

**THE SCIENTIFIC EVOLUTION OF HUMANITY AND ORIGIN OF THE UNIVERSE: A
PHILOSOPHICAL/THEOLOGICAL ANALYSIS IN RELATION TO THE CREATION ACCOUNTS IN
GENESIS**

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Abstract

Human beings are naturally inclined to ask questions about life and its origin as well as the environment and the world in which they live, a capacity which has helped to engender general progress and advancement in the world. The scientific theory of evolution postulates the development of living organisms from preexisting forms through successive generations; that of the Big Bang claims the beginning of the universe – very many years ago – from an infinitely small, hot, and dense point, which rapidly expanded, producing the universe. Following these two theories, many people have come to doubt or even reject the biblically age-long accounts of creation in the book of Genesis as dialectically opposed to the scientific findings. This article aims to study these theories so as to throw more light on them, their implications as well as their proper relationship with creation in that first book of the Bible. The method used in it is mainly library research, aided by the historical critical method of exegesis for the proper analysis of the biblical texts involved. The finding is that many humans in these modern and scientific times misunderstand the basic relationship between these scientific postulations and the biblical accounts. On the contrary, this article maintains that the scientific and biblical positions are actually complementary to each other. The recommendation, therefore, is for all to always endeavour to see each of the two entities, the scientific and the biblical, from their respective contexts so as to be able to appreciate their particular postulations more deeply. This study would, therefore, be significant to many people including scientists, teachers, students as well as believers in God, especially in Judaism, Christianity and Islam.

Key Words: Evolution, Big Bang, Biblical Creation, Analysis, Complementary.

Introduction

Man's natural quest to find meaning in his life inclines him to ask basic questions about life in general but especially about human origin and that of the universe. The theories of the evolution of humanity and the Big Bang respectively, which are indeed popular among many people in the world today, are among the strongest attempts by scientists to provide answers in those two directions. This research has tried to examine those theories so as to throw more light on them, also making reference, in doing so, to the relevant views of some ancient and medieval philosophers. It has also endeavoured to relate the theories meaningfully to the creation accounts in Genesis 1 and 2 which many people of scientific mind today tend to doubt or even reject in preference for the scientific postulations. This study has arrived at the ultimate conclusion that instead of contradicting each other, the scientific theories and the biblical accounts are actually complementary, when all are seen and examined within their own particular contexts – as has actually been done in this paper. It is, in fact, God's creation which is the most basic of everything in life, before science, humanity and even the universe. Hence, evolution and the Big Bang could, at best, be understood as the further developments of that divine creation, a capacity that is actually inherent in creation itself, as ordained by God.

Man's age-long Quest for Knowledge about Life and the World

Man, as already hinted above, has a natural inclination to ask questions about his environment, the world in which he lives, his life in general as well as its origins. It is this quest which underlies all advancements in human knowledge in all the aspects of his existence, be it in the natural sciences, the arts, religion and theology.

Hence, speculation about human origins is at least as old as the written history of man. The earliest recorded myths of human cultures center on the origin and genealogy of man, his condition and progressive development. In the Pyramid Texts of early Egypt (c. 4,000 B. C.), there is a strong belief that certain great men were fashioned by the gods of the pantheon, but that the human race originated from some life force in the world. In Babylonian and Sumerian archaeology, it is believed that the gods fashioned mankind from the blood of a sacrificed god or even from clay. Persian mythology (c. 1,500 B. C.) shows a creative dualism, as one Supreme God created the universe and man in a state which is said to be both good and evil. In Judaism and Christianity, the emphasis is that the supreme, almighty and all-powerful God created the world and everything in it, giving man the pride of place in the entire

creation. Islam, especially under the auspices of Mohammed (d. A. D. 632), believed that man was fashioned by a wise, supreme, and powerful creator, Allah.ⁱ In fact, as has been stated in another article, most human beings believe that there is a Supreme Being who created the world, for this is the tenet of almost all the major religions of the world, especially Judaism, Christianity and Islam.ⁱⁱ

Thus, in African Traditional Religion, the belief in the Supreme Being who created all things, including mankind and the other gods or deities, also abounds. On that note, “studies of the world-views of many African societies show that most African societies recognize fundamentally two different types of divinities – the Supreme Being, and the subordinate deities.”ⁱⁱⁱ The Igbo of Nigeria are particularly strong in this belief.^{iv}

However, serious discussion of the origin of man as a natural variation from other forms of animal life, rather than as a creature of the gods or of God, arose in the 19th century in connection with the biological theories of evolution. Charles Darwin’s *The Descent of Man* (1871) applied the general arguments of evolution by natural selection to the human species, and from that time onward the science of anthropology has treated man, his origin, his development, his culture, and his history in the context of animal origins.^v Thus, Charles’ “discovery of the theory of evolution by natural selection revolutionized biology.”^{vi}

Evolution

Staggering, indeed, is the diversity of the living world. Over 2,000,000 existing species of plants and animals have been named and described, but many more remain to be discovered and to be named. These virtually infinite variations on life have been seen to be the fruit of the evolutionary process, as all living creatures are related by descent from common ancestors.^{vii}

‘Evolution’ is generally defined as “the gradual development, especially from a simple to a more complex form.” But regarding living things, specifically, it is “a process by which species develop from earlier forms, as an explanation of their origins.”^{viii} In other words, biologically speaking, evolution refers to the process by which “new species or populations of living things develop from preexisting forms through successive generations.”^{ix} Human evolution, then, is the theory that man descended from common ancestors among the higher primates by natural evolutionary processes.^x In fact, in Darwin’s world, there was no place for divine intervention, neither is mankind placed in a position of superiority with regard to the rest of the animal world. “Darwin saw man as part of a continuum with the rest of nature, not separated by divine injunction.”^{xi}

The synthetic theory of biological evolution, from Charles Darwin and neo-Darwinism, postulate the intervention of three essential factors: (1) mutations, i.e., sudden, hereditary modifications of one or more morphological or physiological characteristics through the transformation of one or more genes; (2) natural selection; and (3) the isolation of species.^{xii} These terms, which would now be explained, are purely scientific terms whose imports are best grasped within that scientific context. ‘Mutations’ concern changes over time, as evolution is not a linear progression towards perfection but rather a process of adaptation to changing environments. It relies on changes in the genetic material (DNA – Deoxyribonucleic acid) of a population.^{xiii} In ‘natural selection’, organisms with traits better suited to their environment are more likely to survive and reproduce, passing on those advantageous traits.^{xiv} Hence, ‘the isolation of species’ can then occur over long periods; these changes can accumulate to the point where new species arise, diverging from their ancestors.^{xv}

In any case, no one of the factors listed above would alone suffice to explain evolution, but their interaction is proposed in the synthetic theory according to which “mutation by chance becomes the basis of evolutionary modification; natural selection, on its part, permits only such mutants to survive as are most fit; and, finally geographic, genetic, or sexual isolation of the surviving mutants results in their individualization as a new species.”^{xvi} It needs to be pointed out that although there is also the “Modern synthetic theory of evolution,” a combination of Darwin’s theory and Mendel’s genetics,^{xvii} it is very closely related to the basic Darwinian theory already expressed above in its explanation about the origin of living organisms.

The Big Bang Theory

This theory stands as the most widely accepted and leading cosmological model for the origin of the universe. According to that theory, the universe began as an infinitely small, hot, and dense point, which rapidly expanded and continued to stretch over 13.7 billion years. It is this initial period of rapid inflation which set the stage for the vast

and still-growing cosmos we observe today. As the universe continued to expand and cool, subatomic particles like quarks and leptons formed; these then combined to create protons and neutrons. Since the Big Bang, the universe has continued to evolve, with the formation of stars, galaxies, and larger structures.^{xviii}

Even though astronomers cannot directly witness the universe's formation, much of what we know about the Big Bang Theory comes from advanced mathematical models and simulations. Evidence supporting this theory includes the cosmic microwave background (CMB), a faint 'echo' of the universe's early expansion that scientists can study in detail. This is the leftover radiation from the Big Bang.^{xix}

The Big Bang theory is clearly highly scientific, much like that of Darwin already discussed. But while the theory is widely supported within the scientific community, some researchers emphasize that there are still some questions which it does not fully resolve. They, therefore, propose alternative ideas, such as eternal inflation^{xx} or a cyclical, oscillating universe.^{xxi} All these theories keep the debate about the universe's origin alive, dynamic and open-ended.^{xxii} Endless opinions indeed!

Pertinent Philosophical Contributions

This section of the article would not concern itself with the speculations of a number of Philosophers, especially ancient Philosophers, regarding what matter, or even the universe, is made of^{xxiii} – as 'evolution' and the Big Bang are purely scientific themes which are mostly postulated through highly observable data. It would rather focus on the pertinent views regarding 'man' or the human being, his constitution and origin in the world in which he lives; it would also make some notes on the theme of 'creation' – all engendering greater understanding of the topic of this article.

Coming easily to mind in this regard is Thomas Aquinas – “one of the great Scholastics”^{xxiv} and, hence, an outstanding figure in medieval and Christian Philosophy – who was highly influenced by Aristotle and, somehow, Plato before him. Characteristic of Aquinas was his teaching that the human soul is a unique subsistent form, which is substantially united with matter to make human nature.^{xxv} Plato held the view that the soul is imprisoned in the body, a position also maintained by Augustine who also thought of the soul as a spiritual substance. Both Plato and Aristotle were of the view, as well, that the soul is the 'form' of the body^{xxvi} but Aquinas went further to indicate that the soul of man is as dependent upon the body as the body is upon it. Hence, without the soul, the body would have no form. Without the body, the soul would not have its required organs of sense through which to gain its knowledge. Man is composite of soul and body, as a physical substance.^{xxvii} It is the soul which gives man his uniqueness: “Since the soul confers upon man his form, it is the soul that gives man his life, understanding, and special physical functions. The soul accounts also for man's capacity for sensation and the powers of intellect and will. Man's highest capacity is located in his intellect, making him a rational animal and conferring upon him the means by which to attain the contemplation of God.”^{xxviii} It is indeed distinctive of Aquinas that even though he made respectful use of Aristotle and the Platonists, Augustine and the Fathers, he “developed a distinctive position.”^{xxix}

Thus, Aquinas, just like Augustine before him, further strongly holds that God, who has been biblically revealed, created the world and everything in it. He is the First Mover, First Cause, Necessary Being, Perfect Being, and Orderer of the Universe.^{xxx} This act of creation follows from the revealed nature of God. Being pure act and free, God willed to create. Creation, as a free act, is distinguished by Aquinas from a necessary emanation, as taught by Plotinus before him. These views would ultimately lend credence to the final emphasis of this article, as would now be outlined.

Philosophical/theological analysis

That evolution concerns the development of living organisms from preexisting forms through successive generations, has already been clearly stated. In that process also, 'chance' appears more and more as an essential factor that plays a truly constructive role; it is the merit of the neo-Darwinian theory that it assigns to it an organic and systematic place.^{xxxi} But “chance”, one must observe, is not normally systematic in the natural sphere of things – and this is one of the 'grey areas' about the theory, hence the more recent proposal of the 'modern synthetic theory' of evolution, as already hinted. Yet, the very striking discoveries and recent progress in biochemistry, in finding out the code of nucleic acids, in particular DNA, tend to “further confirm the hopes and pretensions of the proponents of this theory whose account of evolutionary progress becomes steadily more complete, while classical objections to it are rendered more fragile.”^{xxxii} It is now a known fact that the DNA of any two people on earth is 99.9 percent identical.^{xxxiii} Humans also share a significant portion of this with other forms of life on earth.

Be that as it may, a fundamental question would naturally be: What originally accounts for the existence of those 'preexisting forms' from which the new species or populations of living things develop through successive generations? This is a question to which the theory of evolution, one must say, does not seem capable of providing an answer.

Furthermore, man is a highly developed creature. Therefore, the empirical distinction between man's biological and psychosocial origins and development is of utmost importance – making his origin “probably one of the most debated issues in evolutionary biology.”^{xxxiv} This is because, philosophically, the nature of man, as has been highlighted above, must be defined in terms of both body and soul (spirit). He is a rational animal, an animal body informed and energized by a spiritual soul. His intelligence and free choice distinguish him from other primates, and, indeed, from the entire material universe. As already hinted, man's capacity for culture, for fashioning a technology, for constructing a language, for judging and reasoning, and for creating sciences, arts, societies, laws, and moral and religious codes must be, at root, spiritual. This spiritual capacity cannot have its origins in primate potentialities or in a purely material substrate, a fact that has also been pointed out in the philosophical contribution above. Thus, the theory of evolution is not accepted unanimously, as even confirmed materialists think that it is necessary to posit laws as yet unknown in order to explain the evolution in so short a time of a being as complex as man.^{xxxv} Hence, it becomes “most essential to acknowledge the radical incapacity of science to furnish an explanatory scheme of evolution independently of the neo-Darwinian frame of reference.”^{xxxvi}

Agreeably, the evidence for the continuity of bodily development from the lower primates to and including man himself, as the scientific study of human evolution has shown, is as well documented as any animal phylogeny. The evidence for the fact of the physical evolution of man is thus good, and this evolution, as already noted, is accepted as a fact by contemporary physical and cultural anthropologists. Yet for many people, among them even evolutionary scientists, evolution has stopped in this time and age as the process seems no more to be visibly in evidence anywhere in the world. But according to a highly informed view, this is really not the case because even though cultural, environmental and even medical factors may all have contributed to slow biological evolution down, especially in the case of humans, “the only way to truly stop any biological organism from evolving is extinction.”^{xxxvii}

But human evolution still has to be reckoned with, more conclusively. Philosophically, as has already been shown, the origin of the soul (spirit) of man requires a special coordinate creative act concurrent with, but infinitely above, the laws and events of biological evolution. It is the 'spirit' or soul, as already hinted, which makes man unique – and it did not evolve biologically! Rather it is God who created and infused that in man. Thus, man would find his origin in the delicately coordinated agencies of primate evolution and divine creative act.^{xxxviii}

Regarding the Big Bang theory, there are also – as already hinted – some fundamental objections, for researchers have also noted its incapacity to resolve some pertinent questions, hence their postulating alternative theories such as eternal inflation or a cyclical, oscillating universe. To that end, the similar question which was raised in the case of “evolution” needs to be addressed here too: From where does that “infinitely small, hot, and dense point, which rapidly expanded and continued to stretch over 13.7 billion years” to form our cosmos of today ultimately originate? This is clearly a very important question to which the theory, and even science itself, seems to have no answer. It is also clear that they cannot answer such a question. Therefore, one has to appeal to the Judeo-Christian theological postulations about the origin of humanity and the universe for a more encompassing point of view – and this is so because that view has also been the subject of much philosophical analysis, as has earlier been shown. It is this view, this paper maintains, which actually renders the foregoing scientific postulations more founded and more deeply understandable.

The relation between Creation in Genesis and the scientific theories

Summary of the two Creation Accounts in the Book of Genesis

The first account of Gen 1:1-2:3 highlights creation as taking place day by day: light was created on day 1, Sky on day 2, land (plants) on day 3, luminaries on day 4, birds and fish on day 5, animals and man (plants for food) on day six and Sabbath on day seven. Almost all of those days of creation are introduced with the announcement of the command, “And God said” (*wayy ōmer ʾēlohīm* [Gen 1:3, 6, 9, 11, 14, 20, 24, 26, 28, 29]); and also with the order, “Let there be...” (*yāhî* [Gen 1:3, 6, 11, 14, 20, 24, 26]). The fulfillment formula, “And it was so” (*wayhî-kēn*), also signals their actual execution (Gen 1:3, 7, 9, 11, 15, 24, 30).^{xxxix} These descriptions help to distinguish each of those days of creation from one another.

In the second account (Gen 2:4b-25), God formed man of the dust from the ground and breathed into his nostrils the breath of life, placing him in the garden of Eden, with everything pleasant, together with the tree of life and of the knowledge of good and evil respectively (Gen 2:4b-9). From God's command, man may freely eat of every tree in the garden, except that of the knowledge of good and evil (Gen 2:15-17). He then formed every other animal and the man named all of them (Gen 2: 18-20). Finally, God created 'woman' from the rib of man, to the latter's delight. She is man's partner and helper – bone of his bones and flesh of his flesh (Gen 2: 21-25).

Creation in Genesis and the scientific Theories are Complementary

The accounts of creation in Genesis 1 and 2 are found in the first part of the book of Genesis, from chapters one to eleven. This is prehistory, a religious history serving specific purposes in the overall narrative in that section of the Bible and in the two testaments of that sacred book. Hence, it should not be interpreted too 'literalistically'. Mainly, it "serves simply as background to the subsequent story of the patriarchs, and their history is in turn background to the story of Israel's exodus from Egypt and the law-giving at Sinai which forms the subject matter of Exodus to Deuteronomy."^{xi} This fact has to be strictly borne in mind, else one runs the big risk of misunderstanding the emphases of Gen 1-11 as well as the entire book of Genesis. Modern man often makes assumptions about the world that are completely different from those of the second millennium BCE when these accounts were believed to have been put together. Therefore, when we read Genesis, we tend to grab hold of points that were of quite peripheral interest to the author of that sacred book and overlook points that are fundamental.^{xii}

The most basic statement of Gen 1-11 is in Genesis 1:1: "In the beginning God created the heavens and the earth." It is almost 'a general title' for the creation narratives in that book of Genesis. The subsequent details only help to develop and elucidate it.^{xiii} This emphasis is highlighted especially from the word 'to create', *bārā* in Hebrew, which is only used for Israel's God as its subject of expression. It is, therefore, used at this very first verse of the book of Genesis to describe the entire creation, highlighting the incomparable newness and uniqueness of what God brings into existence.^{xiii} Furthermore, Gen 1's assertion of the one almighty God who created and controls the world according to a coherent plan (of six days) brings out the unity and order underlying the manifold and seemingly capricious phenomena of experience. It is this unity which can actually justify the experimental method in the sciences, including 'evolution' and the Big Bang. Were this world to be subject to mere chance, no consistency could be expected in experimental results and no scientific laws could be discovered.^{xiv} This is the emphasis of the creation accounts in Genesis, one that has to be understood in its own context. Properly understood, therefore, Genesis actually justifies the scientific experience of unity and order in nature, apart from stating it categorically that God created the world. This is actually the most profound way of understanding these scientific approaches explaining the evolution of humanity and the origin of the world. It is, largely speaking, 'Evolutionary Creationism.'^{xv} Hence, any attempt to force any of these categories on the Bible in a bid to further buttress it, would not be realistic.

For example, according to David Shamah, some scientists have, in 2014, claimed a reconciliation of the Big Bang theory with that creation account in the book of Genesis especially regarding creation *ex nihilo* (i.e. out of nothing) which was hitherto considered impossible: "According to Genesis, the universe was created from a ball of energy and light that appeared suddenly from nothingness – exactly the same ball of energy and light described in the Big Bang theory."^{xvi} This statement, one must say, needs further proof and explanation, as it is nowhere directly stated in the book of Genesis that "the universe was created from a ball of energy and light that appeared suddenly from nothingness." Yet, these scientists also admitted that the cause of the Big Bang, as has already been noted, is still to be resolved even in the midst of their recent breakthrough: "Without addressing who or what caused it, the mechanics of the creation process in the Big Bang match the Genesis story perfectly"^{xvii} – an admission that has landed us exactly where we began. Hence, this paper does not see much 'reconciliation' in this effort by these scientists. We have to lean back to the philosophical/theological solution which is best portrayed in the Judeo-Christian postulation which hinges especially on the accounts of creation in the book of Genesis.

The final thesis could, therefore, be summarized as follows: Creation as described in Genesis and the scientific theories of evolution and Big Bang, respectively, are actually complementary to each other – God created the world, giving that creation the capacity and propensity for further development and actualization. This article emphasizes, therefore, that 'evolution' is ultimately a continuation of that creation by God just as the Big Bang also is. Thus, "there is only one God, who is also the creator of all that exists. So, creation is not the result of chance, blind fate, or necessity, as some scientists would want us to believe. God equally governs his creatures to their particular ends, and

has ordained all his creation to an end in mind.”^{xlviii} It is actually from this background that many, in the world today, are pre-occupied with protecting the world of nature and the eco system because all the creation of God is valuable in its own right, regardless of whether we recognize it or not. It is God who created the world.

Conclusion

That human beings are naturally inquisitive about their lives, their surroundings and the world in which they live has long been noted. Most groups, right from known history, have advanced explanations, even if only mythically, for the origin of humanity and the world. In the Judeo-Christian dispensation, the biblical accounts of creation stand tall among these views. Much more recently also, the scientific theories of evolution, especially from Charles Darwin, and the Big Bang, respectively, have also attracted much appeal especially from scientific minded individuals. In these modern times, therefore, many tend to see a serious dichotomy between the biblical accounts of creation and these modern theories.

This article has, as much as is possible within its limited scope, looked at all these postulations in some detail. It has also analyzed the biblical accounts of creation exegetically, highlighting its meaning within its own specific context. Thus, as innovative and positively informative as these scientific theories actually are, they fall short in some basic aspects, particularly regarding the origin of the ultimate material of which both living organisms and the universe are basically made of. It is here that the Judeo-Christian account towers highest: God created it (Gen 1:1). Consequent upon this active creation by God, other discussions regarding the evolution of living organisms and the origin of the universe could meaningfully follow, as creation itself is not static but keeps on developing, according to God’s plan. From this studied background, therefore, it becomes clear that, when rightly understood, the emphasis that it is God who created the entire world, as expressed in the creation accounts in the book of Genesis, and the scientific theories of evolution and the Big Bang, do not contradict each other. They are rather complementary.

Endnotes

ⁱ Raymond J. Nogar, “Human Evolution: Philosophical Aspect”, New Catholic Encyclopedia, Vol. 5 (Washington, D.C.: Catholic University of America, 1967) 682.

ⁱⁱ Emmanuel U. Dim, “God’s Blessing of Humankind and Human Labour (Gen 1:28-29): Its Meaning and Implications – Relevance especially to Youths in Nigeria”, Global Journal of Religion and Human Relations (GJORHR), Vol. 1, No. 1 (October 2025) 19.

ⁱⁱⁱ Emezie Ikenga-Metuh, “The Nature of African Theism: Analysis of Two Nigerian Models”, in Elochukwu E. Uzukwu, ed., Religion and African Culture: Inculturation – A Nigerian Perspective (Enugu: SNAAP Press, 1988) 60.

^{iv} Francis A. Arinze, Sacrifice in Igbo Traditional Religion (Onitsha: Brothers of St. Stephen, 2008) 92.

^v Nogar, “Human Evolution: Philosophical Aspect”, 682.

^{vi} Bettyam Kevles, “Darwin”, The New Encyclopaedia Britannica, Vol. 16, 15th Edition (Chicago: Encyclopaedia Britannica, 1994) 977.

^{vii} Francis Jose Ayala, “The Theory of Evolution”, The New Encyclopaedia Britannica, Vol. 18, 15th Edition (Chicago: Encyclopaedia Britannica, 1994) 855.

^{viii} Della Thompson, ed., The Concise Oxford Dictionary of Current English, 9th Edition (Oxford: Oxford University Press, 1995) 467-468.

^{ix} MERRIAM-WEBSTER, “Evolution: Definition and Meaning”, Meriam-Webster.com Dictionary <https://www.merriam-webster.com/dictionary/evolution>.

^x Nogar, “Human Evolution: Philosophical Aspect”, 682.

^{xi} Kevles, “Darwin”, 979.

^{xii} Émil-Laurent Boné, “Human Evolution: Biological Aspect”, New Catholic Encyclopedia, Vol. 5 (Washington, D.C.: Catholic University of America, 1967) 680.

^{xiii} Cf. Biology Online Dictionary, “Evolution Definition and Examples”, Learn Biology Online <https://www.biologyonline.com/dictionary/evolution>.

^{xiv} Your Genome, “What is evolution?”, <https://www.yourgenome.org/theme/what-is-evolution>.

^{xv} Reed Hepler, “Evolution in Biology| Definition, Theory and Biologists”, Study.com, “<https://Study.com/academy/lesson/evolution-onhistory-study-types-biology.html>”>Evolution in Biology/ Definition, Theory & Biologists.

^{xvi} Boné, “Human Evolution: Biological Aspect”, 680.

^{xvii} This theory explains that the evolution of life is basically based on genetic changes in a population and this eventually leads to the emergence of new species (cf. “Modern Synthetic Theory of Evolution – An in-depth Study,” Textbook, <https://testbook.com>>Biology).

^{xviii} Andrew May, “What is the Big Bang Theory”, Space, <https://www.space.com>>25126-big-bang-theory.

^{xix} May, “What is the Big Bang Theory”.

^{xx} This is a theoretical extension of the Big Bang theory where the inflationary phase of the universe’s expansion continues forever in most regions, even as it ends in others. This leads to the creation of an infinite number of “pocket universes,” potentially forming a multiverse, with our own observable universe being just one of them

^{xxi} A cyclical or oscillating model, according to Wikipedia, is any of several cosmological models in which the universe follows infinite, or indefinite, self-sustaining cycles. (It undergoes endless cycles of expansion and cooling).

^{xxii} Cf. May, “What is the Big Bang Theory”..

^{xxiii} For example, Thales maintained that everything is made of water. For Pythagoras, things consist of numbers while for Heraclitus, everything is in flux – to mention but these three.

^{xxiv} Joseph Pieper, “Scholasticism”, The New Encyclopaedia Britannica, Vol. 25, 15th Edition (Chicago: Encyclopaedia Britannica, 1994) 585.

^{xxv} James Daniel Collins, “Thomism”, The New Encyclopaedia Britannica, Vol. 28, 15th Edition (Chicago: Encyclopaedia Britannica, 1994) 647.

^{xxvi} For Plato, the ‘forms’ or ‘ideas’ are changeless, eternal and non-material essences. They are the true reality of which the actual visible objects are only poor copies. The human person is composite of body and soul, the soul being first acquainted with the Forms before being united with the body. It was these ‘forms’ that the Demiurge or God employed in fashioning particular things. For Aristotle, however, the forms and matter cannot be separated, as the only real good or beautiful was found in actual things (cf. Samuel E. Stumpf, Philosophy: History and Problems [New York: McGraw-Hill, 1977] 60-65).

^{xxvii} Samuel E. Stumpf, Philosophy: History and Problems (New York: McGraw-Hill, 1977) 60-65. 203.

^{xxviii} Stumpf, Philosophy: History and Problems, 204

^{xxix} Collins., “Thomism”, 647.

^{xxx} Stumpf, Philosophy: History and Problems, 194.

^{xxxi} Boné, “Human Evolution: Biological Aspect”, 680.

^{xxxii} Boné, “Human Evolution: Biological Aspect”, 680.

^{xxxiii} Rachel Crowley, “Genetics by the Numbers”, National Institute of General Medical Sciences Biomedical Beat Blog, April 24, 2024, <https://nigms.nih.gov>>biobeat>2024/04>genetics-by-the-numbers.

^{xxxiv} Your Genome, “Evolution of modern humans”, <https://www.yourgenome.org>>evolution-of-modern-humans.

^{xxxv} Cf. Boné, “Human Evolution: Biological Aspect”, 678-680.

^{xxxvi} Boné, “Human Evolution: Biological Aspect”, 680.

^{xxxvii} Alan R. Templeton, “Has Human Evolution Stopped?”, Rambam Moimonides Medical Journal (RMMJ), Vol. 1, No. 1 (June 2010) 1 and 8, doi:10.5041/RMMJ.10006

^{xxxviii} Nogar, “Human Evolution: Philosophical Aspect,” 682-683.

^{xxxix} Cf. Gordon J. Wenham, Genesis 1-15, Word Biblical Commentary 1 (Nashville: Thomas Nelson, 1987)

^{xl} Wenham, Genesis 1-15, xlv.

^{xli} Wenham, Genesis 1-15, xlv.

^{xlii} Cf. Ephraim A. Speiser, Genesis, The Anchor Bible 1 (New York: Doubleday, 1962) 12-13.

^{xliii} Werner H. Schmidt, “*bārā*”, Theological Lexicon of the Old Testament, Vol. I (Peabody: Hendrickson, 1997) 255.

^{xliv} Wenham, Genesis 1-15, 39.

^{xlv} This view holds that it is God who is the ultimate creator of all that exists. So evolution and the Big Bang ultimately derive from Him, to keep the earth and diversify life in it. (Cf. Damon S. Perez, “Christian Views on Creation and Evolution”, Colorado Christian University (CCU), <https://www.ccu.edu>>blogs>cags>category>christian-views-on-creation-and-evolution).

^{xlvi} David Shamah, “New Big Bang evidence supports Biblical creation, says Orthodox physicist,” The Times of Israel, March 19, 2014, <https://www.timesofisrael.com>/with-new-big-bang-evidence-supports-biblical-creation-says-orthodox-physicist.

^{xlvii} Shamah, “New Big Bang evidence supports Biblical creation, says Orthodox physicist.”

^{xlviii} David-Mary Odunsi, “The goodness of God’s creation: Family’s role in nurturing the earth”, Family Week 2025: The Impact of Environment on Family Well-being and Sustainability in the Spirit of Laudato Si’, (Abuja: Catholic Secretariat of Nigeria, 2025) 1.

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