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## The Interplay of Cosmology and Theology in the Constitution of the Human Condition

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**Abstract.** The major topic of this article is the thematic centrality of humanity in the dialogue between cosmology and theology. Considered in a historical and philosophical perspective, it is demonstrated that this dialogue makes sense only as an intertwining hermeneutics of the human condition and thus represents an open-ended enterprise with no hope for the removal of the difference and distinction between cosmology and theology's representation of the sense of existence. Both, cosmology and theology deal with two different phenomenologies of existence present in one and the same humanity which involve different and irreducible to each other narratives. Correspondingly, the dialogue between cosmology and theology represents another way of explicating the famous philosophical paradox of subjectivity. Cosmology is relevant to theology because it explicates the necessary conditions for existence of theologians as well as the physical possibility of the incarnation as its central dogma. Theology is relevant to cosmology because it interprets the very possibility of cosmology as knowledge of the cosmos referring to the human reason as a component of the human created condition in the image of the creator. The conclusion is that both cosmology and theology complement each other in the constitution and explication of the human condition.

**Keywords:** cosmology, dialogue (between cosmology and theology), history, humanity, phenomenality, theology, universe.

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## Взаимодополнительность космологии и теологии в конституции человеческого состояния

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**Аннотация.** В статье обсуждается тематическая центральность человека в диалоге между космологией и теологией. Показано в исторической и философской перспективе, что диалог имеет смысл как взаимопересекающаяся герменевтика человеческого состояния и, как следствие этого, представляет собой открытое в будущее изыскание без какой-либо надежды снять различие между тем как космология и теология артикулируют смысл существования. Космология и теология имеют дело с двумя различными типами феноменальности в одном и том же человеке, которые влекут за собой два разных несводимых друг к другу нарратива. Соответственно, мы утверждаем, что диалог между космологией и теологией представляет собой еще один способ экспликации философского парадокса субъективности. Космология оказывается релевантной для теологии, потому что она эксплицирует как необходимые условия существования самих теологов, так и физическую возможность воплощения их центрального догмата. Теология релевантна для космологии потому, что она интерпретирует возможность космологии в качестве познания вселенной ссылкой на разум человека как составную часть его сотворенного состояния в образе творца. Делается вывод, что космология и теология взаимно дополняют друг друга в конституции и экспликации человеческого состояния.

**Ключевые слова:** вселенная, диалог (между космологией и богословием), история, космология, теология, феноменальность, человек.

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### **Introduction**

The main objective of the present project on cosmology and theology is to reassess the current approach to research in the field of interaction/mediation/dialogue between modern cosmology and theology. The implied novelty is supposed to originate from the recent advance in the field of astronomy, astrophysics and cosmology as well as astrobiology, the advance which updates cosmological theories and hypotheses as well as the perception of the humanity's place in the universe. Methodologically, the implied novelty in understanding of the relationship between cosmology and theology will have to proceed from the advance of new philosophical methods elucidating both theological and cosmological claims about the

structure of the universe. It is difficult to speak of the progress of theology as such: understood as experience of the Divine in the world, it receives its expansion from the human experience of existing in the vast explored universe by accentuating with a new force the synthesis of the human natural smallness and its Divine-given greatness. The newly undertaken study in the relationship between cosmology and theology thus aims to contribute to the extension of the hermeneutics of the human condition as being created in communion with God. Thus the anticipated outcomes of this research will have not only an abstract academic character, but existential implications. Cosmology will contribute to the anthropology of the Divine image in what concerns the physical existence

of theologians. Theology, on its side, via an anthropological route, will contribute to understanding of the very possibility of the articulated image of the universe, that is, of the very possibility of cosmology as such.

The issue of cosmology and theology is a perennial one and this is the reason why when one poses a question of the relationship between cosmology and theology the answer is grounded in numerous historical references where this relationship appeared because practically every system of views about the world as a whole contained elements of theologies (*theologia* – knowledge of gods), as well as representations of the surrounding physical world. Examples date back to ancient mythologies, various Hellenistic theologies, as well as to the early Christian theology. This is the reason why to relate cosmology to theology and vice versa seems to be legitimate and not needing any justification. In ancient philosophies cosmology implied not only all knowledge related to the surrounding terrestrial nature, as well as the astronomical realm, but also some poetical, social and aesthetical extensions of the vision of the whole world. The very world *cosmos* (as beautiful arrangement) was a result of an aesthetical and even ethical attitude to the world. Christianity brought one essential amendment to such an understanding of the cosmos: it was created by God. Correspondingly if one implies a cosmological context of the Christian tradition in general, it relates to that part of creation which is *visible*, but serves as non-human background for the human existence. One must add that unlike the ancient mythological and philosophical narrative, this context was present not only in the Biblical accounts of creation and of the end of times, not only in the patristic commentaries and various theological works (where the discussion of the earthly projections of the overall cosmic reality is employed for the pedagogical and exegetical purposes), but in numerous manifestations of public (ecclesial) and private mystical worship. In other words, in many ways the universe was sensed not so much through its objective earthly and celestially displayed appearance, but a co-participating (together with man himself) in praise of God. Here one detects an existential element related to man's

role in the cosmos. One can speak of praise of God and his creation, but this is the human propensity telling more about man in the Divine image than of the universe itself. Then this multifarious experience of creation can be treated as a theological narrative whose relationship to cosmology can only be established via a human route. Can then one enquire whether the participatory experience of the universe has an «objective» sense making possible its relation to that which is present as a subject matter of cosmological narrative? This is a philosophical question that implies a different criterion for objectivity, objectivity which originates not only from the inter-subjective experience of the universe through reading theological books and prayers of the Church, but from the private, that is, mystical experience taking place not in a manner of some naturally predisposed causality, but as *events* which, being contingent in the historical and physical sense, yet are constitutive of a certain (but radically different from the scientific one) objectivity of the universe in that which this universe has to do with the human affairs. Contemporary philosophy terms such an alternative approach to the sense of objectivity as a different *phenomenality*: theology (including all forms of experience of God's presence through worship) deals with a radically different phenomenality of the universe implying a special cognitive faculty pertaining to man (traditionally termed *nous* (translated in modern usage as *spiritual intellect*)), which can be employed independently of and complementarily to the discursive reason. It is the possession by *nous* that allows man to discern the truth of the created world behind numerous metaphorical expressions of its presence in sacred texts and worship. To accept the presence of this truth means to include into the scope of humanity's capacity to assert (enhypostasize) the universe those phenomena whose *givens* (data) do not fall under the rubrics of *objects*. One then anticipates (in accordance with the thought formulated above) that the issue of the relationship between theology and cosmology, from a philosophical point of view, can be interpreted as a problem of co-existence of two different phenomenologies of the universe in one and the same human being: one of which

is *phenomenality of objects*, whereas another one can be called *event-like phenomenality* as being related to the singular perceptions of the universe through *events* of communion (either liturgical or related to individual sense of creaturehood) with God). But the events of communion are effectively propensities of life itself, so that one implies an event-like phenomenality of life as corresponding to the radical irreversible entrance of its own newness and unforeseen consequences into being. The alleged «objectivity» of the underlying cosmic phenomena in these two cases can be asserted only through assigning some ontologizing (objectivising) qualities to the human cognitive faculties which are traditionally called transcendental.

Modern cosmology as a natural scientific discipline is not a part of any philosophy, even less theology. It deals with the universe as an «object» of dispassionate investigation within the mundane phenomenality and natural attitude. Its logic and methods of research have their own historical roots, and, what is much more important, different tasks and objectives. Cosmology deals with the manifestation of the universe by explicating this manifestation in the discourse. Accordingly cosmology is thought of the cosmos as manifestation. It is concerned with that which concerns the manifestational givenness, of that which conditions it, that is, of the conditioning horizon (ontological horizon determining that part of the universe which is turned to humanity) which allows the unfolding of the manifestation of space and time and thus granting access to cosmic entities as objects. The phenomenality of these cosmic objects can be described as follows. Object (a galaxy, a cluster of galaxies, microwave background radiation, dark matter etc.) is such a thing which is fixed in its distance and accessible only via mediation through separation, that is extension in space or in time. Such a cosmic object remains exterior and reaches the subject only in vision, that is through its sense as being far away. In spite of the fact that an object is given in all its pieces and moments, in all its profiles, it remains in the distance enclosed in the surface of its appearance to us. The characteristic feature of objects is that they enter our perception and form a matter of our curiosity as they

are given to us, but they *do not concern us* (this can be expressed differently: being described mathematically, cosmic objects represent a form of stability with no intuitive content). We can meet objects because of their affinity to us in terms of nature (consubstantiality) because we ourselves are part of the same nature. Certainly some cosmic objects are not objects *per se*; they are constructs of objects (examples Dark Matter and Dark Energy, as well as numerous representations of the origin of the universe). In this sense what characterizes objects with respect to us is their ontological uniformity with us as physical beings, as well as their intelligible uniformity within the scope of our intellectual sphere (a segment of the Platonic world of ideas accessible to us).

In the universe as it is revealed through communion with its Creator, that is through the primary revelation of life itself, the proximity and distance experience an inversion. One can say in the immediate experience of life as communion the universe gives itself in its distance, but by the means of proximity. The universe as it is given to us in the revelation of life has only half of its common measure with us. In a way, the universe given to us in revelation, is not the cosmos, which is supposed to be consubstantial with us, but that that impregnable otherness which while containing us, yet holds its distance from us. It is difficult to describe this distance in the language of constitution, it is not a sort of «space» disclosed to us through horizon of its conditioning of our knowledge, it is the *distance of non-manifestation* of the universe from which we are separated by the opacity of the visible and intelligible, that is of manifestation. This is the universe as it is lived through, as life itself which is phenomenologically given to us, but as such is invisible at distance. One can metaphorically say that the universe given to us through the revelation of life represents an invisible reality (not in technical terms) which is *given* as invisible, that is not as object. The question then is how this reality of the universe can be given effectively? What are the means of an unification of absence and presence of such a universe? Here human faculties of thinking and speech can be invoked, for this paradox of the presence in absence is as such a doing of

the humans. Yet this thinking and speech are not in their discursive function (which just reproduces the manifestation of the universe) but in the form of the operative «word» which is life itself. Life here, that is, human life, is that which is «sent forth» by that Who was «at the beginning with God» and in Whom «was life, as the life was the light of men.» As such life is operative since it makes presence of the universe only to a certain extent, not totally, nor exhaustively, as the Life (Divine life) which sends life in the universe, presents itself in a way that is perfectible, initiating a way along which one can endlessly walk. Life here is the truly and absolutely origin (*non-original origin, or originating origin*) which is beyond discourse in the same way as the inaugurated history of human life (as sacred history) is above and beyond the cosmic history whose necessary conditions form the discourse of the universe's manifestation only post-factum, that is already in the conditions of the operative life. The meaning and intentionality of the theological allusions to cosmological facts through stories of origins and images of the end of time in no sense represent the world in terms of its explanation and constitution of its destiny; they do not compose a cosmological discourse, but rather envisage a trans-cosmological meaning in the order of history (salvation history). The stories of the beginning of the universe and its end, as they are spelled out by the living humanity on the initiative of the Life itself, represent those events of Life's manifestation of itself through human enquiries into the sense of existence where life speaks of its own beginning and its consummation. In other words, the cosmological enquiries of the theological kind, as well as the cosmological discourse as unfold from within the order of history, deeply imbued with the major human preoccupation, that is, an incessant desire to grasp the sense of its own existence.

From what we have briefly discussed so far it follows that the question of a relationship between theology and scientific cosmology becomes problematic at its very inception: it attempts to co-relate two types of the human activity which in their visible practice develop independently from each other. This is the

reason why here a legitimate question arises about the very possibility and the sense of their co-relation. Any version of a response to this question requires such a philosophical insight which would «exceed» both, theology and cosmology (thus overseeing them both from «outside»). Philosophy will have to play here a role of the methodological ground and arbiter because any way of co-relating cosmology and theology without a philosophical justification would be historically contingent and logically arbitrary. Thus, first we need to proceed with setting the boundaries in the possible relationship between cosmology and theology and to make a general insight on the relevance of theology to cosmology. Then, as case studies, we will apply our conclusions to some particular «hot» issues in the dialogue between modern cosmology and theology in order to bring it to a new philosophical elucidation.

First of all, let us discuss terminology in order to understand what exactly is compared in theology and cosmology. The main question is the sense of what is that in cosmology which can be related to theology? Modern researches in the field of physical cosmology, when they attempt to think of their discipline in a wide historical, social and philosophical context, sometimes feel that there a distinction must be made between proper scientific aspects of cosmology (related to observations and mathematical models which aim to produce a credible and coherent account of the physical reality), and cosmological hypotheses which do not fall in the scope of scientific rationality. This happens when physical and mathematical hypotheses have a purely intelligible sense and are produced with respect to that which is unobservable. In this case philosophical ideas (and may be even theological motives) infiltrate cosmology. This happens because a human knower appeals to the abstract representations of the world or to its own experience of the rationally formulated belief in reality of that which exceeds the boundaries of the empirical. A typical example is a spectrum of models related to the origination of the universe («creation» of the universe), as well as hypotheses of the so called multiverse (plurality of worlds). Another example is the famous Anthropic Principle

(AP) where the physical and biological parameters of the human existence on Earth are related to the large-scale structure of the universe. In all its varieties the anthropic inference does not proceed from some intrinsic physical necessity. It implies a philosophical orientation (that is intentionality of consciousness seeking for the systematic unity of the world). In these examples cosmology is imbued with a wider system of ideas related to philosophy, as well as with some implicit theological intuitions. These aspects of cosmology which do not precisely follow the criteria of the scientific rationality (in contradistinction to the physical cosmology proper), can be called philosophical cosmology, metaphysical cosmology (meta-cosmology<sup>1</sup>) or simply *cosmologia*,<sup>2</sup> a Greek word denoting cosmology as a part of *philosophia* as general knowledge.

Then the question present in the title of this article must be clarified: to what aspects of cosmology theology is related? Is theology relevant to physical cosmology, or to philosophical or meta-physical cosmology, or to *cosmologia*? In a historical perspective, when the distinction within these *modi* of cosmology was blurred, the question was not so cute because there was no clear distinction between philosophy and theology, but cosmology was always a part of general knowledge (philosophy). At present such a distinction is necessary implying that one needs to adopt a kind of an overseeing position in order to relate these various modi of cosmology to theology as if one was able to encompass in thought both of them. The employment of such an overseeing position aims to overcome the historical contingency related to the comparison of theology and cosmology. The historical contingency must be suspended (phenomenologically reduced) by placing the problem of the relation of cosmology and theology to the stratification of the different phenomena appearing to man. The objective in this case is not to compare theology and cosmology

on the level of their allegedly descriptive definition and judgments (as if one argued about ontological realities detected through an empirical experience and theoretical representations), but reducing them to their unity in their original existential (phenomenological) source in man.

By so doing one intentionally refuses a metaphysical methodology (implying some priorities among the models of reality standing behind cosmological and theological propositions) in favour of existential (phenomenological) stance placing man at the center of disclosure of the universe from within the originally given life whose experience (interpreted theologically) is equivalent to the experience of creaturehood, that is of communion with God. Indeed, since modern philosophy advocates «the end of metaphysics» in the sense that no ontology preceding that one which is asserted in cosmology or theology is possible (one of the arguments is that one cannot produce any realistic model of humanity by abstracting from its specific and concrete position in the universe as well as from its radically unknowable essence asserted by theology). Correspondingly that the most realistic approach to the mediation between theology and cosmology is based on an empirical ground that both theology and cosmology manifest human activities having one single source, that is, human conscious life. Then the enquiry into the sense of the relevance of theology to cosmology turns out to be an enquiry into the sense of the split between two phenomenologies of the human existence related to two types of experience of this existence. One can then generalise that humanity, the human phenomenon, becomes the central theme of the discussion of theology. The alpha and omega of all discussions in this vein is man as the center of disclosure and manifestation of the universe within the conditions of creaturehood in communion.

Thus the relation of theology and science (their dialogue) as free from the historical contingency becomes possible only in that case when the common source of their origination in human consciousness is retained in reflection. Cosmology and theology both proceed from this source whose embodied existence

<sup>1</sup> B. Carr, «Black Holes, Cosmology and the Passage of Time: Three Problems and the Limits of Science,» In Chamcham, K., et. al (eds.), *The Philosophy of Cosmology* (Cambridge: Cambridge University Press, 2017), p. 47-50.

<sup>2</sup> G. F. R. Ellis, «The Domain of Cosmology and the Testing of Cosmological Theories,» In Chamcham, K., et. al (eds.), *The Philosophy of Cosmology*, p. 4.

itself implies the *necessary* cosmic conditions of its possibility, as well as the *sufficient* conditions of articulating this source by this same consciousness. Then, once again we come to the question: what is that in cosmology which can be related to theology? From what we have discussed it follows that only those aspects of cosmology which touch upon the basic conditions of the human existence can be relevant to theology. Correspondingly, vice versa, only those aspects of theology which elucidate the very fact of the possibility of cosmology, can be properly relevant for the latter. If in some discussions on theology and cosmology one concentrates on their formal content, it is clear that since their narratives correspond to two different phenomenologies, cosmology and theology can enter into the dialogue only in their non-descriptive modi (that is, as *meta-cosmology* or *cosmologia*). It is doubtful that scientific cosmology working in the natural attitude and dealing with the universe in the phenomenality of objects can be a partner in the dialogue with theology whose perception of the world is based through seeing it as a manifestation of communion with the Creator.

Indeed, if one narrows cosmology to its modern scientific standing, then the issue of «cosmology and theology» could be qualified as artificial and non-scientific. There is no logical or theoretical necessity in carrying out such an investigation. Scientific cosmology functions with no regard to either philosophy and theology. Correspondingly, whatever it claims about the physical universe remains within the limits of its competence. However, if cosmology attempts to generalise its findings towards the whole of being (understood either philosophically as the totality of existence or, theologically, as creation), it trespasses its own boundaries and thus ceases to function as a strictly scientific discipline. The scientific cosmology transforms in this case into a philosophical cosmology, or just into a sort of the world outlook in the style of the ancient Greek *cosmologia*. Then all its edifice turns out to be non-descriptive, that is simply hermeneutical, where such a hermeneutics (as produced eidetically, on the level of some intentionality) is related to the hermeneutics of the human con-

dition. The transition from the scientific cosmology to the philosophical one corresponds to the transition from the objectivised order of the cosmos to its particular version disclosed from within the order of history. The extent of objectivity of the order of the cosmos is diminished simply because it is placed within the universally subjective order of humanity. The cosmic hermeneutics turns out to be an expressed outwardly hermeneutics of the human condition. Since the latter is the subject matter of theology, the mediation between cosmology and theology becomes inevitable.

The same thing can be said about theology. If the latter shifts its concern from the order of history (related to humanity's relations with God) towards the structure of the world as if theology makes some descriptive propositions about ontology of the world, it also transcends its capacity because effectively it attempts to predicate something about God and his creation which are both incommensurable with a finite human being (even made in the divine image). If theology is apophatic with respect to its truth claims about God, it should be apophatic to the same extent with respect to world and man himself as made by the infinite and incomprehensible Creator. Theology can disclose the sense of the Creator's presence in the world, but it cannot exhaust the sense of the world as the latter is presented to God himself. This follows from the fact that the world is contingent. One can enquire into the 'what' of creation, but not of its 'why.' The order of history is a human order. Therefore the order of humanity (unable to know itself), being transferred to the whole world makes the cosmic order unknowable to the same extent as humanity itself. The cosmic order then becomes another form of a theological hermeneutics whose sense cannot have ultimate ontological foundations because they are concealed from humanity to the same extent as humanity hardly comprehends its own ontological foundations. One comes to a similar conclusion that was made above that the theological hermeneutics of the created world is implicitly a hermeneutics of the worldly human condition in communion with God.

It becomes clear that the mediation between cosmology and theology is something

which by definition exceeds the scientific, as well as strictly theological scope. In other words, if cosmology deals with the order of the cosmos, whereas theology deals with the order of history, the question of their interaction/mediation/dialogue becomes a philosophical question about the hierarchy of these orders in human consciousness. The problem of relation between theology and cosmology turns out to be a philosophical problem of the paradoxical enclosure of these orders one into another. Indeed, on the one hand the order of history is enclosed into the cosmic order as the necessary condition of the former. On the other hand the very cosmic order is disclosed and articulated from within the order of history. The premise of man's existence as a theologian is its cosmic place, whereas man's premise of being a cosmologist is its Divine image. Cosmology and theology become inseparable if these disciplines pretend to realistically contribute to the description of the human condition. As to the descriptive statements about the external world and its origin in cosmology and theology, they acquire either a philosophical sense in the style of *cosmologia* of ancient Greeks, whereas theology becomes at best *theologia naturalis*. The interaction between the latter is ever historically contingent without clarifying the source of the paradoxical phenomenality of the order of the cosmos and the order of history.

Before going in detail into philosophical aspects of mediation between theology and cosmology one must admit that modern cosmology (based on results of the scientific search promoted to the level of the world outlook) considered within modern culture becomes a sort of 'public theology.'<sup>3</sup> Contemporary cosmologists are often seen as exercising a certain «priestly» role in modern society as if cosmological ideas had immediate existential and social impact which would catch and fascinate public opinion. Then it is naturally that this «new cosmic theology» (reminiscent to a mixture of ancient *cosmologia* and *theologia naturalis*) enters into polemic with the traditional theology. The latter cannot abstain from

this engagement because it must react towards a philosophical and pseudo-philosophical rhetoric of those who proclaim cosmological theories as ultimate truth. But doing so traditional theology engages not so much into the polemics on the nature of scientific claims about reality, but into a polemics on a particular social and cultural, sometimes explicitly atheistic, appropriation of cosmological theories.

The public nature of cosmology means that it contributes to the overall human culture by supplying the latter with a grandiose multifarious narrative some parts of which are based on interpretations of observations and mathematical modelling. In such a public appropriation cosmology is subjected to a hermeneutics exceeding the scope of the scientific. Whereas theology is aware of the fact that any hermeneutics of creation is historically contingent, science can hardly accept this because the latter implicitly follows a belief that any of its ideas expressed mathematically corresponds to reality in itself independently of how such a knowledge was obtained.<sup>4</sup>

Philosophy and theology are prepared to accept the public nature of cosmological knowledge as a constantly renewing narrative about the universe some parts of which are based in observations and mathematical modelling. This narrative includes up-to-date scientific discoveries and ideas, as well as many trans-scientific extrapolations and speculations which exemplify the open-ended status of any scientific enquiry. It is not difficult to grasp that such a narrative leaves a strictly scientific field transforming scientific cosmology into *cosmologia* as part of the overall concept of reality. The ambitions of such a cosmology to provide a descriptive representation of reality have even less grounds than scientific hypotheses themselves. Since in such a narrative the notion of the universe accessible to the scientific grasp is transformed into the totality of being, infinite by definition, cosmology loses its scientific status. Cosmology of the practically (and

<sup>3</sup> T. Peters (ed.) et al., *Astrotheology. Science and Theology Meet Extraterrestrial Life* (Eugene, Oregon: Cascade Books, 2018), p. 46.

<sup>4</sup> One can speak about an ontological commitment in modern mathematical cosmology based on indemonstrable supposition that any mathematical constructs corresponds to a sort of physical reality (see, for example, as an extreme case of such a view a book M. Tegmark, *The Mathematical Universe* (London: Allen Lane, 2014)).

potentially) infinite universe cannot be ever accomplished and exhausted because of some fundamental physical and epistemological limits of the human knowledge of the universe.<sup>5</sup> In this trivial sense cosmology picturesquely provides one with an example of the open-ended hermeneutics of the large-scale physical existence (as that background which is necessary for existence of humanity). Such a hermeneutics has its own limits because it must comply with the physical laws (expressed mathematically) accessible to man who is *constituted* on the basis of these laws. Thus this hermeneutics is open-ended but yet limited by the horizon of the human cognitive faculties in the conditions of corporeal existence. Here an analogy comes to mind with the apophatic sense of theology as admitting any possible hermeneutics of the infinite and incomprehensible God within the boundaries (*horos*) of dogmatic definitions.

Can then the issue of the relevance of theology to cosmology become a question of a possibility of using a theological hermeneutics of creation together with the cosmological hermeneutics in order to produce a unified representation of one single whole (assuming that it is possible at all), although open-ended as well? This question is a legitimate one because it has precedents in history, where cosmology was a part of philosophy understood as knowledge, as well as of *theologia naturalis*. Yet, one needs to address an issue of whether we return to such a posing of a question on the relation between theology and cosmology as a historically contingent comparison of narratives related to modern era? Our objective, from the very beginning, was to avoid such a historically contingent approach by transferring the question into an *apodictic*, that is, philosophical frame. To interpret the «dialogue» between theology and cosmology as a comparison of two ongoing hermeneutics of the world is not philosophically deep. The genuinely non-trivial question is why there are two hermeneutics (in one and the same human being) but not one. This question brings any researcher back to the enquiry about the basic difference of two types of experience of existence in one and the same human condi-

tion: religious and natural (worldly). But this is a philosophical question so that the approach to the problem of a relation between theology and cosmology must be philosophical.

Indeed, in order to make a comparative analysis of two spheres of the human experience one must have an a-priori philosophical predisposition which is initiated not because of the scientific advance or socio-historical factors, but through the logical necessity to understand how two types of experience of the universe are possible in one and the same human being. Within such a philosophical concern the center of enquiry shifts from its objective pole (that is from truth claims about objective reality) to the subjective (noetic) pole related to the subject. This brings on board an anthropological (existential) dimension of the problem where it is a-priori clear that the question of the relevance of theology to cosmology or vice versa does not have too much sense, because it is the same as to ask what psychological experience of the universe is more relevant: the scientific one or that of theology? In fact, the word relevance becomes inappropriate here, because from the point of view of the empirical life both experiences are possible and both do not contradict each other for they do not affect actual life. It is a different story one does undertake a transmission of these experiences into truth-claims assigning them some epistemic or ethical value. In this case the enquiry into the interaction between cosmology and theology in one and the same human being becomes constitutive for man himself, that is the essence of humanity is determined by the presence in its activity of such a «dialogue.» This can be expressed in a different way: the disclosure and manifestation of the universe as it is studied in cosmology is intrinsically linked to the existential desire to explicate the human condition, human life as it is experienced in its immediate givenness by every human being. Here cosmology represents a certain *telos* (goal) of the human intellectual activity in order to exercise, in words of the founders of phenomenology, «worldification» or «enworlding,» whose scope is not reduced only to curiosity and wonder of the infinite skies and the *cosmos*, but is implanted in the very essence of the human telic constitu-

<sup>5</sup> On limits to testing outcomes in cosmology see Ellis, «The Domain of Cosmology...» pp. 23–32.

tion. From within such a vision of cosmology a particular historical distinction between that in cosmology which is strictly scientific (as defined at this particular moment) and that which represents a much wider narrative has only a historical significance, implying that those perennial issues which humanity encountered at the dawn of its conscious existence, such as, for example, the sense of contingent facticity of all, the origin of the universe and life in it, etc. remain undisclosed and concealed in spite of their ongoing scientific hermeneutics. In spite of the fact that the ultimate origin of this concealment cannot be elucidated either scientifically or philosophically, one feels intuitively that it can be interpreted anthropologically, that is as related to the most immediate existential anxiety of the origin of life. Here one sees a different approach to cosmology not as to a discipline which explores something out there (that is, produces some descriptive claims about reality of things in the conditions of sheer incomprehensibility of why this exploration is possible and why the displayed facticity of the universe is such as it is), but as to some expression of the human existence in cosmic terms, existence considered as a primary philosophical fact. The scheme «there is the universe, therefore there is human existence» is replaced by a phenomenologically explicated existential inference from the human existence to the universe, where in the former the universe is treated as a necessary background for the appearance of the embodied consciousness, whereas in the latter the universe is treated as a product of the human articulation and constitution (as it happens in the sciences). Yet, the fact that the natural background of the universe is necessary for the human existence is an articulated and constituted fact, brought to light post-factum through observation and study of the universe whose possibility is based in the human intellectual capacity which is related to the physical necessities, but as an intentional activity is not implanted in them.

Recapitulating the final point, one can approach cosmology not from the point of view of what it claims as a matter of fact (leaving this to the proper scientific cosmology), not from a point of numerous views of the universe start-

ing in the historical past and finishing by post-modern grand narratives (presented in abundance in popular books), but as an ever present modus of the human existential activity always directed to the future (being indeed a «cosmogonic» process of world-building). Seen in this way, cosmology, as aiming to explicate the sense of the universe, in particular its origin, forcefully demonstrates that it is this origin of the universe that forms the *telos* of cosmological explanation and thus, by its *constantly constituted* essence, is situated in the future of humanity as the anticipated goal of such an explanation. In spite of the seemingly paradoxical nature of this conclusion, it can receive a philosophical justification as the working of the *formal teleology* in the cosmological research which originates in the cognitive faculties as part of the human condition.<sup>6</sup> If the whole of cosmological research related to tracing down the origins of the evolving universe can be seen as a certain formally *teleological* activity (pertaining to the order of history related to humanity), then the entrance of a *theological* dimension into this activity cannot proceed along the lines of a classical physico-theological argument (argument from design). Since we are dealing with the *formal teleology* as an attribute of the human consciousness, theology enters here as an enquiry into the facticity of this consciousness. In other words, theology enters implicitly as dealing with the foundation (inauguration) of the order of history as the history of consciousness. Then the problem of theology and cosmology transforms into the enquiry about the stratification of two different types of the intrinsically *teleological* contemplation of the world, which, in spite of their differences in content, have a common origin in the human condition. Then the goal of the very dialogue between theology and cosmology is to explicate the human condition dealing with two phenomenologies of the world having intrinsically teleological overtones. Here, in addition to the already formulated idea that the rela-

<sup>6</sup> The ideas of formal teleology functioning in constructing the ideas about the systematic unity of nature have been developed by Immanuel Kant in his Critique of Judgement as well as in later works of the founder of phenomenology Edmund Husserl.

tion between theology and cosmology can be established on the level of its narratives about the universe, one must introduce one important aspect, namely that these narratives follow an intrinsically present goal which constitute these narratives, and this goal proceed from the author of these narratives who aspires to understand itself, that is to explicate the sense of its human existence. It is this inherent telos of humanity which initiates all hermeneutics of the created world, including scientific cosmology.

Theology never implied an accomplished cosmological synthesis because it dealt with the human situation in the created world and in communion with God. However theology, together with philosophy, engages with the cosmological discourse when man experiences emotional and spiritual predicaments in appropriating the findings of cosmology. First of all this happens when humanity has to face its radical physical insignificance in the universe and its contingency upon physical factors which are beyond its control. Whether one implies a single universe related to what we observe or multiverse, man's physical position in the cosmos can be described in terms of cosmic homelessness (M. Heidegger), non-attunement (J.-F. Lyotard) or restlessness (S. Frank), or, saying shortly as deprived of sense and value. This is confirmed not only through the modern estimate of the visible universe's size in terms of 92 billions of light years at whose background the habitable zone on the planet Earth with its atmosphere of 10 kilometres high seems to be infinitely small, but, in fact, through a fundamental chaining of humanity to the planet Earth. Indeed, as recent scientific results assert, any perspective in direction of the cosmic expansion of humanity beyond Earth seems to be bleak because of the penetrating cosmic ionising radiation which prevents cosmic travels and thus contradicts to existence of life beyond the planet. *Geocentrism* becomes for humanity not an option, but the imperative (it does not imply that humanity has to deny existence of life and intelligence beyond Earth, the question is about the possibility of being displaced in space). And it is in the background of this inevitability of geocentrism that all cosmological discoveries and estimates of the size and the

age of the universe seem to be very depressing if humanity treats itself only in physical terms. Cosmology in this sense explicates well the predicaments of the human condition. It provides a profound account of what humanity has achieved in a short historical period in terms of understanding of the outer cosmos, but, as such, cosmology does elucidate the sense of the human existence in the universe only apophatically: it tells how the universe is inhuman. Cosmology outlines the necessary conditions for existence of humanity, but it leaves untouched any question on the contingent facticity and the sense of existence in these conditions. Certainly this is not cosmology's business to deal with this issue. But, one must remember that cosmology as such exists only because there are human beings endowed with an intellect and whose existence as such is elucidated by this cosmology only to a «half». In this sense cosmology exists in the concealed conditions of its own possibility. In order to clarify what this means, it is enough to pose a question of how the 20 cm of the human brain is capable of producing an instantaneous conscious synthesis of the practically infinite universe. Philosophically, once can rephrase this question as to where from humanity has access to the idea of infinity? It is only in the background of this innate idea that humanity is capable of sensing its physical incommensurability with the universe, its homelessness, non-attunement and restlessness. All these sentiments belong to the interior sphere of the human subjectivity and reflect something in humanity which does not follow directly from the conditions of its physical existence. One can probably survive on this planet without ever thinking about the cosmic place just imitating an animal «freedom» from enquiring into the sense of existence. It is here that one observes a certain reversal of the situation with the cosmic place: the human obsession with its place in the universe transforms into the question of why this very obsession is given to humanity through the very fact of its existence. In other words, where the very possibility of cosmology comes from and what is its purpose in view of its depressive (but obviously scientifically dispassionate and objective) findings? All these questions are related

to the realm of the human affairs by treating cosmology as one of them. But human affairs take place within the order of history which is a subject matter of theology and here cosmology naturally meets theology in man. Cosmology receives its explication from within the human condition and human history, that is existentially. One finds the questions of the universe as a whole, of its origin, its suitability for the human existence etc. as grounded in the basic concern of humanity about the sense of its own existence. By doing cosmology humanity attempts to achieve existential goals functioning in the human psyche in rubrics of faith related to the vision of humanity's destiny as it is portrayed from within the order of sacred history. How then a vision of such existential goals cascades towards the vision of the order of the cosmos? The answer to this question contributes to the issue of the relevance of theology to cosmology.

**Theology and cosmology:  
from a historical narrative  
to the philosophical problem**

Every ancient mythology, every ancient philosophy that included «theology» under the guise of the *theologia civilis*, *theologia fabulosa* or *theologia naturalis*, contained cosmology (*cosmologia*) implying that the arena of the human affairs in their relation to deities was this physical world, this planet, this particular geographical setting. In many ways cosmology was a certain ideal mirror, a beautiful arrangement (*cosmos*), which humans were longing for in their social life, that is life of the *polis*.<sup>7</sup> In most cases cosmology was mythological aiming towards the ideal picture of the remote hopes and aspirations of humanity. In this sense, in spite of the fact that the heavens were accessible to the human gaze, cosmology's motivation was not astronomical display and the natural order, but the order and sphere of the human ideals, that is of mythology. Truth and value of such cosmologies corresponded to the sentiments of the ancient epochs. Thus cosmology in its ob-

jectives was rather fabulous, than natural. Its truth was existential, but not metaphysical.

The Biblical narrative and its Christian exegesis, which historically followed the antiquity, did not have an objective of constructing an accomplished world-view, because its concern was the relationship between man and God so that the proper cosmological context (that is the description of reality of the universe) was of a secondary importance. Cosmology was present in major Christian writers but this was not an abstract teaching about the cosmos as it existed in itself, rather the sense of the latter was unfolded from within *human history* (sacred history) on Earth. One can say that the Biblical view of the cosmos became genuinely historical, because it was a part of the overall planned history for the Divine humanity. Seen in this perspective, the cosmic order was not a cyclic order of the eternal Greek cosmology, but was set up by God through creation of the world and man. The cosmos was arranged by the Creator for the sake of the human history (as a component of the sacred history of salvation)<sup>8</sup> and man could potentially infer from the thus arranged world to God<sup>9</sup> (the premise of *theologia naturalis* was cosmological). To see God's presence in the world man had to «listen» to the stars meaning the transcription of the Christian prayer «thy will be done in earth<sup>10</sup> as it is in heaven,» where «earth» was always associated with the entire visible universe. Yet, the presence of the physical universe (as a generalised notion of earth) in the Christian context, if one attempts to describe creation in cosmological terms, implies that cosmology appears here as *cosmologia*, as that description of the overall material (visible, empirical) part of creation whose ultimate sense while being disclosed to man to a certain extent (thus making possible

<sup>7</sup> See, for example, L. Brisson, F.W. Meyerstein. *Inventing the Universe. Plato's Timaeus, The Big Bang, And the Problem of Scientific Knowledge* (Albany: State University of New York Press, 1995), p. 18.

<sup>8</sup> See, e. g., J. Danielou, *The Lord of History* (Longmans, Green and Co Ltd, 1958), pp. 27–29; O. Clément, «Le sens de la terre», *Le Christ terre des vivants. Essais théologiques. spiritualité orientale*, n. 17 (Bégrolles-en-Mauges: Abbaye de Bellfontaine, 1976), p. 80.

<sup>9</sup> This was a patristic conviction expressed, for example by Athanasius of Alexandria in *De incarnatione verbi Dei* 12, and *Contra gentes* 35.4.

<sup>10</sup> Assuming that theologically Earth is the whole the visible universe (See, for example, Lossky, *Orthodox Theology*, pp. 64–65).

its study) yet remains hidden in the will and wisdom of the Creator.

Saying that cosmology of ancient Greeks was in many aspects *cosmologia fabulosa*, it is implied that *cosmologia* in ancient Greek philosophical thought, as well as later in Christian teaching was linked to the proper «science» of astronomy only to a limited extent. Astronomy was established on observations of the celestial objects and as such did not always correlate with particular philosophical or religious convictions. Cosmological and philosophical ideas used astronomical observations (for example planets' revolution). Astronomy and *cosmologia* were connected, but *cosmologia*, as a vision of the world as a whole, was based on philosophical (aesthetical, even ethical) convictions whose origin was in the world of culture and mental abstractions from the immediate physical reality. Yet, together with the *theologia naturalis* of ancient Greeks, as well theology of creation in Christian teaching, cosmological views of ancient philosophers and early Christian theologians (that is views related to the wholeness of the universe) could be qualified no more than *cosmologia naturalis* because it asserted that which was related to the nature of the empirically observed things although only limitedly. The question was mostly not the input of observations and realistic claims about the cosmos, but about the ethos of such a cosmology: man's interest to it was rather subordinated to the order of the human history and had sense for the life of the Greek society and humanity in general in Christianity.

From the modern point of view such a qualification for the ancient cosmology seems to be reasonable because cosmology, unlike astronomy, was not and could not be a «science» in a proper modern sense.<sup>11</sup> One can point to the Ptolemy's system of the world that used the Aristotelean model of the universe and which existed for more than a thousand years. It gives an example of how *cosmologia naturalis* remained a dominating in the mind of the Chris-

<sup>11</sup> The word 'science' in general was never used in Greek knowledge. Many of the ingredients of what we now regard as science were present: a developed language for describing nature, methods for exploring it, factual and theoretical claims emerging from such explorations, and criteria for judging the truth or validity of the claims thus made.

tian society the later advance of astronomy associated with the names of Copernicus, Kepler, Tycho Brage, Galileo and up to Newton, when cosmology received some mathematical formation, as well as its observational techniques advanced.<sup>12</sup> Fables and imagination have been replaced by the refined observations and mathematical insights. And this is the reason why the first historical examples of natural theology (*theologia naturalis*) were closely linked to such a cosmology because the former was an attempt of making inferences to the Divine on the basis of studying movements of the celestial bodies, was the only credible kind among ancient theologies since it related to empirical experience.

Yet the ancient relation between cosmology and theology was intrinsically philosophical. In a Christian context, since *theologia* (reasoning or discussion about the experience of God) is linked to truth<sup>13</sup>, a comparison between cosmology and theology can be done only with the help of philosophy (as love for wisdom), for philosophy as knowledge (*gnosis*) delivered a common perception of reality (not that of opinion (*doxa*)). Faith as such (as the foundation of genuine theology) is a concern for philosophers for, as Augustine concludes, «the true philosopher is the lover of God» (*verus philosophus est amator Dei*).<sup>14</sup> Correspondingly, since philosophical systems of the antiquity (in particular

<sup>12</sup> Yet, even Kepler, when he attempted to construct a whole view of the Solar system (as the system of the world) invoked a purely intelligible model of the orbits which was rather a fable. Kepler in his treatise *Mysterium cosmographicum* attempted to explain the number of planets and geometrical position of their orbits by appealing to five Platonic solids whose boundaries determined extensions between planets. In spite of the fact that such an explanation does not correspond to the nature of things and is arbitrary in terms of a method, Kepler managed, according to his opinion, to explain the spatial extension between planets with the precision of 10 %. (J. Kepler, *Mysterium cosmographicum* (The Secret of the Universe), A. M. Duncan (tr.) (New York: Abaris Books, 1981). Yet this was still a *cosmologia naturalis* rather than a scientific cosmology in a modern sense.

<sup>13</sup> Clement of Alexandria treats truth as something which is all-embracing, something which includes all particular kinds of truth. Truth is one, and it is God's truth (Clement of Alexandria, *The Stromatata, or Miscellanies*, Book I, Ch. 5,6 [ET: ANF, vol. 2]).

<sup>14</sup> Augustine, *The City of God*, VIII, 1 [ET: H. Bettenson (New York: Penguin Books, 1980), p. 298].

those of Plato and Aristotle) were cosmological through and through, cosmology naturally entered Christian theology as part of that inheritance from the ancient times which Christianity as Good news had to deal with in the old surrounding culture. Since theology engaged with philosophy, whereas philosophy was always imbued with cosmology, cosmology naturally entered a relationship with theology. A question of relevance of theology for cosmology was a question of the relevance of religious convictions to the picture of the world of the time. During the long history of Christianisation of Greek and Roman civilisation, and later Byzantium and Europe this question went through a radical inversion because the world view became dictated by the Christian attitude to existence based in faith in God and tradition laid in the basis of all systems of the world. The question became not that one on the relevance of Christianity to ancient cosmology, but *vice versa*, on the relevance of ancient cosmology to Christianity. New Christianised cosmology was relevant for theology by definition since cosmology was based on of religious convictions. Yet cosmology in this context remained no more than a *cosmologia naturalis* which could not be disentangled from *theologia naturalis* because it was based not only on scientific evidence (implying, in modern terms, physical causality), but on religious hypotheses, that is sheer intentionality. One must understand that religious convictions were imported into cosmology via an adjusted philosophical route by showing that philosophy was absolutely relevant to cosmology, for cosmology as *cosmologia* could not be thought of without philosophy.

The question of the relevance of philosophy to cosmology became very acute in the 20<sup>th</sup> century when cosmology became an observational discipline encompassing extremely large spatial (and hence temporal) scales of the universe and thus pretending to make *scientific* claims about the universe as a whole. And the first question that arises is about a philosophical status of scientific claims about the universe as a whole. The pretence of cosmology for a scientific status of its claims was based on the new synthesis of the observational astronomy of the deep cosmos with the advance in theoret-

ical physics. One can speak about the inception of a new *scientific cosmology* in the beginning of the 1930s when Einstein's Relativity, applied by A. Friedman and G. Lemaitre to the cosmic scales, convinced scientific communities that the overall cosmos consisting of numerous galaxies experiences expansion, that is, evolves. This breakthrough was important philosophically because science received a chance to ascribe a common property to all objects in the universe, that is, to make an inference about the systematic unity of the universe, where the unity is related to the property of all parts of the universe to be involved into a universal cosmic expansion.

The major contribution of General Relativity was that it allowed to employ mathematical modelling for the entire universe. In fact, the very notion of the universe received its constructive mathematical elucidation as a combination of geometrical methods and known physical laws. This ultimately brought cosmology to the state when one could claim its place among the natural sciences. The major technical factor in assigning to cosmology (with its subject matter – the universe as a whole) a status of a scientific discipline was the rise of mathematical physics for the explanation of the observed and theoretically predicted phenomena. The universe became not only that which was observed through telescopes at the celestial sphere, but a synthesised *empirical* and *intelligible* whole comprising the ultimate realm of existence. Once again, the universe became consisting of the intelligible realm whose basic notion was exactly the notion of the universe as a whole. In other words, from a philosophical point of view, the intelligible counterpart of all ancient cosmologies (sometimes based on myths and fables) received its new formation via a mathematical path thus amending the old pictures of the universe by the new ones, whose extent of apodicticity and thus epistemic likelihood was based on the laws of logic and mathematical demonstration.

In other words, the *extensive mathematization* of the universe aimed to provide a criterion for the fact that science indeed deals with the cosmic phenomena which are objective according to the principle of causality (imple-

mented through mathematical methods), that is independent to some extent from the human hypotheses brought into the subject matter of cosmology on the grounds of sheer intentionality. As was expressed by Edmund Whittaker, James Jeans and other physicists in the middle of the 20th century in the context of the rising scientific cosmology, «the achievement of mathematical physics is precisely this, that is has constructed a scheme of the universe which is trustworthy (that is, predictions based on it are always verified by experience), and which can be carried backward, still retaining its meaning and validity, to a time before the emergence of any sentient creature.»<sup>15</sup> A philosophical question, however, arises as to whether such a mathematical description of the universe covers all aspects of its existence. If not, there is again a distinction between *cosmologia* (which includes many aspects of the universe which are not mathematized, human life, for example) and cosmology proper (as a physical and mathematical discipline). Some philosophically oriented physicists of the 20th century understood this well thus seeing the limits of the physical cosmology. James Jeans, for example, asserts that «a mathematical formula can never tell us what thing is, but only how it behaves; it can only specify an object through its properties. And these are unlikely to coincide *in toto* with the properties of any single macroscopic object of our everyday life.»<sup>16</sup> Yet, «...while it must be fully admitted that the mathematical explanation may prove neither to be final nor the simplest possible, we can unhesitatingly say that it is the simplest and most complete so far found, so that, relative to our present knowledge, it has the greatest chance of being the explanation which lies nearest to the truth.»<sup>17</sup> In spite of all these reservations with respect to the sense of truth delivered through mathematical physics, the first apologists for new scientific cosmology in the 20th century made a leap towards *natural theology* exactly on the grounds of the mathematical efficiency in cosmology. Mathe-

matics, describing the universe as a whole<sup>18</sup>, in particular that the universe cannot have existed for an infinite time in the past under the operation of the present laws of physics (that is that there must come a time when for physical reasons life will be impossible) indirectly contributes to a philosophical (or rather a theological) argument that the world was created and its creator is extramundane.<sup>19</sup> Here the advance of cosmology correlates with some general theological ideas on the origin of the world, so that one can claim that cosmology in a way is relevant for theology since it provides a scientific hermeneutics of that which theology asserts on different grounds. This scientific hermeneutics as such is not descriptive and does not compete with a theological hermeneutics. Rather it shows that cosmology as a natural science acquires more and more capacity to support some theological intuitions by using a different apparatus. It does not imply to «prove» them or to make «descriptive,» but rather to make theological intuitions more articulate and with an increasing amount of content related to the scientific scope. Yet, the expansion of a scientific hermeneutics as such does not guarantee any convergence of its ever-popping ideas to the ultimate objective reality. Cosmology does not replace the theological hermeneutics but fills it with a new content related to the fact that human culture as part of the order of history is irreversibly develops by enlarging the volume of that which theology speaks about without doubting the relevance of the latter and not denying the legitimacy of its existence.

The relevance of cosmology to theology was historically promoted through the varieties of the *natural theologies*, whose major aim was to use information about the surrounding world in order to make inferences about God.<sup>20</sup>

<sup>18</sup> Ibid., p. 133.

<sup>19</sup> Ibid., p. 131. Cf. «Modern scientific theory compels us to think of the creator as working outside time and space, which are part of his creation, just as the artist is outside his canvas» (Ibid., p. 145 (See also p. 144)).

<sup>20</sup> According to Jeans: «Today there is a wide measure of agreement, which on the physical side of science approaches almost to unanimity, that the stream of knowledge is heading towards a non-mechanical reality; the universe begins to look more like a great thought than like a great machine. Mind no longer appears as an accidental intruder into the realm of matter; we are beginning to suspect that we ought rather to hail it

<sup>15</sup> E. Whittaker, *Space and Spirit. Theories of the Universe and the Arguments for Existence of God* (London: Thomas Nelson and Sons Ltd, 1946), p. 134.

<sup>16</sup> J. Jeans, *The Mysterious Universe* (Cambridge: Cambridge University Press, 1930), p. 142.

<sup>17</sup> Ibid., p. 146.

In fact, most of discussions on cosmology and theology since the very inception of modern cosmology up to recent debates in the dialogue between theology and science, proceed along these lines where, roughly speaking, traditional theology is adjusted to the ever extending scope of cosmological knowledge, defending its point that theological truths can hardly be amended by whatever the sciences teach us.<sup>21</sup> All natural theologies are rather philosophical, that is an inference from cosmology to theology is carried out within discursive thinking, when the sought God-Creator is represented as an abstract and impersonal being (its identification with the God of Christian faith can be done only if one extends the naturalness of such a theology towards proper theological articles related to Christ-event, that is to Incarnation, Resurrection, Ascension, Pentecost etc.). In this case the relevance of such a philosophical theology (natural theology) to cosmology has a similar standing as the relevance of philosophy to cosmology.<sup>22</sup>

For «strict» cosmologists (who was not interested in philosophical generalisations of cosmology) the problem of relation between cosmology, philosophy and theology did not exist. For their opposites, that is philosophising cosmologists and those who was predisposed to some religious ideas the actuality of the relation between cosmology and theology was reduced to the comparison of the Biblical picture of creation of the world with that one which was promoted by the physical cosmology. Philosophers of science and all those who belonged to the non-metaphysical trends in philosophy were from the beginning more cautious of the inclusion of scientific ideas into a theological context. The reason was that the notions of the universe and God (as an absolutely necessary

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as the creator and governor of the realm of matter... « (Jeans, *The Mysterious Universe*, p. 148; see also p.149). A general discussion on theistic inferences in cosmology can be found in the paper H. Halvorson, and H. Kragh, Helge, «Physical Cosmology», in *The Routledge Companion to Theism* (Eds. Ch. Taliaferro, V.S. Harrison, and S. Goetz) (Oxford: Routledge, 2013), pp. 241–55.

<sup>21</sup> V.N. Lossky, *The Mystical Theology of the Eastern Church* (London: James Clarke, 1957), p. 106).

<sup>22</sup> See in this respect an article E. McMullin, «Is philosophy relevant to cosmology?», in Leslie, J. (ed.), *Modern Cosmology and Philosophy* (New York: Prometheus, 1998), pp. 35–56.

being) have been fundamentally problematic after Kant's critical insights. These notions can be treated as regulative ideas, but their extrapolation towards ontology was illegitimate within the faculties of the understanding and reason. Correspondingly, any generalisation of the scientific representations of the universe for the whole world, an then, in the style of the physico-theological argument, ascension to the creator of this world was philosophically discredited. Kant's critical philosophy has shown that if one places the problem of cosmology and theology inside the transcendental faculties, this problem is reduced to the construction of an argument for existence of the creator. However this creator turns out to be no more than a demiurge, and architect of the world, but not the God of Christian faith created the world out of nothing.<sup>23</sup> The physico-theological argument cannot justify contingency through an appeal some trans-worldly creator. This is the reason why the ways of how to relate cosmology and theology must have been radically changed in order to avoid fallacies and antinomies while establishing such a relation. If one intentionally remains within the discursive cognitive faculties (the understanding and reason) a comparison of cosmology and theology is possible only on the level of their narratives about the world as a whole, that is by tracing how the constitution of the world (which does not entail the world's objectivity) is going on in science and theology. Shortly, any straightforward comparison and correlation between theological ideas and cosmological theories in what concerns the universe as a whole does not make sense apart from producing an indefinite set of non-descriptive statements. Such a comparison is possible as an abstract academic exercise, but its very objective is unclear if the differentiation in the narratives not traced in the internal split between structure of human consciousness, that is, if the whole issue is not entering the sphere of anthropology. What is obvious is that the dialogue between theology and cosmology cannot be carried out at all without relying on rigorous philosophical methods.

If the difference in the phenomenality of the world in cosmology and theology is as-

<sup>23</sup> I. Kant, *Critique Pure Reason*, A627/B635 [Smith: p. 522].

cribed to the human cognitive faculties such that man is placed by its origin (in the Divine image) in the conditions of their split, the elucidation of the sense of the «dialogue» between these faculties implies a turn to the anthropology of the Divine image, that is *de facto* to the development of theology of the created human condition by taking into account all scientific achievements which develop theology, although indirectly. The problem of the relation between cosmology and theology then turns out to be an element in the development of a philosophical and theological anthropology. In other words, the dialogue between cosmology and theology contribute in the open-ended hermeneutics of the human condition as being a corporeal existence in the world in communion with God. An explication of this inner split which pertains to life as such then becomes a major aspect of the dialogue between science and theology in general.

If one places the dialogue between cosmology and theology strictly in rubrics of religious faith then one must state that everything which science discloses about the world by definition contribute into theological representations about creation of the world and this world as such. In fact, if one remains in rubrics of faith, there is no problem of the relation between cosmology and theology at all. Cosmology describes the created world changing nothing in dogmas of creation, for the latter, according to theology, are themselves based in the foundation of cosmology as a human activity. The only issue remains is that of «adjusting» the relatively slow development of the traditional theology to the rapid scientific advance dictating its own criteria of rationality and objectivity with respect to the world. The main issue here is that theology adapts to new cosmological ideas thus not changing anything in properly theological representation of creation of the world and the world as such. In such an approach one remains in the framework of the old natural theology and changes nothing in theology as such, setting aside any attempt of a renewal of theology describing experience of God, a renewal in which cosmology could play an active role, but become a constitutive part of the Divine image. Another serious drawback of

a one-sided approach to the dialogue based in rubrics of faith only is that such a faith cannot elucidate the facticity, that its very possibility and sense of the dialogue. A reference to the fact that everything is arranged by God, as one possible expression of faith, remains unclarified by reason. Such a faith cannot explain what it believes in and thus any constructive dialogue with science becomes impossible.

In spite of the philosophical difficulties mentioned above if one relates theology and cosmology straightforwardly (or when the former adapts to the latter), the modern dialogue between science and theology *de facto* ignores these difficulties. This happens because science is treated as a most efficient cognitive tool having a universal character so that it is believed that it is able to overcome all traditionally formulated limits on knowledge of the universe. This is the reason why philosophers, being faithful to their commitment to logical clarity and truth, have to exercise at every stage of science's development a critique with respect to its limits and, as a result, to constantly reassess the very possibility of relating scientific claims to the religious outlook. As an example one can point to the article of Ernan McMullin of 1981, where the latter discusses three questions involved in all attempts to relate modern cosmology to Christian theology. We rephrase these questions as follows. The first question asks about the status of scientific claims about the universe as a whole. In its essence it is the same Kantian question whether an empirical knowledge supported by the understanding and brought by reason beyond the legitimate application of this understanding can bring one to the theoretical knowledge of the universe as a whole as it is in itself. Such a question is possible, but one can hardly expect that any answer to it will change anything in the Kantian argument that the notion of the universe as a whole is an idea of reason involving the latter into antinomies in spite of the fact that the boundaries of knowledge in cosmology expand but not disappear. The next question is no so transparent because it deeply appeal to the faculty of faith transcending discursive thinking. It enquirers under what circumstances (if any) the Biblical narrative and its consequent exegesis can

be given a cosmological weight in the sense of modern science? The answer to this question can be given depending on how to understand that which modern cosmology speaks about the universe. If the latter pretends to assert ontological truths then it seems doubtful that the biblical narrative can produce any justified judgement about them. If the cosmological narrative turns out to be no more than a possible hermeneutics of the physical creation (much more saturated with physical and mathematical ideas), then it is possible to compare the biblical narrative with the scientific one as an academic exercise, but in this case there is no sense to talk about a cosmological weight of the biblical narrative since it is just the same as to speak about the biblical weight of the cosmological narrative. By seemingly understanding the whole difficulty of this second question McMullin, in his third question he *de facto* proposed that both narratives complement each other for a sort of wholeness. This question sounds like this: if one assumes that there is possible a single world-view, what is the measure of the mutual relevance of theology and cosmology in this view. If one looks carefully at all three questions one sees that all of them imply a philosophical response to a much more general issue of what is that which holds logical (or existential) relations between theology and cosmology. This is a fundamental epistemic issue of why and how cosmology and theology can be brought to a correlation at all in view of the fact that in some cases theological and scientific propositions are developed in different (and hence straightforwardly incomparable) *epistemological attitudes* whose specificity cannot be detected by a non-philosophical mind. It is in view of this that, in order to avoid any naivety in the mediation between theology and cosmology it is reasonable, as it was formulated by Wolfhart Pannenberg, to seek such an intellectual level to which both cosmology and theology can be related. «Such a... level for the dialogue between natural science and theology has, in fact, always existed, namely, in philosophy.»<sup>24</sup> Pannenberg makes even more

<sup>24</sup> W. Pannenberg, *The Historicity of Nature. Essays on Science and Theology* (West Conshohocken, Pen.: Templeton Foundation Press, 2008), p. 28.

emphatic claim: «Theology's relationship to philosophy – that is, to philosophy's interpretation of the world – constitutes the basis for Christianity's dialogue with the natural sciences.»<sup>25</sup> Without philosophy the question of the relevance of theology to cosmology remains unanswerable and ill-conceived in general. Any step in its comprehension is intimately connected with the issue of the relevance of philosophy to cosmology as well as with a form of suitable philosophical mediation between cosmology and theology.

Here we return to two options in relation of the relevance of theology for cosmology: one of them can be metaphysical (appealing to some a-priori models of reality), another one – existential (phenomenological). In the first case research is conducted in the natural attitude when the presence of the articulating consciousness is implied but not articulated. Then the question of the relation between cosmology and theology is reduced to the comparison of the content with which theology and cosmology operate.

The first option is: if the enquiry into the relevance of theology to cosmology is going on in the natural attitude, that is when the issue of the articulating subject is neglected, then the question of the relevance becomes a matter of comparison of that content with which cosmology and theology (as two particular forms of knowledge) operate. In its essence this is McMullin's third question, assuming that both cosmology and theology produce descriptive claims about truth). If the universe is presented in the phenomenality of objects (galaxies, their clusters, background radiation, etc.) then we deal with physical cosmology proper. In this case the implied question on the relevance of theology for cosmology receives an immediate answer: theology is irrelevant because whatever theology speaks about the world is hardly to be relevant, for even if its claims are treated as ontological, they cannot be compared with the entities described by cosmology. Theology speaks about planet and stars (not galaxies) only in the context of the human affairs.

If, however, the subject matter of cosmology is presented as the *universe as a whole*, that

<sup>25</sup> *Ibid.*, p. 29.

is cosmology attempts to represent the universe in the phenomenality of objects (that is in the natural attitude), such a representation turns out to be problematic (the universe as a whole cannot be an object because one cannot get out from it at to look at it from aside), so that cosmology naturally trespasses its scientific boundaries towards meta-cosmology or *cosmologia*. Such a cosmology loses its quality of a metaphysical discourse by transforming into a narrative about reality. It philosophical generalisations (only indirectly based on observations) and remaining hypotheses are brought into the discussion on the basis of intentionality rather than of the physical causality. In this case one can speak about the relevance of theology to cosmology in a trivial sense since the knowing subject produces two types of narrative – theological (Biblical), predicating the universe as created by God, and scientific one, asserting the universe either as originating in the Big-Bang type of singularity or subsisting in the Multiverse – so that one can compare these narratives not *metaphysically*, but *existentially*. The lack of any metaphysical certainty originates in that both of these narratives are based on some indemonstrable assumptions thus escaping the rules of a philosophical demonstration and scientific justification. This excludes any possibility of relating theology and cosmology on metaphysical grounds: both of them deal with the non-descriptive approach to truth.

The inevitability of the appeal a phenomenological approach (as a second option of the philosophical dilemma formulated above) is in fact dictated by the ‘nature’ of theology. Theology employs a different type of justification based on faith understood as an acceptance of those *givens* in experience which transcend discursive reasoning.<sup>26</sup> Christian theology is not a form of *knowledge* of God, the knowledge which can be compared (as uniform) with knowledge of the universe. It represents a different type of experience placing all aspects of living and perceiving the world in the context of communion with God in a radical sense. The very definition of man, unlike numerous his-

torically attempted descriptions of humanity in terms of the physical things as well as by a reference to its intellectual capacity, implies life whose communion with its source is inalienable («man=man in communion with God.»<sup>27</sup>) Theology proclaims existential truths, that is, its vision of God, man and the world is being subordinated to life (of Life) in its given phenomenological facticity. Correspondingly, according to Christian theology, it is cosmic history that unfolds from within the Christian history on earth (as related to men and understood typologically) marked by some inaugural *events*, and not vice versa. Epistemologically, this statement is transparent: the articulation of the universe is taking place within the delimiters of the human existence so that it is geocentric by its phenomenological constitution.

Saying differently, any cosmological view of the world is a mental construction by humanity and hence anthropic by definition. However the very possibility of cosmology as a form of knowledge of the universe remains undisclosed together with the mystery of the human existence, that is the facticity of the human history. Hence cosmology is seen as a modus of the human activity whose ultimate sense cannot be elucidated by cosmology itself but can be asserted only existentially (as a cosmological modus of consciousness) in the formula «man=man in communion with God» understood in the context of the Christian history. Life as a source of cosmological knowledge is antecedently (phenomenologically) present in its facticity in spite of the post-factum reconstructed cosmic necessary conditions (fixed in the Anthropic Principle, for example) for this life to exist. One implies here first of all the facticity of Homo Sapiens’ hypostatic consciousness which cannot be deduced from the physical on the grounds of causality. Here Christian theology enters the discussion by referring this facticity to: first, its creation by God (together with creation of the world), and second, to being archetypically structured<sup>28</sup> by the dual

<sup>27</sup> Zizioulas, *Communion and Otherness*, p. 248.

<sup>28</sup> Here is implied a structuring which is expressed in the famous philosophical paradox of a human subject: on the one hand man is a tiny physical part of the physical cosmos, on the other hand man is the center of disclosure and manifestation of the universe.

<sup>26</sup> These implied givens have been concretely discussed in numerous theological books. The generic sense of them can be drawn from that which is called revelation.

position of the incarnate Christ on Earth and beyond the world.<sup>29</sup> Seen in this perspective it is theology that provides a certain hermeneutics of the cosmological context of Christian history, that history which is subordinated to the very possibility of existence of humanity in the Image of God.

Here one observes a certain phenomenological reversal which is, in a sense, formally teleological: it is not anthropology which is subordinated to cosmology, but vice versa, cosmology as a system of articulated knowledge is subordinated to anthropology and thus is teleological because of the intrinsic teleology of all human activities. In a way, cosmology becomes an inevitable counterpart of anthropology of the Divine Image, contributing to the exclusively human privilege of not knowing itself<sup>30</sup> and thus searching for its sense among cosmic realities. Teleology consist in that man has an incessant desire and goal to know itself. To do this beyond a certain context is impossible so that cosmology, as such a context, becomes intrinsically teleological, but only formally, as the purposeful activity and not an attempt to get some accomplished description of reality which is subordinated to some goal. Since this teleology does not entail any ontological objective its only result consist in creating an open-ended narrative, a certain infinite hermeneutics of the universe subordinated to the human ends. Such a hermeneutics, in spite of the fact that it is saturated by the scientific content, remains, by its role in the human psychology, a rather mythological because its only task is to articulate the sense of the human existence here and now, and may be in the future, but on the basis of knowing the past. Here the whole discussion leaves the sphere of the natural sciences and de facto becomes a discussion about

the status of cosmology as a science of the human affairs and correspondingly about the relevance of theology to cosmology where the latter is considered in the modus of the human sciences.<sup>31</sup>

As we have seen, the extension of cosmology to *cosmologia* (in order to make sense of its engagement with theology) necessarily leads to the inclusion of the human subject into the whole issue. Indeed, if one adopts a phenomenological position that it is humanity that produces cosmological knowledge (that is, it is the center of disclosure and manifestation of the universe), as well as has experience of the Divine, and hence formulates the problem of the relevance of theology to cosmology, then the latter problem radically changes its meaning. It becomes not a dispassionate comparison of cosmological ideas in the context of God or without him, but as a purely human problem of reconciling of two different views, two different intentionalities, two different experiences of existence with which one and the same human researcher deals in its cosmically-based life. Theology and cosmology (either physical, or meta-physical) supply two types of the *givens* (data) of experience and the question is how to relate not some ontological projections of these data on the allegedly posed realities (that is, to make some metaphysical claims), but how to interpret the difference between these *givens* as constitutive for the subject, that is for man in general. Can then, the enquiry into the relevance of theology to cosmology become a particular type of hermeneutics of the human condition in which cosmology becomes a natural counterpart of anthropology (philosophical or theological)? One can say even more emphatically that an attempted dialogue, or mediation between theology and cosmology reveals itself as essentially an anthropological issue whose major concern is the sense of the human *existence*. Yet the major philosophical issue remains and it is the contingent facticity of both theology and cosmology. And here one has to transcend the very facticity of the mediation between them and to pose a question of

<sup>29</sup> What is implied here is the twofold position of the incarnate Christ in the world who, on the one hand accepted a «norm of a slave» of this world, and on the other hand retaining his place on the right hand of the Father, that is, the creator of this world. Being incarnate in one point of space-time, Christ as God was hypostatically present in the whole universe as its creator. It is not difficult to see that the dualistic structuring of the man's position in the world has its archetype in the incarnate Christ.

<sup>30</sup> J.-L. Marion, «Mihi magna quaestio factus sum: The Privilege of Unknowing.» *The Journal of Religion* 85 (2005), pp. 1–24.

<sup>31</sup> See on the interplay between elements of the natural and human sciences in cosmology Nesteruk, *The Sense of the Universe*, pp. 184–197.

how such a mediation is possible at all. This brings the whole research to the question of that consciousness from which both theology and cosmology originate. Neither cosmology nor philosophy can give a definitive answer to this question. But in contrast with the sciences and philosophy theology (as a *modus of life* in the conditions of creaturehood in communion) points to the ultimate source of consciousness' facticity (and hence of theology and cosmology) in that Divine Life, whose logically preceding facticity is not disclosed by the discursive forms of this consciousness, but lies in its foundation. And it is this Life that is responsible for that split in intentionality of the earthly life, the split with which man is endowed together with the gift of life in the universe in communion with its source in the Divine Life.

**Towards a philosophical methodology of mediation: theology needs cosmology, cosmology needs theology**

Theology and cosmology are different in terms of their affirmation of the sacred (historical) and secular (cosmic) orders as related to the human reality. But both these orders, as being articulated by man, are related to the fact of the human existence. This means that in spite of the difference of these orders there exists a certain general frame of thought which levels them epistemologically in one and the same human being. Here the following question arises: if philosophy takes responsibility for formulating of the all-encompassing view of the human experience, can one establish a criterion of a difference in the *modi* of experience pertaining to theology and cosmology in order to transfer the whole problem in the systematic way? It is clear in advance, however, that the distinction and relation of theology and cosmology will have a minimal existential impact, for it will be maintained from within one and the same life of the subject. A genuine interest of such an enquiry lies in that to understand the extent of how the demarcation between theology and science contributes to the constitution of the human subject, that is, how this subject defines himself.

At the inception of the dialogue between cosmology (as a natural science) and religion,

or cosmology and theology, the very possibility of establishing a relation between the scientifically *given* (data) and that which can be qualified as the *given* in experience of the Divine, is implicitly assumed.<sup>32</sup> Usually such a possibility is linked to the hierarchy of sensible images and intellectual representations of reality in a single consciousness without making distinctions in the means of access to these *givens* and the degree of their rationality, that is the modes of their *phenomenality*. Such a philosophical insensitivity to various modes of representation of experience of existence can lead to a reaction when the possibility of mediation between cosmological ideas and theological representations will be outright rejected because the mediation is applied to the fundamentally non-uniform «things.» Such a reaction could be exercised by the sceptically oriented scientists, as well as by the sincerely believing Christians neglecting scientifically established facts. All those, who deny the legitimacy of religious experience and its comparison with scientific cosmology implicitly justify their position by adopting a certain *ontological commitment* (that is a metaphysical basis) with respect to physical reality as radically different with that one referring to God. Such a reality is assumed to be immanent to itself and the sciences explicate it, that is, constitute its objectivity by using the understanding and criteria of rationality. The ontological character of such a reality in modern cosmology is asserted on the basis of its mathematical description, that is, mathematical constructs are themselves ontologized. In fact an ontological commitment in cosmology is based on a certain realistic interpretation of all mathematical descriptions. Such a commitment is possible, but as such, remains unclarified because such mathematical constructs as of the universe as a whole, its initial conditions, for example, have a purely intelligible, that is fundamentally unverifiable through any empirical experience character. Behind the ontological commitment in cosmology one finds a sort of commitment to belief that mathematical

<sup>32</sup> We use the terminology of the «given» (instead of «data») in order to underline from the beginning the fact of the presence of human subjectivity in participation, detection, identification and articulation of phenomena in the form of «data».

thinking reproduces the structure of the world as a whole. It is natural then, that among those who follow such a commitments all theological claims not being supported by rational arguments and mathematically non-expressible have not authority at all.

In contradistinction to religious sceptics among scientists, all those who promote the legitimacy of religious experience, remain unable to express their position by using philosophical language that neutralises objections of sceptics. Indeed, one could be enough to pose one single question to mathematical cosmologists about the very possibility of mathematics in order to use it for the description of the universe in order to put into doubt its universality and efficacy for describing life and consciousness that comprise the universe. Both approaches, either that one which denies the relevance of theology, or an alternative one diminishing the necessity of taking into account rational arguments from the positive sciences, are both weak from a philosophical point of view, that is from the point of view of the holistic structure of the living experience.

In order to clarify the latter point one can consider a situation when the fervent apologists of faith pose a question of the following kind: why one must take into account cosmological ideas within Christian context while studying and developing theology? Theology deals with the specifically human way of existence, mystical, experience, liturgical life and Church, an ideal of salvation etc., and is not reduced to a mythology of the world. To what extent a Christian must be acquainted with the scope of knowledge of the physical world in order to be saved or even deified? This question has historical precedents and one can use, as a footnote, a reference to St. Augustine, who in his assessment of secular knowledge was cautious of employing it for matters of faith. Augustine stressed the usefulness of knowledge of natural facts if they are compiled in a systematic form to provide a minimum of information that Christians should know in order to understand things that are mentioned in the Scriptures.<sup>33</sup> Augustine affirmed that for a Christian, it is enough to believe that all natural things

<sup>33</sup> Augustine On Christian Doctrine 1.39.

are created by God.<sup>34</sup> However this argument could be considered as a valid proposition only if it takes into account an empirical fact that in order to believe one must physically exist. But the details of this existence become concrete in everyday experience, that is in appropriation of nature through disclosing it by the sciences.

Indeed, the very possibility of theology (as experience of the Divine), that is the reality of its own existence and existence of its different representations is determined by the possibility of existence of the incarnate carries of this theology, that is human persons. In other words, in order to theologise one must have *necessary* physical and biological conditions for the existence of theologians, the conditions which are ultimately cosmological. Cosmology and earthly physics (together with biology) explicate these *necessary* (not *sufficient*) conditions. From here one infers a simple conclusion that *any* theological proposition, expressing experience of the Divine contains truth about the world as such.<sup>35</sup> In this sense *cosmology is always relevant for theology*.<sup>36</sup> In theological terms, the physical world is the meaningful gift of God, the source of existence of human beings, which in itself is neither a partner in communion with God but the means of communion, that one which brings out the worth of the human person. Thus theology, being in this sense a product of human life in the world, is itself a gift of God in the conditions of the world.<sup>37</sup> As once Pierre Teilhard de Chardin once said: «Those who are diffident, timid,

<sup>34</sup> Augustine, Enchiridion 3.9 [ET: The Library of Christian Classics. Vol. 7 (London: SCM Press, 1955), p. 342].

<sup>35</sup> Zizioulas, Communion and Otherness, p. 242.

<sup>36</sup> Teilhard de Chardin expressed a similar thought: «So true is this that nothing can any longer find place in our constructions which does not first satisfy the conditions of a universe in process of transformation. A Christ whose features do not adapt themselves to the requirements of a world that is evolutive in structure will tend more and more to be eliminated out of hand...» («Christology and Evolution», Christianity and Evolution, p. 78).

<sup>37</sup> The same, expressed differently by John Zizioulas, asserts that «Human capacity...does not require a departure from creaturely conditions in order to exist. Communion with God is possible for humanity – and through it for the entire cosmos – only in and through creaturely existence. History is no longer, as it was for the Greek world, the obstacle to communion with God, but its ground» (Zizioulas, Communion and Otherness, p. 242).

underdeveloped, or narrow in their religion, I should like to remind that Christ requires for his body the full development of man, and that mankind, therefore, has a duty to the created world and to truth – namely, the ineluctable duty of research.»<sup>38</sup>

It is not difficult to see that the argument for the relevance of cosmology to theology is ontological in the sense that it appeals to physical matter as the ground of existence of human beings. For Christian theology this fact has a particular meaning related to the Incarnation of Christ in flesh. It is the physical science that makes possible to understand that the universe must be such that it makes human life and hence the Incarnation possible. For the Word-Logos of God to assume human flesh, there *must be* this flesh. Since modern physics (and biology) are clear that for existence of such a flesh there must have passed at least ten billion years of cosmological evolution, it seems evident that for the Incarnation to take place the *necessary* physical conditions must have been fulfilled. To have the body of Jesus from Nazareth (and his Mother (Virgin Mary)) the universe must have had from the beginning the propensity to produce them. Then, once again, *cosmology is relevant to theology* because it explicates the conditions of the Incarnation.

One realises that the ontological argument for the relevance of cosmology to theology implies a certain logical sequence, placing theology and theologians in the realm of the physical and biological phenomena. The epistemological causation is from the world to humans and then to God. This type of causation is typical for natural theologies. The latter assume that one must seek God from within the world. Thus the whole trend of thought implies the presence of the natural world, as well as belief in that their must be some unifying principle of the world beyond the world.

For scientists it would be difficult to accept the idea of God, so that for them natural theologies are not «natural» in an epistemological sense because the employed reasoning is based on the articles of faith in God, and hence

<sup>38</sup> P. Teilhard de Chardin, «Le prêtre», quoted in Claude Guénot, Teilhard de Chardin (Baltimore: Helicon, 1965), p. 40.

unscientific. Correspondingly they can legitimately ask: «Why one needs to invoke theology for cosmology?» Regardless any particular element of Christian teaching the response may be the following. Let us quote Christos Yannaras: «The fact of the world constitutes reality only because there exists the human recipient of the world's invitatory reason – the reality of the world is created only by its being an invitation-to-relationship, regardless of whether it refers to the existence of that which is invited.»<sup>39</sup> Cosmology studies the state of affairs in the universe that it responds positively to the invitation-to-relationship yet without any reflection upon the possibility of this study originating in this invitation. Saying formally, cosmology operates without clarifying the sense of its own contingent facticity, that is, without clarifying the sense of the *sufficient* conditions responsible not only for the outcomes of the physical laws in order to have a given display of the universe, but also for the very possibility of knowledge and explication of the universe by human persons. Cosmology operates without giving an account as to how and why the study of the world as such forms a gift to the physically limited humanity to respond to the hypostatic Logos' invitation to study its creation. Although theology *does not explain* this fact either, it at least interprets it by pointing out that it is only human beings that have a rational capacity of transcending the physically finite, that is to go beyond their own bodies and immediate life-world by integrating the representation of the potentially infinite and intransient in their finite consciousness. Consciousness and reason form such characteristics of the human condition that cannot be explained by reducing them to the physical (ontological) and whose *elucidation* and *interpretation* is possible only through an appeal to the anthropology of the Divine image. Here is the difference between a philosophical assertion of the uniqueness of humanity which remains in essence empirical, and a theological claim for this uniqueness which follows from employing the archetype of the incarnate Christ who, being in the world remains «outside» it as its cre-

<sup>39</sup> C. Yannaras, Postmodern Metaphysics (Brookline, MS: Holy Cross Orthodox Press, 2004), p. 137.

ator and its sense-forming principle cascading to the human capacities of forming the sense of the universe.

This leads the argument for the justification of cosmology (as well as of theology) beyond the limits of science and philosophical ontology. Correspondingly, any cosmological vision of the world is implicitly imbued with theology in the sense that it is based in a Divine gift of faith in reality of good creation of Good God, as well as in the Divine origin of the human capacity of an intellectual and linguistic articulation of the universe. Then it would be natural to suggest that cosmologists are also theologians of a certain kind: they study with their own specific methods (possible because of the Divine Image) the world (in its natural; which was created by God, not only for the purposes of adaptation to it, but also as making back its thanksgiving offering to the Creator.

The ontological argument for the possibility of theology referring to its physical agents (that is humans), is a typical metaphysical justification based on the principle of causality (assuming that consciousness is an epiphenomenon of the physical). At the same time the referral of consciousness' rationality to the idea of God, does not have the same philosophical clarity as it was with the principle of causality. Here one introduces a theological argument that appeals to those *givens* in experience that are radically different in comparison with what is given in physics and cosmology. These *givens* are related to the very fact of the human existence understood as personal (hypostatic) consciousness acting as a centre of disclosure and manifestation of the world. It is the difference in the *modi* of the *given* revealed as the impossibility of avoiding cosmological insights in theology on the one hand, and in the implicit appeal to the theology of the Divine image for the possibility of cosmology (where the very fact of life turns out to be the inaugural revelation), on the other hand, that points towards an asymmetric relation between the metaphysical interpretation of the possibility of theology and theological justification of science. The «dialogue» between cosmology and theology thus becomes a discourse of clarification and explication of the difference in the ways of ap-

pearance and access to the *givens* (in cosmology and theology) in one and the same human subject. Then the issue of the relevance of theology to cosmology turns out to be the issue of clarification of the *modi* of appearance and access to the *givens* of the world in cosmology and theology.

First of all, the philosophical criterion of the difference in the *modi* (modes) of the *givens* in cosmology and theology can be formulated in the following way. Any research in scientific cosmology and any theory assume the acceptance of the system of metaphysics (*metaphysica generalis*), one of whose important parts deals with ontology, that is with the questions «what is there?» or «what exists?», so that such a research implies that it studies an *object* which must exist beforehand, that is to be an *existent (ens)*. This requirement holds for every specialised metaphysics, that is for specific sciences, as well as for the representation of God in philosophical theology (*theologia rationalis*) (which is distinct from theology as communion with God). The requirement for the metaphysical certainty<sup>40</sup> can also be applied to theology as an historical or linguistic tradition. For example, there can be a metaphysical demand for the existence of Biblical events from the point of view of the historical sciences. In this case the first question is: how to establish (if it is possible at all) the difference (on a metaphysical basis) between philosophical theology (or simply philosophy) and theology as experience. The sense of this difference must be established in order to understand what is understood under the term theology in its relation with cosmology. A possible response to this question can be formulated like this: the difference consists in the extent of appearance (phenomenality or presence, display) of beings (existents) (that is, their «positivity») concerned, and of the ways of ontic verifications in philosophical theology and theology of communion. Then the difference between ontic sciences (majority of the human sciences, including theology) and ontological sciences (for example, physics, whose ontology

<sup>40</sup> Metaphysical certainty aims to determine certain things with respect to certain statements that, if they are true, would be descriptions of a reality that lies behind all appearances, descriptions of things as they really are.

is based in physical substance and rubrics of space and time) presupposes the difference in ontology behind these sciences, and the hierarchy of those sciences following from the «hierarchy» of ontologies (assuming that one can define one ontology as more fundamental than another). Then there arises another question as to whether exists such a system of thought that could assert the universal ontology, such that it could be placed in the foundation of both cosmology and theology, that ontology which could be somehow more generic than that of theology (either experiential or philosophical) and of philosophy and cosmology? A doubt in a positive response to this question follows from that both philosophical theology, as well as biblical exegesis can make sense only in the context of communion with God, filling the latter by the concrete existential content and thus overcoming their ontic limits. Can one then find a metaphysical basis for the events of communion and theology in order to compare them with cosmology?

Christian theology has in its foundation very special inaugural *events* which cannot be assigned any metaphysical status, because they exceed any measure of causality related to the world. The term «event» becomes crucial here acquiring a completely new status thus inverting an ontological approach to theology at all. Events related to the sacred history take place in the world, but the very sense of the world, as an articulated image from within human history, emerges as derivative from these events, because these events define humanity. One cannot treat theology as experience of God (communion) in the context of the ontic status of the allegedly inaugurating events as if they would be only specific historical or physical events. If previously the notion of event presupposed a sort of metaphysical background, so that an event needed original ontology in order to take place (for example, in physics, there must be space-time for events to happen), what is implied here is that event «takes place» in the existent but *from beyond* the existent (being). One cannot assign a modus of the already conceived existence to *event*. *Event* can be described as the consummation of that, whose essence did not give the possibility of

its foreseeing as if one could foresee the inconceivable impossible from the perspective of the conceivable possible (that is from within metaphysics with its principle of causality).<sup>41</sup> The essence of event is that it predetermines and redefines all possibilities of existents in their being and it is in this sense that it can be assigned a certain «ontological» status. One follows from here that the more a phenomenon manifests itself as event, the more it doubts its metaphysical modus of being, for its sheer possibility follows from its effective metaphysically understood impossibility. Theology as experience confirms this, for it deals with the events whose impossibility witnesses to what is expressed in the Bible in words «nothing is impossible for God» (Gen 18:14; Luke 1:37). One implies here the events such as creation of the world out of nothing, Incarnation of the Word-Logos of God in flesh of Jesus of Nazareth, Resurrection etc. These events resist the possibility of their non-contradictory comprehension (in a metaphysical sense) thus preventing the formulation of their identity status, that is, in different words, they challenge ontology behind them and hence any definition of God in terms of being. In other words, theology of events radically differs from philosophical theology.

The «essence» of events of creation of the world, Incarnation and Resurrection is exactly that that they do not reduce to that which follows ontological law patterns. These events make possible that which is not presented on the ontological level, which is not identical to itself and whose existence (taking place) contradicts its essence (if such is allegedly posited). One can express the same by saying that the «essence» of these events contradicts to itself, by referring to a biblical case when God «calls into being things that are not» (that is, God calls into being non-existent as existent, as if non-existent would exist) (Rom 4:17). These events acquire a «meta-ontological status» because they (events and all existents involved in them) contradict the laws implied by the ontology of the world.

<sup>41</sup> See details on phenomenology of events in C. Romano, *Event and World* (New York: Fordham University Press, 2009).

Since the dialogue between theology and cosmology deals not with facts related to the world as such, but with the ultimate origin of the world and these facts, this origin receives a new interpretation in accordance with that *event* in which the universe is granted its being: the universe acquires being in that event which exceeds the measure of any possible definition of the existent. Such a philosophical statement corresponds to that which is termed in theology as creation of the world. Being created, the existent receives its being from God; this being results not from the laws of the universe outlined by thought in rubrics of ontology. In spite of the fact that philosophically the rational idea of the universe as creation remains indemonstrable, that is subject to antinomies of reason (that amounts to the fact that this idea is regulative one and does not entail any theoretical content), the universe as creation in its inalienable givenness to humanity remains present through the saturating intuition. Saying differently, the intuition of creation functions within the human articulation of its own existence as an aesthetical idea. But since an aesthetical sense of the universe is inseparable from the fact of life in its unconditional givenness to a particular human being, it is this human life that becomes an inaugural event in comprehension of the universe and hence its constitution as objective reality. Since the very phenomenon of life together with the contingency of the universe represents (from a metaphysical point of view) sheer impossibility, whereas in their facticity the universe and life are possible, the classical relation between possible and impossible undergoes a reversal where the possible becomes to be determined by the impossible (as a characteristic of event). In application to the relation between theology and cosmology (philosophical cosmology) the latter entails that what is possible in scientific experience becomes to be determined by that which scientifically and metaphysically impossible, that is belonging to the sphere of that which can be characterised as a primary theological experience of life.

In view of what has been said, one can return back to the very beginning of the article and ask: if modern development of philosophy

doubts any possible universal ontology overseeing theology and cosmology, can then the posing a question of the relevance of theology to cosmology make any sense? The answer is negative if this relevance is sought in terms of facts and metaphysical statements. However, since cosmology naturally transcends towards meta-cosmology (*cosmologia*) dealing with the boundary situations where no principle of causality can be applied to the inaugural «phenomena» (Big Bang, for example, or the «choice» of this universe out of the multiverse), one can relate philosophical generalisations of cosmology with the biblical narrative. In this case the establishment of a relationship between inaugurating *events* in theology and inaugural «phenomena» in science can make sense as a comparison of two kinds of narrative related to these inaugural events and those «unique» phenomena. Then the «dialogue» between theology and cosmology, as an intrinsically philosophical enterprise, deals with the existential appropriation of these narratives and thus transforms into a comparative hermeneutics of the human condition. However since these narratives do not pretend to provide any description of reality in a metaphysical sense, the dialogue cannot pretend to reconcile worldviews in theology and science on the ontological level. The experiential and linguistic horizons of these narratives remain irreducible to each other.

The question now is: what is that specific to Christianity treatment of the universe from within the inaugural events which form the body and blood of Christian faith? Christian world-outlook (in conflict and radical distinction with Greek understanding of history based on pure reasoning and some ontological assertions) was based on the absolute significance of individual events and their interrelation. In other words, history is treated as continuation of these events. Christianity asserted not just «historicity» in a mundane sense, but sacred history in consistence with its basis in some inaugural events, the events which predetermine history not just in a temporal, evolving into the future sense, but *typologically* as the pattern of a larger arrangement of reality related to the inaugural events. Events here transcend temporality becoming those phenomena which

exceed any antecedent or post-cedent conditions. Saying differently, these events represent a break into the reality of the universe by effectively bringing this reality into existence. These events, one can say, inaugurate the *order of history* which radically changes the perception of the *order of the cosmos*, because the order of the cosmos (as represented in human consciousness) is now being built from within the order of history. Correspondingly, the question of the relevance of theology to cosmology can now be treated as the relevance of the *order of the cosmos as it is unfolding from the order of sacred history* (based on inaugural events), to that *order of the cosmos* which is disclosed in scientific cosmology. Since the order of the sacred history has its background in the cosmic conditions, the question then what is the cosmological significance of those inaugural events which initiate the sacred history (for example, what is the cosmological significance of the Incarnation). Is it possible to build an argument from this cosmological significance of inaugural events to modern views of the universe?

The difference between these two orders is seen as that the order of the cosmos, being in the background of the very short-lived humanity (on a cosmic scale), looks like a static structure which can be contemplated regardless to any changes in the order of history. Cosmology as a natural science creates a discourse of this order. In what concerns the order of history the situation is different: history is «contemplated» only post-factum, in reflection upon it. The present is given to human beings as that in which one must participate. Here one sees the difference between contemplation and participation. Correspondingly, the cosmological narrative and that of history are different: the order of the cosmos is fixed in its static description (a typical temporal scale of the most basic cosmological phenomena necessary for existence of life considerably exceeds the historical scale of the human existence); the order of history is caught through the directed in time narration associated with an open anticipation of that which will be after. But this «after» is anticipated not as it takes place in cosmological scheme

founded on the extrapolation of the physical laws, but as expectation of events which are unpredictable, not having any antecedent metaphysical or scientific context. The order of the cosmos turns out to be abstracted from real historical events. It is enhypositized in the averaged consciousness of anyone from scientific communities, that is, in fact, as insensitive to contingencies and vicissitudes of human life. Past, present and future in the order of the cosmos, regardless their temporal hierarchy, yet express a different kind of the static (even not that of the cyclic cosmology of the Greeks), the statics of the frozen ideal image of the whole aeon of the universe. There is no future in such a cosmic order. To be more precise, the future is there, but its existential sense as having relation to life and hopes of human beings is absent, because there is no *hope* in the order of the universe. Cosmology foretells the decay of the universe and death of all its matter and life forms. But how this relates to human beings who will not be in existence by that time? Rephrasing the initial question, what is the relation of the order of the cosmos to the order of history if in the former there is no purpose, whereas the latter is constituted through man's vision of his end and his hopes? This question brings us to the issue of the human place in the order of the cosmos and the order of history.

Seen through the order of the cosmos man remains a passive agent of that, imposed on him, type of existence whose description does not clarify the main question: what man must do as a subject of choice and action or, how the order of the cosmos can elucidate the sense of his actions as the outward manifestation of man's existence. It is here that the order of history points to the fact that any question on the sense of the human existence is linked to this order's fundamental *irreversibility*, the historical irreversibility as a constant novelty of breaking into history and pointing to God as the Lord of the irrevocable instant which initiated history. Indeed, if there is history, there must be the inaugural «event» (that is event without any antecedent context) which launches this history, as well as other events related to the very being of man.

The order of the cosmos remains the necessary condition for the beginning of history, but one can abstract from it, because one does not need to participate in it (for example the physical uniformity of the lived time is neglected in a historical and social context). By participating in history, that is, *de facto* creating it, man implicitly participates in the very inception of this history (in its inaugural event), that is man communes with that One who launched this history. The vision of the creator becomes possible from within history, so that the cosmic order as created by God becomes visible from within the order of history. Man, as a subject of history, «creates» the universe as a certain order, but belonging to this order enhypostatically as its author, he remains its physical part.

Theology interprets human history as a history of relations with God. This history is *metaphysically* contingent, specific and irreversible. It is based on events bringing novelty into existence and it is from these events that the sense of the future of man and his hope is formed. The order of the cosmos is present in this history as an arena, as a necessary condition, but the very possibility of cosmology which studies this order, cosmology as a *modus* of the human activity, is still rooted in the inaugural event of the beginning of the order of history. Since theology is concerned with this beginning in hope to elucidate its sense, cosmology is organically present in theology's concern. Then the problem of the beginning of the universe (as another inaugural event), as a problem of the scientific cosmology and philosophy, becomes organically inserted into the problem of the origin of man (who is the author of cosmology) and his history.

Theology is interested in the event-like character of the human history, its constant renewal in its linear unfolding. Theology, unlike any cosmological mythology, is concerned not with the static structure of the natural background of man's living, but with the salvific dynamics of the human condition which may bring man to his union with God. But this salvific dynamic has its foundation in events of communion with God which make this history irreversible. Such was a history in the Old Testament, even more radical it becomes

in Christianity. The incarnation of the Logos-Word of God in flesh of Jesus from Nazareth manifests the inaugural element of such a novelty. As a metaphysically impossible event, the incarnation broke into history correcting its course exactly in the way which Christ himself proclaimed through the inauguration of the Kingdom of God on Earth (universe) thus endowing humanity by the meaningful and valuable future. By entering into history through the Incarnation, God reminded to men that his presence in the world is not static and frozen, so that a memory of him is also dynamic and subject to renewal. This memory is radically different in comparison with the «memory» of the universe which is averagely static in terms of the unchanging human condition. The memory of the event of the Incarnation, being constantly transformed theologically and liturgically, is not that immortalized recollection of that which man can or cannot invoke all over again in his consciousness or actualise in action. The *event*-like character of the Incarnation (as a metaphysically impossible event), its irreversibility for all historical consequences, points theologically that the main principle of development of the world within the Judeo-Christian world-view is the creative activity of God, the creator of the world. Theology thus represents an infinite hermeneutics of the ongoing creation of the world. The structure of this hermeneutics depends on the world's causality and events of the human history. Its spontaneity and openness witness to the fact that this hermeneutics itself forms a *modus* of the event of creation of man by God. The hermeneutics of the human life in its link with the creator corresponds to the whole volume of the Biblical exegesis found in ancient and medieval patristics, modern theology and endless popularisations of the inaugural events of the Christian history. When one speaks of the 'Christ-event,' it comprises not only thirty three years of Christ's presence on earth but also a principal impossibility of finding any metaphysical foundation for the facticity of this event in the sense of «when» and «where» in the physical universe. Speaking of the Incarnation of the Word-Logos of God in flesh, remembering the Gospels's description of baby-Jesus' Nativity,

one does not make any sense to pose a question of «why not early?» or «why not later?» with respect to this event in the same way as it does not make sense to enquire into the «early» or «later» of creation of the world. The event-like ontology of the incarnation and all other elements of the New Testament history point towards a principally irreversible character of Good News' coming into the world and assigning to the human history a teleology of reaching the Kingdom of God.

Such a treatment of the order of history excludes cyclicity not only in history itself, but in the whole universe: since the latter is created, there is the beginning and the end. Saying differently, on the one hand the cosmic order is articulated by man from the historical events, on the other hand the very order of history is included in the stable cosmological scheme. One returns here to the paradox of the human condition which is now formulated in the language of the order of history and the order of the cosmos. Then the dialogue between theology and cosmology acquires the following sense: if theology is concerned with the order of the sacred history and man's position in it, that is by events which constitute man's essence in the perspective of salvation, then its major attention is directed towards the events of communion. This is the reason why the cosmological discourse has a little relation to theology which is interested in the natural history of the world only in the perspective that the world is created and contingent upon God. This is the reason why the «main» inaugural event for everything, including theology itself, is creation of the world. Thus we come back to that which has already been formulated, namely that there a logical possibility arises of relating (mediating between) theology and science: to relate hermeneutically two different views of creation within a tacit assumption that such a relation is possible and makes sense. In its essence it is the same as that was questioned in McMullin's paper (cited above) about the weight of the cosmological and theological in the assumed united picture of the world, however we enquire into the contribution of theology and cosmology as dealing with different phenomena (substances and their variations in space and time,

that is, objects in cosmology, and inaugural events in theology), so that their inter-relation makes sense only as taking place within one and the same human subject. Then the issue of the relevance of theology for cosmology becomes reformulated as an epistemological problem of the contributions of phenomenologies of theology and cosmology into the united picture of being which is assumed as possible because of the unity of the human person. This problem is not metaphysical but rather phenomenological since one implies to balance two types of narrative in one and the same subject understanding in advance that their ontological references are empirically, and may be even theoretically, inaccessible.

Here we come to the culmination point by claiming that there are only two aspects of cosmology where theology can constructively engage. The first one is related to the issue of origin of the whole universe. All scientific attempts to deal with this problem in the natural attitude position it as a hermeneutic of the origin of the universe from within the condition of the already existing man. The question of the facticity of this hermeneutic brings the cosmological discourse into the philosophical and theological anthropology, that is, into the problem of man as a creator of cosmology. Phenomenologically, if man is treated as the center of disclosure and manifestation, the problem of the beginning of the universe is similar to the problem of the facticity («beginning») of consciousness. This is a perennial philosophical problem and its «elucidation» (not explanation!) is possible only through the appeal to the theology of the Divine image. With all this the proper physical dimension of the problem of the origin does not disappear, for even if one refers to the facticity of consciousness this consciousness remains incarnate, that is, corporeal, whose necessary conditions of existence remain cosmological. In other words, a dualistic human condition in the world remains the alpha and omega of any philosophical query. A researcher has two options: either to accept this fact as an initial point of any philosophizing in the style of existential philosophy or phenomenology without any further metaphysical clarification of this condition, or alternatively

to give its theological interpretation founded in a human perceptual capacity beyond discursive reason. Here theology is relevant to cosmology in the sense that it *tells* (but this is not entirely human words) to cosmologists why their activity in the studies of the universe is possible at all. Cosmology as such turns out to be incorporated into the scope of experience of life (a created condition in communion with the Divine) as such a hermeneutics of nature which contributes to an elucidation (not explanation!) of the human condition. The latter means that the sense of cosmological theories needs to be clarified not through its inclusion into the traditional, classical issue of creation of the world out of nothing (which itself implies infinite hermeneutics), but as reflecting the human condition in the universe, characterised empirically, philosophically and theologically as the radical humanity's inability to know itself.

In any scientific practice this means that cosmologists do not enquire into the sense of why cosmology is possible and why exists consciousness etc. They work in the conditions of the already given consciousness as the «non-visible» and not phenomenalized «medium». Correspondingly, philosophy and theology enter into the discussion at that point when the human insight attempts to phenomenalise itself in the cosmic context. But this work is not for those whose mind can function only in the natural attitude. One needs an introspection upon those acts of constitution which affirm realities in cosmology. Here consciousness must suspend its intentionality directed to objects of the outer world and to question its own facticity leading one inevitably to the issue of the ultimate origin of life as that which is opposite to the non-living, that which originates from itself and makes possible the phenomenalisation of the world. Here one comes back to the issue of creation but on the level of creation of human persons. Theology interprets the «source» of consciousness referring to the Divine Life. It is this life that is in the foundation of the order of history from within which humanity is capable of enquiring about the order to the cosmos. If scientific cosmology is conscious that it unfolds from within the order of history, that is if it is honest to itself and accepts its human origin, it

must humbly accept that the whole picture of the cosmic reality available here and now is a result of a particular biological, social, cultural and technological development of the human civilisation and thus, in philosophical terms, is contingent upon this history, that is, upon a particular position in the post-factum constituted space and time. What kind of an argument then can be used in order to assert an objective reality of cosmological views (contingent upon human history), as that which forms the ultimate metaphysical reality which men were looking for as their ideal «home»? Cosmology finds such a reality by projecting mathematical construct onto the world. Theology on its side teaches that the very conditions of creaturehood give to humanity a chance to overcome the uncertainty of its physical existence by searching for a union with the Creator and thus grounding itself in the Kingdom of God. Cosmology, from its side, cannot offer anything like this because it predicts the ultimate decay and death of the universe. Cosmology is great in that it explains why humanity has a chance of existing in a very short historical period in the universe. But the problem is that the physical universe does not have any goal in its development (such a goal can be assigned to cosmology in abstraction but it will still be a goal associated with humanity), whereas man defines his existential role in terms of the order of history. Since the universe as such does not have a purpose, cosmology as a dispassionate account of the universe does not possess any intrinsic value, because humanity is practically absent from it. Cosmology as a scientific activity is valuable because it demonstrates the human ability to progress in knowledge of things, that is it demonstrates the progress of human consciousness. Yet, there remains a question of where this consciousness comes from and what is its intrinsic value as related to human life. Theology responds to this by pointing to the Divine Image in man. Values and goals come from that which makes men humans. They are encoded somewhere, where the natural order cannot be applied. Human moral predicaments are not predetermined by the natural laws, for they have an origin in those spheres which ancient Greek philosophies described in terms

of beauty, sincerity, empathy, love. All these moral, ethical and aesthetical categories point to that source of their origin which is always with us, but which cannot be caught in terms of thinking and seeing. Humanity from its dawn called this source God as that ultimate foundation without whom no life, no culture, no cosmology is possible. Without God one cannot see and study the universe because that which is called the universe is ultimately illuminated to man by their Creator.

When modern cosmology narrates about 96 % of the literally invisible (dark matter and dark energy), some of its apologists feel depressed for, honestly, they do not know what they speak about (they know how their own constructs of these entities function in theory, but they cannot provide any independent empirical verification of for existence of that which these constructs aim to signify). Theology and philosophy look at this situation with an irony and empathy, for they intuit that the whole sense of reality is not only not grasped by human researches, but, in fact, it cannot be grasped at all because of their radical finitude (humanity is consubstantial to 4 % of all allegedly existing; it is radically insignificant in terms of spatial and temporal dimensions). Christian writers asserted many centuries ago that asking, for example, a question of the age of the universe («Why creation not sooner or later?») is futile because one cannot get out from creation, and to «look» at it. The question of the details of creation is in the sphere of the will and wisdom of God which are unknowable to man. Cosmology nowadays says the same: the age of the universe is a physical constant implanted in the initial condition so that the elucidation of this age's facticity as an outcome of some trans-worldly laws is impossible. It does not refer to the will and wisdom of God, but the philosophical and existential result is the same: humanity is radically limited in its capacities to produce certain knowledge of the cosmological inaugural events because it is impotent even in explicating, for example, its own beginning (its own inaugurating event), that is the beginning of all humanity and of a particular person. Theology and philosophy honestly accept that humanity exists in the conditions of conceal-

ment of its own sense, that is in the conditions of its inability to know itself. Then it seems that cosmology must humbly accept a similar truth that the universe remains unknowable thus mirroring the fundamental unknowability of humanity by itself. This implies a methodological conclusion that cosmological theories contribute to the open-ended hermeneutics of the universe as well as of man. Cosmology thus contributes to theology (as unfolding the conditions for existence of life), whereas theology is implicitly present in cosmology thus initiating the very possibility of the latter.

### **Conclusions and their application to some hot issues in theology and cosmology**

Any straightforward comparison of theological references with respect to cosmological facts in the narrative of creation of the world and in images of the end of times with the discourse of the universe in scientific cosmology is philosophically unjustified. It is because one compares the elements of the theologically non-descriptive narrative about the world as a whole with the ontologically descriptive propositions about the concrete physical properties of the universe. The same can be expressed in the language of phenomenological philosophy. Theology and scientific cosmology deal with different phenomenologies of the universe: theology treats the world as an *event* of the sacred history directly related to man; for cosmology the world is the *object* of its outward study. For theology the world is the component of one's experience of God, that is, it appears (in a phenomenological attitude) as that which is intrinsically inseparable from the perception of the fact of existence; for cosmology, the world appears as an external object, positioned in the natural attitude as transcendent with respect to consciousness. In other words, in theology, the world is inserted into the immediate empirical givenness of life, whereas in cosmology the world forms the physical condition for the possibility of this life. Theologically understood life and cosmological discourse initiate two non-uniform and irreducible to each other linguistic horizons, thus distinguishing and at the same time unifying them through the fact

of their same origin in life, manifested in man. Such narratives can complement each other in the united picture of all, assuming that this picture is admissible because of the unity of the human subject.

The question of the relevance of cosmology for theology could be answered by a reference to numerous natural theologies (*theologia naturalis*) of the past and present, making inferences from the order of the world to God as the creator of this world. However, despite the experimental and theoretical advance of modern cosmology, the antimomial predicaments of such theologies, explicated by Kant two hundred years ago, remain obstacles for the philosophical validity of natural theologies as ever. This shows that the sense of the question about the relevance of cosmology to theology requires some radical reevaluation by departing from the metaphysical conclusions about the world and God towards thinking of the role of cosmological conditions for the very possibility of theology, that is the possibility of existence of man as its subject. Here cosmology is evidently relevant to theology for it explicates the *necessary* conditions of existence of man. Any theological proposition thence contains implicitly cosmic factors as the condition of its own possibility. Here a Christological narrowing of the question on the relevance of cosmology is possible by pointing to the fact that the Incarnation of the Logos-Word of God in flesh of Jesus of Nazareth implies the presence of the conditions which go deeply in the evolving structure of the universe. The question on what kind of causality can substantiate the formulated primacy of the Incarnation implies the reversal of the question on the relevance of cosmology for theology towards the question on the relevance of theology for cosmology. The implication is that the ontological orders reverse: the order of the cosmos turns out to be included into the order of history, that order which is founded on the inaugurating events. Classical metaphysical ontology is replaced here by the ontology of the inaugurating events. Can one, in this reversal, avoid an implicitly present *teleology* in the development of the universe, related to the appearance of man (in the style of the Strong AP), and the Incarnation? The answer is yes, since

such a teleology would only be relevant with respect to the *necessary* conditions of man's appearance in the universe (and hence the Incarnation). The *sufficient* conditions which are not implanted in the natural conditions can invoke in mind only a teleology of a different kind corresponding to the «changed consciousness' attitude,» admitting teleology functioning in the realm of regulative judgements as originating in purposiveness pertaining to man's consciousness of his own origins. It is in this sense that one can justify philosophically a thesis that the world is subordinated to the inaugurating events of the human (sacred) history. Teleology of the universe as its purposeful development towards producing the conditions for life enters the discourse only because the salvific order of history is imbued with teleology that is transmitted toward the order of the cosmos. But this transmission has an epistemological character related specifically to the human condition of a creature in communion. From a philosophical point of view such a translation can only be a component of the creation narrative subordinated to its main theme of the Incarnation. But in no way such a transmission can be assigned an ontological character.

Finally, natural theologies can only infer from the necessary conditions of existence of humanity (and the beautiful cosmos) to the philosophical idea of the architect of these conditions. The necessary conditions as a part of the specially arranged cosmos can only cascade toward the necessary existence of that one who produced them. But the unknown sufficient conditions for the existence of the beautiful cosmos (and man as its part, as well as of the Incarnation), place the whole universe and humanity in rubrics of those contingent events which as such do belong to the order of the cosmos only tangentially. The inference towards the Creator can only be empirical (not theoretical), that is, existential. Christology supplies this inference by the specific and concrete content as related to humans and their history. The inaugural structure of Christ-event organises human consciousness not only around the mystery of man's existence as such, but also around the mystery of the universe which is related to the Logos-Christ in the same manner as hu-

manity is related to the incarnate Christ. Theology brings human consciousness of the universe to its particular vision as it is disclosed to man as being hypostatically inherent in the Logos-Christ, the creator and sustainer of the universe.

Cosmology and theology are mutually complementary for understanding the sense of the human existence. Cosmology represents the hermeneutics of the *necessary* physical conditions for existence of man. Theology provides one with the interpretation of the *sufficient* conditions of existence of man as made in the Divine image, that is being a creature in communion with God. Thus, theology elucidates the very possibility of cosmology as a kind of the human activity. It also formulates the goal and value of the cosmological knowledge as related to the incessant desire of man (in the Divine image) to clarify the sense of its own existence concealed from him through the fact of his createdness, as well as through the fact of imitating the image of that One who is unknowable. All this entails the main conclusion with respect to the discussion of cosmology and theology, namely, that the main theme of this dialogue is man endowed with life with its seemingly paradoxical split between the radical physical finitude (even insignificance) and mortality on the one hand, and his tragic longing for the infinite and immortal. The distinction and difference between the cosmological and theological in man is constitutive for man, so that the *modi* of the hermeneutics of the human condition (discursive cosmic and non-verbalised existential) are irreducible to each other simply because of the historically observed immutability of the human condition. Thus the question of the relevance of cosmology to theology or vice versa can hardly have any perspective in its «resolution» in favour of either cosmology or theology. Theology and cosmology deal with different but inseparable perceptions of the world and this reflects the basic riddle of the human existence.

Now, on the basis of these conclusions, one can outline a philosophical response to the «hot» issues in the dialogue between cosmology and theology.

1) Fine Tuning, Anthropic Principle, fitness of the universe for life, and the Incarnation

The Anthropic Cosmological Principle (AP) explicates that the *necessary* physical conditions for the existence of humanity are finely balanced (*fine-tuned*) in the evolutionary universe leading to the possibility of life on Earth. Thus AP contributes further to the articulation of consubstantiality of humanity with the *visible* universe. Orthodox theological anthropology accentuates this point through its stance of the microcosmic and meditational position of humanity in creation, humanity that mimics in its constitution the structure of the *visible* universe. While the AP observes that humanity indeed recapitulates only 4 % of the overall matter in the universe, as well as that cosmology of a large-scale structure of the universe proves that humanity's actual presence in the universe is radically insignificant in physical terms, theology (philosophically supported by existential phenomenology) claims humanity's centrality as being hypostasis (the center of disclosure and manifestation) of the universe. Yet, the Orthodox theological insistence that humanity is responsible for the transfiguration of the universe and overcoming the moral division between it and the Creator seems to be unclear in view of man's insignificance in space and time. Humanity can exercise such a mediation between creation and God epistemologically through doing cosmological research and thus imitating Christ. Theologically, this means a further enhypostatisation of the universe by man. Philosophically, man is treated as a center of disclosure and manifestation of the universe. The sense of the AP and observations of the fine tuning of the universe just confirms that the process of knowledge of the universe (as intrinsically human) is consistent with the human cognitive faculties which are related to the bodily conditions. Naturally, these conditions cannot contradict to cosmological findings for otherwise theory would be radically incoherent. Theology and philosophy make clear that the representation of the universe in cosmology, being constituted by humanity, contains the elements of the human presence. Theology insists that the universe is turned to man by that side which is consistent with God's intention to

effectuate the Incarnation. This entails a serious doubt with respect to the existential sense of 96 % of the technically invisible universe which is non-consubstantial with that part of the universe which contains humans. In this sense the AP has a very limited value because as such it manifests itself as a principle of the systematic unity of nature which has an intrinsically human nature as related to the formal *teleology* of knowledge in general. But such a *teleology* has nothing to do with the overall development of the universe, but is related to humanity's incessant search for the mystery of its own origin related to the theologically explicit inability of humanity to know itself. Thus the sense of the AP is to discover man behind its own image of the universe. Seen through such a prism, the whole discourse of the AP represents an advanced narrative of the human condition in the universe, thus manifesting a dualistic position of humanity in the universe being its hypostasis and at the same time its tiny physical part. It accurately explicates the conditions of existence of humanity and thus of the very possibility theology and cosmology. Yet the cosmological AP misses a major issue related to consciousness, that is to the sufficient conditions of existence of intelligent humanity. Obviously these conditions as such are not cosmological and physical, but related to the hypostatic propensities of humanity endowed by God. Thus the cosmological AP contributes only to a «half» of anthropology without clarifying the ground for its own facticity. Theology is relevant to cosmology in what concerns AP because it outlines cosmology's fundamentally limited scope leaving behind the question of the articulating hypostatic intelligence.

Since the doctrine of deification relies on the Incarnation of the Word-Logos of God in flesh of Jesus Christ, the actual theological flavour of the fitness of the universe for life relates to the fitness of the universe for the Incarnation. It is the physical science that makes possible to understand that the universe must be such that it makes human life and hence the Incarnation possible. For the Word-Logos of God to assume human flesh, there *must be* this flesh. Since modern physics and biology is certain that in order for life to exist, that is, to

have such a flesh, the duration of the cosmological evolution must have been no less than ten billion years, it seems evident that for the Incarnation to take place the *necessary* cosmological conditions related to the whole history of the universe must have been fulfilled. Correspondingly the ontological (physical and biological) aspect of the Incarnation is present in the reversed history of the universe as it is described in modern cosmology. One can then, based on the theological Dogma of the Incarnation as foreseen by God before creation, advocate for the *Theo-Anthropoc* Cosmological Principle linking the evolution of the universe to the demand for the human race to develop in order to effectuate the hypostatic union with God. Certainly this is related only the *necessary* conditions for the incarnation (in similarity to the conditions of existence of intelligent life) leaving the *sufficient* conditions for it to happen undisclosed by the sciences and addressed theologically.

## 2) Multiple universes.

The «fine-tuning» issue relates to the very low probability of the initial conditions of the universe, if one assumes (in any possible sense) the potential existence of the ensemble of the universes, and hence a choice of that one out of them which represents our universe. The major problem with the hypothesis of the multiverse is its radically non-empirical status and hence with its testability entailing a doubt in a scientific nature of this hypothesis.<sup>42</sup> The claimed proposals for scientific tests of the physical existence of a multiverse (most of which rely on probability concepts) are doubtful because it seems that one cannot use probability arguments in cosmology when only one universe exists. Probability arguments cannot prove a multiverse exists, they can only prove the self-consistency of multiverse proposals as such. Some cosmologists strongly advocate that any model of the multiverse is hypothetical (unverifiable) and hence non-scientific.<sup>43</sup> Yet some other cosmologists, in order to avoid the prob-

<sup>42</sup> See, for example, G. F.R. Ellis, «Does the Multiverse Really Exist?», *Scientific American* (August 2011): pp. 38–43 (as well as Ellis and Silk, «Scientific Method: Defend the Integrity of Physics»).

<sup>43</sup> Ellis, «Does the Multiverse Really Exist?»

lem of the special initial conditions and consequent in some cases, appeals to the idea of creation of the universe and its creator, prefer the multiverse model by simply ontologizing its construct in a naively realistic fashion. From a philosophical and theological point of view, the perennial issue of the contingent facticity of the multiverse itself (as a new type of the highly undifferentiated ‘substance’) remains untouched by any of its models so that in no way the multiverse hypothesis can replace or «explain» *creatio ex nihilo*.

Yet, from the same theological point of view the idea of the multiverse can represent an interest if considered in a Platonic sense: God created many intelligible universes, but only one (or some of them) have received an embodied physical existence. Seen in this angle, cosmology is relevant to theology because it supplies the latter with another narrative of the plurality of the intelligible aeons which, as theology insists, can be hostile to humanity and thus in no need for exploration and salvation. More than that, the models of the intelligible universes can contribute to a more thorough description of the theologically understood *creatio ex nihilo*. Indeed, if some Patristic writers (Maximus the Confessor, for example) argued that the constitutive element of *creatio ex nihilo* as it is seen from our side of creation, is the basic *diaphora* (difference) between empirical sensible realm and that of intelligible realm containing angelic entities and Platonic ideas, then the modern version of the perennial idea of *plurality of worlds* presented in many versions of the multiverse theories provides theology with a new narrative of how this *differentiation* in creation is possible. It does not specify the sense of these worlds as angelic (demonic) or just Platonic, it just indirectly asserts a very special nature of our world as turned to man because of the human affinity with God who chosen this universe for effectuating his hypostatic union with man in the Incarnation.

Theology (and philosophy) is relevant to cosmology in the case of the multiverse discussions because in agreement with its scientific critiques it places the multiverse under rubrics of those aeons in creation which are anthropologically and soteriologically irrelevant. Being

intrinsically geocentric, theology (and philosophy) reminds to all proponents of the idea of plurality of worlds that this very idea is intrinsically human and represents another attempt to justify the contingent facticity of this world and that of man in it on the grounds of the intrinsically *teleological* move, by introducing the ideas of the multiverse as a regulative alternative to the sheer contingency of this universe as created by God. A theological *teleology* of creation of the world by God in order to effectuate the salvation of man through the Incarnation is replaced in the concept of the multiverse by the formal epistemological *teleology* with no hope to make the concept of multiverse genuinely theoretical. Theology (and philosophy) is relevant to the assessment of the concept of multiverse because it provides one with a clear demarcation in this concept between that which is existentially irrelevant and that which is in reality.

3) How much of life is in the universe: search for extraterrestrial intelligence (SETI), exoplanets and multiple incarnations.

This issue is immediately connected with the previous one, because the *plurality of worlds* is now reduced to the «worlds» related to other intelligent life forms in the universe. Here cosmology enters the discussion with theology in its astronomical, observational modus which is not related to the global structure of the universe and its origin, but is connected with the issue of existence of life in the universe, in particular intelligent life to which humanity has to establish its attitude. Indeed, the recent discoveries of exoplanets stimulated a new wave of the search for extraterrestrial intelligence in our galaxy assuming that the *necessary* physical conditions for biological life are fulfilled on these planets. Theology turns out to be very relevant to the question of a possible intelligent life in the universe because one must be understood in what sense this life is similar or alien to human life. Theology proposes its definition of humanity in the context of its relation to God. Correspondingly the issue here is what is the relation of other possible intelligent species in the universe to that God who descended on earth in order to effectuate his union with man. Since Christianity insists on the uniqueness

of humanity in the latter sense, there arises a question of the uniqueness of the Incarnation.<sup>44</sup>

A theological response to the formulated problem will be formed on the grounds of doubts about the legitimacy of extrapolation of the idea of human life beyond the earthly existence. More specifically, from a theological (philosophical) point of view:

a) The similar necessary conditions of existence of life in the universe do not entail the same sufficient conditions leading to appearance of intelligent beings similar to those of humanity. This thesis can receive its support from the evolutionary biology asserting the uniqueness of the evolution in terms of its undisclosed initial condition and theoretical improbability of its similar outcomes (which we observe on earth), if life would have to start on Earth one again.

b) From a theological (and philosophical) point of view it is not clear in what sense can one speak of the other intelligent beings if they are not in the Divine Image, that is, philosophically, do we have an epistemological access to them. The presumption of the common sphere of the transcendental experience *de facto* position these beings as identical to humanity. This implies that the biological evolution on other planets, if it has taken place, is convergent with that on Earth thus making the human phenomenon common for the whole universe. The *sufficient* conditions of the initial steps of evolution and appearance of consciousness on this planet are transformed in this logic into the *necessary* conditions thus making religious experience being implanted in the natural causal conditions. Then all theological claims for the contingency of creation, the sense of the human salvific history and the very distinction between the order of history and that of the cosmos becomes obsolete reducing, *de facto*, experience of God to the experience of the world. In other words, if humanity will discover similar species in the cosmos, one will be

able to claim that consciousness is the feature of the universe as such, but not that of God. Alternatively, Christianity will have to admit that God acts everywhere in the same way (probably including incarnation) so that Christianity's claim for the uniqueness of humanity becomes ungrounded. Theology also points to the fact that the convergence of all possible intelligent life-forms to that one of humanity entails a drastic conclusion about the Fall, once again transferring its Earthly consequences to the whole universe literally implying then that these intelligent life-forms all need salvation. The latter accentuates with another force the point that all salvific history is implanted in the cosmic causation and thus deprives Christianity of its main message about humanity's free will. Theology (and philosophy) thus is relevant to the modern search for extraterrestrial intelligence by pointing that the only kind of species humanity can discover and understand is that one which is similar to humanity itself. Such a position predetermines a Christian Orthodox position with respect to the question about a possibility of multiple incarnations as that one which insist on the uniqueness of the Incarnation and, if necessary, communication of its effects by humans to other inhabited worlds.

c) Christian theology doubts, on soteriological grounds, that we need to know and contact potential other beings in the conditions after the Fall, when the sense of our own world is obscured. Theology, unlike astrobiological speculations about other intelligent species in the universe, warns humanity that it is no clear in advance that their findings and attempts to implement them in interstellar contacts will not be harmful for humanity, for theology cannot exclude that these other species are not influenced by the demonic agencies fundamentally hostile to humanity.<sup>45</sup> Theology expresses a serious doubt that the issue of SETI can be disentangled from a theologically expressed concern that the cosmos at large can be devoid of grace and potentially threatening to humanity by being usurped by fallen angels. In view of the recent NASA's discoveries of the practical impossibility of cosmic travels because of the high exposure to the ionising radiation

<sup>44</sup> A modern comprehensive discussion of the issue of multiple incarnations can be found in chapter 4 of the book edited by Ted Peters, *Astrotheology*. See also my paper: A. Nesteruk, «The Motive of the Incarnation in Christian Theology: Consequences for Modern Cosmology, Extraterrestrial Intelligence and a Hypothesis of Multiple Incarnations», *Theology and Science* 16 (2018), pp. 462–72.

<sup>45</sup> Cf. Lossky, *Orthodox Theology*, pp. 62–65.

from fast cosmic particles, the planet Earth with all its unique physical features remains the only place for humanity to exist which puts in doubt any phantasies of the human physical expansion in the universe. Thus the discovery of exoplanets in conjunction with the impossibility of the remote travelling in space, as well as the advance in the SETI, explicate further a theological claim for the centrality of Earth and geocentric uniqueness of the Incarnation. Theology here formulates the problem, cosmology (in this case astronomy) extends its elucidation. The sense of theological claims is elucidated by cosmology, whereas the value of scientific discoveries and hypothesis is assessed theologically.

#### 4) The origin of the universe and *creatio ex nihilo*

The issue of origination of the universe represents a major challenge for scientific cosmology because of its lack of testability: here physical theories reach their limits. Theories of creation of the universe are obviously not directly testable and cosmological observations provide very weak limits on conditions immediately after creation because the inflationary phase of expansion wipes out most memory of that which preceded it. Alleged 'explanations' of creation rely on extrapolating some aspects of tested physics to situations where tests are not possible. Usually they employ physical theories (such as Quantum Field Theory, for example) held to be applicable in situations before space and time existed, in spite of the fact that their usual formulation assumes that space and time do exist. So the major issue here is, what features of cosmology (physics) depend on the existence of the universe, and which transcend it. Only those that transcend it can feature in theories of how the universe came into being. This raises a question of how to understand the transcendent features of theories in an ontological sense. What kind of existence is assigned to the theoretically constituted origin of the universe: is it indeed physical, or just mathematical (platonic), metaphysical, or intersubjective (remaining a regulative idea in a Kantian sense)? If one speaks of the scientific narrative, that is, as related to the universe in the phenomenality of objects, philosophy and

theology cannot say too much with respect to the validity of this narrative as having references to some objective realities. Theology and philosophy put some limits on possible ontological extrapolations of such a cosmological narrative referring not only to the impossibility of a metaphysical construing of the causal principle of the world, but also to the fact that this narrative is a human enterprise and as such is constructed in the conditions of the total incomprehensibility of its own possibility. This does not invalidate the cosmological narrative, but just alerts scientists to an obvious theological fact that the world is turned to humanity by its manifestly anthropic side, so that the universe as a whole and its origin as they are depicted in cosmology are all imbued with basic existential concerns for the sense of the human existence. In a way, because of the empirical inaccessibility, the cosmological description of the origins of the universe represents a kind of a top-down mental causation in the sense that the origin of the universe becomes a matter of the human *intentionality* ultimately looking for its own origin. Then one can claim that the «transcendent» features of the hypotheses based on the mental causation (related to scientific hypotheses of the early universe) provide a narrative of the presence of the Divine in the universe because God is present in man through the very fact of man's created existence. Theology (and philosophy) and cosmology enter an open-ended hermeneutics of the human condition by mutually elucidating their own advance in understanding of this condition.

In spite of all the issues raised above, the discourse of origination of the universe in a singular state (Big Bang) which is traditionally related to the theologically understood *creatio ex nihilo*, can be considered as the most developed in the context of the dialogue with theology. There exists an enormous bulk of literature on this topic across all Christian denominations. Orthodox theology provided lots of writings on creation of the universe out of nothing, but it was never concerned with the specifically cosmological aspects of creation because it never aimed to produce any accomplished cosmology. Any straightforward co-relation of the patristic ideas on cre-

ation with the modern cosmological narrative would be considered not only as anachronistic (because the Fathers did not have access to modern knowledge), but logically purposeless because of the historically contingent means of comparing of the two narratives. The essential feature of the patristic narrative of creation is to place it in the logic of transfiguration of the universe and human deification enabled through the Incarnation of Christ. In this sense the whole cosmology of the Fathers is through and through Christocentric thus approaching creation through its major motive – the Incarnation. Correspondingly the novelty in appropriation of modern cosmological narrative of the early universe by Orthodox theology would be by treating the origination of the universe as related to the motive of the Incarnation, that is, by linking the initial conditions of the universe to the *necessary* conditions for the Incarnation (and hence the existence of humanity). Theology and cosmology both admit that the «initial conditions» for the created world are contingent. Yet theology makes a correction that this contingency is yet necessary, because (typologically, not causally) subordinated to the Incarnation. Yet this subordination is not traditionally teleological, but rather regulative (that is formal) which humanity needs in order to construct a meaningful systematic unity of the world.

There are two other issues from theology of creation that can be relevant to the modern cosmological views of origination of the universe. First, theology asserted the dual structure of the created realm: the empirical (visible) and intelligible (invisible) as the constitutive element of *creatio ex nihilo*. In other words, in order to approach the issue of creation either philosophically or scientifically, in both cases concepts and models must contain the presence of that intelligible entities which are not subject to an empirical verification. Cosmology demonstrates this well not only by complementing its observational finding by highly abstracts mathematical models (representing a part of the intelligible world), but also by asserting the technically invisible dark layer of the universe which by its function in theory strikingly resembles another intelligible reality. One

can say that cosmology involuntary follows the same path in explication of the origination of the universe as was anticipated by the ancient theologians. The second theological intuition exercised by both Greek and Latin Fathers is that it was illegitimate to enquire about the «the details» of creation. For example, a most notable question on the «age» of creation, more precisely, a perennial question of «why not sooner?» of creation. This concern is related to the age of the universe (either biblical, or scientifically stated) which refers the issue to the contingency of the initial conditions of the universe (as the transcendent feature of cosmological theories) and hence to the unknown will and wisdom of the creator (his presence in the universe). Modern cosmological models corrected the biblical value of the age of the universe, but yet the contingency of the latter (particular numerical value of this age) was not clarified. Its narrative is more coherent and substantiated by observations, but the issue of the specificity of the initial conditions which predetermine the age of the universe remains undisclosed. This confirms that cosmological models of origination of the universe can be treated as contributing to the open-ended hermeneutics of the concealed contingent facticity of the universe thus expressing the ultimate unknowability of its creator. Some theologians (Augustine, for example) compared the issue of the concealed origin of the universe with that one of origin of man,<sup>46</sup> reminding that philosophically two cases represent an example of a phenomenological concealment of the inaugurating events (creation of the universe and birth of man), as well that both issues, de facto, relate to one and the same human concern about the origin of the facticity of its existence. In the case of the issue of creation, theology and cosmology complement each other by «elucidating» in their intertwining and unending narratives the scale of humanity's incomprehensibility of its own origin and the sense of existence.

##### 5) Consciousness and the universe

<sup>46</sup> See details in A. Nesteruk, «The Sense of the Universe: St. Maximus the Confessor and Theological Consummation of Modern Cosmology», in A. Lévy et al. (eds.), *The Architecture of the Cosmos. St. Maximus the Confessor. New Perspectives* (Helsinki: Luther-Agricola-Society, 2015), pp. 310–25.

Physics in its classical form, when it works in the natural attitude and disregards the functioning of that subjectivity which predicates the physical world, cannot incorporate consciousness. The word ‘classical’ is used here not in order to contrapose quantum physics to that which is traditionally called ‘classical physics.’ This word is used in a philosophical sense related to that particular phenomenality with which physics deals (namely the phenomenality of objects), that is, with that which is allegedly objective and independent of the human insight. There are many speculations and hopes that Quantum Physics will change this approach to reality by bringing on board an enquiring subject. It suffices to mention all famous discussions on the role of the observer within the Copenhagen interpretation of Quantum mechanics. However all these discussions do not change anything in the understanding of the sense of humanity in the universe as embodied hypostatic creatures with their private sense of existence (in 1<sup>st</sup> person) which is not describable by any possible science. This is the reason why physics until now attempts to banish any enquiry into the sense of the personal consciousness by insisting on studying the objective world. This tendency seems to be strange, in particular when the same physics claims to seek for the ‘Theory of Everything’ which must include consciousness in the universe by its definition. Cosmology, at first glance, contributes to the diminution of humanity in the universe by proving its utter insignificance on the physical scale. Correspondingly the status of the embodied consciousness in the universe seems to be negligible and incidental. However this observation enters a direct conflict with the fact that this very observation is possible only because humanity is epistemologically central in the universe and that the overall picture of the evolving universe is the product of humanity’s mental activity. Hence the very possibility of existence of the universe in a humanly articulated form is possible only because of existence of human intelligent beings (theologically, made in the Image of God). Then, on phenomenological grounds, one concludes that human intelligence is rather a fundamen-

tal feature of the universe being its hypostasis in a theological sense. Yet since the hypostatic existence is possible only in the conditions of embodiment, the very enhypostasization of the universe indeed contains objective references of its very possibility. Then theological and cosmological hermeneutics of existence can be considered phenomenologically as constitutive of humanity as the centre of disclosure and manifestation of the universe. In this case the question of explanation of consciousness by some scientific and philosophical means loses its sense and acquires a different status, namely as that which manifests existence as such. Viewed in this angle, the ultimate foundation and origin of the hypostatic consciousness in the universe is treated not through a hidden mechanism of the transition from the animal consciousness to that one of Homo Sapiens, for example, but by studying consciousness’ ‘evolution’ through its acquisition of the world, and hence its allegedly metaphysical explanation of its own origin through constructing the origin of the universe. In no way, however, such an ‘explanation’ will have a theoretical, ontological sense: it will provide us only with a regulative approach and a possible pathway to how is possible to describe consciousness outwardly. Consciousness will always be encoded in theories and explanations of the universe but it will never be ‘seen’ as an *object*, as that which can be defined in terms of substance and its variations in space and time. It will always remain a (transcendental) condition of the disclosure and manifestation of the universe, that condition which humanity receives together with the gift of life from its Giver – the Creator. In this phenomenological view cosmology acquires the sense of a particular form of the human subjectivity dealing with the conditions of its physical existence. As activity, it becomes a *characteristic* experience of existence, when consciousness has to balance its internal sense of being a private person, with the existence of that other (the universe) in the background of which this privacy experiences its being. Seen in this perspective, theology and cosmology, being the *modi* of the human existence, manifest themselves through different narratives

which are rather complementary than exclusive. The split in the *modi* of existence does not threaten to the existence as such; rather it explicates the main predicament of this existence between the Scylla of the finite and insignificant place in the physical universe and Charybdis of longing for eternity and unconditional existence.

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