

THE BIBLE WILL NEVER END TO AMAZE US

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BEYOND EVERY RELIGIOUS OR IDEOLOGICAL BELIEF, BEYOND BELIEVING OR NON-BELIEVING, IT IS DIFFICULT NOT TO ADMIT THAT THE BIBLE REPRESENTS AN IMMENSE "SPIRITUAL HERITAGE", CARRIER OF MORAL VALUES AND ORIENTATIONS 'MAN WHO, DESPITE THEY WERE WRITTEN OVER 2000 YEARS AGO, STILL TODAY ARE EXTREMELY VALID AND INCREDIBLY CURRENT.

IT HAS THE SURPRISING AND THE UN THINKING THAT THE BIBLE COULD ALSO CONTAIN **SIGNS - WORDS - CLUES**

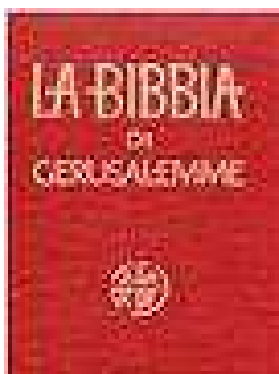
TRUSTABLE BY ANALOGY TO ACQUIRED PHENOMENA FROM SCIENCE ONLY IN RECENT TIMES

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THE BOOK OF THE SYRACIS

"In the face of evil there is good, in the face of light there is darkness, in the face of death, life, in the face of those who reject God there are those recognizes it. Therefore consider all the works of the Most High two by two, facing each other". (Chap. 33,14-15)



THE GLORY OF GOD IN NATURE (Chap. 42,15-25)

¹⁵ His works were created by the words of the Lord. He searches the abyss and the heart and penetrates all their secrets. ¹⁸ The Most High knows all science and observes the signs of the times, ¹⁹ announcing past and future things and revealing the traces of them hidden ²¹ He ordered the wonders of wisdom to him because he is always and forever. Nothing can be added to him and nothing taken away, ²² How lovely are all his works! And hardly a spark goes away to observe. ²³ All these things live and will remain forever under all circumstances and all obey him. ²⁴ All are in pairs, facing each other, he did not do anything incomplete. ²⁵ The one confirms the merits of the other, who will be satisfied in contemplating the his glory?

PREVIEW

In the wisdom book of Sirach of the Bible, in Chap. 42, in the last two verses 24-25, we read: "all things are in pairs, facing each other, he did nothing incomplete, one confirms the merits of the other, who will be satisfied in contemplating her glory? ". Difficult to interpret the text, it seems to be faced with enigmatic words, like a puzzle, or a riddle to be solved. The absence of explanatory notes or any comments, which usually accompany the various Bibles, do not help us decipher these words. Going to consult different Bibles, we find words translated with shades of slightly different meaning between one Bible and another, sometimes even new phrases. By integrating the two original verses 24 and 25, with the new words and phrases found, a new text has been reworked that maintains the literary characteristics identical to the original one, but now enriched with words and new expressions. The inclusion of new words and phrases collected through the various translations made it possible to enrich and enhance the original verses. This integration operation made it possible to reconstruct and rework some verses that were originally obscure, but now much richer in numerous and interesting details. From an overall look at the reworked and integrated verses, read through a purely scientific angle, with great amazement, one can glimpse **indicative signs, precise clues and references** that, by analogy, can be associated with the bio-molecular structure of DNA.

THE STORY OF A BIBLICAL RESEARCH

The book of Sirach

God wisely ordained the wonders of his work

(Sirach Chap 42,21)

PREMISE

Reading the Bible, both the Old and the New Testament, we can see that the concept of "binary polarity" is frequently mentioned, also called the principle of the "double aspect" which, according to the various biblical authors, is inherent in the nature of the things of creation and in the events that characterize the life of man. They would constitute distinctions and differences present in creation and between men, desired by the "Wisdom of God" who arranged everything with order, harmony and benevolence. Even "the intelligence of man" managed to represent "binary polarity" thanks to the German philosopher Leibniz, introducing the "binary numbering" system which reduced the ten signs of the Arabic numbering to just two digits (1 and 0), from which all numbers originate. Leibniz, in the 17th century, starting from a purely mathematical basis, also assumed that binary arithmetic could be used to metaphysically represent the creation of the world, assuming that the "Spirit of God" (similar to the number 1) created with his omnipotence all things from nothing, the "initial chaos" (comparable to 0). In fact, in the 1st chapter of the book of Genesis we read that the world was a shapeless and empty mass, darkness covered the abysses and the Spirit of God, or the living presence of the Creator, hovered over the waters. The invention of the Leibniz binary numbering code (1 = on and 0 = off) will form the foundation of the modern computer programming language.

THE BEGINNING

In the wisdom book of Sirach (chapter 33, verses 14-15) of the Jerusalem Bible we read: "In front of evil there is good, in front of light there is darkness, in front of death there is life, in front of those who reject God there are those who recognize it ", then adds again "Therefore consider all the works of the Most High two by two, one facing the other ". It is not at all easy to interpret the meaning of the latter expression due to the generic way in which it is expressed by the author. Going then to chapter 42, again from Sirach verse 24-25, the author takes up the theme by adding a clarification: "all things are in pairs, one facing the other, he has not done anything incomplete, one confirms the merits of the other, who will be satisfied in contemplating her glory? ". Now we know something more, the author adds new elements, but he still seems to be faced with words in an enigma, like a rebus, or a riddle to be solved. No explanatory notes or comments, which often accompany the various Bibles, help us to make sense of these words.

THE SUSPECT

I had suspicion of what the author could convey to us with these phrases from the first time I came across the book of Sirach. These words, in themselves at first glance enigmatic, led me to think of the DNA formula, the structure of which is composed of two strands paired facing each other. But at first it seemed "unthinkable" to give credit to an idea that had almost instinctively flashed to me.

THE IN-DEPTH

But at a certain point I wanted to resume and deepen the subject by going to consult other Bibles, knowing full well that the various translations sometimes report words and phrases with different shades of language, often useful for the reader to better understand or clarify what an original text is. of the Bible wants to convey. In fact, there are often slight differences and substantial nuances between one Bible and another when translating from Greek, a very rich and versatile language that offers the translator various opportunities in the choice of words.

THE SURPRISE

As I went to consult Chap. 42 of Sirach in the various Bibles, I noticed that in most cases the translated texts coincided, reporting for some verses all the same textual words and almost literally confirming these enigmatic words object of my curiosity. Surprisingly, however, I also noticed, from time to time, between one translation and another, not only short sentences or single words with different nuances and meanings, but also new expressions which, in any case, did not differ or contradict with the original theme treated by the author, concerning "the wonders of Wisdom of God's works in nature". I found it useful to examine the new phrases and interesting new expressions that have arisen from the various translations of the Bibles consulted.

THE HELP OF THE METHODOLOGY

Words and phrases taken from the various translations of Chapter 42 of the book of Sirach, from verse 15 to verse 25, have been taken into consideration and carefully evaluated. The new words and new phrases have been transcribed, respecting the original placement of the verses, omitting any parts that are not relevant to the main theme dealt with by the author. Then, all the words and phrases chosen were compared synoptically, placing them in a column, in order to facilitate an overview. This methodology made it possible to better analyze and compare the different expressive forms adopted by the authors in translating the text of Sirach. The various verses have been elaborated to obtain an integrated text, placing as a basis the literally coinciding parts inherent to the theme on the works of God, and gradually inserting all the new phrases, and the new words, "scattered" here and there in the various translations. , (almost like the "pieces" of a puzzle), with the aim of finding new elements useful to enrich the content of the enigmatic phrase "all things are in pairs, facing each other". In practice, a "new text" has been recomposed and reworked, less fragmented than the original, more harmonious on a literary level, and with the addition of numerous and interesting new details. The transposition of any words or phrases from one verse to another, always carried out strictly within Chapter 42, were considered useful and necessary to validate and strengthen the meaning of the words previously expressed.

THE CONCLUSION

In light of the literary comparative analyzes of the various translations of verses 15-25, Chapter 42 of the Book of Sirach, it is undeniable that "all" coincide coherently with the original intentions of the author in describing the works of creation, enriching and bringing new ideas and precise clarifications to the content of the original text. The integration operation made it possible to reconstruct and rework words that were originally obscure and difficult to interpret but, in any case, now much richer in numerous and interesting details. Surely, the inclusion of new words and phrases taken from the various translations, has allowed to enrich the meaning of the phrase "all things are in pairs facing each other", allowing it to be read and interpreted within the broad context concerning the wonders of God's wisdom in the works of nature. This reworking operation has also made it possible to enhance the whole meaning of Chapter 42 of Sirach as a whole, planning it on a narrative and literary level.

ANALYSIS OF THE RESULTS

THE REELABORATION OF VERSES 24 and 25 of Chapter 42 of the BOOK OF THE SYRACH

The last two verses **24** and **25** at the conclusion of Chap.42 of Sirach read verbatim:

**"All things are in pairs, facing each other,
he did nothing incomplete,
one confirms the merits of the other,
who will be satisfied in contemplating his glory? "**

Since the beginning of this discussion we have raised our curiosity, our interest, our attention and the utmost commitment to give a meaning to these verses. Really, these words difficult to deciphering, even for the generic way in which they are expressed, does not they can read in their own right, but they must be understood to be understood read within the entire context of Chapter 42, where the author describes extensively and with numerous details:

"God's Wisdom in the Works of Nature"

The author speaks of the wonders of the works of God, Creator of heaven and of the earth. He claims that everything that has been created has a purpose and a very specific sense, all the works are perfect and reflect his wisdom. The text at first glance seems fragmented and disorganized, probably because the author drew on various sapiential sources that they circulated at the time, we are around 200 b.C.

The integration operation, which we have extensively talked about, us made it possible to bring a certain uniformity and greater completeness literary to the entire text, respecting the original intentions of the author.

Thanks to the integration with words and phrases taken from the translations of various Bibles, verses and words, the main subject of our investigation, in my opinion they have acquired meaning and added value, if read within the general context of the "new work".

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I have already stated, in describing the history of this biblical research, that from the first moment I read the aforementioned enigmatic phrase in the Book of Sirach, I had intuited that it could refer to the DNA formula, whose structure is composed of two strands paired opposite each other. At first glance it seemed "unthinkable" to be able to give credit to a "senseless" idea that had flashed to me at the moment of instinct. I immediately discarded this hypothesis, because on the one hand the sentence offered very few elements for a sufficient evaluation, but also and above all because it was not supported by explanatory notes or by any comments that often accompany the various Bibles.

I reiterate that, thanks to the contribution and integration of different words and phrases collected from the translations of various Bibles consulted, it was possible to rework a

"new text" which, while maintaining the same structural characteristics of the original text, is enriched in its contents and with greater literary and narrative completeness.

I would like to point out that the Bibles consulted and taken into consideration for this study are official, and all provided with imprimatur by the Catholic Church, as such, we can give "full value" to the use of the words and phrases that have allowed us to develop this research.

THE INCREDIBLE CONFIRMATION

By re-examining the phrase object of this research "**all things are in pairs, one in front of the other**" and re-reading it within the new elaborated text, from an overall view and from an angle of scientific analogy, we can glimpse signs, indications and references which, confirming the initial suspicion, could be associated with the bio-molecular structure of **DNA**. As many know, DNA represents the source and the bio-molecular basis on which the life of a living being, both animal and plant, is based, whose most important function is to transmit hereditary characteristics from one individual to another.

In fact, under the apparent mysterious phrase, one could hide with great amazement and with sufficient clues **the bio-molecular formula of DNA**, in its structural form of the two coupled strands (the two nucleotide chains), placed one in front of the other.

Incredibly, from the various biblical translations there are also several words that refer not only to the fundamental characteristics of DNA, but also to some of its functions. Even instructions, advice, and warnings can be found for an ethical use of the things created by God.

COMMENT AND EXEGETICAL CONTRIBUTION of the biblist Don Mario Vito Martorina

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To attract hermeneutical attention is precisely the concept of "**being placed one in front of the other**" which we find twice in the book of Sirach, exactly the first time in Sir. 33,15 and the second time in Sir. 42,24-25. We find ourselves within a sapiential vision of Creation and its wonders, a reflection of the Being and of the Glory of God. The specific context of each of the two steps under consideration is interesting. Regarding the **first step**, in the official C.E.I. version of the Bible Edita da San Paolo 2020 (Cinisello Balsamo Mi) the title in red of the pericope (rubricaria) expressly speaks of "**creation and its binary composition**", as a peculiar and fundamental characteristic of all the existing: **<< Consider therefore all the works of the Most High two by two, one in front of the other >>** (in Greek) "diúo diúo, en katémanti tou enós". So it is therefore for Sir. 33,15 within the pericope of 33,7-19. The **second step** of Sir. 42,24-25 instead is found within the pericope of 42,15-25, titled in the rubric as "**Wisdom and creation: the song of wonder**", which in turn is part of the last section of the book of Sirach including the CC. 42,15-50.29 where we speak of "**The Wisdom of God in Nature and in the History of Man**". To vv. 24-25 of Chapter 42 it says: *<< All things are two by two, one in front of the other, He has not done anything incomplete. One confirms the merits of the other >>*, (in

Greek) "pánta díssá, én katénanti tou enós". In the Greek language, "díssá and díúo díúo have the same meaning as " two by two ", while " én katénanti tou enós "means" facing each other ".

But in the pericope of Sir. 42,15-25 there are other interesting verses to give basis to our hypothesis and they are: vv.17 <<... **the Almighty has established that the universe stood firm in his glory** "... >> vv. 18-19 << **The Most High knows all science and observes the signs of the times, announcing past and future things and revealing the traces of those hidden** >>. Which means biblically that all science and all human sciences are always the work of God, who himself determines when the signs of the times are ripe to reveal the traces of what was still hidden from human knowledge. Biblically scientific progress is always within the work of God in continuous creation. And what about v.23 which amazes us by stating that: << **All these things** (the entire universe) **have life and will remain forever?** >>.

We are astoundingly confronted with today's conception that the whole universe is vital, alive and stable. But if there hadn't been man, if humanity had never existed, made up of male and female, in the image and likeness of God, if there hadn't been intelligent human life, would there have been a "science"? Could one ever speak of science, knowledge acquired and transmitted, reasoning intelligence, thought reflected, compared and transmitted from generation to generation? Here is Sirach with that concept of "being placed one in front of the other", with that **binary composition of all creation**, a mirror that reflects and makes God known as "Life", as "Life in itself" that it gives rise to all that exists, it takes us back to the divine Revelation of the Holy Bible, to the first time in which "being placed one in front of the other" appears.

We are directly referred to the second story of the creation of humanity (man), male and female in the image and likeness of God, because "... it is not good for man to be alone: I want to make him a corresponding help" (Bible C.E.I. Ed . Pauline 2020). Other translation C.E.I. past << *I want to make him a help that is equal to him* (Bible C.E.I. 1974), *or a help worthy of him* >> (Bible Ed. San Paolo 2010). But what do the Hebrew and Greek texts of the LXX (seventy) say? The one of the LXX says << *poiésomen autô Boetón kat'autón* >> which translates as: << *we want to make a help for him that stands in front of him* >>. In ancient Greek, the preposition "katà" with the accusative of place translates as "in front". What does the Hebrew text say? He says << 'e 'e sèh lô 'ézer K-neghdô >> which translates <<*I want to help him that is in front of him*>> and in this sense "that corresponds to him", "that is equal to him" or "Worthy of him", legitimate translations but weaker in meaning than the literal one.

That << two by two >> and << one in front of the other >>, in the perspective of "God who knows all science, observes the signs of the times, announces past and future things, reveals the '**Traces**' of the hidden ones ", could really hide in the biblical text, **not** a clear and clear scientific discourse on the structure of **DNA**, **but** "the divine secret" of the Wisdom of God the Creator which over time reveals to man (through the use of reason and the reflective application of the intelligence received from him) the profound knowledge of all things, applied and applicable, transmissible through human knowledge, verified and verifiable that man calls "science".

But there is a good science, how is man himself very good, and all things created by God good, without Wisdom? It is necessary to deepen the ethical-anthropological meaning, and not only cognitive and epistemological, of why the creation of all things culminates, on the

sixth day, with the creation of Humanity as a "human family" made up of male and female, both equally and together, "image and likeness of God". God does not create the male for the facts of him and so does the woman. He creates the "human family", made up of male and female, at the same time fullness of the image and likeness of God. And he creates it for the happiness of life, happiness that is achieved in the "integrative company" between man and woman, or rather of that "binary polarity" which will make *"the two one flesh"* (Gen. 2,24) and make them happy, *"because it is not good for man to be alone!"*. Happy with a happiness that is not achieved in the possession of things, goods, but in the relationship of "supplementary company" between man and woman. A happiness that first of all will make them recognize the same as *"bone from my bones"* (= strong) and *"flesh from my flesh"* (= fragile), both in need of unity, integration and mutual completion, becoming precisely "one flesh". If both are clothed with strength (= bones) and weakness (= flesh), neither of them prevails over the other. The substantial "equality of nature" does not consign them to the opposition of people in gender or roles, but is a natural vocation of synthesis in the unity of the relationship lived in a form of mutual **"complementarity"**: the two will be one flesh. The unity of relationship as a way to happiness, in the awareness of having equal dignity and fundamental equality, reveals the beauty of that "companionship of life" and "companionship in life" which is the necessary **"binary polarity"** of man and woman, of male and female, all contained and expressed in the concept of being *"placed one in front of the other"*.

The "binary polarity" is a reflection of the "binary composition" of the form and essence of life, placed by God at the structural basis of everything that exists and which is reflected down to the bio-molecular level of nature, both animal and vegetable, in the DNA.

And so we return to the significant text of Sirach 33,15 and 42,15-25 Bible C.E.I.
<< Consider therefore all the works of the Most High: two by two, one in front of the other ... the almighty has arranged for the universe to be firm in his glory (42,17) ... He scans the abyss and the heart, and penetrates all their secrets. The Most High knows all of Science and observes the signs of the times, announcing past and future things and "revealing the traces of the hidden ones" ... He has arranged the wonders of his Wisdom in order ..., nothing is added to him and nothing is taken away from him ... All things have life (all creation has a living structure) and remain forever... All things are "two by two, facing each other", He did nothing incomplete. One confirms the merits of the other >>. And almost with a suspension: <<Who will be satisfied with contemplating his glory?>>.
For granted: **None!**

God's creative Wisdom for the Bible, divine revelation, reflects its unfathomable, inexhaustible and wonderful Glory in creation, it contains and founds all science understood as knowledge acquired and discovered by man. It develops in human history and manifests itself in every new scientific acquisition, as the fruit of the exercise of reason, the natural gift of God made to men, which in no way opposes the supernatural gift of faith. Thus, by carefully evaluating the translations of the original texts of the Bible, it is possible to discover the **"Traces"** of that "still hidden science", an expression of the divine creative Wisdom of God. These traces can also be **"Intuitions"**, characteristics and fundamental, of a possible reference to **DNA**, not as a scientific datum pre-contained in the Bible (which is not a book of exact sciences), but **analogically**, as a reference and discovery of the inner truth and wisdom of all things created by God for the good of man in the knowledge of himself and of what surrounds him. Indeed, **the science that discovers what already exists** in the marvelous creation of God, Maker and Author of all things. By

discovering and using the wonders of human science with wisdom and respecting their natural order (Sir. 42,21), God is discovered and known as the Creator, and man exercises his service as guardian and user of creation (Gen. 1,27-29), maintaining its original goodness: << *And God saw what he had done, and behold, it was very good!* >> (Gen. 1,31).

Science and Faith are always reconciled in the manifestation and custody of divine Wisdom: << *since what one can know about God ... his invisible perfections, that is, his eternal power and divinity, are contemplated and understood by the creation of the world through works accomplished by him (God)* >> (Romans 1,19-20). Science and Faith, Reason and Religion, Human Thought and Natural Order, Human Intelligence and Divine Wisdom, Respect for the Structure and Nature of Life, Ethics of History and Ethics of Created Nature, find in God the Creator their origin, their ultimate goal and their harmonic composition. Everything is found in God if everything comes from God. Everything is composed in him and in him it finds full understanding and fulfillment: << *In him was life and life was the light of men* >> (Jn 1,4), because "*Everything was done through him and without him nothing was made of everything that exists*" (Jn 1,3).

Human science for the Bible is not creation from nothing, but the discovery of what already exists: a coming to light of a **hidden truth** whose **signs**, in the specific case of this study, would legitimately lead to **associating the phrase from Sirach: "all things are two by two, one facing the other"** to the **DNA**, in strength and thanks to the discovery of the numerous references and precise analogies found in the various biblical translations.

Don Mario Vito Martorina - biblist

Diocese of Noto (Syracuse)

THE METHODOLOGY USED

BOOK OF THE SYRACH Chap. 42

THE WISDOM OF GOD IN THE WORKS OF NATURE

SYNOPTIC ARRANGEMENT OF THE VERSES

The words and phrases identified are highlighted, and then used, for the reconstruction of the new text

BIBLES CONSULTED Translation	Verses 15-22	Verses 23-25
<p>1BIBLE OF MILLENNIUM 1999, Imprimatur: Mons. Carlo Meconi San Paolo Editions</p>	<p>His works are done with the words of the Lord. The Most High possesses all the science, unveils past and future things, and reveals the traces of hidden things. He ordered the wonders of his wisdom before time and for eternity (4) His works are all pleasant, even if we see their spark.</p>	<p>All these things have life and last forever all are necessary (8) e all obey. All things are double facing each other, he did nothing incomplete, the one completes the goodness of the other: who will finish contemplate the glory of him? (15).</p>
<p>2THE HOLY BIBLE OF JERUSALEM 1974, Imprimatur: Mons. Marco C'e By the CEI Dehonian Editions -EDB</p>	<p>His works were created with the words of the Lord. The Most High possesses all science (5), announcing things past and future, and revealing the traces of those hidden. He has ordered the wonders of his wisdom. Nothing can be added to it and nothing removed (9).</p>	<p>How lovable they are all her works! And just one spark can be observed All these things live on and they will stay in forever all circumstances (2) and all obey him. All are in pairs, one of opposite the other, he does not have done nothing incomplete. One confirms the merits on the other hand, who will be satisfied in contemplating his glory?</p>
<p>3THE BIBLE TOB 1998, Official Edition of the CEI Elle Di Ci Publishing House</p>	<p>His works stand by the words of the Lord. The Most High knows all science (5), announcing the past and future things, e revealing the traces of those hidden. He has ordered the wonders of his wisdom to him, nothing can be added to him either removed from the work of God How lovable they are his works! It has just a spark can to observe.</p>	<p>All these things live on and they will remain forever in all circumstances, and all obey him. All are in pairs, one of opposite the other, he does not have done nothing incomplete (3) = unnecessary TOB comment One confirms the merits of other, who will be satisfied with contemplate their glory?</p>

<p>4 THE BIBLE 1997, Imprimatur: Mons. Carlo Meconi They reviewed: the Old Testament Gianfranco Ravasi, the New Testament Pietro Rossano San Paolo Editions</p>	<p>His works are done with the words of the Lord. The Most High possesses all the science, and fixes his eye on the signs of the times, reveals past and future things and reveals the traces of hidden things. He ordered the wonders of his wisdom to him. All his works are pleasant, even if we see a spark of them.</p>	<p>All of these things have life, and they last forever. All are necessary and all obey. All things are double, one in front of the other, he did nothing incomplete, one completes the goodness of the other: who will finish contemplate the glory of him?</p>
<p>5 THE BIBLE In Current Language 1985, under license from CEI, Elle Di Ci Edition</p>	<p>With his word the Lord created the world (1). The Most High (4) knows everything and puts us on the trail of what is still hidden (5), with wisdom he has arranged his marvelous works along the course of history (4) There is nothing to add or to take away from his Opera. How beautiful are his works, even the smallest is stupendous (1).</p>	<p>Everything he did it is stable (13) and useful (3). All things come in twos two, and they match (10). Everything it contributes to the good of the other (12) and if you start contemplating God's work you never finish (15) because the Lord has left nothing incomplete.</p>
<p>6 THE HOLY BIBLE 1968, by delegation of Superior Sac. Eugene Fornasari S.S.P. Ed. Pia Società S. Paolo.</p>	<p>With his word the Lord has done his works, and all obey his will, following his laws (1). The highest possesses all science, and foresees the signs of the times, announces the past and the future and reveals hidden things. God has arranged the wonders of his wisdom in order, since he has always been and forever: nothing can be added or taken from him. How beautiful are all his works! A spark is not given to contemplate</p>	<p>All are alive and long lasting centuries, and in every occurrence all obey him. All they are different from each other, and he has done nothing that is useless (3) The good is communicated with each other: who can satisfy his appetite beauty? (15).</p>
<p>7 THE HOLY BIBLE 1964, Imprimatur: Vicarius Urbis Aloysius Card, Garzanti Publisher</p>	<p>His works were created with the words of the Lord. The Most High possesses all science and sees deeply in the signs of the times, announces the past and the future, and discovers the traces of hidden things. He</p>	<p>How many are all lovable her works! it has just a spark can contemplate! All these things live and last forever, and all, just in case, they obey him. They are all combined (6), one facing each other, and he did</p>

	<p>has arranged in order the magnificence of his wisdom (1). Nothing can be added or removed from him.</p>	<p>nothing that was defective. The one confirms the goodness of the other; and who is satisfied with admire the glory?</p>
<p>8 THE HOLY BIBLE by Fulvio Nardoni 1960, Imprimatur: Antonius Ep.us Publishing Library Fiorentina</p>	<p>With his word the Lord did his works. The Most High knows all knowledge, foresees the signs of the times (5). He announces the past and the future and reveals hidden things. He has ordered the wonders of his wisdom (4), he cannot add or remove anything, and does not need the advice of anyone. How many are all beautiful works of him! There is only one spark given to contemplate.</p>	<p>All are alive and last in centuries (2) in every occurrence and all obey him. They all go in pairs, one against each other and nothing did defective (3) In each he established the well; who can get enough of admire the glory of Him?</p>
<p>9 THE HOLY BIBLE by Giuseppe Ricciotti 1990, Imprimatur: Joachim Bonardi, Ep, tit. Salani Publisher</p>	<p>His works exist by the word of the Lord. The Lord knows everything and he observes the signs of the times (5) and reveals the traces of occult things (5). The magnificence of him was his wisdom he prepared and did not need the advice someone. How many lovable are all his works! (1) And hardly a spark can be contemplated! (1).</p>	<p>All these things live on and they last in perpetuity (2), and all in every occurrence obey him. All are paired (6), facing each other, and he has done nothing lacking (3) of each has insured the good through the other ** (12): and who will be satisfied with contemplating his glory? (15).</p>
<p>10 THE HOLY BIBLE 1958, Imprimatur: Raphael Deacon Ep.Suffra? Episcopal Curia Albanian. , Pauline Editions</p>	<p>With his word the Lord has done his work. The Most High knows everything knowledge and foresees the signs of the times. He announces the past and the future and reveals hidden things. God has arranged in order the wonders of the wisdom of him, not you can add neither take away nothing, nor has he need the advice of I any. How beautiful they are all the works of him! (1). Only one spark is given contemplate.</p>	<p>How beautiful are all his works. Only one spark is given to contemplate. All are alive (7) and last over the centuries other always in each occurrence all obey him (14) All are different from each (10), and nothing has done that is useless. Good is communicated to each other (11)</p>
<p>11 THE BIBLE Christian formation 1993, Imprimatur:</p>	<p>The Most High knows the whole science by revealing</p>	<p>All things are in pairs facing each other, he has not done</p>

<p>Mons.Claudio Stagni EDB editions</p>	<p>the traces of those hidden, he has arranged in order the wonders of his wisdom of him. How lovable are all his works. All these things have life and will remain forever, for all needs, and all obey him.</p>	<p>anything incomplete, one confirms the merits of the other. Who will be satisfied with beholding his glory?</p>
<p>12 THE BIBLE For the family 1996 Comment by Gianfranco Ravasi S. Paolo Editions</p>	<p>His works were created with the words of the Lord. The Most High possesses all the Science, he reveals things past and future and reveals the traces of the hidden ones He has ordered the wonders of his Wisdom, his works are all pleasant, All these things live and they last forever, all are necessary and all obey.</p>	<p>All things are in pairs facing each other (6); he has done nothing incomplete. The one completes the goodness of the other (12) Who will be satisfied to contemplate his glory?</p>
<p>13 THE BIBLE by the JESUITS 1980, Imprimatur: Arch. Carlo Maria Martini Rusconi Editions</p>	<p>The Most High knows everything the knowledge, announcing the past and future things, revealing traces of those hidden. He ordered the wonders of his wisdom, As I am lovable all his works! Yet what if he can contemplate is like a spark.</p>	<p>All these things exist and they will remain for centuries, for every need, and all obey. All are in pairs, facing each other; he did nothing superfluous (3). The one specifies the merits of the other (12). Who will be satisfied with contemplating his glory?</p>
<p>14 THE BIBLE Brand new version 2007, San Paolo Editions Skira Publisher</p>	<p>The Most High possesses all the Science = knowledge (5) His works are done with the words of the Lord. He reveals past things e future and reveals the traces of hidden things, he ordered the wonders of his wisdom. Son all his pleasant ones works (1).</p>	<p>All these things have life and last forever, all are necessary and all obey. All things are double, one in front of the other, he did nothing incomplete, one complete the goodness of the other. Who will stop contemplating the glory of him?</p>
<p>15 THE PIEMME BIBLE 1995, Imprimatur: Carlo Cavalla - Bishop Author of the CEI</p>	<p>His works stand by the words of the Lord. The Most High knows the whole science, announcing the past and future things, e revealing the traces of those hidden. How lovable are his works! Hardly a spark can be observed.</p>	<p>He ordered the wonders of his wisdom, nothing can be added and nothing taken away. All these things live and will remain forever in all circumstances and all obey him. All are in pairs, facing each other, he hasn't done anything incomplete. One confirms the merits of the other. Who will be satisfied</p>

		in contemplating his glory?
16 THE HOLY BIBLE 2008, official version by the CEI Vatican Publishing Library	His works stand by the words of the Lord. The Most High knows the whole science, and he observes the signs of the times, announcing past and future things and revealing the traces of the hidden ones. He has arranged in order the wonders of his wisdom of him, he alone is always and forever: nothing is added to him and nothing is taken from him. How lovely are all his works! And hardly a spark can be observed.	All these things have life and will remain forever for all needs (2), and all obey him. All things are two by two (6), facing each other, he did not do nothing incomplete. The one confirms (12) the merits of the other: who will be satisfied with contemplating his glory?

The number that appears next to the words highlighted in color indicates the destination on the relevant paragraph of:

"NEW TEXT PROCESSED"

Is structured in two parts:

A) **The first part**, paragraphs 1 to 4, refers from verses 15 to 23 which deal, in general, with the wonders of the works of nature, as the Wisdom of God conceived and desired them.

B) **The second part** of the paper, paragraphs 5 to 15, develops the last two verses 24 and 25 of Chapter 42 of the Book of Sirach, which refer to the words object of this research:

"all things are two by two, facing each other"

ANALYSIS OF THE RESULTS

BOOK OF THE SYRACH Chapter 42

THE WISDOM OF GOD IN THE WORKS OF NATURE

THE NEW INTEGRATED AND RELABORATED TEXT

FIRST PART

Paragraphs 1 to 4

Reconstruction of the new text Verses 15-23	COMMENT
<p>1 By his word the Lord created the world and did his works, and all obey his will, following his laws. He arranged the magnificence of his wisdom in order. All his works are pleasant. How beautiful and lovable are all of his works, even the smallest is stupendous. And hardly a spark can be contemplated!</p>	<p>1 The Bible reveals to us that all of God's works are the fruit of the "materialization" of his word. He created his works through his Wisdom, and they all obey his will. God has arranged in order in the course of history the wonders of his work, even if we do not yet know them all in their complexity and entirety. "We see only a small part of his works, there are even greater hidden wonders that we do not yet know" (Sirach, Chap 43,32-33). In the book of Genesis we learn that God is the Creator of all things, like an artist, he is also satisfied with them. He himself is pleased with what he had created: "God saw all that he had made, and behold, it was very good thing "(Chap 1.31)</p>
<p>2 All these things live and last forever over the centuries, and will remain forever, under all circumstances and for all needs.</p>	<p>2 These verses could refer to the source of life and living matter. A work that would not know an end, because it is necessarily destined to remain and last as long as there is life in the universe.</p>
<p>3 God has done nothing that is useless, he has done nothing defective, he has done nothing incomplete, deficient or superfluous. Everything he has done is useful.</p>	<p>3 Everything that God created has a very specific purpose and meaning, he has done nothing that is useless or defective: the fullness and completeness of his work reflect the image of his Wisdom, they express the essence and existence of God.</p>
<p>4 The Most High with wisdom has arranged his marvelous works along the course of history, before time and for eternity.</p>	<p>4 God's works reflect the perfection and harmony of created things in the awareness that God pre-existed creation: "in fact, ever since God created the world, men can see with their intelligence his invisible perfections that he did "(Romans 1,20). "Everything was made through him and without him nothing was made of everything that exists" (Jn 1: 3). Even the genome, which regulates all the biological activities of a living being (animal or plant), could fall into this category of marvelous works.</p>

BOOK OF THE SYRACH Chapter 42

THE WONDERS OF CREATION

The State – The Features – The Functions – The Obedience

THE NEW INTEGRATED AND RELABORATED TEXT

SECOND PART

Paragraph 5 to 15

Reconstruction of new text Verses 24-25	COMMENT
<p>5 The Most High knows and possesses all science and knowledge, knows everything, knows everything that is known, observes and foresees the signs of the times, puts us on the trail of hidden things, and of what is still hidden.</p>	<p>5 The author states that God, in the qualities of Creator of heaven and earth, possesses the knowledge of all "knowable". In the Treccani dictionary the word "knowable" is defined as: "The set of ordered and coherent knowledge, organized according to criteria of different historical periods". The text of Sirach makes it clear that everyone is allowed to have access even to the things of creation that still remain "hidden", giving wisdom to those who love him (Sir 43,33). It is as if the Lord wanted to stimulate us to seek the things that are not yet known thanks to the intelligence that he has given us.</p>
<p>6 All things are in pairs, facing each other, matched and paired two by two.</p> <div style="text-align: center; margin: 10px 0;">  <p style="font-size: small; margin-top: 5px;">Struttura del DNA</p> </div>	<p>6 <u>All</u> the biblical translations of Chap. 42 of Sirach, verses 24-25, have the same wording: "all things are combined", "paired in pairs two by two" and "face each other". We have come to the moment to give a possible interpretation to the words object of this investigation. I believe that we have "sufficient elements" available to associate the generic term "things" with the DNA molecule, formed by many serial units, called nitrogenous bases, paired one in front of the other (represented in the figure with A, T, G, C) and linked together, to form two strands (the two nucleotides), which make up the basic unit of the classic molecular structure of DNA (see models represented here). Everything seems to be confirmed and supported by the following words which, with meticulousness and incredible precision, would describe not only the nature and characteristics, but also some important functions, even instructions are given for an ethical and correct use of things. This is what science first discovered in 1953 by the scientists Watson and Crick, who presented the first model of DNA, namely the double helix model, as we know it today:</p> <p style="margin-left: 20px;"><i>"Two strands paired facing each other, with a chemical structure formed by two polynucleotide chains, paired and spiraled around the same axis, so as to form a double helix".</i></p> <div style="text-align: right; margin-top: 10px;">  </div>
<p>7 All are alive.</p>	<p>7 There is no doubt that these "two things" are alive, because they represent life in itself and are the basis of the living being in its fullness and entirety.</p>
<p>8 All are necessary.</p>	<p>8 Both things are necessary, it means that there cannot be a</p>

	single element to be able to express their value and their function.
9 Nothing can be added to him and nothing taken away from him.	9 "Nothing can be added or taken away": The structure of things is unchangeable, because everything created by God represents perfection. With this sentence, it seems that the author wants to send a warning to the future world, to say that it is not allowed to "modify" or "manipulate" the things created by God. Violating the genetic code of DNA, with the aim of modifying nature of the living being could represent a transgression to the divine plan of creation. From the book of Genesis we learn that life represents a sacred and inviolable gift from God, which man has the task of admiring, preserving and safeguarding.
10 All are different from each other and correspond to each other.	10 The translation from Hebrew reads: "Everything is different from one another, he hasn't done anything in vain". Referring to the structure of DNA, we can state that each strand is structurally different from one another: each basic structural component, the nucleotide, differs both in position (sequence of nitrogenous bases) and in the chemical formula. Furthermore, the two chains are not each in their own right, but are related to each other, and mutually correspond to each other. In scientific terms they are called "complementary chains", which means that they complement each other. Therefore, each chain cannot exist alone, because one depends and is dependent on the other.
11 The good is communicated to each other.	11 The two things communicate " the good ", they exchange information with each other aimed at achieving the good of life. Some translations point out, with great meticulousness and precision in terminology, that the two things communicate good to each other, one through the other, confirming the indisputable characteristic of "functional reciprocity" inherent in the biological structure. molecular DNA.
12 One completes and confirms the goodness and merits of the other, one specifies the merits of the other, everything contributes to the good of the other, has ensured the good of each through the other.	12 Sirach seems to clarify and reiterate, with different and incredible detail in the choice of words, and with equal precision, the previous concept of good. The verbs used by the various translators are: complete, confirm, specify, contribute, ensure that they make the binary concept of " reciprocity " of the things of creation more than exhaustive: "one thing was created to complete and serve the other" . The two expressions: "good is communicated to each other" and "through each other", transmit the principle of complementarity inherent in the things of nature, a principle that <u>is reflected down to the bio-molecular basis of life</u> . These words allow us to validate the interpretation we have given to the text of Sirach, associating by analogy his words, apparently enigmatic, to the molecular structure of DNA, with specific reference to the complementarity of the two chains. In fact, today, this science states: " <i>DNA is made up of two paired and complementary strands, which mutually depend on each other, together indispensable in expressing the genetic code that uniquely identifies and characterizes each living being existing on earth, animal or plant</i> ".
13 Everything he did it is stable.	13 DNA is the fundamental basis of life, and the stability of the system is an indispensable prerogative to ensure that all genetic information, with hereditary characteristics, is transmitted correctly and without errors from one individual to another, in order to ensure the constancy of hereditary characteristics that

	<p>make an individual similar to his parents. The stability of the genome of a living being, on the functional level, is ensured by the “perfect” DNA replication mechanisms. We know from the chemical structure of DNA that the stability of each chain, formed by a sequence of nucleotides, is guaranteed by strong bonds, so-called "covalent", while the two chains are held together by hydrogen bonds interposed between the nitrogenous bases. Any replication errors can generate a mutation of the genome, a phenomenon outside God's original plan. In fact, science has ascertained that, generally, a possible DNA mutation can be caused by the interaction of the genome with "mutagens" , toxic chemicals produced artificially, introduced by man into the natural environment since the so-called '<i>industrial society</i>' has existed.</p>
<p>14 All obey him in every case and always in every case.</p>	<p>14 The "two things" that DNA would represent constitute the source of life. God created a perfect system and in order for it to function properly it is necessary to obey his Creator and conform to his will. From the book of Genesis we learn that God created life and therefore we have a moral duty to obey our Creator. Life is an absolute value, man cannot dispose of it at will, he is required to respect the divine will, exercising his service as guardian and user of creation.</p>
<p>15 And if you start contemplating God's work, you never finish.</p> <p>Who can be satisfied with admiring its beauty and will finish contemplating his glory?</p>	<p>15 Contemplating the structure of the genome of a living being, in its smallness and in all its complexity, cannot fail to arouse a sense of wonder and amazement. The believer glimpses the glory of God in it. The question is of course rhetorical: no one will ever be able to stop admiring and contemplating the work of God, a reflection of absolute perfection. Man, due to his finitude, will never be able to discover it in all parts of him, he just has to contemplate his beauty. With these words, the author seems to want to send us an extremely topical message and, at the same time, indirectly also a warning: <i>"We must commit ourselves to respecting "life" and "nature": two elements that must constitute for man only "objects" of contemplation and not "subject" to manipulation.</i></p>

From n°1 to n°5 the Wisdom of God and the wonders of nature are described

From n°6 to n°9 the state and characteristics of all things are described

From n°10 to n°13 the functions of all things are described

From n°14 to n°15 man's duty to obey his Creator is remembered

THE RESEARCH CONCLUSIONS

From the literary comparative analyzes of the various biblical translations, from verses 15 to 25, of Chapter 42 of the Book of Sirach, it is undeniable that "all" coincide coherently and harmoniously with each other in describing the wonders of the works of creation. The elaborated text, reconstructed and enriched with meaning thanks to the addition of words and phrases taken from the multiple biblical translations, maintains the same narrative structure, but presents a greater wealth of variants of meaning resulting from the translation of a series of the same words as the original text which, when compared, give the text itself greater literary and hermeneutic organicity, also allowing, in my opinion, to assign a meaning and a deeper interpretation.

It is evident that the author in those times, we are in 200 BC. about, not being aware of specific scientific knowledge, nor of adequate technical terms (which have been acquired by scientific research since the 1950s), he could express himself only with allusive words and phrases, with clues and signs of hidden reality that they certainly faithfully reflect the fruit of his inspiration, his farsightedness and his personal intuition.

In the light of what emerged during the entire procedural process, carried out in a strictly scientific manner, I think it "makes sense" to be able to correlate the words: "all things stand two by two, one facing the other", to the chemical structure of DNA, making use of some precise analogies in terminology, which agree well with the scientific data we know today, both on the chemical formula, on the molecular structure and on some functions of DNA.

Even Cardinal Gianfranco Ravasi, in the pamphlet published by Mondadori "Biblical Conversations", in examining the phrase from Sirach "all are in pairs, facing each other, he has not done anything incomplete", makes it verbatim a <consideration of a scientific nature> even, with reference to the translation into Hebrew, associates the verse (Sir.42,24) with the diversity of the fingerprints of all living beings.

It is certain that the Bible is a book of faith and, as such, it cannot be the bearer of pre-established scientific data, but traces of that "hidden science" can be discovered, an expression of God's creative wisdom. In evidence this study, human intelligence can and must grope to discover the "divine signs" that the various authors of the Bible have handed down to us over the centuries.

I feel the duty to close my research work, certainly with an exciting and exciting tone, with some "words" borrowed from the exegetical commentary of Don Mario Martorina, to whom I sincerely express my deepest gratitude for the advice received, and for the commentary and his exegetical contribution as an expert connoisseur of biblical texts, confirming and corroborating, with numerous and precise references from the Holy Scriptures, the methodological approach that led to confirm the idea of being able to associate the words of Sirach to the structure of the DNA:

Human science is not creation from nothing, but the discovery of what already exists. And man, in God's wonderful creation, finds time debt 'as a coming to light of hidden things' the signs of which, in case specific to this study, they would lead to associate the phrase from Sirach "All things are two by two, facing each other" to DNA, by virtue of the discovery of numerous references and precise analogies found in the various biblical translations



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OF THE WISDOM GOD IN THE WORKS OF NATURE

Authentic Phrases and Words taken from the Book of Sirach

Chap. 39, Chap. 42, Chap. 43 and from Chap. 9 of the book of Wisdom

* * * * *

→ MASTER READING

The Most High knows and possesses all science and knowledge, knows everything, knows all knowledge, observes and foresees the signs of the times. With Wisdom he arranged all his wonderful works throughout history, before time and for eternity. **By his word the Lord created the world and made his works very good, and all obey his will, following his laws.** The Lord clothed men with knowledge and intelligence, so that they might see the greatness of his works, praise his holy name and tell of his magnificence. Let everyone know that the Lord is great and tell him your thanks. He has arranged the magnificence of his Wisdom in order. **All his works are pleasant. How beautiful and lovable are all his works, even the smallest is stupendous.** However, little is what we see of his works, we see only a small part of them, but there are much greater hidden wonders that we do not know. We can hardly imagine the things that are on earth, and with great difficulty we discover those that are within our reach: barely a spark can be contemplated! However, the Lord puts us on the trail of hidden things, and of what is still hidden. **God has done nothing that is useless, he has done nothing defective, he has done nothing incomplete, deficient or superfluous, everything he has done is useful.** The Lord, in the fullness of his wisdom, made men different, one different from the other and assigned them different destinies. **All these things live and endure forever through the ages, and will remain forever, under all circumstances and for all needs.**

→ COMMENT

God created everything with a purpose, a precise end, and he destined it for the good and happiness of all men. For all his works there will be a timely response from him and everyone will realize that everything is good. From the Bible we learn that "only" God's Wisdom possesses all science and knowledge. His Word which overcomes "nothing", the initial chaos, creates all things, all wonderful works that obey his will. The Bible also asserts that man can only see a small part of God's works, there are hidden marvels that we still do not know, even if the author of the text (the Sirach) reassures us by stating that "the Lord puts us on the edge << traces >> of what is still hidden". Ultimately, from the biblical story it is clear that God's Creation is a complex and prearranged project, not due to chaos, but which obeys very specific natural laws and connected to each other in evolutionary and manifestational development. This creational project of Divine Wisdom has nothing "useless", "defective", "incomplete", "lacking", or "superfluous", all of its works "last forever over the centuries, they will remain forever, in all circumstances and for all

needs", which means that Creation is structurally good, it is not destroyed, but grows and transforms. "We see only a small part of it now, but there are greater hidden wonders that we don't know about." However, the Lord gradually puts us on the "traces of hidden things and of what is still hidden". The Divine Project of Creation is not static but evolutionary, i.e. in a constant implementation phase, and has things to reveal to us in the future that are even greater, more marvelous and more beautiful than we already know. Man adds nothing to God's plan, but finds, uses and wisely enjoys all the works that God has prepared for our good and for his glory. For this reason, man has the task of guarding, managing and using wisely, according to God's will, all the works and marvels of the Divine Creation of the entire Universe, going in search of hidden things and hidden knowledge of creation, proceeding in this research hand in hand with the evolutionary process inherent in things and in the dynamics of nature. We can then understand that science is not creation out of nothing, in other words the scientist discovers nothing original, he discovers what already exists and has always existed in God's created work, and uses it for progress for the good of all. 'humanity. Every new scientific acquisition is like a coming to light of that still hidden science whose "signs" are an expression of God's divine creative Wisdom, as the fruit of the intelligence given by God to men, so that through the consideration and contemplation of created realities could see the greatness of his works and tell of their magnificence.

→ **COMMENT AND OPINION**
by H.E. the Bishop Monsignor Antonio Staglianò

I read with interest the text of Dr. Antonio Caruso's research on the verses of Sirach in which one can glimpse "signs, clues, words" by analogy attributable to certain gains of today's natural sciences, such as DNA. I think the things written here have their own hermeneutic relevance and are really interesting. They can be included in the hoped-for trans-disciplinarity of knowledge, of which Pope Francis speaks in "Veritatis gaudium". In fact, overcoming a banal "concordism" the fact remains (believed) that Revelation and Creation have God as their author. Therefore it is up to us, with intelligence and open reason, to investigate to discover traces and images of God's holy face in creation.

This research can be done in all fields of knowledge, in astrophysics as in elementary particle physics, in biology as in neurology. In this context the reflection proposed by the biologist Antonio Caruso on DNA with reference to the Sirach *"considers therefore all the works of the Almighty two by two, facing each other"* chap. 33,15- must be continued from the scientific point of view to verify the possibility that "analogice loquendo" can come from the Bible an inspiration, an indication such as to advance scientific research itself. This is the epistemologically difficult aspect because it clashes with the modern prejudice according to which faith inhabits the field of irrationality and could offer nothing to scientific reason, while instead it should take everything from scientific reason in order not to fall into superstition.

the Bishop of Noto Monsignor Antonio Staglianò

→ THE BINARY NATURE OF THE WORKS OF CREATION

In Chapter 33 of the Book of Sirach at vv.14-15 we read verbatim:

"In the face of evil there is good, in the face of light, darkness, in the face of death, life, in the face of those who reject God there is it is who recognizes it. He therefore considers all the works of the Most High two by two, one opposite the other".

By observing the things of the world and what exists in nature, we can see the characteristic binary nature of things. It is the principle of the "dual aspect" which would be inherent both in the physical nature of many things of creation, but also in the events that characterize the spiritual and intellectual sphere of man, of social, political, religious activities, etc. According to the Bible they would constitute distinctions and differences, present in creation and in human life, willed by the Wisdom of God who has disposed everything of creation with perfect order, harmony and benevolence, deemed necessary to maintain balance and harmony in world.

There are countless things with a "double aspect" scattered in nature that can be both "physical" and "abstract", placed in pairs two by two, facing each other. Just think of the pair of man and woman, the pair of right and left limbs of an animal, the pair of wings of a bird, the pair of eyes and ears, the lungs, the cerebral hemispheres of man, and so on, many others things. It is strongly indicative, and at the same time incredible, that the dualism of created things is reflected up to the basic bio-molecular unit of nature, i.e. the basis of the life of a living being (both animal and vegetable), represented by two strands (nucleotides) placed in pairs in pairs, facing each other, to form the DNA structure. Even going to consider the intellectual abilities and spiritual activities of man we can detect opposing aspects such as: light and darkness, good and evil, life and death, honest and dishonest, good and bad, the beautiful and the ugly, the believer and the non-believer, love and hate, joy and pain, justice and injustice, and then again, day and night, peace and war, the positive and the negative etc.

Even human intelligence has managed to reproduce the principle of the dual aspect on a "purely mathematical level" thanks to the philosopher and mathematician Leibniz who in the 17th century introduced the so-called "binary code" which reduced the ten signs of the Arabic numeral just two digits (1 and 0), from which all numbers originate. Leibniz, on the basis of the biblical story of creation, also hypothesized that binary arithmetic could be used as a symbol to metaphysically represent the creation of the world, assuming that the "Spirit of God" (similar to the number 1) created with his omnipotence all things from nothing, the "initial chaos" (similar to 0). The invention of the binary numbering code (based on 2) by Leibniz today constitutes the foundation of the modern computer programming language, resulting over the years in the development of "artificial technologies", the result of computer engineering applications capable of processing an enormous number of data, thanks to which man has achieved goals that were unthinkable until a few decades ago, not least for example, the creation of "robots" with humanoid aspects that are able to simulate human language and correctly answer precise questions and external stresses created by man. They are technological tools that, seeing them at

work, seem to be able to converse and understand what we are saying to them. At the base of these machines, however, there are only inert parts capable of generating 'electric signals' which in turn can produce other 'electric signals' or other physical consequences such as force or movements, but never sensations or feelings. It is only a question of imitations, there is no awareness, there is no conscious self-reflection, no such device will ever be able to be self-aware because it automatically responds to a management program instructed by a person who makes it say and do only what it was programmed for. In fact, consciousness can never be replaced by an algorithm, and this is what makes the difference between a robot and a human being. For this reason, to a superficial examination, these super powerful machines could appear capable of equaling the characteristics and peculiarities of the human mind, or even be able to replace human intelligence.

In reality, the only intelligence that can be attributed to machines is essentially the intelligence of its programmer. It is therefore clear that no "artificial intelligence" will ever be able to emulate that large number of other "Natural Intelligences" typical and peculiar to man, such as conscience, thought, creativity, emotions, feelings, joy, pain, feelings, etc.

Today, rightly so, there is great interest around artificial intelligence, a powerful computer technology, an immense "mechanical intelligence" created by man's intelligence, which attempts to replicate the potential of the human mind with the intention of improvement of the quality of life, by virtue of digital assistance, innovation in the field of medicine, development and automation in the industrial field, and so on. If used correctly, with the right ethical approach and if guided by a strong sense of social responsibility, artificial intelligence will certainly be able to bring great and multiple benefits to all humanity, but today it is not possible to predict its future and in which direction it will evolve . It is certain that artificial intelligence in the coming years will lead to a new social, cultural and industrial revolution.

→ THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE

With the beginning of the third millennium we note that science begins to progress rapidly in all fields, both in the search for "artificial technologies" and in regards to the sciences that study and investigate the functioning of "natural technologies" and the various "systems organic". The supremacy of the "mechanisms natural" on "artificial technologies", since the latter are not able to emulate what exists in nature or to reproduce the specific and peculiar potential of human intelligence.

We can see that at the basis of the super power of computers there is a code, the Binary Code, as well as at the basis of human intelligence there is another code, the **DNA**. Both codes are capable of generating amazing and astounding results. But we must observe that while the binary code, invented by man, is made up of the sequence of only two symbols **0** and **1**, instead the DNA code, which is the basis of life (animal and vegetable), is based on **four elements** called '**bases**' (Adenine, Thymine, Guanine, Cytosine). It can already be guessed that "*four*" instead of "*two*" originally means that the two codes can be combined in different ways, with a significant difference in potential in data processing and in the ability to create and transmit information. There can effectively be no competition in ability to create variables, the binary code using only two variables would not be able to create enough combinations to encode simple organic molecules, from which life appears to originate. In the course of evolution and natural selection, on the other hand, starting from those 4 elements, nature increases the level of complexity, and would have created base units made in groups of three (the so-called triplets), so the game of combinations increases in "**64 combinatorial possibilities**" (from the statistics it is clear that 4 elements combined to 3 lead to the formula $4 \times 4 \times 4 = 64$). Starting from this assumption, the first simple organic molecules could have arisen which, by combining with each other, could have first generated amino acids, then the first proteins and nucleic acids, and finally the first living cells. It is certainly correct to say that the binary code of computers, based on numbers, alone would not be sufficient to explain the origin of life, while the DNA code may have been essential for the evolution and development of life, even if certainly life is the result of a complex set of factors still to be discovered in its entirety today. To all this it must be added and considered that the DNA code, in addition to offering greater processing potential compared to the binary code, has evolved over time as a mechanism for transmitting genetic information rather than as a data processing platform.

Obviously this comparison between the two codes is purely "instrumental", I dare say even "pretext". It mainly served to highlight the insurmountable limits of all highly technological tools compared to the so-called "natural technological system". Artificial intelligence was originally created to design hardware systems driven by powerful and complex software programs capable of governing machines capable of providing amazing performances. For this reason, to a superficial examination these super powerful machines could appear capable of equaling the characteristics and peculiarities of the human mind,

or even capable of replacing human intelligence, but in reality the only intelligence that can be attributed to machines is essentially the intelligence of its programmer.

In truth, we must state forcefully and with the utmost clarity that there is an insurmountable gap and difference between artificial intelligence and human intelligence. While the first is based on a finite number of "inert and static" components created by the intelligence of man that can be assembled and reassembled several times while maintaining the same configuration and the same functional repeatability, the second instead is based on "living" components, the cells - the basic units of life - which can neither be disassembled nor reassembled, because they are not like the levers and gears of a classic machine. The cells of a living organism are alive from birth, they are in a "dynamic" state, constantly changing and evolving. In fact, they obey the orders given by a genetic code which is the basis of life, DNA, and which interacts continuously and adapts perfectly to every new solicitation or situation coming from the outside world. This peculiar characteristic allows human beings to diversify their response to every change of state, to adapt suddenly in every circumstance to new and sudden situations, eventually making them capable of freely facing unpredictable situations even in hostile environments. Unlike human beings endowed with conscience and free will, "robots" interact with the external environment in a standardized way through "sensors", tools that only allow them to change their operating programs when faced with certain situations.

We must put aside the absurd and senseless idea that machines in the future could totally replace man, instead they must only constitute a means of integration, to help him improve his life especially at work, and in all social activities cultural, learning and relational life. And why not, the new technology could also be a reason to awaken awareness of the undoubted spirituality inherent in the nature of the human being. Only a purely materialistic person can think that the human mind can be beaten by a machine, and that it's just a matter of computing power, perhaps believing they can entrust it with a decision-making role. It is clear that no "artificial intelligence" will ever be able to emulate that large number of other "Natural Intelligences" typical and peculiar to man, such as conscience, thought, creativity, emotions, feelings, joy, pain, sensations, etc. All situations and phenomena that no machine can ever possess and, therefore, unequaled by robotics, an artificial system based solely on mathematical models, on statistical principles, on technical and mechanical components, and on programs created by man.

There are no doubts the extraordinary benefits brought by artificial intelligence in the various sectors of our daily life, from information to interactive learning, from training to the automation of repetitive processes in various industrial processes, in schools, in engineering technologies, in scientific research, especially in medicine to formulate more accurate diagnoses or to provide "practical experiences", such as the simulation of a surgery that is difficult or dangerous to replicate in real life. However, we must also consider the risk of "technological addiction" that the abuse of artificial intelligence can create, such as to reduce the sense of "critical ability" of people who could find a convenient substitute in the mutual dialogue of human relationships, causing damage collateral to your health if you do not maintain the right balance between real life and virtual reality.

There is the danger of letting ourselves be seduced by the rampant culture of digital consumerism and of replacing real and profound relationships with virtual ones, deriving from suggestive messages often based on false information. For this reason, a global regulation of artificial intelligence is considered necessary by many, because every technological achievement is not free from dangers. This requires a reflection that focuses on the person who, in addition to enjoying the benefits, is protected from suffering negative consequences due to possible excesses or inappropriate uses. To date, high-level artificial intelligence is mainly managed by a few groups of researchers at the service of large multinational companies scattered all over the world, which could already generally influence their expansionist policies, future and various opportunities. Considering its frenetic development, an 'enlarged diffusion' of artificial intelligence cannot be excluded, so it would be good to understand and establish what is permissible to do or not, above all to avoid manipulating the human mind indirectly influencing the life and freedom of people. Software programmers can cleverly train their machines to say some things and not others, they can insert "sensors" into robots to put them in contact with the outside world making them look more and more like a person, they can encourage people to trust blindly of technologies that appear intelligent but which are instead subject to errors and significant defects.

There is a danger that artificial intelligence in the hands of unscrupulous individuals, driven by the lust for power and lacking a clear conscience, could be used in an uncontrolled way, making it inappropriate and incorrect use, instead of using it for a good purpose for the progress of society and mankind.

Biblically speaking, a wrong application and a distorted use of artificial intelligence could constitute an act of disobedience to the will of God, who in the plan of Creation had created all things structurally good, under the banner of perfection and in continuous transformation, entrusting to man the role of guardian, manager and user of created things, giving him the intelligence to use them in the best possible way for the good and for the progress of humanity.

Antonio Caruso – biologist

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