THE RATIONALITY OF LOGOS INSTEAD OF THE DICTATORSHIP OF RELATIVISM

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Summary: 1. *Dictatorship of Relativism versus Absolute Truth*. 2. *The Empirical Sense of Logos and the New Discoveries in the Natural Sciences*. 3. *Cosmos, Chaos, and Logos*. 4. *The Cultural Chasm of the Post-modern*. 5. *Rationality in the Face of New Cultural Challenges*.

The disappointment brought by the heritage of the Enlightenment inspires the anti-intellectual attitudes André Glucksmann called «euthanasia of reason».[1] According to this highly appreciated representative of the 1968 generation, such a form of cultural euthanasia, consciously and deliberately chosen, brings about not only cultural relativism, but also the relativism of evil. [2] The rhetorical formulation "why not?" may serve to justify the most irrational proposals inspired by the search of an alternative society. Concrete consequences of such proposals are apparent in the radical projects concerning the important domains of contemporary culture. While we assess them, the basic questions arise: if one forgets the semantic content of the terms *animal rationale* and *Homo sapiens,* does the loss of intellectual identity not threaten us? In this new perspective, can we still be regarded as intellectual heirs of the creatures who in the past valued the principle *plus ratio quam vis?*

1. Dictatorship of Relativism versus Absolute Truth

Pope Benedict XVI has many times referred to the topic in question. He undertook it as Cardinal Ratzinger, in his address on April 18th of 2005 to the College of Cardinals. After pointing out the danger of the "dictatorship of relativism", he prayed that the follower of John Paul II would «guide us to the knowledge of Christ, to His love and to true joy».[3] This synthesis combining knowledge, love and joy is thoroughly elaborated on in Benedict XVI's lecture delivered in Regensburg, where the Pope stressed the intrinsic necessity of a rapprochement between Biblical faith and Greek inquiry.

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[1] A. Glucksmann, *Lo Spettro di Tifone*, in Aa. Vv., *Dio salvi la ragione*, Cantagalli, Siena 2007, p. 109.

[2] *Ibidem*, p. 110 f.

[3] http://www.vatican.va/gpII/documents/homily-pro-eligendo-pontifice_20050418

Thanks to a cultural dialogue between Jerusalem, Athens and Rome, the very concept of *logos* played an extremely important role in the rise of European culture. In his theological justification of reason, Benedict XVI follows Emperor Manuel II Paleolog when he declares "not to act reasonably, not to act with *logos*, is contrary to the nature of God". In this perspective, rational categories become essential for theological discourse. Consequently, theology should not be merely regarded as a historical discipline or one of the human sciences. Rather, it should be considered as an academic discipline involved in a profound intellectual dialogue, in which the fundamental question of the rationality of faith is discussed.

These two papal addresses were met both by a great interest from the academic milieu and profound differences in the understanding of their basic terms. As a result, in the 13th volume of the "Common Knowledge",[4] devoted to the meaning of the term "dictatorship of relativism," basic objections are already placed on the terminological level. They concern questions such as: what kind of relativism is meant here: moral, philosophical, cognitive, or axiological? What is the key manifestation of the dictatorship Cardinal Ratzinger sees as a cultural threat for our age?[5]

David Bloor, the key proponent of the Strong Programme of Edinburgh School, formulates the essence of relativism in the following words: «we have no *absolute* knowledge and no *absolute* morality. Knowledge and morality... cannot transcend the machinery of our brains and the deliverances of our sense organs».[6] This opinion has some important consequences for our knowledge, for we cannot consider as absolute any truth or moral principle without rejecting the "dictatorship of relativism". The author of *Knowledge and Social Imagery* states this position explicitly when he says: «To deserve the status of 'absolute', a thing must have an inner necessity and transcendence. It must stand outside the world of cause and effect. It must be supernatural rather natural».[7] In this perspective, the very rationality of justifications and logical accuracy of the argument, do not suffice to recognise concrete truths as absolute. The recognition of any absolutes would be possible only when transcendent and supernatural reality has been accepted. Therefore, we could not expect *ex definitione* for a religious agnostic to go beyond the "dictatorship of relativism" and, recognise as absolute, any truths in the domain of ethics or even in the natural sciences.

[4] It is published by Duke University Press in association with Bar-Ilan University three times a year.

[5] Ch. Norris, *Dictatorship of the Professoriat? Antiobjectivism in Anglo-American Philosophy*, «Common Knowledge», 2/3, 13 (2007), pp. 281, 288.

[6] D. Bloor, *Epistemic Grace. Antirelativism as Theology in Disguise*, «Common Knowledge», 2/3, 13 (2007), p. 251.

[7] *Ibidem*, p. 254.

Several counterexamples can be provided to argue for the position that we can speak of absolute truths and values, even in the case when the conditions defined by Bloor are not fulfilled. The first example comes from Einstein's physics. There are absolute values of physical parameters, in the sense that they do not depend on the chosen frame of reference. As invariants of the so-called Lorentz transformations one could consider them laws of nature, leaving aside the question of what concrete philosophical sense should be attached to the very term «laws of nature».[8] Their role in physics is so important that Einstein himself held the theory of relativity could just as well be called the theory of the absolute, for the laws of nature that are essential for it retain the same form in all physical frames of reference. Any analogies with the philosophical understanding of absolute values and their universal character are obvious here. The reference to transcendence or the supernatural, as suggested by Bloor, is entirely unnecessary. Lorentz invariants assume the same forms, independent of the chosen frame of reference and regardless of the attitudes that concrete physicists adopt towards the supernatural reality.

The rationality of the mathematical formalism of the special theory of relativity does not require in this case any additional references that would go beyond the rational discourse of physics. We could indicate many other similar examples where, contrary to Bloor, it is not essential to refer to the supernatural factor or to take into account transcendent reality in order to formulate opinions that have a character of absolute truth. A simple example is the following proposition: in Euclidean geometry, the total sum of the angles in each triangle equals 180 degrees.

In other domains of knowledge, we may quote many similar examples in which universal values and absolute truths appear. As counterexamples to various forms of relativism, the following statements may be provided: 1. Contemporary natural anthropology shows that racism has no rational justification. 2. There are no rational grounds to regard women as creatures less perfect than men. 3. Anti-Semitism has been a morally reprehensible attitude.

It would be next to impossible to rationally justify the opinion that moral evaluations, such as in the above views, result only from some social conventions similar to the rule: in England people must drive on the left-hand side of the road.[9] Social conventions regarding driving indeed have a different epistemological status from principles with rational justification independent of conventions, e.g. "The use of torture cannot be justified under any circum-

[8] See J. M. Życiński, *Laws of Nature and the Theological Meaning of Cosmic Evolution*, in S. Moriggi - E. Sindoni (a cura di), *Dio, la Natura e la Legge*, Angelicum, Milano 2005, pp. 15-26.

[9] Jeffrey Stout seeks to defend a different opinion: J. Stout, *A House Founded on the Sea. Is Democracy a Dictatorship of Relativism?*, «Common Knowledge», 2/3, 13 (2007), p. 391.

stances" or "Auschwitz is one of the darkest pages in European history". It offends European rational tradition to suggest that a negative evaluation of the homicide practised in Auschwitz is only a result of social conventions.

In this context, the critical evaluation of relativism, as contained in Cardinal Ratzinger's homily, remains in a close liaison with the acceptance of fundamental values. Such values have constituted for centuries the tradition of humanism. This critical evaluation is also in accord with the approval of rationality, the logical implications of which cannot be replaced by reference to psychosocial determinants. Christianity confers an additional sense to the conclusions thus formulated. They represent, however, a common value held by the community which combines critical application of reason with respect for the dignity of the human person. Reference to transcendence or religious dogma must not be explicitly formulated when, even someone who does not accept the transcendent dimension of human existence, recognizes human dignity or human rights. We can see it, for instance, in Francis Fukuyama's claims where he stresses that the concept of human dignity as well as the idea of the equality of human dignity, regardless of its religious roots, «is held as a matter of religious dogma by the most materialist of natural scientists».[10] There are authors who argue this very concept has been constituted by anthropological universals characteristic of human nature, regardless of the cultural and social milieu in which they function.[11] In similar cases, additional reference to transcendence and to the supernatural seems to be inconsistent with Ockham's methodological razor.

2. The Empirical Sense of Logos and the New Discoveries in the Natural Sciences

During his homily at the conclave, Cardinal Ratzinger took a critical stance towards relativism, as an attitude of resignation from the truth that resides within the reach of our cognitive possibilities. In his lecture in Regensburg, he strongly emphasised the Christian affirmation of rationality, and highlighted the conception of logos essential to Greek intellectual tradition. On making this vision more precise, he showed «the profound harmony between what is Greek in the best sense of the word and the biblical understanding of faith in God».[12]

In the papal lecture one finds a surprisingly strong defence of rationality in

[10] F. Fukuyama, *Our Posthuman Future. Consequences of the Biotechnology Revolution*, Farrar, Straus and Giroux, New York 2002, p. 156.

[11] See L. Arnhart, *Darwinian Natural Right: The Biological Ethics of Human Nature*, Suny Press, Albany ny 1998, pp. 31-36.

[12] The quotations in the further part of the paper given in inverted comas, but without a footnote, come from the papal lecture in Regensburg delivered on 12th September 2006.

a form of *modus ponendo tollens* argumentation. The first verse of the Gospel according to Saint John: "In the beginning was the λογος" is then developed into a double negation: not to act "with *logos*" is contrary to God's nature. It seems impossible to indicate any other papal document of the contemporary epoch in which there is an equally strong affirmation of reason. Nonetheless, various forms of defending humankind's rational heritage seem to be characteristic of papal messages presented at the beginning of his pontificate. For instance, in the commentary offered on September 2nd 2006 at a seminar in Castel Gandolfo, Benedict XVI stressed that the concern for the rationality of faith defends us against the mentality of a ghetto tolerated in Catholic milieus. At the same time, it provides inspiration to seek an insightful conception of logos.[13]

The importance of such statements may again be belittled in a similar manner as in the earlier criticism of relativism. The following questions gain on a basic character: how is logos actually to be understood? In the context of contemporary discoveries in the natural sciences, can we make concrete the intuitive comprehension of logos as the principle of reason that accounts for the rationality of the world? I shall try to justify a positive answer to these questions by indicating some discoveries made in the natural sciences, which go far beyond the simple generalisations of observational findings.

An important discovery that marked the origin of modern science was finding that we could develop a dialogue with nature in the language of mathematics. As Newton discovered the basic principle of modern physics, the principle of gravitation, it became clear how important were the principles of differential calculus, which he had previously found. By applying the formulas of this calculus, the author of the *Principia* could, based on calculations made at his desk, determine the position of the planets with greater precision than John Flamsteed, who directed then the Observatory in Greenwich and had at his disposal the best instruments for observation in his epoch.[14] Flamsteed was hurt in his pride and at the same time amazed at the accuracy of the results given by Newton. A similar amazement can be found in the texts of contemporary physicists, in which the effectiveness of mathematics in describing natural phenomena has been regarded as an expression of logos, so important for scientific discoveries.

The priority of mathematical description over observation was many times manifested in twentieth century science. Seeking solutions for Einstein's field equations, A.A. Friedman as early as 1922 found out the universe was expand-

[13] S.O. Horn - S. Wiendenhofer (a cura di), *Creazione ed evoluzione. Un convegno con Papa Benedetto XVI a Castel Gandolfo*, EDB, Bologna 2007, pp. 154, 166.

[14] I. Lakatos, *Newton's Effect on Scientific Standards*, in *The Methodology of Scientific Research Programmes*, vol. 1, Cambridge University Press, Cambridge 1980, pp. 215-217.

ing. This discovery was made five years before Edwin Hubble confirmed the expansion of the universe based on empirical evidence. Friedman obtained his result while working at his desk and trying to determine logical consequences for the equations formulated by Einstein. His discovery was so amazing for Friedman's contemporaries that the so-called cosmological constant was introduced *ad hoc* to avoid the strong conclusion about the expansion of the universe.

From the gravitational field equations formulated by Einstein in 1915, physicists also deduced other important conclusions, for example concerning the existence of neutron stars, of rotating and stationary black holes, etc. When observations confirmed the real existence of similar objects, the thesis that mathematical equations are wiser than those who invented them appeared to be surprising in its epistemological aspect. The mysterious logos of nature led to pose questions that were very close to the great questions of metaphysics.[15]

In 1965, A.A. Penzias and R.A. Wilson discovered the so-called 2.7 K background radiation. George Gamow postulated its existence on purely theoretical basis as early as 1948. He predicted this radiation was emitted around the time of the big bang, 13.7 billion years ago, and should be accessible to observations in our epoch. Gamow formulated his argument on purely mathematical basis. On the empirical ground, his predictions were confirmed 17 years later. It turned out abstract mathematical formulas constitute our mother language, in which human beings can conduct a creative dialogue with nature. The mysterious logos appears to be a basic reality both in the structure of nature and in man's mathematical reflection. The references made to the cosmic logos therefore are not a manifestation of human cognitive fantasy, but rather an attempt to rationally explain the effectiveness of mathematics in the development of the most recent discoveries of science.

The important scientific discoveries of the 20th century imply the abandonment of commonsensical explanatory patterns defended in earlier stages of scientific growth. These patterns were used, for instance, in the naive critique of Galileo, when the movement of the Earth around the Sun was denied. Moreover, what seemed impossible to the earlier generations, one had to get used to appreciate the role of mathematical formalism in scientific theories and abandon commonsensical arguments. The so-called common sense is usually neither common, nor does it have sense. Its postulates often stem from the domination of habit and routine over imagination. Mathematics is such a domain of reality in which intellectual courage inspired by the rationality of the world goes far beyond the domain of imagination.

[15] E. WIGNER, *The Unreasonable Effectiveness of Mathematics in the Natural Sciences*, «Pure and Applied Mathematics», 13 (1960), pp. 1-14.

3. Cosmos, Chaos, and Logos

Important discoveries made in modern science have brought about profound transformations in the scientific image, which for centuries was thought to be a description of the cosmic order. The expanding universe from the textbooks of contemporary physics is very different from the model of a static world as assumed in medieval cosmology. We can no longer rescue the faith in the music of spheres, or in the existence of the distant sphere of Empyrean heavens. At any rate, there is no reason why we should yearn for this music or expect the theological heavens should have anything to do with the heavens of astronomers. What we need is a more profound philosophical reflection on the discovery of a new harmony of cosmos that can be found in Einstein's field equations, and on the search of the so-called physical Theory of Everything. These discoveries radically change the earlier understanding of the universe. At the same time, however, they ensure a fuller comprehension of the relations between our rational reflection and the logos hidden in the work of creation. They also show that it is possible to apply the language of mathematics to those domains, which half a century ago were still regarded as inaccessible to mathematical formalism and seemed closer to artistic fantasy than to the deterministic laws of physics. What comes especially into play here is the phenomenon of the so-called deterministic chaos.

The classically understood chasm between the logos of mathematised formulas and nonmathematisable physical chaos was described by James Gleick when he wrote: «Where chaos begins, classical science stops. For as long as the world has had physicists inquiring into the laws of nature, it has suffered a special ignorance about disorder in the atmosphere, in the turbulent sea, in the fluctuations of wildlife populations, in the oscillations of the heart and the brain».[16] Meanwhile the discoveries of the 1970s bred important philosophical commentaries concerning deterministic chaos. In the new cognitive perspective, a scientific study on chaos seemed to be the knowledge of becoming rather than of being, a quest for a rational structure of the world rather than a description of concrete physical processes.

The reality of chaos, which was earlier thought to be a manifestation of «complete anarchy»,[17] has unveiled its sophisticated rational structure. This structure called for a new language of mathematics, one that would take into account fractal calculus, chaotic gauge program, probabilistic compressibility of nature, and the like.[18] Now commenting on the term "fractals," introduced

[16] J. Gleick, *Chaos. Making a New Science*, Viking, New York 1987, p. 3.

[17] J. Barrow, J. Silk, *The Left Hand of Creation: The Origin and Evolution of the Expanding Universe*, Unwin, London 1983, p. 213.

[18] General discussions of those terms are presented by Michael Heller in his paper *Chaos,*

in 1975 by Benedict Mandelbrot,[19] John A. Wheeler said that if someone did not understand this term, such a person should no longer be regarded as a university graduate. This opinion is justified inasmuch as there have been attempts before to put in opposition the realities of cosmos and chaos. In the new perspective, cosmos derived from Hellenic intellectual tradition and chaos described by the calculus of fractals, are manifestations of the same logos. In this logos, the mysterious rationality of nature is demonstrated, one which is intriguing for scholars using the language of modern mathematics to describe physical phenomena.

This world of logos and sense unveils its depth alongside the development of mathematics. Processes that were thought earlier to be manifestations of the non-mathematised artistry of nature reveal their logical structure together with the development of the new branches of mathematics. The books by Benedict Mandelbrot and Edward Lorenz have unveiled new and intriguing relations between mathematics, art and philosophy. In the summer of 1977, a summer school was organised in Como to discuss the need for a special scientific discipline called "deterministic chaos". Attempts were made to define its grounds on the basis of studies conducted for a dozen years or so. They were conducted independently in disciplines as distant as hydrodynamics, physics of plasma, meteorology, artificial intelligence, neurophysiology or linguistics. Contrary to sceptics, an interdisciplinary dialogue had brought about some valuable and important discoveries, the dialogue developed in the spirit of the well-known letter of John Paul II to George Coyne SI.[20]

Nature, which has for many generations been the domain of a dramatic struggle for survival, shows us today its harmony more pointedly than ever before allowing us to express it with precision in the language of mathematics, made more and more accurate. Where the earlier generations noticed only the chaos of uncoordinated processes, we can observe the fascinating reality of rational structures. The world of escaping galaxies and mathematised chaos has revealed new, unknown before, manifestations of the mystery of Nature. In order to notice them, however, we had to leave simple schemes of common sense empiricism, and notice the rationality hidden in the phenomena previously regarded as chaotic. Einstein's traditional question, "why is the

Probability, and Comprehensibility, in R. J. Russell, N. Murphy, A. Peacocke (a cura di), *Chaos and Complexity. Scientific Perspectives on Divine Action*, Vatican Observatory Publications, Vatican City State 1995, pp. 107-121.

[19] B. Mandelbrot, *The Fractal Geometry of Nature*, W. H. Freeman and Company, New York 1982.

[20] John Paul II, *Message to the Rev. George V. Coyne S.J.*, in R. J. Russell, W. R. Stoeger, G. V. Coyne (a cura di), *Physics, Philosophy and Theology. A Common Quest for Understanding*, Vatican Observatory Publications, Vatican City State 1988, M1.

universe comprehensible at all?" assumes today a new and concrete form. It is translated into the question "why is the universe algorithmically compressible [comprehensible?]?", whereas it could be only a form of stamp collecting, which would allow only for generalisations of the earlier findings of observation?[21] In this new perspective, the mysterious logos of nature unveils its reality to those who seek some sophisticated formulas of mathematics, in order to develop a rational dialogue with nature.

4. The Cultural Chasm of the Post-modern

While presenting a programme that is theologically grounded in Biblical faith and brings in a new perspective of knowledge into the debates of our time, Benedict XVI calls for "the courage to engage the whole breath of reason, and not the denial of its grandeur". This unambiguous affirmation of reason is then developed in making human reflection opposite to violence, greed for power and bloodshed. For the Pope as well as for the Emperor from eight centuries ago, it has been obvious that our moral duty was "to reason properly, without violence and threats..." Following the rational vision of the world, "one does not need a strong arm, or weapons of any kind, or any other means of threatening a person with death..."

This principle was openly questioned in the twentieth century by two totalitarian systems that shook Europe: Marxism and Nazism. Karl Marx, already in the nineteenth century, developed a Promethean vision of man and critically evaluated the rational heritage of humankind. The tradition of European thought is clearly questioned by Marx's thesis that the world – contrary to what the earlier philosophers claimed – should be changed, rather than understood. This approach meant affirmation of a kind of praxis that was radically different from the one proposed at the lecture in Regensburg. This praxis ultimately announced the primacy of revolutionary bloodshed and saw in it a source of the most important cultural transformations. Its consequence was Lenin's anti-intellectualism, expressed if only in the fact that Nadezdha Krupska prepared a special catalogue of authors whose works should be removed from public libraries after the October Revolution. Among the banned authors one finds Plato and Aristotle, Augustine and Thomas Aquinas, Descartes and Pascal.

The revolutionary transformation of the world was supposed to be carried out by rejecting the great rational tradition of the past. Prometheus liberated from the bonds of reflection became a symbol of human emancipation. This tradition was continued by Nazism, where the vision of *Übermensch* was

[21] J. D. Barrow, *Theories of Everything: The Quest for Ultimate Explanation*, Clarendon Press, Oxford 1991, p. 11.

supposed to replace the traditional conception of man, and the ideological *Überverstand* eliminated the classically comprehended reflection. The anthropological error of Marxist collectivism exposed by John Paul II had therefore its profound roots. It was manifested by questioning the importance of the rational and critical reflection for the culture of humankind.

We should deem it an expression of optimism if we claimed that the fall of Marxism, symbolised by the events of 1989, definitively put an end to false doctrines in anthropology. Post-modern mentality announced deconstruction of the human subject, death of sense, apotheosis of despair, nihilistic negation of truth, and rejection of the great narratives of the past. It also implied a departure from this cultural tradition in which rational reflection was as important for *animal rationale* as the elementary biological needs. Now the essence of man's interests was equally expressed by *edere* and by *philosophari*. This means many authors treat the period between the proud declarations of the Enlightenment and the tragic reality of Auschwitz as the time of the crisis of reason, as an ontology of disintegration, or an end of Utopias. Between the optimistic vision of the Enlightenment and the crematories in Auschwitz, a very profound axiological transformation has taken place. In this transformation, the classical idea of rationality was questioned and its purely pragmatic counterparts were sought.

The cultural transformation seems to be rather a social phenomenon than a result of substantial evaluation of discoveries in the domain of science and technology. It is a revealing sign that the important discoveries in the natural sciences, as well as their technological applications, do not necessarily find in the present humanities such counterparts, which would provide a rational and critical analysis of the consequences of the new discoveries. It is true that numerous publications have appeared, seeking to show either an ominous vision of technology, or else inspiring an uncritical fascination for the development of science. In those publications, however, one rarely finds profound reflection upon the contemporary scientific and technical revolution. Without understanding the essence of new discoveries in the natural sciences, it is much easier to frighten humanists with a vision of chaosmos[22] than to see in the deterministic chaos some important manifestations of cosmic logos.

5. Rationality in the Face of New Cultural Challenges

The biotechnological revolution is running such a rapid course that, if the development of science is still described in the twenty first century by an exponential curve, then in our century the universe will change more than it has

[22] See U. Eco, *The Aesthetics of Chaosmos. The Middle Ages of James Joyce*, Translated by E. Esrock, Harvard University Press, Cambridge 1989.

over the past ten centuries.[23] The application of new technologies to human beings will bring about such profound changes that the question of man's species identity itself will become controversial.[24] In this context, it is easy to understand how the concept of spirit, truth, or even the Enlightenment, as Max Horkheimer and Theodor Adorno rightly notice in the *Dialektik der Aufklärung*, become magic formulas characteristic of the early stages of human growth.

A telling sign for contemporary culture is the application of new technologies that express the unprecedented progress in the domain of the natural sciences. Spectacular accomplishments in nanotechnology would not be possible without some revolutionary discoveries in quantum mechanics. Their result is not only a practical application of science, but also a profound transformation in the scientific paradigm. These results have an important cognitive value, although they do not belong to science but to its philosophical interpretations.

The accomplishments of relativistic cosmology undoubtedly show some positive consequences of rational reflection that ensures the acquirement of important information about the universe as a whole. This is epistemologically interesting because the universe by definition is the unique object. Traditionally, it has been made clear that a scientific study cannot deal with single objects, but it should refer to the large domain of repeatable processes. Therefore, we see that the concept of scientificity [science?] has gone through a profound evolution, just like the rational epistemological procedures in science.

This variation in understanding rationality was also apparent in the earlier stages of the development of knowledge. In Voltaire's or Diderot's rhetoric, the understanding of rationality had little in common with Hume's or Hegel's. It was difficult, however, to attach much importance to these differences, while none of the authors in question was able to prove it was his understanding of rationality which was particularly important for scientific research. Meanwhile, both relativistic cosmology and the physics of deterministic chaos through their breakthrough discoveries have proved that we may assume entirely different criteria of scientific rationality than those suggested by the Vienna Circle in the 1920s in its famous *Manifesto*.

The profound methodological transformations in the science of the twentieth century call for an interdisciplinary reflection. Such a reflection may show the deep changes in opinions concerning the nature of heuristically valuable rational discourse. Some of the procedures applied in relativistic cosmology

[23] J. Garreau, *Radical Evolution. The Promise and Peril of Enhancing our Minds*, Doubleday, New York 2005, chapter 3.

[24] C. Ben Mitchel et al., *Biotechnology and Human Good*, Georgetown University Press, Washington D.C. 2007, p. 1.

would be regarded in the period of the domination of cognitive empiricism as methodologically unacceptable, or even irrational. For instance, the nature of the big bang defined on the basis of radiation observed almost 14 billion years later could, by analogy, be regarded as equally risky from the methodological point of view as the pursuit of psychology of infants on the basis of an observation of one old age pensioner. The surprising rationality of nature is present in the fact that the theoretical predictions of cosmology formulated based on the current data from 14 billion years ago turn out to be in accord with observational data.

In the circumstance when advocates of post-modernism bemoan the crisis of reason, rational predictions formulated in the cognitive perspective of the natural sciences lead to spectacular empirical confirmations, unknown to the earlier generations. This shows that there is a need for a profound philosophical reflection about the ongoing evolution in the scientific method of investigation and in the understanding of rationality.

Modern science has developed in the milieu of the intellectual influences of Christian thought. Neither China nor Egypt had a thinker that would, like Newton, have attempted a study of nature independently of the pragmatic applications of his theoretical discoveries. Therefore, the duty of a more profound reflection on the cultural, philosophical or even theological discoveries rests on the Christian intellectual tradition. We mean those discoveries that would bring an opportunity for a new intellectual synthesis and take into account new challenges and profound transformations in the contemporary understanding of the rationality of the world. This vision was consequently developed by John Paul II as he wrote: «The unity we perceive in creation on the basis of our faith in Jesus Christ as Lord of the universe, and the correlative unity for which we strive in our human communities, seems to be reflected and even reinforced in what contemporary science is revealing to us».[25]

The same vision strikes us in the Regensburg lecture where, in his opening to the great dialogue of cultures Benedict XVI proposes "this breadth of reason" in which one rediscovers "the great task of the university". These words testify that it is not an amateurish interest of particular scholars that comes into play here, but a great intellectual challenge that the academic milieu must face. There is no rational alternative for a more profound theological reflection on the discoveries and applications of the natural sciences. If this task is not undertaken in the interdisciplinary thought open to dialogue, the serious risk arises of the reflection on scientific discoveries important for our culture being dominated by anti-intellectualism and nihilism. Moreover, such an outcome will broaden the chasm between religious values and natural culture and will bring about "a dangerous state of affairs for humanity, as we

[25] John Paul II, *Message to the Rev. George V. Coyne S.J.*, cit., M6.

see from the disturbing pathologies of religion and ethics no longer concern it".

Saint Paul's vision of a Macedonian who pleaded with him: «Come over to Macedonia and help us!» (*Acts* 16:6-10) has now an important cultural counterpart. In post-modern culture threatened by despair and disappointment there is clearly a new invitation to overcome certain borders, at present of epistemological nature, and to join a fellowship of reflection that provides rational answers to new questions faced by our generation. We may also hope that in this case the combination of human dignity, essential for the Christian vision, with the Hellenic faith in the rationality of logos will turn out equally important for the future dialogue of cultures like Paul's arrival in Macedonia.

Abstract: *Relativism has been argued by many scholars such as Pope Benedict XVI to not only be a "Dictatorship," but also the very root that inhibits both contemporary philosophers and scientists from properly expanding their theories further into objective truth. In this essay, Joseph Życiński develops an overall consideration of relativism from the renown perspectives of influential thinkers within both the major fields of philosophy and theology. First, Życiński establishes a dichotomy between the world views of relativism with one that maintains a universal "Rationality of Logos". Accepting a Logos encapsulated universe, the essay goes on to argue for the inherent rationality behind chaotic theory systems in light of an objective and unified absolute truth. Both the concepts of the "Cosmos of Logos" and the "Cosmos of Chaos" are considered in depth and in light of mathematics. This paper is particularly focused upon the scientific community's process of theoretical development and the nature of the order inherent behind physical reality. Życiński not only argues that a Logos is inherent within nature, but that it is verifiably acceptable in light of the incontrovertible fact that mathematics is both applied and correlated perfectly with physical reality. Życiński concludes with a consideration of the consequences of a Logos' natural reality in light of human history that at times was fruitful, though most recently hampering, for society's discovering of objective truth. Życiński also ends the essay by considering common standpoints for other central ethical and cultural implications within a Logos encapsulated universe.* (Abstract by Mario V. Cardone, PhL.)

Keywords: *Relativism*, *Science*, *Truth*.