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The Mystery of Rationality. Interface in the Dialogue between Theological and Scientific Knowledge

Abstract

The paradigm of contemporary science offers different epistemological mutations. The new epistemological orientation valorizes the rationality as a mystery. Nowadays there are significant representatives of international scientific community that recognize that it is impossible to exhaust the truth about world and human being through a pure analytical and empirical research. In this perspective of recognition and assumption of limits of human reason within the act of knowledge, the savant is closer to the Truth than a demiurge consciousness that pretends to analytically understand and predetermine everything. The limit becomes a chance, an openness, not something which closes the knowledge. There is a chance that theological gnoseology and scientific epistemology to be reconciled.



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The epistemological perspective founded and elaborated in quantum physics will determine science's opening up towards interrogations of a philosophical kind. It will favor an articulation of a theological vision of the world with a scientific conception on a philosophical level. In this way, the limit is assumed as an opening, not as an epistemological enclosure.

Keywords

patristic gnoseology, scientific epistemology, quantum physics, principle of indetermination, participative logic

1. The coordinates of the patristic gnoseology assumed in the dialogue between theology and science

The knowledge of God and of the world presupposes a deep rationality as a mystery lived in the ecclesial experience. This knowledge cannot be totally explained by words or by an axiomatic logic. The force of knowledge which has its foundation in the Holy Spirit does not consist in an accumulation of information or in a skilled language, but in the spiritual and living power which changes the mind and the heart of persons. Regarding this aspect, the Saint Paul's thought is continued and eloquently expressed in the patristic gnoseology tradition.

Saint Apostle Paul says: "When I came to you, brothers, I did not come proclaiming to you the testimony of God in lofty words or wisdom. (...) And my speech and my message were not in plausible words of wisdom, but in demonstration of the Spirit and of power, that your faith might not rest in the wisdom of men but in the power of God. (...) Now we have received not the spirit of the world, but the Spirit which is from God, that we might understand the gifts bestowed on us by God. And we impart this in words not taught by human wisdom but taught by the Spirit, interpreting spiritual truths to those who possess the Spirit" (I Corinthians, 2,1, 4-5, 12-13).

For the Holy Fathers the presence of empowered, spiritual authority as existential guide mark in the act of knowledge does not cancel the cognitive function expressed in natural plan. There is a reciprocity between apophaticism and cataphaticism in the gnoseology. This reciprocity is based on the intrinsic connection between natural and supernatural in the patristic ontology. The integrative dimension of patristic gnoseology (that is not exclusive but rather inclusive toward the culture) could be verified without to diminish once or another culture's identity.

The academic theology could assume an ecclesial responsibility. At the present time, one of the theological responsibilities is to respond to the challenges of contemporary science. It is important to develop an honest approach in the dialogue between theology and science from the epistemological perspective. The modern science's premises (science where mathematics apply in physical phenomena by Galileo, science where according to the structure of Cartesian philosophy, the truth of knowledge can be obtained by an universal method or science based on classic principles of physics by Newton) have favored a tendentious philosophical interpretation of scientific data. Thus, the mechanistic and determinist thought raised, in the cognitive step claiming self-sufficiency to the analytical science. The scientism substituted the science that will bring ideology and scientific research together and will determine an artificial opposition between theology and science. The Enlightenment, the positivism and the Marxism are the expressions of scientism based on ideology, the real connection between theology and science has been occulted.

The paradigm of contemporary science offers different epistemological mutations. The new epistemological orientation valorizes the rationality as a mystery. Nowadays there are significant representatives of international scientific community that recognize that it is impossible to exhaust the truth about world and human being through a pure analytical and empirical research. In this perspective of recognition and

assumption of limits of human reason within the act of knowledge, the savant is closer to the Truth than a demiurge consciousness that pretends to analytically understand and predetermine everything. The limit becomes a chance, an openness, not something which closes the knowledge. There is a chance that theological gnoseology and scientific epistemology to be reconciled.

The testimony about the Truth experience becomes possible due to fact that the nature of Truth can not be exhausted through a methodology and can not be cut down to a concept. There is not separation between theological truth and scientific truth, the believer and the savant as well, both share the same truth, according to their integration in an experience where the theology and the science are expressed by cosmic liturgy. "The achievement of the Greek Patristic synthesis was to link the problem of truth with the idea of liturgical experience in order to proclaim that truth, as ontological truth, is accessible only through and within communion with God in ecclesial community. This can have implications for the science-religion dialogue...The split between theology and science can be overcome if both are reinstated to their proper relationship to the eucharist, understood in cosmic terms as the offering of creation back to God through art, science, and technology. Scientific activity can be treated as a cosmic eucharist work (a cosmic liturgy). Science thus can be seen as a mode of religious experience, a view obvious to those scientists who participate in ecclesial communities but as yet undemonstrated to those outside such communities".¹

The preservation of theological and scientific competences will favor to avoid a unilateral, concordant and separatist concept, facilitating in philosophic contemporary epistemology background the articulation between theology and science. Therefore, it will be possible to regain and enhance the Holy

¹ Alexei Nesteruk, *Light from the East. Theology, Science and the Eastern Orthodox Tradition*, Fortress Press, Minneapolis, 2003, p. 2.

Fathers gnoseology in which the distinctions are conserved in the unifying perspective. The theology developed on the patristic gnoseology assumes world's challenge and cultural diversity, without abandoning the fidelity of the living Tradition. Someone engaged in the Way of Truth and Life of this Tradition is an open person, open to the other and open to the world. The ecclesial theology developed in the living Tradition of Church is opened to the scientific approach.

2. The participative logic and the comprehensive dimension of the ecclesial knowledge

Assuming the comprehensive dimension of Tradition in the dialogue between science and religion

The path which the Holy Fathers, and therefore tradition, assumed, imposes the rigors of authentic ecclesial life, in which the Nicaeno-Constantinopolitan creed does not remain a simple (external) proclamation of dogmatic formulas, but becomes an act of life exercised in the daily existence. Patristic perspective implies the dialogue of theology with culture, since theology has been called to respond to the needs of people in a contextual manner. The dialogue should not be blocked by extreme attitudes such as timidity or fear, or the opposite, disregard and superiority. The dialogue between theology and science does not mean conformity or synchronism, through which much confusion is generated. The meeting of patristic gnoseology with the scientific epistemology requires the existence and the development of spiritual judgment.

Beyond the reciprocal enrichment at epistemological level given by a complementary vision regarding scientific and religious knowledge, an honest dialogue between science and religion could offer the framework for developing personal relationships in conformity with respecting otherness. A consciousness that is open to creatively assuming the limits of human research, penetrated by the deep mystery of creation, is a consciousness ready for science. Theology can strengthen

this consciousness that is engaged in the effort of assuming the truth of the world.

“While faith, unconditioned in science (scientism) leads to a conflict with religion, religion is not opposed to faith that strengthens science. On the contrary, religion can vitalize faith or trust in reality, thing which science needs to continue the exploration of the world. If we acknowledged the role of religion in strengthening faith, it would confirm science rather than contradict it, and it would in no way interpose itself between the scientist and the truth. Religious confidence in a personal God cannot be verified or falsified by science, but when the conscience of a person has already been modeled by the confidence that such a faith can give him, it has the power to feed the adventure of scientific discovery rather than to frustrate it.”¹²

Orthodoxy affirms the essential actualization of patristic thought in contemporary society. This actualization does not mean mere textual reference to patristic writings, but especially the assumption of a way of being that determines true inner resurrection and communion of the Truth of the world. Understood as the laboratory of the resurrection, the Church, where the Kingdom of Heaven is foretasted through each Holy Liturgy, produces radical metanoia through which the mind of man is renewed. In this way thought does not remain the exclusive result of erudite and critical rationality that develops lofty theories that are hermetically sealed off from concrete needs of human beings. Theology founded on the Orthodox Tradition generates creative thought, open towards life and the needs of the contemporary world, and it gives answers through the assumption of *the same style of life* which the Holy Fathers had.

² John Haight, *Science and Religion. From Conflict to Dialogue*. Ed. XXI: Eonul Dogmatic, Bucuresti, 2002, pg. 50-51.

Patristic knowledge is always contemporary, since the same Spirit expresses divine consciousness through the intermediary of those that purify their lives, realizing their disposition in relation to God in Spirit and in Truth. Recourse to patristic, gnoseological authority cannot be reduced to scientific archiving of problematic treatises during a certain period of time, but must favor becoming conscious of the ecclesial experience of Orthodox Tradition, in which it should grow. In this way, theology can recuperate the Holy Fathers' unifying perspective, which is open towards culture and science of its times, without renouncing the rigors imposed by bearing witness for Christ as the absolute Truth of cosmos and history. Contemporary science recognizes the rationality and the mystery of the world. Theology, starting out with the epistemological mutations of the contemporary paradigm of science, can open an honest dialogue with science, stressing however the fundamental particulars which are in the Orthodox Tradition. A profound rationality of the world cannot fulfill its ultimate meaning in the absence of a Person that generates and recapitulates all the deep meanings of creation. The knowledge of these ultimate reasons, beyond the pretensions of all scientific objectivity, means communion with the divine Logos, imitation of the perfect communion which takes place between the Persons of the Holy Trinity.

From this point of view, knowledge is a mystery of an encounter with Christ that bears fruit through the work of grace. The presence of grace illumines the mind and opens it up to true thought. Therefore, apophaticism does not mean mere recognition of the mystery of the world, as in contemporary science, but especially the experience of grace that gives knowledge beyond the powers of man. Progressing on this path of knowledge illuminated by grace, theological thought can dialogue with science without just remaining in the sphere of nature, because the Truth surpasses all naturalist theories.

The participative logic of ecclesial knowledge

The idleness of the non-participative way of thinking about the ecclesial reality is equivalent to the failure of theology making at the personal level. It can be overpassed only by courage in assuming the ecclesial requirements of intelligence, in the spirit of theological understanding. A real theology must be faithful to the Revelation of Christ, to experience continually the life of Church, to be responsible for the believers in any century and to be opened from an eschatological perspective.

Theological knowledge faithful to patristic Gnoseology always keeps alive the divine condition of humanity practiced in ecclesial life, and especially during the Holy Liturgy. This path of knowledge is essentially participative, so that the principles and the results of knowledge are not possessed, but they are expressions of the participation to the Truth of the divine humanity of Christ extended by the Holy Spirit in the life of Church. Participation, as principle of knowledge, puts the love of God as a standard for true knowledge in the centre of theological knowledge. The one who loves more in Christ comes to a more profound and truthful knowledge (1 John 4, 7-8). Love as the supreme base of Christian knowledge, often mistaken for an individual cheap piety, must not be reduced to a psychological feeling. Love comes from the complete ecclesial community between all saints and the divine powers (2 Efes. 3, 19). This love is stronger than the human powers and is continually received and empowered within the ecclesial experience.

Theological knowledge in accordance with patristic Gnoseology is founded on the reality of faith. Knowledge by faith transgresses any formal conception because beyond formal logic, it implies a participative logic at something that is superior to immanent reality. The one that feels the lively power of knowledge given by faith uses the formal argumentation only as iconomy:

„Formulation is necessary and compulsory because it reveals the truth, separates it and distinguishes it from

any deformation or alteration... The conventional logic of everyday language and its theoretical concepts of operation easily give man the illusion of a safe knowledge which he consumes, once possessed by the intellect".³

Faith is not a mere psychological feeling given by the trust in something or someone, but the certainty revealed in the ontological participation in the event of the communion with God. By this participation, the believer contemplates the divine realities beyond the possibilities of discursive knowledge. This experience can be felt starting from the present moment, and ending in the eternal life of the Kingdom of God. From an ecclesial perspective, we are dealing with a participative knowledge by which we understand that reality is not known by wisely manipulating the formal affirmations about the respective reality, but by a gesture of sharing. For instance, not only an atheist but also a formally declared believer who does not practice his/her religion, both not being engaged in the ecclesial experience, do not have real access to the truth of faith. The affirmations about the reality of Incarnation, Holy Trinity and Resurrection are different from the truth of these realities, unless they are felt by the believers.

The paradoxical thought of patristic Gnoseology imposes a knowledge in which truth is shared by the act of life of the ecclesial experience:

„The apophatism of Church truth excludes any objectivising perception of Orthodoxy. Truth is the reality that does not deny itself-the ultimate truth is life that cannot be vanished by death. Therefore, finding the truth is impossible only by understanding its formulations, taking part in the event of truth is needed, in the truth of life, in the immediate of experience".⁴

³ Christos Yannaras, *Abecedary of faith*, Romanian translation, Bizantina, Bucharest, 1996, p.28.

⁴ *Ibidem*, p. 186.

3. The consciousness of the limits reflected in the epistemological implications of the quantum physics

The Heisenberg principle and its epistemological implications

Bernard d'Espagnat proves that the research in quantum physics underlines the fact that physical reality cannot be definitively explained by a theory of physics. He introduces the term of the *covered real* that expresses the limits of scientific knowledge.

“This covered real surpasses in part the possibilities of human intelligence... On the other hand, science is that which teaches us the rapport with the real. Yet the information that it provides us with is limited to its own general structures, and so it cannot be conceived of as being exhaustive”.⁵

The indetermination induced by the Heisenberg principle in quantum physics presupposes an assumption in a differentiated way: that human ignorance, as a limit of conceptual knowledge, as structural indetermination of nature. Einstein and Bohm are representative scientists who consider incertitude, from the principle of indetermination, to be a measure and expression of human ignorance. The subjectivity from scientific research is due to incomplete information and an insufficient interpretation of the data of existence. Incertitude is of epistemological order, not ontological. The theory of probability and uncertainty based on quantum physics was vehemently repulsed by Einstein who believed in the possibility of obtaining absolute objectivity in scientific knowledge. In the same way, David Bohm, through the theory of variability hidden in quantum physics, attempted to construct a certain formal framework for scientific knowledge, expressed objectively. The uncertainty that resulted from the principle of indetermination

⁵ Benard d'Espagnat, *Le réel voilé*, Fayard, Paris, 1994, pg. 377.

only represents a temporary epistemological step, which will be surpassed in time by the discovery of a theory that will coherently structure all the variables. What we meet here is a profound aspiration for finding a unified theory of science through which an integral representation of the world is presented.

Niels Bohr considers that uncertainty is not due to a temporary ignorance, but is a fundamental limitation of human knowledge. All of human knowledge (including science) is structurally limited. Uncertainty is introduced into scientific research, even starting with the production of the obtained observations at the end of an empirical experiment. Yet, the impossibility of predicting the state of the atom is not a result of the erudite intervention in the study of natural phenomena, but rather it is an intrinsic condition of nature itself. According to Heisenberg's uncertainty principle this indetermination is an ontological measure given of nature. However, Bohr insists more on a kind of scientific agnosticism rather than affirming the ontological dimension of ontological indetermination.

Werner Heisenberg is the one who insisted on the ontological character due to the uncertainty principle from quantum physics. The limitation is an ontological expression of natural reality, it is structural to created existence. From the theological perspective, the ontological dimension of indetermination expresses even more clearly the significant distinction of an ontological type between created and uncreated. Science has competence in that which regards the study of created realities, and even in this situation it is characterized by a limit due to the ontological indetermination that exists in created nature. The imperfection of scientific knowledge is not due to the imprecision of measuring devices, or to the absence of epistemological ability, but rather to the ontological indetermination that exists in the internal structure of the world.

An ontological orientation facilitates the interconnection of consciousness with matter. We no longer have anything to do

with amorphous matter, gross, and lacking rationality. The physical world no longer remains without an ontological statute, being intrinsically structured precisely on the basis of its internal rationality, in close connection with human reason. Therefore human reason can grasp the rationality of cosmos in a perspective that rediscovers the ontological identity of all existence.

The implication of the conscious process of human mind regarding the representation of the world from the perspective of quantum physics brings into evidence a real ontology of the world. This allows a coherent vision of the universe that articulates consciousness as much as nature.

“The incorporation of the representation that the physicist makes in the processes of the brain gives birth to certain interpretations of quantum theories that are integrated coherently in a theoretical representation which contains nature, which also includes mind as much as matter, and that automatically insures the structural connections between the mind and the brain”.⁶

The epistemological perspective founded and elaborated in quantum physics will determine science’s opening up towards interrogations of a philosophical kind. It will favor an articulation of a theological vision of the world with a scientific conception on a philosophical level. In this way, the limit is assumed as an opening, not as an epistemological enclosure.

Quantum physics no longer has the pretensions to say what nature is, but only to express what is possible to express, taking into consideration the inherent limits of the process of knowledge. Niels Bohr says very clearly, “it is false to believe

⁶ Henry Stapp, *Rațiune, materie și mecanică cuantică*, Editura Tehnică, Bucharest, 1998, pg. 176

that the role of physics is to discover that nature is. Physics has as its object only that which we can say about nature.”

The fundamental, epistemological significance of quantum physics consists in the acquirement and assumption of the consciousness of limits in scientific research. Science cannot offer an integral representation of the world as in the scientist conception. The motivation for science is no longer given by an aspiration to offer a complete knowledge of the integral realities that have been studied. Science can offer certain knowledge about a *certain* level of reality of the created world. This selective character of scientific study is not caused by certain external conditions, which can be surpassed in time, through enhancement of methods of research or through technical and technological progress. The limitation constitutes an internal, structural reality of scientific research. Yet this partial, selective and limiting character of science does not diminish the authority of science, but reveals its true epistemological statute through which a dialogue with religious knowledge may be realized, a dialogue with a reciprocally and complementary enrichment.

Discontinuity as the principle of quantum physics

Developed epistemology, beginning with the classical premises of physics, is based on the principle of continuity. Continuity is a constant of modern thought that places immediate, visible, palpable reality in the center of its epistemology. The principle of continuity expresses a quantitative knowledge, explicitly observable in natural phenomena. Mathematical analysis valorized the principle of continuity, developing an epistemology that understood the world in its whole complexity like a continual evolution, manifested in all of life's aspects.

The principle of discontinuity is characteristic to thought developed in religious tradition, which postulates the existence of qualitative distinctions. Discontinuity as an epistemological fracture permits the development of a knowledge that operates

with paradoxical logic, beginning with the theory of unification, and in which distinctions are maintained. Unity does not mean uniformity, because in knowledge the principle of hierarchy is maintained, which is specific to religious thought. Fundamental, ontological discontinuity is also found in the distinction between the uncreated and the created.

Quantum physics recovers, on the scientific, epistemological level, the principle of discontinuity, and through this it favors the relationship of scientific knowledge with religious thought. Quantum implies the existence of discontinuity, of the transmission of energy in a discontinuous way. Knowledge founded on the principle of discontinuity is not evidence specific to analytic and discursive thought. It is not an expression of conceptual knowledge, but of intuition flowing from the greatest depths of existence. The discontinuity affirmed by quantum physics brings into discussion, in the framework of scientific epistemology, the entire scaffolding of classical realism that is characterized by local causality, unequivocal determinism, neutral objectivity, attributes founded on the principle of continuity (see Basarab Nicolescu and Eliade – concerning validity of this principle in traditional religion).

Methodological limits of science evidenced by quantum physics

The scientific truth of modern epistemology begins with the premise of man's separation from nature. Its objectivity is guaranteed precisely on the separation between the researcher and the object being researched.

Quantum physics underlines the existence of limitations in scientific methodology. Scientific theory is no longer an obtained result following research in which the human subject remains exterior towards the natural reality being studied. The scientific truth of quantum physics is not the result of a neutral methodology, but the expression of a dynamic interaction between man and nature. This truth acknowledges the internal and structural limitations of scientific methodology.

These limits do not reduce the epistemological authority of science, but rather permit the opening up of scientific knowledge towards the assumption of nature's mystery, which favors a superior knowledge of the world. "Science, ceasing to be a spectator of nature, recognizes itself as a part of the reciprocal actions between nature and man. The scientific method, which selects, explains and orders admit the limitations that are imposed on its object, and as a consequence, the method cannot be separated from the object of study. This means that the image of the universe according to natural science is no longer properly speaking that which we believed that it was, a representation of the universe according to natural science".⁷

Quantum physics takes a position against absolutist positivism that believes that it can explain everything, beginning with the possibility of identification with the exclusively empirical means of the laws of nature, independent from the existence of the human subject. Positivists refuse the given character of physic's constants, considering them to be simple values given by the researcher for obtaining coherence of theories. The positivism of science admits that any measurement is repeatable and that it does not depend on the moment or location, or the person that brings it to effect. In other words, measurement is placed outside of the operator and it is the result of causality, inherently inscribed in the structure of physical phenomenon.

Quantum physics, especially through the principle of Heisenberg, will apply the issue of intuition in scientific investigation to realities that are deeper than that which is immediately, empirically observable. In fact this deep substratum of reality, undiscovered despite the help of empirical experiments, is what structures entire existence,

⁷ Werner Heisenberg, *La nature dans la physique contemporaine*, Gallimard, Paris, 1962, pg. 34

including that which is observable in an evident way. Relating physics to metaphysics in an effort for knowledge that recuperates the force of symbol present in the traditional epistemology is possible in quantum physics.

4. Final remarks

The unifying perspective of the Orthodox Tradition implies openness towards one's neighbors. Yet this openness is not a mere formal relationship, animated and sustained by reciprocal interests (sometimes petty), but is strengthened by the power of holiness. At the same time the effort of obtaining a holy life presupposes both delicacy manifested towards one's neighbors and the power of bearing witness to the Truth of the Gospel. In the dialogue between science and theology, theology cannot be the victim of conformist tendencies, but neither of the blockade in which it frustratingly or aggressively encloses itself against science. Orthodox theology does not have to defend any ideological position, just to bear witness to the saving Truth of the world. In this way the risk of ideolization can be surpassed, which is present both in theology and in science, and through which the distance [between the two] is invented and amplified. Consequent to Patristic Tradition, Orthodox theology is assuming, always hoping in the chance that God can work through anybody, and without ever renouncing at the consciousness of the fullness of the Truth, that is partaken of. Therefore it is possible to discuss the catholicity of Orthodoxy that is given by the plentitude of the Truth that leads to holiness. But at the same time, this catholicity is open since the one that is actually engaged with the Way of the Truth and Life that leads to holiness is a being who is open to his neighbor and to the entire world. A saint bears all of his neighbors and the entire creation in his prayers.

The most representative figure from contemporary theology that embodied this balanced approach of the Holy Fathers, recuperating and valorizing the generous perspective of the unity of the world in Christ, is Father Dumitru Stăniloae. If

knowledge of God surpasses all objectivity through meeting with Christ, in the same way, the objectivity of certain kinds of human knowledge is surpassed by meeting a person illumined by the Holy Spirit. That is what we find in father Stăniloae, direct continuation along the directing lines of patristic gnoseology, theology of the Logos Christ who perfects knowledge through holiness. From this perspective, openness towards one's neighbors and world becomes an imperative of infinite love, warmed by the power of the Holy Spirit.

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