

RESEARCH ARTICLE

# A Brief History of the Relationship between Religion and Science in Culture and Civilization

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## Abstract

Science and Orthodoxy are not necessarily in conflict, but can coexist, Orthodox spirituality having a more open vision towards the meaning of science than some Western theological approaches, favoring a cultural rapprochement in the current context, based on a common understanding of the search for truth.

Unlike other Western Christian traditions, the history of Orthodoxy does not know an institutionalized persecution against science (for example, an equivalent of the Galileo Galilei case). The Orthodox Church has generally allowed science to take its course, recognizing that scientific paradigms are constantly evolving.

Orthodoxy does not reject science, but rather sees it as a way to understand God's creation, and certain aspects of Orthodox spirituality (such as the search for deeper reality, not just the visible) align more easily with the scientific spirit.

From an Orthodox perspective, scientific truth and revealed Truth (through Scripture and Tradition) are not contradictory, since both come from God, the Creator of the world. Scientific knowledge can, in the view of some theologians, strengthen Orthodox dogmas, providing a better understanding of the grandeur of creation.

Numerous scientists throughout history and today have been and are practicing Orthodox Christians, a notable example being Saint Luke of Crimea, who was a renowned surgeon and, at the same time, an archbishop.

Essentially, Orthodoxy considers science to be a valid tool for exploring creation, as long as it does not turn into an exclusively naturalistic ideology (scientism) that denies spiritual realities.

**Keywords:** Religion and Science, Christianity and Scientific Knowledge.

## 1. Introduction

The connection between religion and science has known different periods over time. Today, it is no longer an exception for a researcher to be a religious believer. Science and religion generally pursue knowledge of man and the universe using different methodologies. Science recognizes sensible, rational knowledge, evidence, determinism, theoretical demonstration, while religions recognize revelation, faith and sacredness. Despite all these differences, most scientific and technical innovations, before

the scientific revolution, were achieved by societies organized on religious traditions.

The relationship between religion and science has been a subject of study since antiquity, being addressed by philosophers, theologians, scientists, etc. Perspectives from different geographical regions, cultures, and historical eras are diverse, some characterizing this relationship as one of conflict, others describing it as one of harmony, while others assume only a small interaction between religion and science. The extent to which science and religion can attempt to understand

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and describe similar phenomena is one of the important issues in the history of human knowledge. Historically, the relationship between science and religion has been complex and varied, evolving over time and depending on culture. Initially, the two were closely linked, with science often considered a form of understanding the world through the lens of religious beliefs. Over time, especially with the Renaissance and the Enlightenment, a distance emerged, with science asserting its autonomy and developing on the basis of observation and experiment. However, in many parts of the world, the interaction between science and religion continues to be dynamic and sometimes conflictual.

Until recently, a constructive and honest dialogue between theology, philosophy and science was difficult due to elements that are related to ideology, not to the scientific act. Ideology, not scientific research itself, has generated a distorted understanding of the relationship between theology, philosophy and science. However, in the current context, there are premises for overcoming reductionist positions based on self-sufficiency and triumphalism. A 2015 study, conducted in the United Kingdom, shows that only 32% of scientists characterized the relationship between religion and science as conflictual. Physicist Werner Karl Heisenberg, Nobel Prize laureate for Physics, stated: “The first sip from the glass of natural sciences will turn you into an atheist, but at the bottom of the glass God awaits you” and Father Radu Petre Mureșan, parish priest of the “Izvorul Tămăduirii” Church in Mavrogheni, shows that: “The Church has always shown an openness to the mystery of life and the existence of the cosmos. Through faith one can reach divine knowledge, while through science one reaches knowledge of created energies.” From the perspective of the Church Tradition, the profound rationality of the world founded by the divine Logos expresses the fact that the foundations of the reality of the universe are given, not constructed or invented by man. Fundamental research in mathematics, theoretical physics, as well as other areas of research highlight the foundations of reality, observing symmetries of a profound order of the world, manifested through a hierarchy of creation and existence, impossible to comprehend and express through an autonomous, immanent, analyst-type logic.

“Confessing the Gospel Truth about the Universe and about the vocation of man in today’s information society requires the courage not to become prisoners of opinions imposed ideologically by current technological environments, in which there is a risk of

cultivating the equivalence between information and knowledge,” states His Beatitude Daniel, Patriarch of the Romanian Church.

We believe that the relationship between science and religion can be analyzed under four aspects: a) the coexistence of science and religion in the history and culture of civilizations; b) the limits of scientific knowledge; c) testimonies of contemporary science about the revealed truths of Christianity; d) knowledge through faith of the created world.

## **2. The Coexistence of Religion and Science in the History of Civilizations**

The relationship between science and religion in history is complex, of harmony in some periods of the history of civilizations, but also of contradiction, especially in the contemporary and modern period, when from an ideological perspective the thesis of materialist and atheistic origins of the incompatibility between science and religion appeared, in the sense that only rational and scientific knowledge is the holder of the truth about man, the universe and existence in general. Starting with the Enlightenment era, the ideology of human reason without limits of knowledge and of the possibility of man through the means of knowledge of reason, sensitivity, judgments and reasoning of a causal, deterministic type to build scientific theories that explain existence, to provide progress to culture and civilization, to answer, if not now, in the future to the fundamental existential questions Why does something exist, rather than not exist (Heidegger)? Who are we, where do we come from, where are we going? What is existence, where does it come from, its meaning and purpose?

Such an ideology has proven to be erroneous and most honest scientists do not share it, starting from the undeniable historical reality of the coexistence of science and religion in almost all eras of human history.

We attempt a brief presentation of this reality. Initially, science and religion were closely related, often considered complementary parts of knowledge. Over time, as science advanced, tensions arose, especially in areas such as cosmology or biology. However, the interaction between them continues today, influencing culture, politics and society.

In Antiquity and the Middle Ages, science was often practiced within religious institutions, and researchers were often priests or monks. For example, many astronomers and mathematicians in antiquity and the Middle Ages were active in religious learning centers. Religious ideas also influenced scientific concepts.

Natural theology, for example, attempted to explain the existence of God through the study of nature.

In many ancient cultures, science and religion were closely intertwined. Cosmologies and explanations of nature were often formulated in religious terms. Examples can be found in the Greek, Egyptian, Babylonian, and many other civilizations.

Thus, in Ancient Egypt, science was closely linked to practical needs, developing in fields such as mathematics, astronomy, and medicine. Although there were no modern abstract concepts, the ancient Egyptians made significant progress in these fields, based on observations and experiences.

The ancient Egyptians knew, to a large extent, all fields of science, in some applying only the primitive elements of that science, but in others they excelled, making contributions that remained centuries in the universal heritage of antiquity. The mathematics and astronomy practiced by the ancient Egyptians were elementary, but their application in everyday life, through the monuments they built (pyramids, temples, etc.), and their artistic achievements, prove the rigor of their practical knowledge. In any achievement there is a tendency towards accuracy brought close to perfection.

Many of these knowledge and achievements had a religious basis and purpose. Engineering is present in the construction of pyramids and irrigation canals. Architecture, as a science, was used in the construction of temples, pyramids and impressive monuments.

Information about Egyptian medicine appeared in Greek writers (Theophrastus, Dioscorides, Galenus), who cite recipes they had from Egyptian doctors. Hippocrates, the father of ancient medicine, studied medicine in Memphis, in the library of the great temple of Imhotep. Egyptian doctors were state officials. According to Herodotus, *Histories*, II, 84, "each doctor treated a single disease, not more", which implies their specialization. The most information about Egyptian medicine was provided by the Ebers Papyrus, a compilation of about 875 recipes and spells. It dates back to the 2nd millennium BC. The aforementioned papyrus contains a treatise on the heart: "The starting point of the doctor's secret: knowing the heart's rhythm and knowing the heart." Doctors in ancient Egypt knew the effects of various plants and substances on the body and developed treatments for various ailments. Medicine was also used for religious purposes, for the mummification of the deceased, which required advanced knowledge of anatomy and surgery. 1

Another example of the interconnection between science and religion in ancient Egypt is astronomy.

Egyptian astronomy begins in prehistoric times. Much of the ancient Egyptians' knowledge of astronomy comes from writings in tombs, papyri, temples, or some manuscripts.

In ancient Egypt, the cult of the sun and astronomy were closely linked. The sun, personified by the god Ra, was worshipped as a creative and life-giving force, essential for the existence of the world. This veneration was reflected in architecture, rituals, and beliefs, with temples built to honor the movement of the sun and temples aligned with constellations.

Like other ancient peoples, they used star configurations to explain certain important events, especially the rebirth of the human spirit and of the pharaoh in particular. The Egyptians attached great importance to this process by which they believed that the pharaoh would join the gods after he resurrected and ascended to heaven. This resurrection process was closely linked to the star Sirius and its movement in the sky.

Egyptian buildings played an important role in Egyptian astronomy, many of them being aligned with certain stars or constellations. The main constellations used for alignment were Orion and the Big Dipper. Temples were built in such a way that the Sun's rays would illuminate a certain god during ceremonies, or to mark a certain star that would either rise or set at the time of the beginning of the harvest. This is the case of the Great Pyramid, whose tunnels point towards the constellation Orion, and which it is believed that it was used during the ceremonial elevation of the pharaoh and was closely linked to the mummification ritual.

Astronomical observations formed the basis of the Egyptian calendar, which was essential for agriculture and the predictability of the Nile floods. The sky was divided into 36 constellations called star-gods, and each such group rose and set annually for a period of 10 days from a certain area of the sky. Using these constellations, the Egyptians created a 365-day calendar system called star-clocks, based on the position of each constellation at a given time, but they did not take into account that the year was 6 hours shorter than normal. Thus, 10 days had to be added every 40 years (some sources indicate that 5 days were added at the end of each year. 2

Mesopotamia was home to some of the most important civilizations of the ancient world, such as the

Sumerians, Akkadians, Babylonians, and Assyrians. Science and technology in Sumer developed on many levels.

The Sumerians were among the first to develop metalworking, glassmaking, textile weaving, irrigation systems, and flood defenses. They were also among the first to use metals, using copper, bronze, and later iron.

And in this geographical and cultural space, science and religion coexisted.

In Mesopotamia, science and religion were closely linked and influenced each other. Religion provided the conceptual framework for understanding the world, while science, in its ancient sense, attempted to explain natural phenomena and provide practical solutions.

Mesopotamian religion is the oldest known religion. For the cure of diseases, people turned not only to doctors, but also to the goddess Gula, also called Ninisina. Diseases were believed to be brought by the evil god Pazazu, also called Zu. The oldest medical texts date from the period of the First Dynasty, somewhere between the 18th and 15th centuries BC. The most representative work is a Treatise on Diagnosis and Prognosis, written by the physician Esagil-kin-apli from Borsippa, during the reign of King Adad-apla-iddina (1069 - 1046 BC).

Doctors were oriented towards logic and rationality. The medical act was based on science, obviously at the level of that historical era, on empiricism but also on faith. Knowledge of Mesopotamian medicine was possible thanks to the deciphering of clay tablets found in the library of King Ashurbanipal. From these writings it follows that in Mesopotamia there were famous doctors who were divided into two categories: those who practiced a magico-religious medicine - ASIPU - and those who practiced an empirical medicine - ASU. The oldest medical document was discovered in the city of Nippur.

Temples and ziggurats, impressive structures, required advanced knowledge of mathematics and engineering, but were also built as places of worship, connected to the divinity.

Mesopotamian religion offered a view of the creation of the world, placing the gods at the center of cosmic events. This cosmological view influenced the scientific understanding of nature.

Mesopotamia was a cradle of astronomy and mathematics. These fields were closely linked to

religion, since the calendar, the measurement of time and astronomical observations were essential for the religious calendar and religious ceremonies. Mesopotamian astronomers noted the movements of the planets and stars, but also interpreted them in astrological terms, as divine indications.

While Mesopotamian science was based on observation, experimentation (in the ancient sense of the term) and logical reasoning, religion was based on faith and revelation.

Science sought to understand and explain the natural world, while religion had a broader scope, including explanations of the origin, purpose of life, and man's relationship to the sacred.

Despite these differences, the two fields were not considered separate, but rather complementary. Scientific knowledge was used to understand and act in the physical world, and religion provided a moral and spiritual framework.

In conclusion, science and religion in Mesopotamia were not antagonistic concepts, but rather overlapped and influenced each other. While science sought to understand the natural world through observation and reasoning, religion provided a vision of creation, the cosmic order, and man's place in it.<sup>3</sup>

In ancient Greece, science and religion were closely related, although not always directly. Religion provided a conceptual framework for understanding the world, while science sought rational explanations. Greek mythology offered a vision of the origin of the universe and natural phenomena, and philosophers such as Thales, considered the first scientist, began to seek natural explanations for these phenomena, laying the foundations of empirical science.<sup>4</sup>

Thales tried to explain the origin of the world through water, not through the action of the gods.

Anaximander proposed the theory of the cosmos, suggesting that the universe is infinite and that there is a balance between the elements. Pythagoras combined mathematics with philosophy and religion, believing that numbers are the fundamental principle of the universe.

Empedocles identifies 4 elements as immutable, eternal, uncreated and indestructible primordial substances: fire, water, earth, air that cannot pass into each other, but can only combine and separate mechanically. From this continuous process of union and dispersion, the result of the action of two universal forces ("dominant powers" or "principles"), love (philotes) and hatred (neikos), allegorical

representations of the centripetal and centrifugal forces, all objects and living beings of the universe are born. The action of these two forces is determined by a higher principle, called by Empedocles *ananke* (necessity), conceived as an essence of existence.

For Empedocles, matter and energy cannot subsist separately. On Nature is, through the poetic force and suggestiveness of the images, perhaps the most impressive literary creation of the pre-Socratic philosophers. A materialist, Empedocles also sought rational explanations in research in other fields of science, studied the appearance of plants, animals, and humans, and is sometimes considered a precursor of modern biological theories.

Euclid systematically exposed the geometric results known in his time, due to his predecessors in the development of geometry in the treatise *The Elements*. He also presented research in the field of optics in the treatises *Optica* and *Catoptrica*. In the former, he presented the notion of a ray of light, stating for the first time the law of rectilinear propagation of light: “Rays... propagate in a straight line and go to infinity”. Euclid then analyzed geometric problems of applying this law: the formation of shadows, obtaining images with the help of small holes, the problem of the apparent dimensions of bodies and determining the distances to them. In *Catoptrica*, Syracuse (was a scholar ancient world. His achievements are in many scientific fields: mathematics, physics, astronomy, engineering, philosophy. Carl Friedrich Gauss considered Archimedes and Issac Newton to be the greatest scientists in the entire history of human civilization. Among other things, he laid the foundations of hydrostatics and explained the law of levers. He was credited with the designs of new inventions, including assault machines, as well as the endless screw. Archimedes designed machines capable of lifting ships out of the water and setting them on fire using a system of mirrors. Archimedes is generally considered to be one of the greatest mathematicians of antiquity and one of the greatest of all time, being the first universal mathematician. He used the method of complete exhaustion to calculate the area of an arc of a parabola by summing an infinite series, as well as the approximate calculation of the number  $\pi$ , a fundamental mathematical constant, defined as the ratio of the circumference of a circle to the and its diameter with remarkable accuracy for those times. He also defined the spiral that bears his name, formulas for calculating the volumes and surfaces of bodies of revolution, as well as an ingenious system for expressing very large numbers. Currently, two scientific notions bear his name: “Archimedes’s

axiom in mathematics” and “Archimedes’s law in hydrostatics”.

He believed in gods, prayed, and considered that the power to think and reason that he had were gifts from the gods, and the gods were the creators and supporters of this world. 5

One aspect of Aristotle’s work is his focus on the study of nature. Although he wrote important books on logic, ethics, politics, and art, much of his work was in natural philosophy (called “physics”—*physike* in Greek); about a quarter of all his extant work deals with topics related to what we call biology. There seems to have been no aspect of the physical world about which Aristotle had nothing to say.

Some philosophers do not consider Aristotle’s biological research to be part of his philosophy, seeing it as a different kind of research. But the methods and some of the ideas of this research have spread to other fields. It was, for example, his study of living creatures and his sense that the organization of the natural world was not accidental that led him to the idea of *telos*—the idea that creatures were as they were for a reason or purpose.

Aristotle explored zoology and biology, collecting, observing, and dissecting various specimens. This resulted in two major books, of which only the *Historia animalium* (History of Animals) survives. It describes the anatomy of mammals, birds, reptiles, and especially fish and other marine creatures, their reproductive systems, food, habitat, and behavior. Aristotle used this empirical evidence to devise a hierarchy of life forms from “inanimate” matter to God, through plants, insects, marine creatures, reptiles, birds, mammals, and human beings. His classification scheme represented an immense conceptual advance over previous ones and provided the basis of taxonomy for the next two millennia—a testament to his strengths, but also a brake on more independent research, because Aristotle was taken as an undisputed authority, even if he was not always right and sometimes accepted hearsay evidence uncritically. However, in collecting, observing and recording so extensively, he discovered a new ground of immense value for the future development of biological sciences almost to the present day. 6

Nature, in Aristotle’s conception expounded in his work *Physics*, is based on a simple idea, which concerns the fact of being in another. Because all things of this world are in motion, in place, in time, but also in their immobile possibility of being in nature, they become the object of science. *Physics* in

Aristotle's conception describes the successive shells that make up nature. Things stand here in a finite and full universe, thanks to the nature that contains them.

In *Physics*, Aristotle states that objects fall with a speed proportional to their weight and inversely proportional to the density of the fluid in which they are immersed. This is a correct approximation for objects in the Earth's gravitational field that move in air or water. <sup>7</sup>

Of course, space does not allow us to highlight the complexity of the coexistence of religion with science in ancient Greece.

The ancient Greeks began to question mythological explanations and seek rational explanations. This search led to the emergence of philosophy and empirical science.

There were intersections between the two. Some philosophies, such as Stoicism, had religious aspects. At the same time, some religious rituals included empirical observations, such as astronomical observations to predict the seasons.

Over time, science evolved, and rational explanations became increasingly important. However, religion continued to play an important role in social and cultural life.

In conclusion, we can say that in Ancient Greece, science and religion coexisted and influenced each other. Religion provided an initial framework for understanding, and science evolved as a search for rational explanations. This interaction contributed to the development of both science and philosophy and left an important legacy for the modern world.

In ancient Rome, science and religion were closely intertwined and profoundly influenced social, cultural, and political life. Although there was no clear separation between the two, certain aspects of scientific knowledge and practice were considered sacred and integrated into religious rituals, while religion provided a conceptual framework for understanding the natural world.

Roman religion offered a view of the origin of the universe and man's place in it, influencing perceptions of natural phenomena. The gods were seen as active factors in the creation and maintenance of cosmic order.

Engineering and architecture, developed largely to build temples and other religious edifices, were seen as manifestations of divine power.

Various inventions and techniques, such as those used in agriculture or construction, were considered gifts from the gods, often attributed to specific deities.

Mathematics and astronomy were used to establish calendars, predict astronomical events, and guide religious rituals. Astronomy, in particular, was closely linked to religion, as the stars were considered symbols of the gods.

In Ancient Rome, there were numerous scientists and intellectuals who contributed to various fields of knowledge. Among the most important are: Archimedes, already mentioned, a Greek mathematician, physicist and engineer, known for his works in geometry, mechanics and hydraulics; Galen, a physician and philosopher, whose theories dominated Western medicine for centuries; Ptolemy, an astronomer, astrologer, geographer and mathematician, author of the geocentric system of the universe; Vitruvius, an architect and engineer, author of the treatise "De architectura", an important source on Roman architecture; Lucretius, a poet and philosopher, author of the poem "De rerum natura", which presents Epicurus' atomic theory; Pliny the Elder, a writer, scientist and officer, author of the encyclopedia "Naturalis Historia".

These scientists, along with many others, have left an important legacy, influencing thought and practice in diverse fields, from mathematics and physics to medicine and engineering. <sup>8</sup>

Continuing our historical and geographical journey on the relationship between science and religion, we will make a brief foray into the culture of India.

In India, science and religion often co-exist in a complex manner, with interactions and tensions, but also coexistence. Hinduism, the majority religion, has a fluid relationship with science, with some aspects being integrated with scientific concepts, while others are considered separate. Several sources indicate that other religions such as Islam, Christianity, Sikhism, Buddhism and Jainism, although with a smaller percentage of adherents, also have their own interactions with science. Hinduism, the main religion of India, has had a profound cultural and intellectual influence, and many aspects of traditional Indian science, such as mathematics, astronomy, and medicine, were developed within religious and philosophical frameworks. At the same time, modern science is widely accepted and practiced, and India has a thriving science and technology industry.

Science is seen as a way to understand the natural world, while religion provides insight into the meaning of existence, wisdom, and moral values. Most scholars believe that in Indian history there is no

contradiction between science and religion, but rather a complementary approach.

In the Indian view, science is based on empirical evidence and reason, while religion is often based on faith and revelation. According to some views, some religious concepts, such as reincarnation, can be interpreted in ways that fit with certain scientific theories. Religion can influence the direction of scientific research, and science can influence perceptions religious. For example, the development of modern medicine has led to changes in religious practices related to illness and health. 9

Indian philosophy, which is often closely related to religion, offers diverse perspectives on the world, including concepts that can be interpreted in scientific or metaphysical terms. 10

Hinduism has a rich mathematical and astronomical tradition. The concept of zero, negative numbers, and some mathematical formulas were developed in the context of astronomical and religious studies.

Ayurveda, the traditional Indian medicine, is based on traditionally transmitted medical knowledge and on the understanding of the human body from a religious and philosophical perspective. The practices of yoga and meditation, which have religious origins, are scientifically studied for their effects on health.

In conclusion, science and religion in India have a complex history of interaction. Hinduism, as the dominant religion, has influenced the development of traditional science, while modern science is widely accepted and practiced. There is a coexistence of both, and in some cases, a mutual influence can be observed. 11

The coexistence of science and religion is also present among pre-Columbian peoples, especially in the Mayan civilization. Without insisting, we will dwell on this great and enigmatic culture and civilization.

The Maya civilization is a mysterious civilization, about which it is not known where it emerged, nor how it disappeared. It reached its peak in the period 300-900 after Christ. The Mayans lived in the area between Mexico and South America, in the territories that today are called: Belize, Honduras, Guatemala, El Salvador, Yucatan, Chiapas. The areas inhabited by the Mayans were also the cradle of other extremely advanced, pre-Mayan civilizations: the Olmec and Teotihuacan civilizations. It is believed that the Mayans are the beneficiaries of the knowledge taken over from these powerful predecessor civilizations.

In connection with the disappearance of the Mayan civilization, several variants have been assumed – they are suspected: an invasion of northern barbarians, economic factors, the onslaught of the jungle, a slow revolution of the peasant masses against the religious and aristocratic elite, etc. However, all of these are just assumptions, the disappearance of the Mayan civilization continuing to remain a mystery to us.

The Maya religion was polytheistic and was based on a complex system of myths, rituals and beliefs that governed their social, political and spiritual life. There is no single Mayan religion, but rather a set of beliefs and practices that varied from one region to another and throughout history.

The universe was conceived as consisting of three levels: the sky (where the gods lived), the earth (the place where people lived) and the underworld (Xibalba, the place where the gods of death lived).

Maya temples, pyramids and other structures were decorated with religious symbols and images of the gods. Mayan art, including sculpture, painting, and pottery, reflected their beliefs and myths.

The Maya civilization was a highly advanced civilization, especially in the fields of mathematics, astronomy, and architecture. The Maya priests were the masters of scientific knowledge, and religion at that time was closely linked to astronomy and arithmetic. The Maya accurately predicted eclipses and charted the movements of the planet Venus with a precision that still amazes scientists today. The Maya writing system was based on hieroglyphics.

The Maya used base 20 as their base of numeration, not base 10, which we use today. The Maya used the number zero long before other civilizations. Despite the amazing accuracy of the Maya calendar, the Maya priests believed that the Earth was flat like a disk and did not realize that it revolved around the Sun.

The Maya civilization, although extremely advanced, did not know inventions such as the wheel, glass, or coin. Although they possessed extremely advanced astronomical knowledge, the Maya had only stone tools; they did not know optical devices, nor any precision instruments, nor did they have any minimal units of time such as the hour or minute; their measurements were based solely on eye tracking, triangulation calculations, and shadow measurements. By repeating calculations, by “statistics”, by regularly transmitting the results, the Mayans corrected the empirical data extracted from a rather summary geometry of space.

The astronomical concerns of the Mayans, which went beyond those necessary for drawing up an agrarian calendar, reveal their fear of the passage of time, as well as their obsession with infinity – spatial or temporal. In addition to astronomy, another field in which the Mayan civilization excelled is architecture: Mayan architects are today considered the greatest decorators and the most prolific builders on our planet. The Mayans built thousands of buildings that attract and amaze even today through: the harmony of forms, the simplicity of plans, the purity of volumes, the ambition and scale of the projects and through an undeniable beauty.

Although the phrase “Mayan calendar” is often used, the Mayans actually had 4 calendars and, depending on their needs, they used one calendar or another to record different events: The first Mayan calendar was called Tzolkin, it had 260 days (divided into 13 months of 20 days each) and was a sacred calendar, reserved for divination – and the Mayans believed, like some people today, that a person’s date of birth determines their personality. The second Mayan calendar was called the Haab Calendar, it had 365 days, was a solar and agricultural calendar, and was very similar to the Dacian and Gregorian. The third Mayan calendar was called the Spherical Calendar and had 18,980 unique days, or 52 years, and was obtained by correlating the first two Mayan calendars (which intersected once every 52 years). The fourth Mayan calendar was called the Great Count, was 5 thousand or so years old and was designed to “map” time across generations. Although extraordinarily accurate, the Mayan calendar stops abruptly on December 21, 2012; this calendar is based on cycles, and a new cycle begins in 2012. 12

Islam, one of the world’s great civilizations and cultures.

Islam is the youngest of the three world religions, having originated in the Middle East. The other two religions founded in the Middle East are Christianity and Judaism. Like Jews and Christians, Muslims believe that there is only one God. For this reason, they are called monotheistic religions. Islam is a religion that follows a legal order—Islamic law. This means that there are certain rules and laws that decide what is right or wrong and what Muslims must do.

Islam is the second largest religion in the world, after Christianity. Approximately 1.7 billion people in the world are followers of Islam. Those who are followers of Islam are called Muslims. The Muslim community is called, in Arabic, the umma. The umma can be

divided into two main categories: Sunni and Shia Muslims. The Prophet Muhammad founded Islam around 610 AD in his hometown of Mecca. The city of Mecca is located in Saudi Arabia. Muhammad died in 632 AD. The Quran is the most important holy book of Islam. According to Islam, the Quran contains the revelations received by the prophet Muhammad from God. The Quran was originally written in Arabic.

In Islam, science and religion are not considered opposites, but rather complementary. Islam encourages the pursuit of knowledge and the study of the world, believing that this is a way to better understand God’s creation. Many Muslim scholars in the past have made significant contributions to various scientific fields, and Islam has a rich history of interaction with science.

The Quran, the holy book of Islam, emphasizes the importance of knowledge and encourages people to study the world around them in order to better understand God’s will.

Islam and science have been a topic of discussion and debate for many years. Some people believe that the Quran contains scientific knowledge that was ahead of its time, while others argue that scientific discoveries were made independently of the Quran.

There are certain verses in the Quran that are often cited as evidence of scientific knowledge. For example, the Quran refers to the process of embryonic development and the stages of growth of the human fetus, which modern embryology has confirmed. Similarly, the Quran mentions the expanding universe, which is a concept that was only discovered by scientists in the 20th century.

However, there are also some verses in the Quran that seem to contradict modern scientific understanding. For example, the Quran describes the sun as “setting” at a specific location, which is inconsistent with the modern understanding of the sun as a stationary star around which the Earth orbits.

It is important to note that the Quran is not a scientific text, but rather a religious text that provides moral guidance and teachings. While some scientific knowledge can be found in the Quran, the Quran is not intended to be a comprehensive guide to scientific discovery. Instead, it is up to individuals to use their critical thinking and scientific methods to explore the natural world and make new discoveries.

In general, there is no perceived conflict between Islamic belief and science. Many Muslims see science as a way to better discover and understand

God's creation, not as a contradiction of their faith. We can say that Islam has no doctrine that prohibits or considers science an enemy of faith

Between the 8th and 13th centuries, there was a period of scientific and cultural flourishing in the Islamic world. Muslim scholars made major contributions in mathematics, medicine, astronomy, chemistry, and other fields. During this period, universities and libraries were established that contributed to the advancement of knowledge. The House of Wisdom in Baghdad was an important example

We list some of the Islamic scientific contributions: They developed algebra, trigonometry, and introduced Arabic numerals. In Medicine They made significant contributions in surgery, pharmacy, and helped establish the first hospitals. In astronomy they developed astronomical instruments and made precise observations of celestial bodies. In chemistry they studied the properties of chemical substances and laid the foundations of modern chemistry. In geography, they made detailed maps and explored new territories.

Islamic science has a rich history, with many important names who made significant contributions to many fields. Here are some of the most important names:

Al-Khwarizmi: "The Father of Algebra", as he wrote a book called "Al-Jabr", which introduced the concept of algebra and the use of Arabic numerals. He was also a scholar in astronomy and geography.

Ibn al-Haytham: He is known for his work in the field of optics and is often considered the father of modern optics. He wrote the book "Kitab al-Manazir" (Book of Optics), which introduced the concept of the camera obscura and explained how the eye perceives light.

Al-Razi: Physician, philosopher and alchemist who is often called the "father of pediatrics". He wrote numerous medical texts, including "The Comprehensive Book on Medicine", and made significant contributions in the fields of chemistry and alchemy.

Ibn Sina (Avicenna): Physician and philosopher who wrote the book "The Canon of Medicine", which became a standard medical text in Europe for centuries. He also made significant contributions in the fields of astronomy, philosophy and mathematics.

Al-Farabi: He was a philosopher and musician who wrote on a wide range of subjects, including

metaphysics, ethics and political philosophy. He also wrote a book on music theory entitled "Kitab al-Musiqi al-Kabir".

Al-Kindi: Philosopher, mathematician and scientist who wrote on a wide range of subjects, including logic, metaphysics and astronomy. He also made significant contributions in the field of cryptography.

Ibn Rushd (Averroes): He was a philosopher and physician who wrote commentaries on the works of Aristotle and made significant contributions in the fields of logic and metaphysics.

These are just a few of the many important names in Islamic science, and their contributions continue to have an impact on the understanding of the world today.

In conclusion, science and religion in Islam are considered to be two complementary aspects of knowledge and understanding of the world, both contributing to the spiritual and intellectual development of the individual. 13

### 3. Christianity and Science

The relationship between Christianity and science is complex and has been the subject of much discussion and debate. There are different points of view, ranging from conflict and incompatibility to complementarity and peaceful coexistence. Some Christians believe that there is a clear separation between the domains of faith and reason, while others see a close connection between the two.

The relationship between Christianity and science from an ideological and therefore subjective perspective has been interpreted and understood differently by theologians, scientists, philosophers and politicians.

Attempting a synthesis, we can identify several ways of this relationship

Conflict Some see science and Christianity as mutually exclusive. They argue that science, based on empirical evidence, rationally demonstrated theories, sensible and rational knowledge, challenges the revealed Christian faith expressed in dogmas: the existence of God, unique in being and triune in Persons, the creation of the world by God from nothing through his incomprehensible love, the creation of life, of man by God, the salvation of man through the Incarnation of the Savior Lord Jesus Christ, God and man, through His sacrifice on the Cross and through the Resurrection, the vocation of man to deify himself through grace and to have eternal life, the transfiguration of the

world at the second coming of the Savior, the Last Judgment, etc.

Supporters of such an ideological conception consider that the world has its cause in itself, is subject only to material and causal determinism, is finite, and reason and science can know existence infinitely.

It is the ideology specific to the modern era of postmodernism and transhumanism characterized by secularization, atheism and materialism.

The conflict between Christianity and science has manifested itself in some historical eras and from some theological conceptions of some denominations, sects and currents of Christian origin. It has been wrongly considered that the truths of science cannot be accepted, must be blamed, as well as their supporters, if they are in contradiction with the strict literary interpretation of the evangelical texts. There have been such periods in history, especially in the Middle Ages, characterized by obscurantism and departure from the true faith revealed by God, with dramatic consequences for some scholars.

### 3.1 Separation

This perspective argues that science and faith address different questions. Science answers the questions of “how” (about natural processes), while religion answers the questions of “why” (about the meaning of life and moral purpose). This is an ideology specific to the Enlightenment era, based on absolute trust in the power of human reason to know and which marked the separation of the state from the Church. Christian faith, as well as any religious conception, are considered aspects of private life and are tolerated, consecrating the right to freedom of conscience and expression. The Enlightenment ideology, which is still fully manifested today, atheistic by nature, argues that only scientific knowledge, through the power of human reason, expresses existential truths, demonstrable and pragmatically transposed into technologies, but also into social organization, into the social status of man, who, thus, from a free person, becomes a simple individual, a happy slave subject to the state and those who hold power, thrown into the social mass. This leads to what many bona fide philosophers, sociologists, and legal scholars call “democracy of the masses.”

### 3.2 Complementarity

There are philosophers and scientists who argue that science and Christianity can coexist and even complement each other. They see science as a way to understand the natural world, while faith provides an

ethical and spiritual framework for giving meaning to life. Most often in history, such views have led to pantheism and deism, including in contemporary times.

### 3.3 Interaction

There is also a perspective increasingly accepted by honest philosophers and scientists that highlights the interaction between science and faith. Some Christian scientists use scientific methods to explore issues related to creation and evolution, while others study the implications of science for faith. In this way of being, the only true one in the dialectic of the relationship between Christianity and the sensible and rational knowledge of man, scientists, science, note the limits of the rational knowledge of modern science and confess the revealed truths of Christianity. The fundamental truths of the true Christian faith are accepted: the existence of God; the world does not have its cause in itself, being created by God; man is a person endowed with dignity, reason, freedom, created in the image and likeness of God; the meaning and purpose of existence is eternity, the transcendent.

In the following we present a brief description of the relationship between Christianity and science in different historical eras:

Christianity played a central role in the Middle Ages, shaping the political, social and cultural life of Europe. The Catholic Church, with its center in Rome, and the Orthodox Church with its center in Constantinople became important powers, influencing monarchs and states. At the same time, Christianity was a source of conflict, through the Crusades and the Inquisition, but also of art and philosophy, through the works of the great artists and theologians of the time.

The Christian church, in all its institutional forms, contributed to the creation of the first universities and to the development of art and architecture, including the Gothic style of cathedrals. At the same time, it established moral and ethical standards for society, influencing people’s behavior and the way they related to divinity. In this historical era, the dogmas of Christianity were formulated, Christian worship, theology separated from ancient philosophy, although the latter continued to influence the thinking and creation of great theologians and spiritualists, but who adapted philosophical concepts to the revealed truths of faith. It is also now that the great theological works of Christianity are being developed and the heresies and sects of the time are being combated. These works are inspired by the Holy Spirit, they contain immortal truths of faith. Of course, we cannot list all these

great spiritual fathers and theologians, but we refer in particular to those who contributed decisively to the construction and development of the true Orthodox faith, holy Eastern fathers, among whom we mention: the Holy Cappadocian Fathers, the Holy Philocal Fathers, Maximus the Confessor, Gregory Palamas, Dionysius the Areopagite, John the Ladder, Origen John Damascene and many others. The development of theology is also present in the Catholic Church, especially through the work of great theologians. Some of their teachings on the hermeneutics of the holy texts of the Bible are valuable truths for all of Christianity. Among these great Western theologians we mention: Blessed Jerome, Tertullian, Saint Thomas Aquinas, Blessed Augustine and others who tried to integrate faith with reason.

Painting, sculpture, and architecture were strongly influenced by Christianity, with notable examples such as Giotto, Leonardo da Vinci, Michelangelo, and Gothic architecture.

During the Middle Ages, science continued to be studied and developed in three major linguistic cultures and civilizations: Greek (in the Byzantine Empire), Arabic (in the Islamic world), and Latin. During the medieval period, scientific knowledge from antiquity was preserved, transmitted, and in some cases expanded. In Western Europe, universities became centers of study and research, where scientific, as well as philosophical, and theological knowledge was debated and transmitted. Mathematics continued to be developed, including algebra and geometry, with significant contributions especially from scholars in the Islamic world. Medicine was studied and practiced, with an emphasis on anatomy, physiology, and treatments, although access to human bodies for dissection was limited. Chemistry was studied in the context of alchemy, which sought to transform metals and discover the elixir of life. Astronomy was studied to better understand the movements of celestial bodies and to improve time measurement systems.

The astronomical observations of Copernicus and Galileo Galilei challenged the geocentric view of the world and laid the foundations for the scientifically proven true conception of the solar system and the universe.

Chronology, as an auxiliary science to history, continued to develop to establish the precise dating of historical events, also using mathematical methods.

In general, the Middle Ages were a period of transition, in which classical science was preserved, adapted and, sometimes, expanded, preparing the ground for the

subsequent scientific Renaissance. Throughout this historical period, science in Europe had the Christian faith as its basis and as its purpose. Almost all the great artists and scholars of the time were also confessors of the truths of Christian faith, but in ways more or less close to the truths of the true faith. Science did not contradict Christianity and more than that, as I briefly showed above, the Christian Church contributed most of the time to the development of science.

Also during this period there were strong conflicts under religious pretexts that had a negative effect on life, culture but also on scientific knowledge. We refer to the religious wars between Christians, or with the Arabs, the Ottomans, to the crusades with disastrous effects on Byzantine culture and civilization, but also to the Inquisition, a church institution designed to combat heresy and punish those considered heretics.

The Italian theologian Thomas Aquinas (1225-1274) theoretically established the phrase “*Accipere fidem est voluntatis, sed tenere fidem iam acceptam est necessitatis*” - “to accept and keep the faith requires a free and voluntary decision”, the cornerstone of the Inquisition in the Middle Ages. The punishment for heresy was excommunication or the death penalty. In 1231, Pope Gregory IX (1167-1241) formed a permanent commission to combat heresy, consisting mainly of monks of the Dominican order. The punishment that Pope Gregory IX demands is life imprisonment for recidivist heretics.

The trials brought by the Inquisition also extended to witches. An accused had, for example, the freedom to accuse some of his enemies, and if his accusation proved to be true, he had a chance of pardon. Most cases of heresy were not punished by death, but by punishments such as: the obligation to take part in services, pilgrimages, crusades, financial penalties, or tying to the pillar of infamy. The Inquisition in the Middle Ages was geographically limited to central and southwestern Europe, with only isolated cases in England or the Scandinavian peninsula. 14

There were also great saints who were unjustly accused by the Inquisition tribunals as heretics and therefore suffered or paid with their lives for their scientific views. We exemplify in particular Galileo Galilei and Giordano Bruno. The latter is arrested by the Inquisition, which extradites him to Rome. After six years of detention, during which time he is subjected to endless interrogations, being accused of blasphemy, immoral behavior and heresy, he is brought before the inquisitorial tribunal. Refusing to abjure his beliefs, Giordano Bruno is convicted of

heresy and burned at the stake on February 17, 1600, in Rome. All his works were banned.

Together with Galileo Galilei's compulsion to publicly abjure his own beliefs in 1663, the condemnation of Giordano Bruno constitutes one of the darkest moments of the Catholic Counter-Reformation, of obscurantism and religious intolerance, of the departure from the true Christian faith.

At the site of his martyrdom, in the "Campo dei Fiori" square, the city of Rome erected a statue dedicated to freedom of thought at the end of the 19th century. Four hundred years after his execution, the Catholic Church, through Pope John Paul II, expressed its "deep sorrow", regretting the error committed by sentencing Giordano Bruno to death. The thinking of the great philosopher and scholar influenced the philosophy of the times that followed him, especially the Dutch philosopher Spinoza, who in the 17th century anticipated the development of monism as a way of representing the world. 15

In conclusion, Christianity profoundly shaped the Middle Ages, leaving a complex and diverse legacy, marked by the institutional power of the Church, but also by conflicts, cultural changes and social transformations.

The Renaissance was the cultural movement that profoundly affected European intellectual life in the early modern period. Beginning in Italy and spreading throughout the rest of Europe by the 17th century, its influence was felt in literature, philosophy, art, music, politics, science, and other fields of inquiry. Renaissance scholars adopted a humanist approach to study and focused on realism and human emotion in art. Humanists searched the libraries of European monasteries for Latin literary, historical, and oratorical texts of antiquity. The fall of Constantinople in 1453 led to an exodus of Greek scholars who brought valuable manuscripts to the West. A new emphasis was placed on literary and historical texts, works of natural science, philosophy, and mathematics. The Renaissance also involved an attempt by intellectuals to study and improve the secular world by reviving ideas from antiquity and adopting new methods of thinking. Renaissance innovations made political and church structures more receptive and led to the emergence of capitalism. While the great European kingdoms, France, Spain, remained absolutist monarchies, and others were under the direct control of the Church, the Italian republics adopted the principles of capitalism, which led to an unprecedented commercial boom

Humanists did not reject Christianity; on the contrary, most Renaissance works were dedicated to the church,

which patronized works of art. A subtle change occurred in the way intellectuals approached religion, reflected in many cultural fields.

Science in the Renaissance marked a radical change from the Middle Ages, characterized by the rediscovery of antiquity and the adoption of new research methods based on observation, experiment, and reason. This marked the shift from a theocentric to an anthropocentric view, emphasizing man and the exploration of the surrounding world.

Interest in the writings of philosophers and scientists from ancient Greece and Rome led to a revitalization of knowledge in various fields, such as mathematics, astronomy, medicine, and philosophy. Observation, experiment, and reason became the pillars of scientific inquiry, gradually replacing the dogmatic authority and unconditional acceptance of ancient texts.

Significant advances were made in physics, chemistry, astronomy, mathematics, medicine, and geography, paving the way for the subsequent scientific revolution.

The invention of printing allowed the rapid spread of knowledge and facilitated collaboration between researchers, thus accelerating scientific progress.

For example, Leonardo da Vinci was a true Renaissance genius, with important contributions in art, anatomy, engineering, and other fields, demonstrating the interdisciplinarity of science.

Science in the Renaissance was a period of transition, in which the foundations for the development of modern science were laid, through the adoption of rigorous scientific methods and the rediscovery of the values of antiquity, emphasizing man and the exploration of the surrounding world.

However, during the Renaissance, the relationship between science and Christianity was a complex one, marked by tensions and collaborations. Although the Catholic Church was an important patron of the arts and sciences, scientific progress sometimes led to conflicts with established religious dogmas.

The Church played an important role in the preservation and transmission of ancient knowledge, financing the translation and copying of classical texts. Many Renaissance scientists and artists were supported by the Church, either through direct commissions or by providing positions and resources. Universities, many founded or patronized by the Church, were important centers of learning and research. Not all Renaissance scientists were in conflict with the Church. Many sought to reconcile

science with faith, believing that God created both the natural world and the laws that govern it.

There are a variety of approaches to the relationship between science and religion during the Renaissance, reflecting the diversity of opinions and beliefs at the time.

There were also tensions and conflicts between the Church and the scholars of the era. As science advanced, certain discoveries contradicted traditional church teachings, such as the heliocentric model of the solar system proposed by Copernicus. The Church saw in them a threat to its religious authority and popular faith. On the one hand, the Church continued to support and fund intellectual activities, but on the other hand, scientific progress led to conflicts with established religious teachings, marking a paradigm shift in the way people understood the world.<sup>16</sup>

The Enlightenment, also called the Age of Enlightenment or the Age of Reason, was an intellectual, philosophical, ideological and cultural, anti-feudal movement, carried out during the period of preparation and implementation of the revolutions of the 17th-19th centuries in the countries of Europe and America, aiming to create a “rational” society, by spreading culture, “light” to the masses. This era in the history of culture and civilization, resulting from the humanist current of the Renaissance, is a response to the Baroque, in an attempt to remove religious dogmas and to propagate the enlightenment of the masses based on their own experience.

The Enlightenment claimed the liberation of the human being from his self-induced tutelage. “Tutelage is the inability of the human being to use his cognitive abilities in the absence of instructions from another person. This tutelage is self-induced when its cause does not reside in the absence reason, but in the absence of the determination and courage to make decisions without instructions from another person”. Sapere aude, “dare to think”, is the motto of the Enlightenment (Immanuel Kant).<sup>17</sup>

The scientific and intellectual events of the 17th century— the discoveries of Issac Newton, the rationalism of Rene Descartes of Leibniz, Gottfried Wilhelm Leibniz, Immanuel Kant, Hegel, the skepticism of Pierre Baye, the pantheism of Spinoza and the empiricism of Francis Bacon and John Locke – promoted a belief in natural laws and universal order, as well as confidence in the reason of the human being and in its innovative abilities that managed to influence the entire society of the 18th and 19th centuries.

The main promoters of these concepts were philosophers, who popularized and promulgated new ideas for the general public. They had a number of common basic attitudes. Having an unshakable faith in sensible and rational knowledge, they sought to discover valid universal principles that would govern humanity, nature and society, and to act on them.

Rationalist philosophers, based on a rational, scientific vision of man, society and existence in general, attacked in various ways religious and scientific authority, dogmatism, intolerance, censorship, as well as economic and social constraints. They considered the state to be the appropriate and rational instrument of progress. The extreme rationalism and skepticism of the era naturally led to deism. The same theses played an important role in determining the later reaction of Romanticism. Reacting to dogmatism, the Enlightenment found a favorable channel in a period in which the Catholic Church had lost its all-powerful authority to impose social order with the same fervor and involvement as in the Middle Ages. Philosophical ideas in mid-18th-century France, particularly those resulting from Denis Diderot’s *Encyclopédie*, transformed the mechanistic view of the universe into a radically revised version of Christianity, which they called deism. At the same time, pantheism as a Christian view of reality coexisted with deism.

Drawing inspiration from Newton’s description of the universe as a vast clock built and set in motion by the Creator, deists promoted the idea that everything— physical motion, human physiology, politics, society, economics—had its own set of rational principles established by God, which could be understood by human beings solely through reason. This meant that things in the human and physical worlds could be understood without bringing religion, mysticism, or divinity into the equation. Deists were not atheists; simply, they asserted that everything about the physical and human universe could be understood independently of religious aspects or explanations. For a correct historical framework of 18th-century Europe, regarding the relationship between political and religious authority and the upper class, we must mention that, in France, Voltaire and his followers strove to impose the values of freedom and tolerance in a culture in which the twin strongholds of monarchy and Church were the opposite of everything these values stood for. Voltaire devoted much of his time to attacking the fundamental elements of the Christian religion: the inspiration of the Bible, the incarnation of God in Jesus Christ, the damnation of unbelievers.

Kant located the Enlightenment’s strength mainly in matters of religion, since its leaders, as he said, “had

no interest in playing the role of guardian of the arts and sciences, and since religious incompetence is not only the most harmful but also the most degrading of all.” 18

Here are some general features of science during the Age of Enlightenment: it combined rationalism (belief in the power of reason) with empiricism (the importance of observation and experiment); the idea that science should use a systematic method to obtain valid knowledge, based on observation, experiment, and logical deduction, was promoted; Enlightenmentists believed that science could bring about social, economic, and political progress by improving living conditions and combating superstition and ignorance; the increase in the number of scientific publications and the establishment of academies contributed to the spread of scientific knowledge in society; The influence of the Enlightenment was also reflected in the arts and literature, through themes related to reason, progress, and nature; many of the Enlightenment philosophers challenged the religious dogmas of orthodoxy and the authority of the Church, instead promoting reason and science as sources of knowledge and a religious deistic and pantheistic worldview. The secularization of society and atheism are increasingly taking shape.

Isaac Newton's work, *Philosophiæ Naturalis Principia Mathematica* (1687), is considered the first great work of the Enlightenment.

Undeniably, Isaac Newton is one of the greatest scientists of the Enlightenment and of all time, and he was not an atheist.

Sir Isaac Newton (1642-1727) was a renowned English scientist, alchemist, mystical theologian, mathematician, physicist and astronomer, president of the Royal Society. He is the scientist at the origin of scientific theories that would revolutionize the fields of optics, mathematics and especially physics. Newton described the Law of Universal Gravitation and, by studying the laws of motion of bodies, created the foundations of classical mechanics. He contributed, together with Gottfried Wilhelm Leibniz, to the founding and development of differential and integral calculus. He was also the first to demonstrate that the laws of nature govern both the movement of the terrestrial globe and other celestial bodies, intuiting that orbits can be not only elliptical, but also hyperbolic or parabolic. He demonstrated that white light is a light composed of radiation.

The great scientist promotes the concept that has become emblematic in modern philosophy

regarding absolute time and space, that is, substances independent of things. Time and space are conceived in the form of receptacles, frames or environments in which things are immersed. In order to determine distance, speed, time in physics, a reference point is needed. For example, the movement of a body cannot be measured if the reference point in relation to which the movement takes place also moves. A reference point must be immutable, absolute. The time by which any function is measured in relation to an absolute reference point must be the same for all measurements. As a reference system, absolute time is different from the measures or moving parts that form the sequence of hours, days, weeks, etc., considered to be relative time. Absolute time and space are not in the universe, but the universe is contained in absolute time and space, with which it does not establish any relationship.

Newton was not only a scientist but also a philosopher and theologian. He wrote numerous pamphlets on philosophical and religious topics on the interpretation of texts from the Bible, under the influence of the mystical spiritualism of Henry More and his belief in the unity of the universe. Newton's conception of the physical world provided a stable model of the natural world that would consolidate stability and harmony in the civic world. Newton saw a monotheistic God as a creator whose existence could not be denied in the face of the grandeur of all creation. Newton's religious views developed as a result of participating in an investigative discourse on the nature of the world and from the increasing revelation of the structure of reality resulting from research and the subsequent challenges that these truths about nature posed to the religion accepted by the Church in light of the faith of the Christian scriptures. Unorthodoxy was necessary for Newton and those affiliated with him, through the need to rediscover a truth hidden somewhere in classical history. In doing so, they might be able to engage in an open dialogue through a study of nature.

Like many scholars, including those of the contemporary and modern era, Newton he departed from the true Christian faith and promoted a pantheistic conception of God.

Two quotes from Newton's philosophical and theological work are instructive in this regard:

“I do not know how others see me, but to me I was like a boy playing on the seashore and finding a finer pebble or a more peculiar shell than the others while the whole ocean of truth stretched out before me.”

“The order that reigns in material things sufficiently shows that they were created by an intelligent will.”

The epitaph on his tomb contains the following text: “Here lies Sir Isaac Newton, noble, who with an almost divine reason was the first to demonstrate, with the torch of mathematics, the motion of the planets, the paths of comets and the flows of the oceans. He investigated the differences of luminous rays and the different colors that appear in connection with them, which no one suspected before him. A diligent, wise and correct interpreter of nature, antiquity and Holy Scripture, he affirmed by his philosophy the greatness of Almighty God, and by his character expressed the simplicity of the gospel. Let mortals rejoice, that there was such an adornment of the human species. Born December 25, 1642, died March 20, 1727.” 19

One of the most powerful controversies that emerged during the Enlightenment and continues to this day, marking the ideological opposition generated by atheist philosophers and scientists, is that between creationism and evolutionism.

In the field of science and theology, creationism and evolutionism represent two fundamental perspectives on the origin of life and the universe. Creationism claims that life and the universe were created by a supreme being, while evolutionism proposes that life gradually evolved over time, through natural processes. Creationism is based on the belief in divine intervention as a determining factor in the creation of the world and life forms.

Evolutionism, on the other hand, is a scientific theory that explains the diversity of life through processes of natural selection, adaptation, and genetic modification over generations. The theory of evolution, proposed by Charles Darwin, but also by some contemporary scientists, claims that species gradually change in response to the environment and the survival of the fittest, the universe, life, man, human consciousness are the result of the laws of natural evolution, of the causal, material determinism of nature.

In this context, there are various variants of creationism. Biblical creationism: this view supports the literalness of sacred texts, considering that the world was created in six days, according to the description in the book of Genesis. Progressive creationism: supports the idea that God created fundamental species, and then these evolved into more complex forms. Evolutionary creationism (or theistic evolutionism): this perspective accepts evolution as a natural process, but attributes the creation of the universe and the first forms of life to a divine entity. 20

In conclusion, we can say that the Enlightenment represented a period of flowering of science,

considered the engine of human progress. Reason, observation, and experiment were the central values of this era, and scientific results had a profound impact on society, the arts, and literature. 21

At the same time, it contributed to the secularization of society through an exaggerated trust in human reason. The philosophers and scientists of the time were not atheists, but they promoted a misconception about God, pantheistic or deistic.

The Enlightenment in social and state terms, through political and legal documents regarding the new social order, human rights based on the supremacy of the Constitution and the law, the separation of the state from the Church. Thus, religion, including the Christian one, is considered a private reality, an expression of the freedom of conscience of each person. This conception is current, also enshrined in contemporary constitutions.

Without going into details that I have exposed in other works, we consider that such a separation is likely to favor atheism and the secularization of society. The separation of state institutions from Church institutions, to a certain extent, is useful in consecrating and guaranteeing the functional and organizational autonomy of the Church, of religious cults, but the state does not only represent political power or the sum of its institutions. The state is also a territory, on which its population is located. Therefore, the Romanian Constitutions from the interwar period enshrined Romania’s character as a “Christian and Orthodox State.” 22

Christianity and science in the era of postmodernism and transhumanism Christianity, one of the most widespread religions in the world, continues to be a significant force in the current period, although it faces challenges and transformations. The number of Christians is estimated at 2.4 billion, representing approximately 31.54% - 33.2% of the world’s population.

Currently, Christianity is characterized by a great diversity of denominations, including Catholicism, Protestantism and Orthodoxy, which have their own practices and doctrines. In some regions, Christianity is growing, while in others, it is facing a decline in the number of followers, influenced by secularization and socio-economic changes

In many Western countries, secularization has led to a decline in the number of practitioners, while in other parts of the world, Christianity continues to thrive. However, Christianity continues to play a role in the politics and society of many countries, often in connection with ethical debates and moral values.

In Romania, Christianity is dominant, with the majority of the population identifying with the Orthodox Church. There are also Catholic and Protestant communities, as well as other smaller Christian denominations. The 2011 census indicated that 86.5% of the population identified as Orthodox, while almost 5% declared themselves Roman Catholic, according to the census conducted by the Romanian Government. The 2022 census shows a decrease in the percentage of Orthodox Christians to 73.86%.

The current era in human history is also characterized by the emergence of ideologies that deny the classical values of culture and civilization, man is no longer considered a free person created in the image of God, and the truths of faith revealed by God of Christianity are attempted to be replaced with the idols of our times created by the supporters of postmodernism and trans-humanism, because it is to these ideologies that we mainly refer.

Postmodernism is the reference term applied to a vast range of developments in the fields of critical theory, philosophy, architecture, art, literature and culture. The various expressions of postmodernism originate from, exceed or are a reaction to modernism. If modernism considers itself a culmination of the search for an aesthetic of scientific and rational enlightenment, an ethics and rationalized and normative legal humanism, all with universal value, postmodernism deals with the way in which the authority of these ideal entities (called metanarratives) is weakened by the process of fragmentation, consumerism and deconstruction. Jean-Francois Lyotard<sup>23</sup> described this current as a “distrust of metanarratives”; in his vision, postmodernism attacks the idea of universal, monolithic, stable conceptions of man and monolithic existence and instead encourages fractured, fluid and multiple perspectives, promoting value relativism of a scientific, artistic or moral nature. Nothing makes sense, therefore everything is permitted. Existence is individual, concrete, without universals.

Contemporary postmodernism is an era of great existential contradictions in the history of the salvation of man and the world: faith coexists with disbelief, value with non-value, progress with regression. The dominant tendency is recessive, of abandoning man’s relationship to God, of dissolving the perennial values of true faith and culture, of transforming man into an individual dominated by technological rationalism and of changing his existential status from the goal of creation to a simple means, of perverting freedom with the illusions of accumulation and consumerism.

A characteristic feature of postmodernism is negativism, “apotheosis of groundlessness” (L. Shestov).<sup>24</sup> Everything that before postmodernism was considered established, reliable and certain: man, mind, philosophy, culture, science, progress - everything was declared unstable and indefinite, everything turned into words, reasonings and texts that can be interpreted, understood and “deconstructed”, but which cannot be relied on in human knowledge, existence and activity.

Transhumanism is an international intellectual and cultural ideology that supports the use of new sciences and technologies to improve the mental and physical abilities and skills of people and to ameliorate what it sees as undesirable and unnecessary aspects of the human condition, such as stupidity, suffering, disease, aging and involuntary death. Transhumanist thinkers study the possibilities and consequences of the development and use for these purposes of human enhancement techniques and other emerging technologies. The dangers and potential benefits of powerful new technologies that could radically change the conditions of human life are also concerns of the transhumanist movement.

In his 2002 book, “Our Posthuman Future” and in a 2004 article in the magazine “Foreign Policy”, the political economist and philosopher Francis Fukuyama designates transhumanism as the most dangerous idea in the world, because he believes that it could undermine the egalitarian ideals of democracy (in general) and liberal democracy (in particular).<sup>25</sup>

We believe that postmodern society can be characterized by six ideologies and at the same time ontological realities: convergence of systems; zero economic growth; the ideology and practice of globalization; gender ideology; the ideology of artificial intelligence; the ideology of the superman.

Of course, these are not the only aspects. For example, another characteristic of postmodern society is the dominance of technologies over humans and humanistic values, including Christian ones.<sup>26</sup>

However, Christianity remains a major force in the world, but it is facing significant challenges and transformations in the current period. According to some studies, adaptation to social and economic changes is essential for the future of Christianity.

Science in the present era is a vast and constantly evolving field, characterized by a rigorous and systematic approach to knowledge. It encompasses a wide range of disciplines, from the natural and

social sciences to the formal sciences, each with its own methods and goals. Currently, science is closely related to research, which is carried out in various institutions and has a significant impact on everyday life, through innovations in technology, medicine and other fields.

In this particularly complex social and spiritual context, there are numerous scientists, great scholars who testify to the ontological limits of rational and scientific human knowledge and at the same time the fact that the most advanced research, especially in the fields of quantum physics, astronomy, and medicine, confirms the revealed truths of the true Christian faith, primarily the existence of God unique in Being and triune in Persons, unknowable in His being, as well as the creation of the world, of life, of man by God, out of His incomprehensible love.

There are numerous contemporary scientists who testify to the revealed truths of the true faith. We present some of these statements and convictions

Academician Leon Dănăilă declared: “Work and faith have given meaning to my life, shaped my behavior and given me depth. I have always rushed into the unknown alone, because I have had the greatest confidence in myself. I have directed my entire activity towards the poor, the sick and the needy who suffer, in order to lend them a helping hand.”

Academician Nicolae Dabija noted the following: “If believing means being able to move mountains, such faith is almost impossible for a mortal man. He wants to believe rather than believe, man is more around faith than at its core; God, with whom the believer should be confused in his faith, is inaccessible to the latter, only Jesus opens the door to the eternal through his quality as man and God.”

Werner Heisenberg, Nobel Prize laureate in physics, said: “The first sip from the glass of science will make you an atheist, but at the bottom of the glass God awaits you.”

Essentially, the phrase suggests that, at first, science may seem to contradict religious beliefs, but as one delve deeper into it, one can discover a deeper perspective that reconciles the two.

Ludwig Josef Johann Wittgenstein, philosopher and scientist, said: “The world has no cause in itself.”

Max Plank, Nobel Prize laureate in physics, said: “It is no coincidence that the greatest thinkers of all time have deeply religious souls.”

Albert Einstein had complex views of God, distancing himself from traditional religious conceptions. He

stated that he was neither an atheist nor a pantheist, preferring to believe in a “Spinozian God”, a force that manifests itself in the order and harmony of the universe, rather than in a personal entity involved in human actions. A famous quote of his is: “I do not believe in a personal God, who is concerned with the fate and actions of human beings”. He also said: “I am only interested in what God thinks of me. The rest are details”.

Einstein considered the question of God to be a deep and complex one, not one that could be solved with a simple “yes” or “no”. He recognized that the human mind is limited in fully understanding this question. In addition, he emphasized the connection between the aspiration for truth, specific to science, and religion, stating that both stem from the human need to understand and find purpose.

In his famous controversy with quantum mechanics theorists, Albert Einstein stated:

“You believe in a God who plays dice (the proponents of quantum mechanics, n.n.), and I believe in complete law and order that exists in an objective way, and which I, in a highly speculative manner, am trying to understand. I believe strongly, but I hope that someone will discover a more realistic way, or a more tangible basis than I have been able to.”Of course, such testimonies do not stop there.

#### 4. Some Conclusions

The finite nature of the human being’s capacity for knowledge through sensitivity and reason can be expressed by the phrase: all knowledge has limits. It means that knowledge about knowledge also has limits and hence that knowledge about the limits of knowledge itself has limits. For now, the history and logic of knowledge have not identified the existence of any form of knowledge without limits, even mathematical and logical knowledge.

Therefore, one can admit the universality and logical truth, or the evidence of the statement, Any sensitive or rational knowledge has limits. The truths of faith do not have to and cannot be demonstrated scientifically, but today’s scientific discoveries testify to the truths of faith of Christianity. Knowledge through faith is not contrary to scientific knowledge, but completes it with revealed truths, exceeding the limits of human reason.

The Holy Apostle Paul notes the limits of man’s rational and sensitive knowledge regarding God and created nature: “If these realities are inaccessible to

those who have reached the measure of the Apostle Paul, how immeasurable can be the arrogance of those who claim to know the being of God? I will gladly ask them to tell us about the earth on which they are and by which they were born. Let them show us what his being is! So that if they can hold a philosophical discussion about earthly things and those that are under our feet without being contradicted, then we will believe them when and if they also discuss those that are above any concept. What is therefore the being of the earth? What is the way according to which we can understand it? Let them answer us in what way this is achieved, through intelligible knowledge or through sensory knowledge? And if they say that it takes place through sensory knowledge, through which sense is this knowledge embraced?...It remains, therefore, that the Logos revealed their being. But which Logos? Where is it found in Scripture? Which of the saints transmitted it? 27

Although human knowledge is vast and constantly expanding, there are ontological limits that prevent us from understanding everything about the world and about ourselves.

Only through the right Orthodox faith can these limits be overcome, as the Holy Apostle Paul says: And faith is the assurance of things hoped for, the evidence of things not seen. By it, the ancients gave their good testimony. By faith we understand that the ages were founded by the word of God, so that things which are seen were made out of nothing (Hebrews 11:1-3)

Modern science bears witness to the truths of the true Christian faith, and knowledge through faith does not contradict scientific knowledge, but rather provides the necessary epistemological foundation, opening new horizons for the knowledge and understanding of the intelligible and sensible created existence.

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