrate up the female tract. This is due mainly to the fact that acid conditions in the vagina are hostile and sperm do not survive there for long, and several millions may be blocked from entering the uterus by thick cervical mucus. Moreover any sperm with

physical abnormalities are progressively eliminated along the way and generally sperm can only live up to about 72 hours within the female genital tract. Finally a random sample of only few thousand of surviving sperms reaches the ovum (for review see [Ghazel et al. 2014](#)).

On the other hand human females are born with their entire lifetime supply of gametes. At birth, the normal female ovary contains about 1-2 million oocytes (ova). By the time a girl enters puberty only about 25% (around 300,000) of her lifetime total oocyte pool remain. Oocytes are stored within follicles in each of the two ovaries. Within a woman's lifespan, large numbers of follicles and oocytes will be engaged to begin the growth and maturation process. But the large majority will not reach full maturity, and only about 300-500 of these oocytes will mature over a women's lifespan. In fact during each menstrual cycle even if hundreds of oocytes have begun to mature, generally only one oocyte will randomly reach its' fully mature state in one of the two ovaries and become capable of ovulation and fertilization (for review see [Ghazel et al. 2014](#)).

Gametes (both male and female) are formed from parent cells, having 46 chromosomes, after two successive divisions called meiosis: Meiosis I is the first division (reductional division) reduces the genetic material from diploid (46) to haploid (23); while Meiosis II is a simple equational division. Moreover the gamete male (sperm), contain a 23rd chromosome that is either an X chromosome (female) or the analogous Y chromosome (male), making each sperm cell either female or male.

Owing that the orientation of paternal and maternal homologues during the metaphase of the Meiosis I happens randomly and each produced cell contains only one of each homologue, the number of possible combinations of maternal and paternal homologues is 2^n , where n is the haploid number of chromosomes. Hence each gamete in each of the two sexes represents one of 2^{23} (8 388 608) different combinations of chromosomes. This extremely great number of combinations possible becomes infinite if we add those resulting from the segregation of chromatids at the anaphase of the Meiosis II, and the reciprocal recombination (crossing over) that could happen during Meiosis I between pairs of homologous chromosomes.

Although the current scientific knowledge on this biological process seems satisfactory, biologists are often obliged to use some terms 'random', chance, randomly or by chance, when they try to give a complete description particularly when they speak about the fertilization event (union of a particular male gamete with a particular female

one). In fact, this event could occur if (1) at least a sexual intercourse happens **by chance** close to the ovulation day of a spouse menstrual cycle, (2) a **random** final sample of at least few thousand of surviving sperm of her husband would reach her released oocyte: knowing that this oocyte is **randomly** selected among those have begun to mature, then to be **randomly** reached its' fully mature state in one of the two ovaries and become capable of ovulation, and (3) only one sperm, among those of the final sample, has the **chance** to penetrate into this oocyte for giving a zygote which contains a new genetic profile, qualitatively unique leading to a new distinct individual. This uniqueness comes from the fact that each of the two gametes, that compose every zygote, is selected **randomly** from an innumerable number of gametes differentiated by infinite states of genetic combinations.

But as stated above such terms (random, randomly or by chance) have no scientific sense in the context of biological issues and they are used to express the ignorance of the involved causes. As a clarification to this question Allah informs us that the human picturing creation happens under His supervision and not randomly or by chance. This is clearly announced in the verse quoted above "...He pictures you in your mothers' wombs as He wants... ". In fact, although Allah had already provided all conditions necessary (elements, suitable background.....) for that this biological process could happen automatically, He intervenes at least in some acts such as those indicated above and falsely considered as happened randomly.

Accordingly, alluding to this first phase (union of two selected gametes to form a zygote having a unique genetic combination), Allah said what means "In any form whatsoever He want combine you" (Sourat 'the Splitting' *Al-'Infitar*, verse 8). In this verse Allah uses an uncommon verb 'to **combine**' that could have a simple apparent meaning 'to fashion' for a non biologist. However, a meticulous biologist would refer the meaning of this verb to the major characteristic of the first phase of our picturing creation. In fact, the zygote from which each of us was originated is a cell genetically unique because it represents one of infinite states of **combinations** of human individual characteristics, because it results from union of two gametes, each is chosen from innumerable ones differentiated one from another by **infinite states of genetic combinations** due mainly to infinite chromosomal rearrangements.

The uniqueness of each zygote leading to a new unique person is mentioned in other verse where Allah, after speaking about the development of the human zygote

through embryonic stages, He said what means “.....and then We produced from it (*the zygote during its development*) another distinct creation. Blessed is Allah, the Best of creators » (Sourat the Believers, -*Al-Mu'minun*, verse 14).

3. Designation of human gametes (male and female)

* *Scientific designations*

The origin of the word gamete is from New Latin *gameta*, from Greek *gametè* wife and *gametès* husband, derivative of *gamos* marriage and *gamein* to marry. Namely the human sex cells have been designated “gametes (male and female)” because they represent the two major elements that, coming from wife and husband, would give after fusion offspring. Thus if we take into account this explanation deduced from the meaning of ancient words of origin (unfortunately often ignored or unknown) we can consider this scientific designation as acceptable because it would be originated from symbolic ancient words. The human gametes in males and females are different: gametes produced by the male parent are called sperm or spermatozoa, and gametes produced by the female parent are called ova (singular ovum) or Oocytes.

The word ‘sperm’ is derived from the Greek one *sperma* meaning seed. Thus this designation is based on a metaphor whereby sperms have the same effect of seeds: both represent an absolute necessity for the formation of a new sexual being. For example in the humankind sperms included in the semen emitted from the male genital tract are indispensable for the procreation of offspring because the female gamete cannot evolved in a new embryo before it be fertilized by a sperm. Thus, this metaphoric designation is based on a similarity between the effects of each of the two compared elements and not between themselves because the seed includes an already fertilized female gamete (zygote) of a plant, while the sperm is only a male gamete.

On the other hand, the word ‘ovum’ is borrowed from Latin *ōvum*, which literally means egg (oeuf in French). Moreover the adjectives oval, ovate, and ovoid all come from roots meaning "egg-shaped" from noun use of Medieval Latin *ovalis* from Latin *ovum*. Given that this human female gamete is small (barely visible with the naked eye, having a diameter of about 1.5 micron), and it is produced in the ovary hidden in the abdominal cavity of each woman, classic scientists had given it the same designation attributed to that of other sexual animals the female of which lay relatively great female gametes popularly called eggs that we can see such as those laid by chickens. As

explained above, these eggs have been scientifically called ova (single ovum) to designate female gametes.

** Wonderful designations in Qur'an*

According to my interpretations of Qur'an verses related to human creation, gametes, male or female, are designated "نطفة". This Arabic word has two meanings associated to two pronunciations:

- If pronounced *Noutfa* "نُطْفَةٌ", it means the smallest amount of water: a small drop.
- If pronounced *Natafa* "نَطْفَةٌ", it means a women's earring or a little pure pearl.

But what these meanings have to do with both human sexual cells? Pictures presented in [figures 3](#) and [4](#), give a clear answer by showing that this word came as double dual beautiful metaphors for both gametes, male and female.

* The female gamete (ovum or oocyte), unlike sperm, appears immobile. Pictures of [figure 3](#) show how much it is similar simultaneously to a drop of water (in a stable state to reflect the immobility of the ovum) and a pure pearl seen with the naked eye and particularly thanks to X-ray contrast imaging. Thus the two meanings related to the two possible pronunciations (*noutfa* & *natafa*) of the same designation represent simultaneously two beautiful associated metaphors specific to the female gamete (ovum).

* The male gamete (sperm or spermatozoon) is much smaller than the female one and very mobile thanks to a long tail (flagellum). The microscopic observation of a sample of semen permits to see mobile sperms in different states. In [figure 4](#), I present two states of sperm in motion, one is similar to a drop of water falling down and the other is similar to a woman's earring. Thus the two meanings related to same designation also represent simultaneously two other wonderful associated metaphors specific to the male gamete.

Considering both gametes, male and female, together Allah has designated them by the same word 'نطفة' through the meanings of its two pronunciations *Noutfa* or *Natafa* that provide superb **double dual metaphors** (demonstrated in [figures 3](#) and [4](#)), as far I know, never seen in Arabic and even in other world languages. This represents an example of rhetorical modes, peculiar to the Qur'an text, where the brevity, conciseness and metaphorical versions reach unusual highest degrees. However, such superb metaphors are often very difficult to be revealed because for example in the present case they are based on unusual comparisons between what is visible and invisible to the naked eye. On this basis, I have already called such metaphorical

designations linked to scientific issues “the scientific hidden metaphoric designations in Qur’an” (Chaabani 2006, 2017, 2018, 2019).

Although the causes of appellations of gametes, male ‘sperm’ and female ‘ovum’ by scientists are, as I have explained above, more and less suitable, the Qur’an designations are incomparable: They are emanated from a great power “Allah” Who see simultaneously what we see directly with the naked eye and what we see indirectly thanks to invented tools, and surely what we have never been able to see.

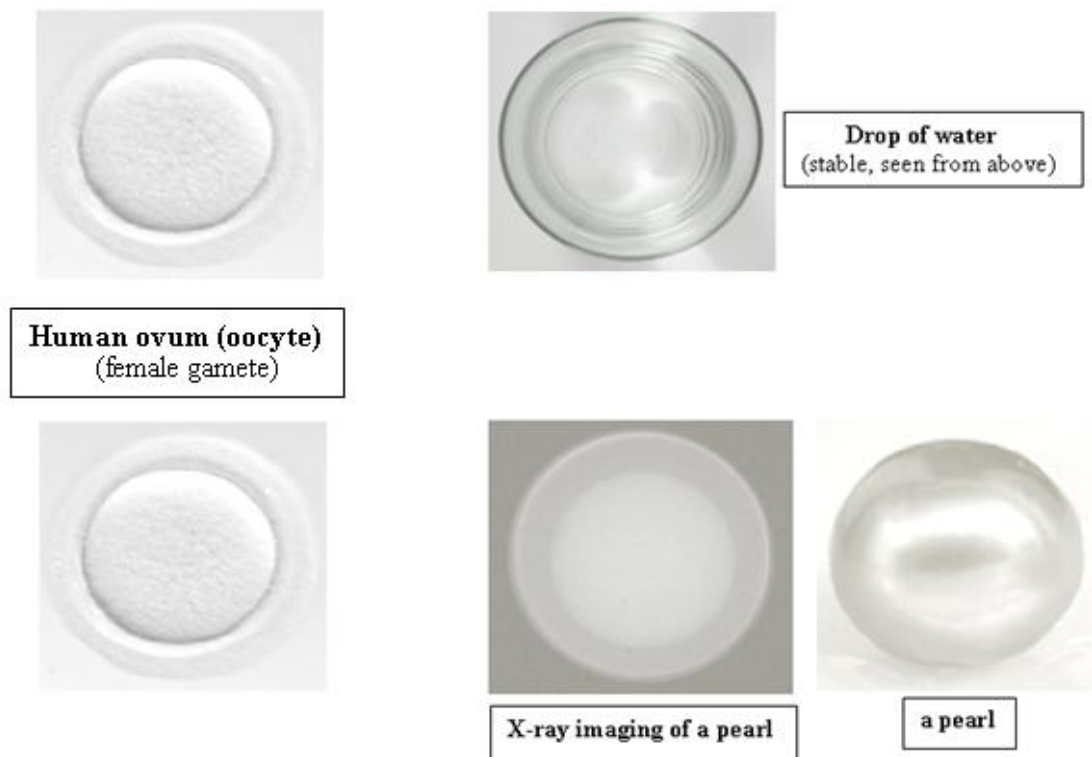


Fig. 3 Illustration of the female gamete designation in Qur’an

Pictures showing a microscopic observation of a human female gamete (ovum or oocyte): It seems similar at once to a stable drop of water and to a pearl (particularly when it is seen through X-ray imaging). This exceptional use of similarity between things visible and invisible to the naked eye is at the basis of two simultaneous wonderful associated metaphors by which the oocyte is designated **نطفة**, if pronounced *Notfa* means **drop of water** and if pronounced *Natfa* means **a pearl** or an earring.



Fig. 4 Illustration of the male gamete designation in Qur'an

Pictures showing two states of microscopic observation of human sperm: one is similar to a drop of water falling down and the other is similar to a pearl earring. This exceptional use of similarity between what is visible and invisible to the naked eye is at the basis of two simultaneous wonderful associated metaphors by which the sperm is designated **نطفة**, if pronounced *Notfa* means **drop of water** and if pronounced *Natfa* means an **earring** (women's earrings) or a pearl (or at once a pearl earring).

Among verses where the word ‘نطفة’ , gamete, is mentioned or intended, I can quote the following ones:

* In Sourat ‘the resurrection’, *Al-Qiyamah*, (verse 37), referring to the gamete male, Allah said what means “Wasn’t he (human being) a premeditated gamete from a seminal fluid”. As the seminal fluid (semen) is already known as emitted from the male genital tract, the intended gamete is a male one (sperm). Moreover this sperm is not any one among innumerable sperms present in a determined seminal fluid, but it is a unique premeditated one, namely the unique entitled to be the source of creation of a determined individual (at a determined time). In other words the unique sperm that will enter in the gamete female for giving a new individual is not selected by chance but it is determined by Allah since the beginning.

* Referring again to the gamete male in two other successive verses 45 and 46 of Sourat ‘the Star’ *An-Najm*, Allah confirms the meaning of the last verse by using the same terms ‘premeditated gamete’ refers to the male gamete (entitled to be the source of creation) informing us its responsibility for the determination of the sex of the newborn by saying what means “ * and that He who created both sexes, the male and the female,* from a premeditated (*male*) gamete* “. This agrees with the scientific fact that male gametes, sperms, contain a 23rd chromosome that is either an X chromosome (female) or the analogous Y chromosome (male), making each sperm cell either female or male.

* In Sourat ‘The Nightly Comer’, *-At-Tariq*, (verses 5, 6, and 7), referring simultaneously to the two types of gametes (male and female) through the fluids where they exist at the ejection moment, Allah said what means “Let the human reflects of what he is created * He was created from ejected fluid * coming from between the "الصلب" and "الترائب" * ”.

- Among meanings of the word "الترائب" are the superior bones of the thorax or the place of a necklace known as the central superior place of the thorax. Thus taking into account these two meanings together and the scientific aim of this verse, this word would mean: the central bone among the superior bones of the thorax that scientifically called “manubrium sterni”.

- The word "الصلب" means all solid things particularly the steel. Thus, it is used to indicate the human back (particularly the lower part) owing that it seems relatively harder than the human ventral side. This meaning is the more suitable for this verse so it

would mean the human vertebral column particularly the lower part (scientifically called lumbar spine).

According to this selection of suitable meanings of these two words the complete translation of this verse could be: “Let the human reflects of what he is created * He was created from ejected fluid * coming from between the vertebral column (particularly the lumbar spine) and the central bone among superior bones of the thorax*”. But the general mean of all the verse is yet unclear. This is due to the brevity by deletion of letter(s), word(s) or phrase(s) that, although somewhat known in Arabic before the emergence of Islam, reaches superb level in the Qur’an text ¹. When such brevity concerns scientific signs the interpretation needs a long reflection from a real academic expert in the field in question. Accordingly I ended up establishing the interpretation of this verse by adding the possible deleted terms (in italic) as follows:

“Let humans search of what they are created, they are created from ejected fluid coming from *what is* between *the vertical plane adjoining* the manubrium sterni and *that adjoining* the vertebral column (particularly the lumbar spine)”. Moreover as the origin of each of us is the union of two gametes, female (oocyte) and male (sperm), Allah would intend by ‘ejected fluid’ both fluids that ejected in female (follicular fluid including an oocyte) and that ejected by male (seminal fluid including sperms).

This detailed interpretation is demonstrated in [figures 5](#) and [6](#), showing that the ejection of each of the two types of gametes (male and female) within a fluid occurs in a place situated between the vertical plane adjoining the manubrium sterni and that adjoining the vertebral column (particularly the lumbar spine)”:

In the case of male gamete, [figure 5](#) shows how the beginning part of the urethra is really placed between these two planes (A and B), knowing that the seminal fluid, composed of sperms (elaborated in the two testicles and stocked in the seminal vesicles) and fluid mainly from seminal vesicles and prostate, is ejected in the beginning of the urethra that permits its evacuation through the penis.

¹ This brevity by deletion does not concern only verse related to scientific signs: for example in Sourat ‘The Prophet Joseph’, *Yusuf*, verse 82, Allah said what means “ Ask the village where we were and the caravan in which we traveled, we speak the truth”. If we add the suitable deleted terms (in italic), it becomes “Ask *the people of* the village where we were and the *owners* of the caravan in which we traveled, we speak the truth *in what we have told you*”

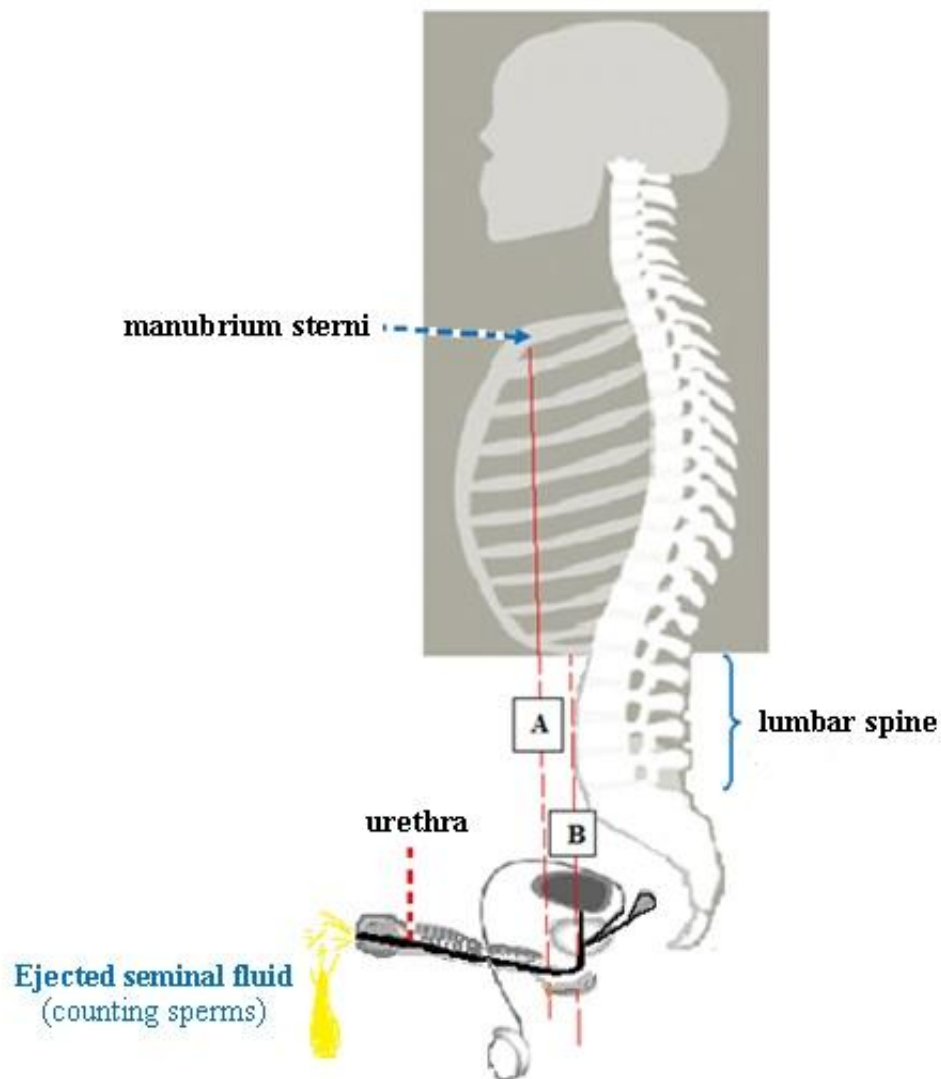


Fig. 5 Location of the beginning part of the urethra between the two vertical planes (A and B) where the seminal fluid is firstly ejected to be evacuated through the penis

In the case of female gamete, [figure 6](#) shows how each of the two ovaries is placed also between these two planes (A and B), knowing that the female gamete (oocyte) is ejected with the follicular fluid from the most mature follicle of one of the two ovaries approximately at the middle of each menstrual cycle (on average, a woman with a regular 28-day cycle ovulates on about the 14th day of each cycle).

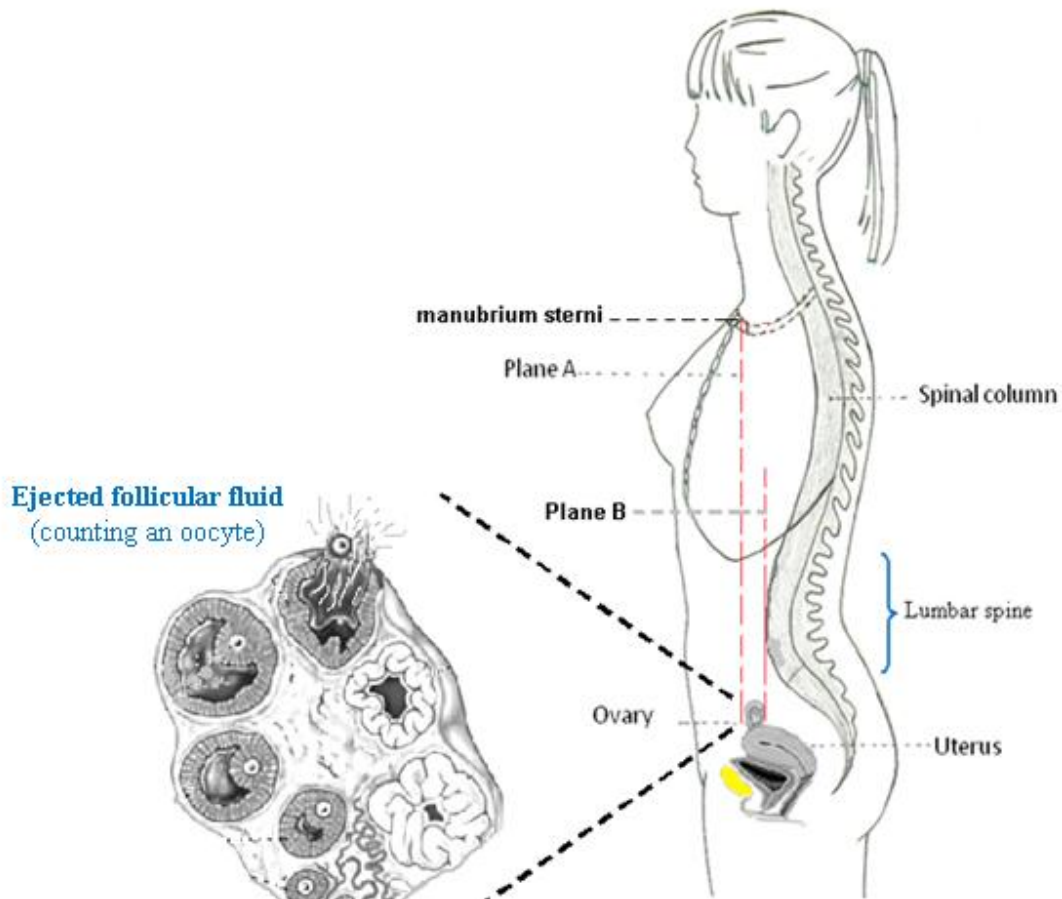


Fig. 6 Location of each of the two ovaries, from which a follicular fluid could be ejected, between the same two anatomical planes (A and B) considered in the male case (Fig. 5) knowing that at the middle of each menstrual cycle, generally from one of the two ovaries an oocyte is ejected within the follicular fluid.

Moreover, regarding the frame of ovaries position, a second possible proposition has been previously suggested (Chaabani 2013) from the same verses by change of some of the adding terms proposed in the interpretation presented above “Let humans search of what they are created, they are created from ejected fluid coming from *what is between the vertical plane adjoining the manubrium sterni and that adjoining the vertebral column (particularly the lumbar spine)*”, which becomes: “Let humans search of what they are created, they are created from ejected fluid coming from *what is between the frontal section adjoining the manubrium sterni to the convexity of the lumbar curvature of the vertebral column and that adjoining the two convexities of cervical and lumbar curvatures of the vertebral column.* This brevity with

deletion of terms that could be interpreted by adding two possible different terms leading to two possible complementary meanings is peculiar to Qur'an²

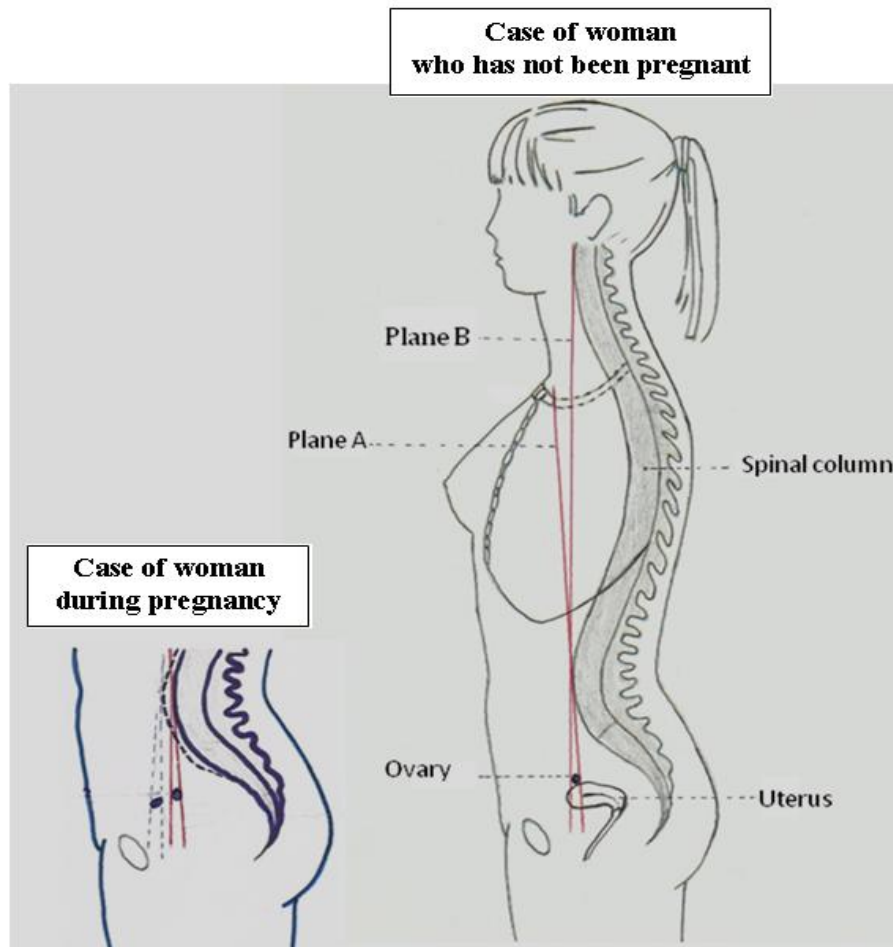


Fig. 7 Diagram of a theoretical three-dimensional ovary location in link with the global anatomical structure of each woman who has not been pregnant and after possible reciprocal changes during pregnancy (according to Chaabani 2013).

In any state of the woman life (before and after pregnancy) the ovaries location is always between a first plane (A) of a frontal section touching, at the top, the internal edge of the manubrium sterni and, at the bottom, the convexity of the lumbar curvature of the spinal column, and a second plane (B) of a frontal section touching the two convexities of cervical and lumbar curvatures of the spinal column.

(In fact, even during pregnancy, the lumbar spinal curvature slightly curves forwards particularly during the last months of pregnancy and simultaneously ovary would move forward with possible slight descent and loss of erect posture. These two simultaneous moving would permit the maintenance of the location of the ovaries between the two planes A and B).

² Previously (Chaabani 2006; 2018; 2019) I have pointed out several examples of superb Arabic rhetorical modes peculiar to Qur'an concerning "the complementarity between two (or several) meanings for the same expression (or word)": it concerns the case when the same word or the same sentence (verse) could have simultaneously two meanings (not opposing but complementary). However the example above shows another type of complementarity as result of some of expressions that represent brevity with deletion and to which we can add different terms following two possibilities leading to two complementary meanings. This type of complementarity does not concern only verses carrying scientific signs. For example in Sourat "The Cattle" *Al-An'am*, verse 138 Allah said what means "...and cattle whose backs are forbidden.....". If we add the suitable deleted terms (in italic) we not two possibilities: "...and cattle whose *the riding of their backs* are forbidden....." and ".....and cattle whose *the loading on their backs* are forbidden.....". Thus this brevity by deletion includes two complementary meanings, which concern the two major kind of use of the cattle backs.

As shown in [figure 7](#), it considers that ovaries could be placed between two other anatomical planes: a first plane (A) of a frontal section touching, at the top, the internal edge of the manubrium sterni and, at the bottom, the convexity of the lumbar curvature of the spinal column, and a second plane (B) of a frontal section touching the two convexities of cervical and lumbar curvatures of the spinal column. Although the first proposition is valid and concern both types of gametes (male and female), this second possibility is peculiar to female gamete and seems more accurate and more general because it could involve even the change of place of ovaries during and after the first pregnancy.

In fact a woman who has not been pregnant, the ovary lies in a vertical position (erect posture) against a depression, the ovarian fossa. This typical position is submitted to some change during the first pregnancy after which the ovary becomes slightly displaced and probably never again returns to its original position: generally it moves forward and probably with slight descent and loss of erect posture ([Thorek 1985](#)). This ovaries moving is involved by this second proposition because during the first pregnancy as during the following ones changes in spinal curvature can occur in different degrees from a woman to another very likely in harmony with ovaries moving (forward and probably with slight descent and loss of erect posture). As shown in [figure 7](#), changes of the spinal curvature (forward), particularly at the lumbar level drive the moving of the two planes A and B, and simultaneously ovaries move for staying again between the two planes. Namely everything happens as if the variable degree of ovaries moving would depend on the degree of spinal curvature changes, which varies from woman to another (for review see [Chaabani 2013](#)). Therefore this second theoretical three-dimensional ovary position would reflect the harmonious continuing link between each organ and the global anatomical structure of each human body. But this theoretical position of human ovaries, although seems suitable, should be confirmed thanks to a possible future more developed technology such as a special combined techniques of Magnetic Resonance Imaging (MRI).

4. Designation of the fertilized female gamete ‘zygote’

The scientific word Zygote comes from the Greek word for *yoke* that means joining two things together (accordingly zygote is the result of joining a male gamete and a female one together). In Qur’an, Allah would refer to it by two designations:

* A first designation “gamete having mixed things” similar to the meaning of the Greek word (zygote). It is presented in the verse 2 of Sourat ‘the Human’, *Al-’Insan*, where Allah said what means:” We have created the human from a gamete having mixed things; afflicting him, We made him to hear and see”. Thus Allah describes what we call currently fertilized female gamete or zygote by pointing out its characteristic relating to the fact that it contains mixed things. Hence the interpretation of this verse could be: Allah has created each of us from a (fertilized) gamete where things (parental and maternal chromosomes) are mixed; aiming to afflict and test us He makes us to hear and see (namely to ovoid doing us an injustice Allah afflict and test us after making us with excellent cognitive faculties because seeing and hearing are mainly the starting point for all cognitive processes).

* A second superb designation, peculiar to Qur’an, “unique self” has been presented in the verse 98 of Sourat ‘the Cattle’ *Al-’An’am*, where Allah said what means: “It is He who originated you from a unique self, then a stable place to stay, and then a storage area. We have made clear the verses to people who have knowledge”. By ‘unique self’ Allah would refer to the sole cell (fertilized ovum or zygote) from it each of us was originated because this cell contains genetic material (DNA) bringing information on all futures of a new, unique, human being, namely in this cell a human ‘unique-self’ is potentially present. Moreover in this verse Allah would confirm that by ‘unique self’ He intends the female gamete at a post fertilization state by referring to two major places of a cyclic itinerary of the female gamete: - at its fertilized (diploide) state it find its stability and protection for continuing its development in a **stable place**, which is the **uterus**; - then in a following generation female gametes would be formed in the haploid state and stored in a **storage place**, which is each of the **two ovaries**. This cyclic itinerary takes again when a pregnant woman develops a female fetus.

However when Allah uses the word self in plural speaking to humans “yourselves” He would intend “your species” (your humankind) because all of us have the same human species futures. This is clear in the first part of the verse 72 of Sourat ‘the Bees’ *An-Nahl*, were Allah said what means “And Allah made to you in yourselves (your humanking) couples (males and females) and has given you, with your spouses, sons and grandsons...”. This

could be interpreted as follows: For us Allah made, in our humankind, couples (males and females) and (consequently) has given us, with our spouses, sons and grandsons.

5. Designation of stages of human embryo development in Qur'an

Scientifically speaking I can summarize the stages of human embryo development, started from the fertilization event (zygote formation), as follows:

- The cleavage stage: during it the zygote undergoes rapid divisions.
- Blastulation: formation of a blastocyst
- Implantation: adherence and implantation of the blastocyst in the uterus wall from the day 6 after fertilization
- Embryonic disc: formation of an embryonic disc in the implanted blastocyst. It is a bi-laminar disc of two layers: the epiblast (primitive ectoderm) and the hypoblast (primitive endoderm). This disc is stretched between what will become the amniotic cavity and the yolk sac.
- Gastrulation: It begins from the day 17 after fertilization and would continue until the day 21 after fertilization. It reorganizes the two-layer embryo into a three-layer embryo, and also gives the embryo its specific head-to-tail, and front-to-back orientation, and establishes its bilateral symmetry.
- Primary neurulation: during it the neural tube forms and somites appear. It happens during about days 21 to 24 after fertilization. It marks the beginning of the process of organogenesis.
- Formation of the different organs (organogenesis).

Some Qur'an verses refer to all these stages, but in superb brief expressions and designations peculiar to Qur'an. Regarding the two first stages (cleavage and blastulation) I have already presented and interpreted the corresponding Qur'an verses in my previous paper ([Chaabani 2018](#)). Here I will present and explain verses related to stages from the implantation event (from the day 6 after fertilization).

In sourat 'the leeches' *Al-'Alac* (verses 1 and 2) Allah, addressing Prophet Muhammad, said what means: "Read in the Name of your Lord who created * created the human from *Alac*". In other verses Allah explains what He intends by *Alac* (plural of *Alaca*, which means leech or what could fix itself to a thing like the fixation of a leech to the skin) by saying what means "Then We placed him (*human*) as a (*fertilized*) gamete in a safe deep place (uterine

cavity) * then We created the (*fertilized*) gamete into *Alaca*, then We created *Alaca* into *Mothgha* (chewed lump like), then We created (*from*) *Mothgha* bones, then We clothed the bones with flesh, then We produced him another (*unique*) human being, thus blessed be Allah, the Best of creators” (Sourat ‘the Believers’ *Al-Mu'minun* , verses 13 and 14)³.

These verses would show that the word *Alaca* represents a metaphoric designation that refers to each of the blastocyst where the embryo will be developed and the embryo itself during a major phase of the human embryonic development. Thus, it is a dual metaphor based on two similarities: (1) a similarity between the way of adhesion of a blastocyst to the uterine wall (at the day 6 after fertilization) and that of a leech to the skin, and (2) a second similarity between the form of the emerged embryo (at about day 21 after fertilization) and that of a leech (see Fig. 8, A). In other words Allah would designate by only one word ‘*Alaca*’ (leech) a major stage of the human embryonic development, while also specifying its limits: from days 6 to 21 after fertilization. Therefore it is a superb dual metaphor among those I have already called “the scientific hidden metaphoric designations in Qur’an”.

These verses show also that this major stage of ‘*Alaca*’ from days 6 to 21 after fertilization is immediately followed by a stage that Allah would designate ‘*Mothgha*’ (this Arabic word means a chewed lump such as that of a meat) based on a metaphor pointing out the similarity between rapid changes of the aspect and size of a chewed lump (of meat) ‘*Modhgha*’ and that of the human embryo (during days 21 to 26 after fertilization). In fact although its shortness this stage represents rapid change of the embryo aspect from day to day particularly the rapid increasing of the number of emerged somites, which resemble to tooth marks on a chewed lump that become more and more numerous from one chew to the next. Simultaneously this rapid change concerns also the size: the chewed lump ‘*Modhgha*’ size could double after few first chaws (moves up from about 20 mm to 40 mm) also the size of the embryo doubles from day 21 to 26 (moves up from about 2 mm to 4 mm) (Fig. 8, B).

³ As far as I know, generally all my interpretations are completely different from previous ones published by other authors and exegetes. Even some ones appear in part somewhat similar to few contemporary ones such as the case of this verse (e.g., Moore 1986), they remain distinctive if taken as a whole particularly by their high accuracy in both linguistic and scientific levels.

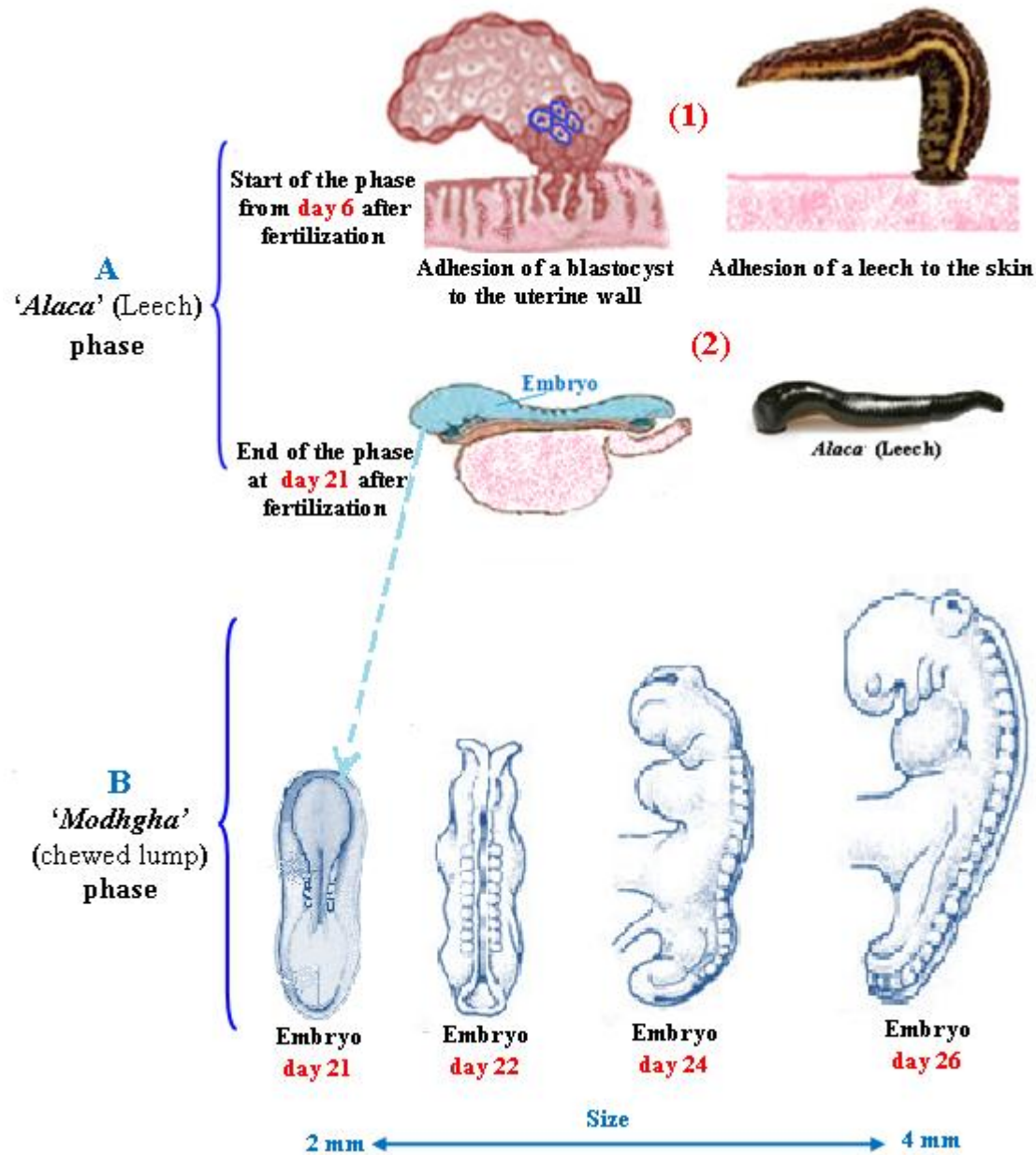


Fig. 8 Diagrammatic presentation of embryo development stages according to a modern interpretation of related Qur'an verses

A. (1) Similarity between the self fixation of a blastocyst to the uterine wall (at day 6) and that of a leech to the skin; (2) Similarity between the form of an embryo (at the day 21) and that of a leech. On the basis of these two similarities corresponding to a dual metaphor, Allah would designate a major stage of the embryo development '*Alaca* (leech) stage' the limits of which are from the day 6 related to the first similarity to the day 21 related to the second similarity.

B. Presentation of the next stage *Modhgha* (from about day 21 to day 26) during it rapid changes of the embryo are similar to those of a chewed lump during the first chaws: in fact, at the morphological level, from day to day the embryo goes through rapid developing change particularly marked by an increasing number of emerged somites, which resemble to tooth marks on a chewed lump that become more and more important from one chew to the next. Simultaneously this rapid change concerns also the size: the chewed lump '*Modhgha*' size could double after few first chaws (it moves up from about 20 mm to 40 mm) also the size of the embryo double from day 22 to day 26 (it moves up from 2 mm to 4 mm).

In comparison with the detailed stages, quoted above, described by biologists, the *Alaca* stage (spread over day 6 to 21 after fertilization) includes Implantation, Embryonic disc and Gastrulation stages; while the '*Modhgha*' stage (spread over days 21 to 26 after fertilization) follows it and corresponds to the primary neurulation stage. Moreover in the last verse Allah would inform us that this '*Modhgha*' stage is immediately followed by the last stage of embryo development, stage of organs formation, by presenting the more apparent events marking the beginning of this stage: the start of bone formation and then the flesh intervening (among other things) in the covering of bones. In fact, this is in agreement with last stage of human embryo development 'organogenesis (organs development)' that mainly begins by the formation of the skeleton at its first cartilage models state, then the continuation of cell differentiation to give the different tissues (flesh) involved in the formation of the different organs such as muscles that, among other things, will cover bones.

Similar presentation of the same stages of the human embryonic development was given in the first part of another verse where Allah said what means "O mankind, if you are in doubt about the Resurrection, remember that We first created you from earthy nature, then, from a gamete, then in a *Alaca* like (blastocyst), and then from a differentiated and undifferentiated *Modhgha*" (Sourat 'the Pilgrimage', *Al-Hajj*, verse 5). But in this verse Allah gives us additional scientific information regarding the embryo during the *Modhgha* stage. Although the simple apparent meaning is that some places of the embryo appeared somewhat formed (emergence of the sketches of some organs) and others yet unformed, the real accurate scientific meaning is related to what we call nowadays 'stem cells'. In fact during embryogenesis few cells remain undifferentiated, these cells, called stem cells, are present in the different tissues throughout the body. During the lifetime of each person, they could divide to replenish dying cells and regenerate damaged tissues. Accordingly, the interpretation of the last phrase of this verse is that although the great majority of cells of the embryo at '*Mudhgha*' stage are involved in the differentiation process leading to the formation of the different tissues of different organs, some of them remain undifferentiated (the stem cells).

A strong call for a modern rigorous re-reading of all the Qur'an text within a great international project

The Qur'an text is not comparable to any Arabic text. It possesses, among other things, unique dynamism and superb unusual brevity combined with wonderful modes of metaphors the revelation of which is often very difficult if not impossible in a determined epoch. For that reason my interpretations (presented here or in my previous studies) are obtained after a deep research based mainly on the making and the application of a modern rigorous approach (Chaabani 2018). As far as I know, generally all my interpretations are completely different from previous ones published by other authors and exegetes. Even if few of them appear in part somewhat similar to some contemporary ones, they remain distinctive if taken as a whole particularly by their high accuracy in both linguistic and scientific levels. This do not decrease my respect to the first contemporary authors who have the courage to take the initiative of starting a modern reading of Qur'an verses related to scientific issues.

This difference between my interpretations of verses related to scientific issues and existing ones is often radical reflecting what the latter extent the presence of errors, distortions and contradictions, which generally lead to incredible controversy between Qur'an and science. However, when these distortions concern some verses on social or socio-political issues they have led to more bad consequences, such as the curtailment of women's liberation, or to perilous events such as terrorism that plagues human society and erodes the basis of human security.

Also, these unsuitable existing interpretations have more and less influenced negatively the translation of Qur'an text in other languages. Moreover, when some classic exegetes did not arrived to interpret a verse, they invented a false meaning to one of its words for making any possible interpretation, and unfortunately some of these false meanings are included in contemporary Arabic dictionaries as been real ones deduced from Qur'an.

As I have already explained in my last study (Chaabani 2019) the major cause of the presence of innumerable errors, distortions, and contradictions in Qur'an interpretations is that the latter are almost a stupid repetition of those proposed by ancient exegetes, lived particularly during the 8th century, who had used methods and tools often uncertain, questionable, or even erroneous, under a socio-cultural-political

influence in a period where the scientific knowledge was yet very limited and narrations, including warps and fibs, were very spread. In addition, from the medieval period to nowadays some sheikhs (men of religion) have added some incorrect interpretations that go with their stupid political ideologies; while others have tried continuously to make people believe that the archaic interpretations including innumerable warps, fibs, and pre-Islam believes and customs are the correct ones. Therefore, they have done their best to fossilize the Qur'an text through an indirect request for an abstaining of any innovative re-reading of the Qur'an; while Allah requests all Muslims, particularly the great minds, at all time and everywhere to interpret the Qur'an text.

Unfortunately this situation of misapprehension of the real essence of Islam has been persisted until nowadays showing ups and downs from a period to another. For example, the Prophet Life period was characterized, among other things, by the foundation of freedom of thought, justice and good morals; while after this period, the deviation from these major principles of Islam has been emerged in link with political problems. For example, at the end of the 7th century, a dangerous group appeared: its members were designated by the Arabic term "*Khawarij*" that means the Outsiders (the ones who deviated from mainstream Islam). Aiming to reach political objectives, Outsiders invented new considerations and laws falsely allocated to Islam and they had given to themselves the right to kill any Muslim who does not follow such laws, namely who they consider under allegations of excommunication (in Arabic *Takfir*). Therefore, they had tried to violate the Free Muslim Thought and to establish a mental slavery, which is far more sinister than physical slavery.

By contrast, during the Golden Age of Islam (dated from about 9th to 14th century) this situation is somewhat broken thanks to the re-appearance of some freedom of thought concretized mainly by the apparition of a group of thinkers called "Mu'tazilites", known by the power of their reasoning and logic. This, among other things, had led to a cultural, economic and scientific flourishing leading to the emergence of internationally known great scholars and thinkers such as Ibn Sina (Avicenne), Ibn Rochd (Averros) and Ibn Khaldoun. Although the relative success of this Age, no courageous political initiatives were done aiming to do a real reform assuring the protection of the real essence of Islam and to put an end to the mediocrity and excesses of the narrow minded men of religion. On the contrary, often indirect stupid egoistic conventions between politicians and these men of religion were been

accomplished and became more evident from the 14th century leading with other factors to a general decadence of the Muslims world particularly in the Arab countries.

Over the contemporary history of Muslim World, some scarce attempts had begun to prepare a suitable background for changing this bad situation by ensuring freedom from bad believes, ancient strange customs and fibs falsely allocated to Islam by narrow-minded sheikhs, and to catch up with the huge scientific advances leading to modernization and development. But unfortunately these attempts are more and less broken off: for example, the distinguished attempt of the president Habib Bourguiba in Tunisia, although had led to the accomplishment of several important steps, didn't last long owing to the short period (1955-1980) of the real Bourguiba governance. In fact [Bourguiba](#) is not only a great known eminent politician but he is among the eminent thinkers and reformers of the 20th century. Among his sayings related to this issue I can quote that extracted from his speech of the 13/08/1960 that I have translated from Arabic as follows: *“The secret of the retreat of Muslims in the era of their decadence is their denial of reason, their rejection of thought, their restriction with absurd narratives, and their adherence to charlatans among opportunistic leaders and narrow-minded men of religion who have been disabled the thought and therefore petrified the religion”*.

As reactions against these attempts appeared since the 1970s a wide variety of movements designated under a false umbrella term "Islamic revival". In fact the majority of these movements have nothing to do with the real essence of Islam but represent reiterations of political-religious opinions of some stupid extremists sheikhs who had transforming the Islam in different ideologies mixed by political stupidity such as the intolerance between East and West. Thus I designate such movements under a correct suitable umbrella term ‘religious obscurantism return’.

Over the two previous decades some of these stupid movements have been evolved in dangerous terrorist groups that, thanks to a great financial support at least at the beginning, have been rapidly grown and caused havoc for some Muslim countries with bad repercussions on all world continents. Thus, I believe that towards this very bad current situation it is time to call for a real future renewal of Islam that could be started by a great international project aiming to accomplish, among other things, a deep rigorous modern re-reading of all the Qur’an text.

This project, among other things, will group eminent Muslim modernist thinkers and eminent academicians interested into Qur’an and Islam (specialists in one or more

of known scientific and social fields), aiming to concretize a real deep picture on the essence of Islam never done in the past and it deserves to be designated the “First International Real Renewal of Islam” (FIRRI). Some outline of this project could be presented as follows:

1. To begin by trying to remove what falsely allocated to Islam such as clearing up some confusions. For example, the inaccurate designation “Islamic cultures” that leads to consider these cultures (including the hundreds of books written on Islam) as belonged to the central part of Islam. However, these cultures should be designated “cultures of Muslim societies” and not “Islamic cultures”⁴, because (1) although these cultures are influenced by Islam they include innumerable uncertain narrations, pre-Islam believes, warps, fibs, and even stupid considerations, customs and laws fabricated by narrow-minded men of religion⁵, and (2) to use the adjective “Islamic” to qualify what is created by humans, such as cultures, is unacceptable. In fact, all this amalgam of cultures accumulated during successive periods from the death of the Prophet Mohamed until nowadays has included a new larger religion at least partly in complete discordance with the real spirit of Islam. In fact, we must research the real Islam only from its unique book the Holly Qur’an and what was occurred only during the Prophet life after testing its acceptability using the strictest objective historical modern methods.
2. To establish a rigorous methodology necessary to do a deep rigorous modern re-reading of all the Qur’an text as that I have already founded and applied during my interpretation to some Qur’an verses (Chaabani 2019). Then a great long work that will need several years necessary to reveal the unique miraculous dynamism of Qur’an which permits its use in all epochs and anywhere (Chaabani 2019). The obtained great international report of modern Qur’an interpretation will be the unique international official reference that informs all humans (Muslims and non Muslims) on the wonderful contents of this great unique book addressed to all humanity with an evident respect to their right to freedom of thought.
3. To start a great long review of all Prophet Mohamed sayings leading to a new modern rigorous selection and classification.

⁴ In the same context the designation “Islamic Civilizations” is also commonly used; while it is evidently more correct to speak about “Civilizations of Muslim societies” (because during it beside good events compatible with Islam, innumerable anti-Islam ones have been occurred).

⁵ In fact men of religion, who call themselves “Scholars !!!!” or Imams or Sheikhs, are rather narrow-minded persons: often considered as stupid narrators and/or religion traders (using religion for achieving financial and/or dirty political aims).

Accordingly this “First International Real Renewal of Islam” (FIRRI) project could permit a radical resolution to all erroneous Qur’an interpretations and other related fabricated considerations that have accumulated through the ages and were merged into cultures of Muslim societies. But this great long academic project could happen only if an international political willpower should be convinced and mobilized

Conclusion

In this study I have presented new insights into the processes of biological evolution and human reproduction in the light of a dialogue between the current scientific knowledge and Qur’an verses through their profound meanings hidden under the superb metaphors and brevity peculiar to the Qur’an text. I have shown how this dialogue could provide a report of combined information, which in spite of their two different origins (divine origin and human source), are in an attractive compatibility and a creative interaction.

In a first section I have presented a new vision of the biological evolution process, which is based mainly on reasonably informed decisions reached after presenting and discussing confusions and uncertainties related to this process. In this vision, designated ‘Supervised Evolutionary Emergence of Organisms’ (SEEO), I consider that the Creator (Allah) of the entire Universe with its Laws and systems had organized and supervised the emergence of living beings depending on a wonderful evolutionary plan. As this vision is hopefully in agreement with my interpretations of related Qur’an verses, I have concretized it from them. The combination of four complementary meanings of two of these verses gives two wonderful artistic-scientific paintings; one of them shows how our humankind emerged at the top of a complex network of evolutionary stages evolved from the earth like the emergence of the upper part of the top of a tree.

In a second section I have shown how Allah gives to the second biological process a distinctive designation ‘Human Picturing Creation’ that is by far more accurate than the current scientific one ‘Human Reproduction’ insisting on the fact that the major acts of this process, particularly the fertilization event (union of a particular sperm with a particular ovum), do not happen randomly but under His supervision. I

have also shown that Allah gives wonderful descriptive designations to the major elements involved in this process such as what we call nowadays gametes, zygote and stages of embryo development. Allah designated both gametes, male and female, by the same word 'نطفة' through the meanings of its two pronunciations *Noutfa* or *Natafa* leading to superb **double dual metaphors**, as far I know, never seen in Arabic and even in other world languages.

Moreover, the interpretation of other verses shows how the ejection of each of the two types of gametes within a fluid occurs (in both female and male bodies) at the same situate between the vertical plane adjoining the manubrium sterni and that adjoining the vertebral column (particularly the lumbar spine) with a possible other theoretical three-dimensional ovary location in link with the global anatomical structure of each woman who has not been pregnant and after possible reciprocal changes during pregnancy. Although such positions seem compatible with the known human anatomy, it is unnoticed by scientists and need an experimental confirmation.

I have shown that Allah given two designations to what we call currently fertilized female gamete or zygote (result of joining a male gamete and a female one together). A first designation "gamete having mixed things", similar to the present one, points out its known common characteristic relating to the fact that it carries mixed things (parental and maternal chromosomes). A second superb designation, peculiar to Qur'an, 'unique self' referring to the fact that it is the sole cell (zygote) from it each of us was originated and the fact that it contains genetic material (DNA) bringing information on all futures of a new, unique, human being, namely in this cell a new human 'unique-self' is potentially present. In this paper I have also shown that some Qur'an verses refer to all the stages of human embryo development in superb brief metaphorical expressions peculiar to Qur'an. For example by only one word '*Alaca*' (leech) and through a superb dual metaphor Allah would designate a major stage of the human embryonic development, while also specifying its limits: from days 6 to 21 after fertilization.

At the end of this study I have pointed out that my modern interpretation of Qur'an verses, based on new rigorous methodology, are generally different from the existing ones, which often include errors and distortions making them, among other things, incompatible with science. Given that such distortions if concern verses related to social or socio-political issues have led to more bad consequences such as terrorism, I have urged the planning of an international scientific cultural project aiming to do a

complete deep long research work leading to a modern rigorous interpretation of all the Qur'an text and to explore its dynamism destined for all humanity, at all times and everywhere, with an evident respect to the freedom of thought. This international great project could include other related issues such as a rigorous modern re-classification and re-selection of the Prophet Mohamed sayings, aiming to concretize a real deep picture on the essence of Islam never done in the past and it deserves to be designated the "First International Real Renewal of Islam" (FIRRI) that could happen if an international political willpower should be convinced and mobilized.

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