

# SCIENCE AND ORTHODOX CHRISTIANITY

## INTRODUCTION

We live in an age of science and technology. It has been a long process, stimulated by leaps and bounds in our knowledge, but it is undeniable that no human generation has been so dominated by the application of scientific and technical developments. Although most modern people have a very limited understanding or knowledge of how the technology they use actually works, they are content to accept that Science, as a pursuit, can address most of the questions that arise in their minds.

Science, as it has developed especially in Western Europe since the seventeenth century, has its own protocols and processes, designed to establish facts about the world we experience and live in. Generally, it starts with the observation of a particular phenomenon. An explanation of the phenomenon is then put forward, based on the current state of knowledge. This is called an hypothesis. This is then rigorously tested by experimentation. If the experiment is successful, it is reviewed and subjected to independent testing. If this, in turn, is verified, the original explanation is confirmed as a theory.

What we might note from this process is that Science is always involved in improving its knowledge. Any untested explanation of a phenomenon, as noted above, always starts from the current state of knowledge. Progress, of course, will often depend on 'thinking outside the box' and, naturally, many failed experiments, testing hypotheses.

The other observation we might make is that Science has limits to what it can investigate. The word itself, Science, comes from the Latin *scio* (I know) and its proper domain is the natural cosmos around us, and to an extent, the world within us as observers and those who can appreciate what we experience. Indeed, it is salutary to realise that, as far as we are aware, humans are the only living beings who not only can make the best of their environment, like other living beings, but also seek to understand how it is the way it is. This is the pursuit of Science and it deals with the physical universe, how it came to be (Cosmology), how it works (Physics, Biology and Chemistry) and how such knowledge might be useful (Technology). However, in the strict sense, Science cannot, nor need not bother to ask the question, *why*? Science, as soon as it attempts to probe metaphysical ideas, loses its identity as Science; it becomes mere philosophical speculation. The question *why* our universe exists (as opposed to *how* it came to be), for example, cannot be open to the scientific method explained above.

For example, Physics can describe fundamental principles that govern how elements interact: the so-called, natural laws such as the First Law of Thermodynamics. This law states that heat is a type of energy. Thermodynamic processes, being subject to the principle of energy conservation, cannot create or destroy

such energy. However, it can be transferred from one location to another and changed into other forms of energy. If we now ask where does this law come from? Was it there before the universe came to be? Did it develop alongside the beginnings of the universe as the only logical principle? But then we must ask another question: why is there a logical universe at all? Where does logic come from? Already, as one might see, we are going beyond the strict bounds of Science and into the realms of philosophical speculation.

## MODELS OF APPROACH

For a long time now there has been, especially in the western mind, a controversy that pits Science against Religion. From the start, this is an inaccurate title for the debate. A more appropriate name would be Science against Theology. However, from the start it should be stated that Orthodox Christian Theology has no fundamental problem with Science as the human pursuit of knowledge about the universe, and that any antipathy between the two has to be based on a misconception of the purposes of both Science and Theology.

If we examine Scientific knowledge and Theological knowledge, we can uncover, historically, four basic approaches or models:

- **The Conflict Model**, where they are absolutely opposed to one another and seek to contradict the claims made by either side. This is seen, for example, in the Protestant fundamentalist approach to Creationism and its literal interpretation of the First chapters of the book of Genesis. Interestingly, the idea that the world is fixed after a literal six-day process, has far more in common with ancient Greek and even Indian concepts of creation, holding evolution to be unnecessary, and at odds with any authentic Orthodox exegesis regarding the text of Genesis.
- **The Integration model**, where Science and Theology work for a common understanding on the questions addressed. The problem with this approach is that *how* and *why* questions cannot converge, they will always be in parallel, and each discipline will claim that its explanation takes precedence.
- **The Interaction Model**, where each discipline offers insights to the other. Ultimately, however, for the scientist, this might appear quite unnecessary, especially, as would be claimed, theological knowledge cannot be subject to the scientific method involving, observation, hypothesis, experiment and theorising. It also produces the 'god-of-the-gaps', brought in to explain what Science currently cannot. The problem here is that, as scientific knowledge grows, the 'god' shrinks in his importance and relevance as the gaps grow narrower.
- **The Independence Model**, where each works on different questions regarding truth. This, quite simply, would be the Orthodox Christian understanding of the separate but complementary roles of Theology and Science; complementary, that is, in that both pursuits offer insight in their own way into largely different issues.

Using this last model as our approach to the question of Science and Theology, we need to explore what our Theology is for, just as we know what our science is for.

In short, we are dealing with our belief in eternal salvation, through our relationship with God: something that no scientific theory, chemical formula or piece of technology can know anything about. Indeed, Science would have to be quite agnostic about such questions. Whether a particular scientist would regard this as an illogical or meaningless pursuit, is a question for his beliefs.

#### ORTHODOX THEOLOGY

Orthodox Christianity is founded on the belief in one God who, in order to be defined, in any meaningful way, as God per se, must be eternal, omnipotent (almighty), omnipresent (everywhere) and omniscient (all-knowing). Being everywhere, however, does not mean that God is part of the universe, indeed, God has to be understood as entirely separate from the contingencies of the universe, outside what we understand as time, space and causality. In fact, God does not exist (out of non-being) extant in the same way that all objects in the universe exist. It is also the belief of Orthodoxy that God is the Creator of all. As such He cannot be just a causal explanation for the parts of our Science that we do not currently know, a god-of-the-gaps. As such, He would not be God at all. In other words, to be God, He must be absolute, ever-existing and one being without rival.

This Theology, so far, would be recognised by all monotheistic religions. It is, of course, part of the revelation received in Christianity, that God is a Trinity of three Divine Hypostases, or persons, united in one Godhead. As with any being so defined, the divine nature (essence) cannot be (exist) without subsisting in the particular, that is, an hypostasis. In the same way, human nature cannot exist without subsisting as actual persons. We do not believe in an impersonal, divine force operating within and upon the universe. Rather, our faith is in a tri-personal God, three hypostases, each sharing the divine nature but not three gods, but one Godhead and Being. It is this God, Father, Son and Holy Spirit, whom we believe created all that is, visible and invisible. Furthermore, we believe that one person of the Trinity, the Son, took a human soul and body at His Incarnation as Jesus of Nazareth, the Christ. These things, of course, are theological mysteries, of which, Science can know nothing. It has no method of testing any of these assertions or even language in which to explain them. As the philosopher, Wittgenstein, says at the end of his Tractatus, *'That whereof we cannot speak, thereof we must be silent.'*

The Orthodox Church holds these beliefs about God, not because of any scientific method or philosophical system, but because she has received them by revelation from God. We also say in the Nicene Creed that we believe in God as the Creator of all things visible and invisible. Clearly, modern Science has discovered much about the origin of the physical universe and how it came to be as we find it today in our own experience. It has also uncovered much about the origin of what we call life, both zoological and botanical, and about how the forms of life have changed over time. Given that we might follow the Independence Model outlined above in respect of Science and Theology, it is possible and, indeed, right, to hold both these approaches to the cosmos and life within it and that they are not, of necessity,

contradictory. They are, we can maintain, two different perspectives on the same phenomena, the how and the why.

If for example, we were to ask, how God connects with the processes of creation, especially those uncovered by Science, we might propose that:

- God planned and created everything from the beginning and just 'put' them into the world.

Or

- God controlled the whole process of creation and evolution as it went along.

Or

- At the beginning of Time, God set the conditions from the start, so that it was bound to produce what we see.

The first, of course, is the Fundamentalist/Creationist position, taking the six-day creation story in the book of Genesis as historical, setting up the classic Conflict Model. It also demands that we have to ignore or even demonise scientific conclusions, based on the scientific method, whilst illogically (and hypocritically) accepting science when it suits, such as in medical treatment.

The second approach set God up to be a red herring from the scientific point of view: once an explanatory theory has been established, why do you need the divine as well? It also tends towards a god-of-the-gaps. The point to be established here is that we cannot just use a divine being to explain matters in nature that we do not understand as yet. This is the difficulty with the analogy of *Paley's Watch*, where finding a mechanism like a watch on the ground, someone is bound to conclude that it did not come about by accident but that it must have been manufactured and thus, mutatis mutandis, the same must be true of the wonders, laws and processes observable in the natural universe. The problem here is that Science can very easily unravel the watch-analogy, pointing to evolutionary change over time as a more obvious and observable explanation, with no need for the divine. More crucially, it appears to put the cart before the horse: although we might take God as the origin and source of all *being* (existence itself out of *non-being*) God cannot just be used as a convenient and direct explanation of natural phenomena. Instead, it is rather that the natural phenomena themselves point us towards an understanding (as far as possible) of the nature of God.

In fact, the third approach, where Creation is set from the start, as it were, is consonant with Orthodox Theology. Given, also, that God, being omniscient and outside time, space and causality, He knows the outcome of any process anyway and is, Himself, the source of the logic and law that establishes the cosmos and all that is within it. In short, all that comes to be is necessarily contingent upon God from the start. As the ancient Greek philosopher, Aristotle, concluded, there must be a Prime Mover, an uncaused-first-cause of everything, without which, nothing would start or happen. To ask, then, what gave rise to the First Cause is to miss the point: nothing has being without an absolute Supreme Being that underlies all existence. For at this point Science must be silent as it can, according to its own methods, have no idea or

explanation as to why there *is* anything at all, when the default position must be nothingness and no mind to perceive it.

#### GOD IN ORTHODOX THOUGHT

Although this god of the philosophers, logically, must exist, he is, however, not the God revealed in and to Orthodox Christianity. The point that we assert and insist upon, is that God in the Orthodox Faith is personal, not in the sense of being subjectively relevant to particular individuals (i.e. my own personal God) but rather, the God is a person/hypostasis, in fact, tri-personal, as known in the Christian revelation. And, moreover, we were created, according to the foreknowledge of God, for relationship with Him and with one another. Just as God is a community of Three divine persons in One Being, so we are created for communion with Him. This is *why* we were created, to share in the eternal love of God. It does not describe *how* this happened, which remains a mystery, theologically, though Science may legitimately produce models for the physical and chemical processes inherent in the forms of matter and, not least, what constitutes a human being.

We may move on now to consider a question that has vexed the Orthodox theological mind for some time: that of Evolution. The position will be promulgated here is that the Theory of the Evolution of Species, as properly understood within the Scientific endeavour (and not as often thought about or misunderstood in the popular mind) does not negate the Orthodox Christian belief that all that exists out of nothingness, the Cosmos, is God's Creation.

#### GENESIS AND CREATION

Within the Holy Tradition of the Orthodox Church, the Book of Genesis is part of the inspired Word of God recorded in the holy scriptures, canonised by the Church. It contains, of course, an account of Creation at the very beginning, which is reiterated in the following chapter. There are references to God's creative activity throughout the Old Testament, but we should not forget, however, that the New Testament also has a creation narrative, recording a short but fuller revelation and theological understanding of the mystery. *'In the beginning was the Word, and the Word was with God, and the Word was God. He was in the beginning with God. All things were made through Him, and without Him nothing was made that was made. In Him was life, and the life was the light of men. And the light shines in the darkness, and the darkness did not comprehend it.'* (Jn.1:1-5)

Let us start with the Genesis story of Creation which, naturally, is not concerned with Physics and Biology; such disciplines certainly did not exist in the era in which it was composed, if we suppose that it came from the time of the Solomonic temple in Jerusalem. Herein, in fact, lies the key to our understanding of the text and the theological approach (the Independence Model once again!) it takes to existence: it is not a book of Science, as we use the term. Instead, the Genesis story is thoroughly theological and very much linked to the institution, Solomon's temple, that produced it.

What is presented in Genesis, before the Fall of Adam, is the construction of a contained world wherein Man is placed as gardener-steward in Eden and set to enjoy communion with God through the Tree of Life. In short, Man here, is to be the link between the Divine and the world, the mediator, and as such, the priest of Creation

leading the worship of all creatures to the glory of God. In particular, we can compare the six days of Creation directly to the setting up of the tabernacle, described in the book of Exodus [chapters 25 - 27] This is set this out as in the chart below.

GENESIS	EXODUS
In the beginning God created the heaven and the earth	And you shall make curtains of goat's hair for a tent over the tabernacle
Let there be a firmament ... and let it divide the waters from the waters	The veil shall divide the holy place from the holy of holies
Let the waters under the heaven be gathered together	You shall make a laver of brass... whereat to wash
Let there be lights in the firmament of heaven	You shall make a candlestick of pure gold
Let fowl fly above the earth	The cherubim shall spread out their wings
On the sixth day man was created	Bring near unto you Aaron your brother
And the heaven and the earth were finished, God blessed and hallowed and on the seventh day God finished the work which he had done	Thus was finished all the work of the tabernacle and Moses blessed them and it came to pass on that day that Moses made an end

Whether we see Genesis influencing the book of Exodus, or Exodus informing Genesis, the essential meaning of the creation story is that whole cosmos established by God is a temple, and the entire vocation of Man is to lead the cosmic liturgy, glorifying God. This is the *Why* of our existence. The story does not so much present God as an alternative to Science, an explanation for creation's existence; rather, it posits the elements of Creation as revealing the mind of God in respect of Man's vocation in the world.

The story also presents mankind as having dominion over Creation, as its benign steward, having been made in the image and likeness of God. This human likeness to the Divine necessarily separates us, in part, from the rest of nature that, although, composed of matter (*'And the Lord God formed man of the dust of the ground.'* Gen.1:7) we have a very different purpose in life. The text itself speaks of God letting things happen within Creation, (*'Let the earth bring forth the living creature according*

*to its kind.*' Gen.1:20) rather than any direct, hands-on formation of creatures. Man, however, is, as it were, God's special project: *'Let Us make man in Our image, according to Our likeness.'* (Gen.1:26)

We are not here merely to engage in the continuous natural cycle of life, death, decomposition and renovation, but to aspire towards an eternal relationship with God. *'What is man that You are mindful of him, and the son of man that You visit him? For You have made him a little lower than the angels, and You have crowned him with glory and honour.'* (Ps.8:4-6)

This understanding of the Genesis text is, of course, perfectly acceptable if one were to go along with the biblical fundamentalist or Conflict Model (together with its concomitant problems) in regard to Science. How, though, does it sit, if one takes the Independence Model proposed by this essay? The nub of the problem, in terms of evolutionary biology, is precisely when does 'Adam' appear in the evolving species of hominids? Moreover, what constitutes Adam's Fall in his relationship to God and with the natural world?

#### THE ORTHODOXY FATHERS AND CREATION

The approach of the eastern fathers, like St Gregory of Nyssa and St Maximos, is to see the biblical creation as not directly or immediately producing this world that we inhabit. In other words, what is created by God is not this world of mutability and entropy but a paradisaical state that is 'very good.' Adam, as Berdyaev says, is a noumenon, someone/something that exists in himself, rather than just something to be appreciated objectively through the senses as the other phenomena of this world. The point to be extrapolated here is that the point of our redemption in Christ is to return us to that state from which we have fallen; an aspiration and theme that often occurs in Orthodox Liturgical texts. So Orthodox Eschatology envisages the recapitulation of all that is described in its Protology. As Christ says in the Apocalypse, *'I am the Alpha and the Omega, the Beginning and the End, the First and the Last.'* (Apoc.22:13). By contradistinction, the Western Christian traditions have tended towards Theistic Evolution. Following the later Augustine and Thomas Aquinas, they see a direct continuity between Adam in paradise and his bodily form in this world after the Fall. As well as stirring up all kinds of questions for Christian Theodicy, Theistic Evolution can only bring us back to the unproductive Integration or Interaction Models noted above.

None of this Theology, once again, is perceptible to the scientific method as it refers to concepts outside the phenomenological cosmos; its understanding is entirely dependent on cataphatic revelation, as received by Holy Tradition. Adam, created by God to inhabit paradise, fell from that primal state into this world and, as we might say, eventually emerged as the animal form, homo sapiens, through evolution. This is the pre-cosmic origin of the current state in which we find ourselves. As Genesis says,

*'Also for Adam and his wife the Lord God made tunics of skin, and clothed them.'*  
(Gen.3:21)

What we call Ancestral Sin in paradise is the cause of the Fall and Man. Having been given dominion over all creatures, Adam's turning to his own will fractures the relationship between all things in the primal creation, as also within himself, between Man's own mind and body, and indeed between him and his helpmeet, Eve. The change in the state of Adam, therefore, was the transition from the spiritual body that he knew in paradise, to the carnal body we have now. This is not an actual change in the nature (Gr. *physis*) of Man but an alteration in his mode (Gr. *tropos*) of being. There is, of course, a deformation in the soul of man, as St Basil says in one of his sermons, *'The soul deteriorated when it was perverted from its natural state.'* From this point, with the emergence of the physical, objective universe, all creation participates in suffering and struggle. St Paul notes in the epistle to the Romans, *'For the creation was subjected to futility, not willingly, but because of Him who subjected it in hope; because the creation itself also will be delivered from the bondage of corruption into the glorious liberty of the children of God.'* (Rom.8:20-21) Paul sees this restoration as the putting on of that immortality that Adam had enjoyed in paradise: *'So also is the resurrection of the dead... It is sown a natural body, it is raised a spiritual body. There is a natural body, and there is a spiritual body. And so it is written, "The first man Adam became a living being." The last Adam became a life-giving spirit.... So when this corruptible has put on incorruption, and this mortal has put on immortality, then shall be brought to pass the saying that is written: "Death is swallowed up in victory."' (1 Cor.15:42-54)*

What, then, is necessary in this world, driven by the contingency and the instinct for survival, becomes our own obsession. Whereas sexuality and the need to reproduce are driving forces in this life, in paradise Adam and Eve, though sharing in the communion of marriage, have no need for sexual intercourse; children are only necessary where there is death. Where nutrition is needed to supply the body in this life, in Paradise for Adam, his food was the experience of communion with God through the fruit of the Tree of Life. St John Chrysostom writes, *'The matter of intercourse came after the transgression. Until then they lived like angels in paradise, without the burning desire of the flesh. They were not besieged by other passions nor were they pressured by natural needs, but, because they had been created incorrupt and immortal, they did not even need to wear clothes. Before sin and disobedience entered, they were clad in divine glory, even though they were naked'*. (On Genesis, Homily 15). Adam and Eve's shame at the discovery of their nakedness after their fall thus reveals the emergence of the sinful passions within the human mind [Gen.3:7].

## PARADISE AND THIS WORLD

The question arises as to the relationship between the pre-lapsarian state of Adam and the human condition in the world we know: how does the Fall in one determine the state (flux and decay) of the other? Any answer must take on the nature of spiritual



speculation and can only result in a theologoumenon (theological opinion). Nevertheless, one might suggest that outside *The Garden*, (whether located on this actual planet or within some other, pre-existing, spiritual mode of Creation) already, the pre-fallen (demonic) bodiless powers are already active, as symbolised by the serpent in Genesis; that, in fact, Death already awaits within the Creation, both for plants and animals, but not yet in Paradise. Destruction of the works of God being, naturally, the spiteful work of the demonic, Evil itself being entirely negative, the antithesis of all that is called into being by God. As again, St Basil says, *'Do not on any account suppose God responsible for the existence of evil; and do not imagine that evil has any substantive existence of its own. Wickedness does not exist as if it were a living creature: we cannot produce its essence in real subsistence. For evil is the privation of good.'* It is then Adam's disobedience that, once expelled, brings to his descendants the knowledge of good and also, evil. Thus we too are subject to death through ancestral sin.

Alternatively, we might see Adam, once appointed the regent of Creation, but now through his failure of stewardship, bringing all nature down with him; that from the start of this world (the Big Bang?) we know that atrophy and death, the consequences of his sin in Paradise, will still await the eventual appearance of mankind in this world.

Eden, as a mode of existence in Creation, becomes, then, a state of communion with God (symbolised in the Tree of Life). There is room here for the development of human consciousness and/or a spiritual awakening. This highlights the interconnectedness of *nous* (the Mind, the highest faculty of the soul) as reflected and incarnated physically through the human brain. This would be lacking in the rest of the animal creation, even those closest to us genetically speaking, like chimpanzees. The question then becomes, at what point in the changes that produced what we classify as homo sapiens, do we, or rather, God, recognise the imago dei created first in Adam and Eve?

We might add to this that it is possible that the pre-lapsarian state, being judged positive ( *'And God saw that it was good...'* ) must logically exist against the negative and by existing must, of necessity, be threatened by non-existence. Here, the Fall of Man and our current condition are clearly subject to causes that are potentially there before our creation. As such, what Adam is given in Eden is the possibility of avoiding his own destruction and retain communion with God. Thus, through failing to come up to the mark, preferring a baseless autonomy, he falls into the exigencies of this world.

## THE THEORY OF EVOLUTION

In the fallen world, of course, it is easy to see why, knowing that ultimately, all appears to end in death, the pursuit of pleasure, especially through misdirected sexuality and gluttony, become so prominent for many. ('Eat, drink and be merry for tomorrow we die.') For this reason, in the Church, heterosexual marriage alone is blessed, raised above what has evolved in nature as pair-bonding, not just to produce children but exalted into the mystery (sacrament) of marriage, an icon of Christ and His Bride.

Alongside this, the celibacy of monasticism prefigures and signifies on earth the angelic life of heaven.

The Theory of Evolution (and it is a theory, not an hypothesis) is often misunderstood, both by its proponents and detractors. Often referred to as suggesting gradual development within species over time with a teleological purpose, it is far more likely that sudden and erratic change lead to the survival and continuation of what best adapts to changes in the natural environment. Though random in its development and subject to chance, from the perspective of the divine mind, evolutionary change must always be foreseen, for the divine mind, being eternal and outside time and space, cannot be subject to the contingencies of the objective universe. The problems come, however, when the theory is applied to what is outside the purview of biological science, such as when evolutionary theory is sought in human psychology, social development and even political ideology. There are problems also with many of the conclusions drawn from it, beginning in the nineteenth century: the supposed superiority of certain races, eugenics and the idea of evolution towards a set goal (teleology) imposed, from the scientific point of view, upon random change. Here we might cite the examples drawn from recent History from the political philosophies of National Socialism and Communism, founded upon the ideas of racial purity, social determinism and the illusion of an inevitable victory through historic destiny. From thinkers like Nietzsche onwards the idea of evolution proved a useful hook on which to hang ideas of political and philosophical development, some of it present even in Darwin's very own ideas. None of this is, of course, Science.

#### THE UNANSWERED QUESTION

A crucial question that, so far, has been left unanswered is, at what point in the evolution of hominids, do we recognise the fallen Adam who has a soul that can seek after God? It is worth, of course, considering what we mean by the word, *soul*, in Orthodox anthropology (understanding of the human condition). The Greek word used in the New Testament is *psyche* from a verb meaning to breathe. In the Genesis story of Creation God breathes the breath of life into his creation, Adam, formed from the earth, so that he becomes a living being [Gen.2:7]. Expressed now in this heavy, carnal body, the soul is our life, and although it is not separate from the body in this world (as in Descartes' dualism) there is, nevertheless, a dissonance, a disharmony, between body and soul, evident, especially in temptations where many of our reactions and sense perceptions are akin to that of Pavlov's dog. So the soul is our life, will, experience, memories, consciousness, character. When we, in our Orthodox understanding, use the word, *person*, we do not actually mean the *soul*. The *person*, in Greek, *Hyposasis*, refers to a subsisting and particular individual example of a human being, an actual incarnation, as it were, of the human nature (*physis*) we share. Human nature (*physis*), of course, cannot exist without subsisting as particular persons, and each person has his own eternal soul or life.

The Fourth Ecumenical Council of the Church (Chalcedon 451AD) speaks of the incarnation of Christ, the second person of the Trinity, as the union of His person

(*hypostasis*) with a human soul and body taken from the Theotokos: one person (*hypostasis*) in both human and divine nature (*physis*), without confusion or alteration. This is not the union of two souls, for we cannot say that God has a soul, as is given to human beings. For the soul is our life (*psyche*) whereas God is Life itself and the Life-Giver. Therefore, Christ took a human soul at His incarnation, uniting it to His person (*Hypostasis*). To say there are two souls in Christ would be to say He was two persons, a human hypostasis and a divine hypostasis, the heresy of Nestorianism. In other words, the human body/soul of Jesus of Nazareth is taken up to manifest the divine hypostasis of the second person of the Trinity on earth.

In our thinking, therefore, an hypostasis may be defined as an individual particularity, the actual example/existence of a nature/*physis* (the 'someone' of a 'something'). Someone might argue that for the human soul/body of Jesus to exist, it would have its own human hypostasis. But in the mystery of Christ's incarnation, the human soul/body is only extant through union with the divine hypostasis of the Son of God alone. Indeed, Science itself tells us that if Jesus' human soul/body had been a separate human person (*hypostasis*) through parthenogenesis, he would have been female. This is a divine mystery into which we can go no further and before which human language falls into inadequacy. It is certainly outside the realm of Science.

Whether we consider Adam created for paradise as symbolically human or a single individual hypostasis, he bears the same nature (*physis*) that is eventually to appear on the earth as we know it, evolving into the large-brained Homo Sapiens. The body, of course, is the carnal body, not the spiritual body of paradise, reflecting the fallen soul. In other words, what has changed through the Fall is not the nature (*physis*) of humanity, but its mode (*tropos*) of existence. We might be tempted to ask whether, at some point in our evolution, God interacted within the biological process to insert a soul (breathed life/*psyche*) into the bodies of mankind (Interaction Model). But, in a sense, we might say that all animal life (and to an extent, even plants?) has life/soul (*psyche*) that manifests its self or person (*hypostasis*) whatever its particular nature (*physis*). So feline nature (*physis*) for example, will subsist as a particular cat (person/hypostasis) which will have its own life (soul-body/*psyche*).

#### ORTHODOX ANTHROPOLOGY

The difference with human beings in the Orthodox Tradition is that the human soul is believed to be eternal, its life does not end once separated from the carnal body by death. It is also commonly held that the soul of each human being is created at the moment of conception. This, though, does not necessarily imply that there is divine interaction at each instance of human conception, but sharing the primal Adam's nature, human souls are immortal, and the body of flesh (subject to decay through its fall) must manifest the soul, though now with a certain alienation from the soul's higher will. We might also bear in mind that all things, including our souls, only exist at all through the will of God, and that the constant prayer in the Orthodox liturgical tradition is to ask God to remember us in His kingdom: this is true of the dead of this world as well as the living. It would, though, be beyond our capability or even spurious, to speculate when the eternal human soul first appears in our current state.

Can we, then, even ask the question, when in pre-history does an eternal human soul first appear within Homo Sapiens? And how do Neanderthals (Homo Neanderthalensis), for example, of the genus, *Homo*, relate to this; humans who were

not only contemporary with the species, homo sapiens but, similarly, buried their dead with grave goods and are known to have even interbred with Homo Sapiens? The point is, Evolution, as a biological process, can have no teleological purpose; scientifically; we are what we are, physically the result of adaptations to fluid environmental conditions. But, clearly, we did begin to seek out more, beyond what is inherent in our mundane existence. There is a qualitative difference that appears in our historic experience, when the first hunter gatherers developed animistic beliefs about the natural world around them. Or perhaps we might cite Genesis itself, *'Then men began to call on the name of the Lord.'* (Gen.4:26)

## CONCLUSION

What we hope to have demonstrated is that Orthodox Theology can properly accept the general scientific consensus on such matters as the Big Bang, the age of the universe, the origin of the Solar System, the age of the Earth, the origin of biological life, and Evolution of species, with the provision that Science itself is often subject to refinement and better definition. This is the proper realm of Science, bound and limited as it is to the investigation of the universe, confined by its own contingencies. Orthodox Theology, on the other hand, the fruit of revelation, has its own knowledge and is commissioned by her Lord to proclaim the gospel and what she holds by faith: the mysteries of creation, redemption, sanctification and salvation of the whole world. That is, the regaining of paradise, the liberation from destructive passions and our spiritual evolution by participation in the divine energies.