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Models of reality as Sources of Conflict (Archbishop Lazar Puhalo)

Ξένες γλώσσες / In English

Reality at all levels and in every dimension is a mystery. I will not suggest that the world which we experience with our own senses is *not* reality; nevertheless, what we perceive is the *surface* of reality, which is penetrated only with great spiritual effort over time. The more deeply we penetrate into this perceived reality, the greater the mystery becomes.

Creation icon

It is my proposal to demonstrate that almost all the apparent conflicts between science and faith arise from *models of reality* and not from reality itself. The resolution to such conflict may arise from a re-examination of the *models of reality* we hold which are based on obsolete information. The Church fathers should perhaps be given credit for possessing the integrity and intelligence to have restructured their understanding of the history, geography and the nature of the earth and the universe, if they had had access to the technology and information which is at hand in our century. The holy fathers were open to the learning and experience of the world around them, and utilised that learning themselves. There is every reason to surmise that they would utilise our own contemporary exploration and learning to reshape many of their own *models of reality*. The reshaping of our *models of reality* does not contravene our basic dogmatic understandings about God as Creator and Redeemer. In fact, the discoveries of the

past century only open us up to greater wonder at the beauty of the universe, along with its fragility: this can open to us also a greater appreciation of the presence of God and His role in the sustenance of our universe. We need not limit the role and plan of God by the boundaries of our own finite understand-ing and wisdom, but can open up our minds to the beauty, the vastness, the fragility and the dimensionality of the universe, as a way of increasing our faith and love-relation-ship with God.

When we become rigid and frozen in our *models of reality*, particularly when based in literalistic understandings of Scripture and the non-dogmatic statements of the holy fathers about science and history, then we deprive ourselves of reality itself, and close ourselves off from a more full discovery of God's presence, even though He is "everywhere present and fills all things."

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Modern physics and cosmology have become "superstar" subjects. There is, however, an admirable and dignified modesty among physicists who acknowl-edge that they offer us only *models of reality*, rather than reality itself. When Nils Bohr said that "the purpose of science is not to know the essence of nature, but to discover what can be known about nature," he reminded us that science is a method of explora-tion, not the final arbiter of facts and understand-ing. Science is not an alternative to revelation.

This same dignified modesty is expressed in the Ortho-dox Christian concept of apophatic theology. Apophatic theology also acknowledges that doctrinal and poetic formulations are secondary worlds, models. They are more or less adequate in helping us give words to and have concepts for our encounter with ultimate reality. Since no one can know or comprehend the essence of God, even the dogma of the Trinity must be understood as a secondary world, a conceptual framework of enormous importance and clarity that is the best we can do in the framing of language for the experience of the ineffable, but it is, nevertheless, a *model of reality.* When we assume that we have a concrete definition of the Divine, we step onto the path of those who built the Tower of Babel. We will examine later the prob-lems created in Western Scholastic theology when philosoph-ical theologians attempted to present such models as facts which are legally definable, adequate and comprehensible by reason.

In a similar context, physicist Werner Heisenberg says of quantum physics that we have no framework for correlating the mathematical symbols of it with the concepts of our human language, nor can we satisfactorily discuss atoms in normal language. The evidence of reality upon which scientific exploration builds *models of reality*

can only be expressed symbolically by a mathematical formalism, which might be the closest one can come to expressing a metaphor for the great mysteries that are encountered but not resolved.

In order to better understand the essence of this discus-sion, let us first explain the meaning of *models of reality.* Perhaps the best way to do this is to look at history's most famous clash between models of realities.

In the year 1500, the general *model of reality* for our universe was neat, tidy, dogmatic — and completely wrong. It was generally acknowledged that the earth was the centre of a harmonious system of concentric circles. These circles, diaphanous crystal rings, were delineated by the heavenly bodies that rotated in perfect circles around the earth. The sun rotated around the earth, as did everything in the universe. There could be no essential change within the region of the harmonious spheres. Earth did not move. Both the greatest of the philosophers and Holy Scripture agreed: Earth does not move, and the sun rises and sets as it moves in a perfect circular orbit around the earth.

This system was not thought to be a *model of reality*. It was held to be reality itself — reality so concrete that it could be a dogma of faith.

Then, however, an insignificant science-oriented monk somewhere in north central Europe had the outrageous temerity to offer a radical revision to this venerable model. Not only is the earth not stationary, he asserted, not only does it, like the other planets, rotate around the sun, but their orbits are not perfect circles. Father Nicholas Copernic-us had the good fortune to live beyond the reach of the Inquisition, but his writings were received with sufficient outrage, and suppressed.

When, however, Galileo pointed his crude telescope toward the heavens, the old *model of reality* about the universe was doomed. Not only was Copernicus correct, but his understanding of the new model was only elementary. Indeed, he had only presented a more accurate model, but by no means a complete model.

The conflict that had arisen by the clash of these two *models of reality* was enormous. It had already cost the life of Giordano Bruno, and came close to claiming the life of Galileo.

Let us carry our example a step further. Copernicus and Galileo also gave us only *models of reality*. In fact, the sun is not stationary either, nor is it at the centre of the universe. It races through space at an enormous speed, in one of the tentacles of a massive spiral galaxy, which itself is hurtling outward from some unknown point to some unknown destination. This also is a *model of reality* which

may be added to and augmented by yet more discoveries.

This historical example demonstrates both the meaning of "*models of reality*," and of my thesis that *models of reality*, and not reality *per se* are the sources of all the apparent conflicts between Christianity and modern science. Lest scientist judge too harshly, let us recall that the great physicist Boltzman was driven to suicide (in 1905) at least in part by the ridicule he endured from other scientists for espousing atomic theory. Atomic theory strongly contradict-ed the *model of reality* held by most physicists of his day.

How does the massive new information we have encoun-ter *models of reality* shaped by an antique understanding of relevant sections of Holy Scripture? I would like to invite you to think together with me about how we might resolve the conflicts — sometimes bitter conflicts — between the new information which forms scientific *models of reality*, and *models of reality* drawn from a simplistic reading of the Bible.

AN OUTLINE OF THE MAIN POINTS OF OUR CONSIDERATION

1. Metaphor is integral to language, and the language of Scripture is rich in metaphor.

2. There are serious problems and loss of meaning when one literalises metaphor.

3. All tribes and societies throughout history have used stories to transmit their understanding of the meaning of life. It is a singular curiosity of our modern era that these stories are often presented, not as landscapes of meaning, but as concrete fact, history and science.

4. Challenging *models of reality* formed by the literalisation of metaphor and simple narratives is inevitable, and sincerely believing persons need to be clear about the language of meaning that constitute the purpose of a story, and ***not become party to the reduction of that story*** to history or science. We should also be open to changes in our *models of reality*.

5. Testing *models of reality* with regards to cosmology, the creation narrative and man's history:

    a. Science: the scientific method.

    b. Religious: consistency of meaning, rather than concreteness of facts.

6. Theoria: a shared concept between physics and Orthodox Christian theology.

7. Science and Christianity: The challenge of living harmon-iously with one another.

Here, we are speaking of those subjects where science and religion may overlap. There is a range of subjects in which there is no such overlapping. For example, science can say nothing about the Holy Trinity, the Resurrection of Christ and the Ascension.

Points 1 and 2: Metaphor and Simple Stories

Simple stories told for simple people are intended to convey meaning. They are not concerned with scientific facts or chronological accuracy. They will often contain sophisti-cated psychology in narrative that appears naive on the surface. Although the stories appear simple, the meaning they convey may be complex and surprising in its depth.

Metaphor, which is very rich in older languages, conveys meaning by means of interlocking imagery. It is not "con-crete" language. It has a fluidity that can convey textures of meaning which more concrete language cannot. Metaphor also contains an internal dissonance that warns one not to literalise it.

At the very least, literalising a simple narrative story or a metaphor creates a false *model of reality*. In relation to scripture and theology, when we literalize a metaphor, we create an idolatry.

Let us look at the creation narrative in the book of Genesis, for example. The details and processes of the creation of the universe, our solar system and our earth are extremely complex. Indeed these matters are so complex and difficult to comprehend that the best scientific minds in history with the finest technology are only now unfolding the details, though with difficulty.

Why would the scripture attempt to explain all this vast complexity — so complex in many details that it exceeds human language and requires mathematical formulae to express it — to a wandering tribe of Hebrews who were not yet literate? Instead the narrative presents a simple story, but one filled with meaning and revelation. Moses had to come down from Sinai with the ten commandments; it would have been of no value for him to have returned with the Periodic Table of the Elements.

It is not surprising that ancient peoples formed a *model of reality* based on a more or less concrete and literal interpretation of the Genesis narrative; what is astonishing is that anyone in the 20th and 21st centuries would hold such a *model of reality*

when it is so clearly false. The first tragedy in this is that it results in a loss of the actual meaning of the story. The second tragedy is that such a disproved *model of reality* sets up an unnecessary conflict between religion and science, which undermines the faith of many who desire to believe.

The creation narrative, from the beginning up to the time of the holy prophets Sarah and Abraham, condenses an enormous time and a vast prehistorical oral tradition into a simple narrative. This entire narrative is about *meaning*, not historical or scientific detail. We must remember that we derive our theology from *meaning*, not from supposed *facts*. Facts do not constitute *truth* even when they are accurate, only *meaning* can provide a basis of truth, and both the meaning in scripture and the truth of that meaning are revealed to us by the Holy Spirit. The same might be said of science. Brahe[1] was a careful, encyclopaedic recorder of observed astronomical facts, but still held an erroneous model of cosmology. His facts were of little value until his assistant, Kepler,[2] interpreted them after Brahe's death. Only when the "facts" were given meaning did they become of value for knowledge and understanding.

"Truth" is founded on meaning, while *models of reality* are based on supposed facts. More clearly, *models of reality* are derived from a presupposi-tion of the accuracy of a given set of what appear, at least on the surface, to be facts — really, suppositions which have emerged in a given era of time.

For Orthodox Christians, spiritual and theological truth is derived from *meaning*, illumined by grace. Revelation, in the Christian sense, is also about meaning: a way of integrat-ing meaning into the events in life. This too (understanding revelation) must be illumined by divine grace. If there is, therefore, any claim to immutable truth, it is a subject of spiritual experience rather than rationalistic reflection on a given set of surmised facts.[3] *Models of reality*, being based on surmise and supposition about what are presented as "facts" in a given era, are malleable and subject to revision and change when some or all of the bases of the information that informed these "facts" are disproved or displaced by later discoveries and newly emerging sets of information relating to the same subject.

This is where the crisis arises for fundamentalism and Scholastic based Western theology in general. Fundamentalist interpretations of Scripture consist in *models of reality* which are based on supposed facts, with little comprehen-sion of meaning. It is these *models of reality* which many religious thinkers bring into conflict with the *models of reality* generated by physics and other fields of science and medi-cine.

Point 3: Axial II

Karl Jaspers appears to have coined the expression, “axial period” to describe the great philosophical develop-ments in the ancient world. He applied it to the long era between about 800 and 400 B.C.[4] During that era, an enormous revolution in human thought and understanding took place. A radical shift in the paradigm that informed human thought and society occurred. At first, the transform-ation moved almost with the gradualness of the shift of the magnetic poles, but then it erupted into a great flowering of philosophy and systematic ethics. This era began at about the time Prophet Isaiah was illuminating the revelation of God in Israel. It was the epoch in which the Azeri prophet Zoroaster revolutionised religion in Persia, Confucianism developed the system of ethics in China and the Milesian Greeks began to speculate about the nature of being. During this period, too, the Buddha began to explore the problems of human suffering. The great thinkers of this era began to consider the actual meaning of myths and taboos, and to transpose them into systems of meaning. This process had, in fact, begun with the great lawgivers of history who attempted to systematise human experience into the structure of civil society, binding it together with legislation that took account of the purpose of the myths and taboos.

It was during this era that the quest for an understanding of the roots of good and evil advanced a general moral philosophy. It was evident that people could keep any set of laws to the letter and still do evil things to others. Law was not the solution; it remained only a mechanism for controll-ing and mitigating behaviour within a given civil society. Neither the moral concepts that were developing, nor the legal concepts were by any means universal. During this great axial period, theology began its long journey toward development. Philosophy was rivetted on *cause and effect*, and later spent great energy on the question of *how we learn and know.* The paradigm shift of this first axial period consisted in a movement away from unexplained myth, and into the realm of philosophy. The development of both philosophy and theology were part of the same stream. Within this stream, myth was converted to a systematic concept of ethics and social morality and the philosophers, both secular and religious, became the dominant practition-ers who formed the grid of thought, beliefs, and structural changes in politics and governments and our concepts of humanity, the world and the universe.

I will contend, with Robert Solomon, that we are in the midst of a second great axial period. It appears to me that a major paradigm shift is underway, and that it began already in the 1600s, but gathered its real force at the beginning of the 20th

century. I want to suggest that this shift has been, in some small way, motivated by the fact that the question of *what we know* is overpowering the question of *how we learn and know*.[5] The old preoccupation with a metaphysical dualism of mind/brain, and the abstraction of the intellect hardly seem tenable or significant in our present era. Reality at all levels and in every dimension, is a mys-tery. I do not suggest that the world of our sensual experi-ence is *not* reality, but it is only the *surface* of reality. This surface can be penetrated only with great effort, either spiritual or scientific, over time. The more deeply we penetrate through the surface of this perceived reality, however, the greater the mystery becomes. This is reflected in quantum physics, and also in Orthodox Christian theolog-ical experience. Thus, both quantum mechanics and the world of Orthodox Christian spiritual experience are complementary. Orthodox theology can be informed by modern science, and modern science can be illumined by Orthodox Christian spiritual experi-ence. This can be accomplished only when we clearly maintain the understand-ing that science is a method of exploration, not a dogmatic system, not pursued in the manner of a religion or "spiritu-ality." Orthodox theology is not a system for interpreting the physical history and properties of the cosmos, but a means of the assent and transformation of the human person, an avenue of the revelation of redemption, and a framework for life and experience.

What shapes our idea that we are in a second axial period, is the major shift in the paradigms of philosophical and religious thought in the present era, beginning with the last decade of the 19th century.[6] The shift has been such that scientists, and physicists in particular, have gradually replaced the philosophers as the architects of the grid through which we view humanity in relation to the world and the universe, and to each other. This shift has clearly touched all areas of human thought and reasoning. Just as the lofty theories of philosophers slowly "trickled down" to the most common levels of society, reshaping human thought, so the abstractions of scientists have been trickling down to every human level reshaping, over the past four or five centuries, every aspect of thought, including theological and religious concerns. In the 20th century, and especially in the present century, technology, which is something of a parasite on science, has had an even greater impact on the shaping of the human mind. Still, at the root of the making of the post-modern mind one has to see both quantum physics and evolutionary biology as seminal. This is the great paradigm shift that constitutes what I see as the Second Great Axial Era.

From an Orthodox Christian point of view, if we are to continue to effectively witness the faith of Jesus Christ, we must respond to this Axial shift. At a time when the Scholastic system in religious thought has been exposed for its emptiness as a spiritual and theological *cul-de-sac*, a deep spiritual void and hunger has been

created in man by the age of technology, with both its benefits and its dehumanisation. The equally blind alley of “spirituality without religion” offers no answers; it cannot separate itself from the spirit of the age and the bondage to ultimate hopelessness. Orthodox Christianity stands in a position to have a vital, existential encounter with the paradigm shift of the present Axial Era, and give form to the void and fulness in place of the emptiness that has been generated. It has the content and the spiritual power to carry man beyond mere spirituality and into a profound spiritual life, in the grace of the Holy Spirit, which is not in conflict with this new grid of understanding, but which rather has a complementarity with it. I will assert that Orthodoxy alone can sail easily upon the sea of our unfolding understanding of the universe, the origins of humankind and the mysteries of the quantum world. In order to do this effectively, however, we must wean our Orthodox teachers and leaders away from the bondage of Western Scholasticism into which so many have fallen, and bring them back to the great existential revelation of the faith so clearly enunciated by the holy fathers, and in particular by the great hesychastic theologians who synthes-ised our understand-ing of our true relationship with God and the universe.

If we cannot, as teachers of the faith and theologians, address in a meaningful and open way, the new paradigms of the Axial Era in which we live, then we will be frozen in obsolete and meaningless *models of reality*, which we must forever set into militant opposition to the *models of reality* of physics and all the sciences. If we fall prey to such arrogance, we will be unable to respond at all to the spiritual needs and aspirations of mankind, we will be unable to sustain the Gospel and we will be able to speak only to the most superstitious and religiously credulous elements in our various societies. The younger generation will have been betrayed by us as we betray the Gospel and the faith with a blind, reactionary religiosity rather than an openness to new understanding and a grasp of the infinitude of the Orthodox Christian revelation.

Orthodox Christianity is not the arbiter of “facts,” but the healer of humanity, the source of meaning, the path to authenticity of life and the doorway to eternity — to immortality.

Be watching for Part II of this same work, coming soon on Pemptousia.com, as His Grace will dig deeper into Point 4 and then conclude with a closer look at Points 5, 6, and 7.

We have reformatted this material from Archbishop Lazar's book Culture, Commonwealth and Personhood *(Synaxis Press, 2011) under his supervision. This article has been posted with his permission.*

Notes

1. Tycho Brahe (14 December 1546 – 24 October 1601), born Tyge Ottesen Brahe. Danish nobleman and astronomer, he is remembered for his accurate and comprehensive astronomical and planetary observations. In his ***De nova stella***, published in 1573, he refuted the theory of the celestial spheres by showing the celestial heavens were not in an immutable or unchanging state of perfection as previously.

2. Johannes Kepler (December 27, 1571 – November 15, 1630). German mathematician, and assistant to Brahe. He was both an astronomer and astrologer. Kepler, a leading figure in the 17th century scientific revolution, interpreted and made sense of Brahe's observations..

3. I have purposely avoided the use of the word "philosophy" and "philosophical," because the context might not be understood, and one might think either that we are degrading philosophy or elevating it to too high a level. Philosophy, to cite David Goa, is part of the "great human dialogue." We will discuss it later.

4. I do not recall his actual delineating dates, but it was during approximately that era.

5. I believe Lord Bertrand Russell suggests such a situation in one of his works.

6. I believe Dr. Solomon thinks of a second axial period as beginning during them 1700s. I would date the beginnings of the era in the 1600s, and suggest that a pivot point took form in the 1800s. The two major impetuses in that era were Newton and Darwin. However, in my view, we see the great paradigm shift taking place early in the 20th century, with the acceptance of atomic theory and the birth of quantum physics, coupled with the emergence of evolutionary biology.