ANTHROPICAL COSMOLOGY AND PERSONAL THEOLOGY

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If by 'culture' in its strongest meaning we understand the totality of knowledge at any possible level contributing to the construction of a world picture as extended and complete as possible, we should easily recognize that such a picture must include all the domains of thought present in our psychical being; and we instinctively feel the impulse to connect to each other such domains in order to form a general coherent frame of reference into which any viewpoint finds its adequate location. What I am proposing here to present of such a vast frame is one of those possible connections, related on the one hand to science, as requested by the theme of this conference, and on the other to one of the most conspicuous fields of internal investigation, for almost anybody I might venture. In fact the main cultural and most valuable derivation yielded to me from science is its contribution to the growing of my understanding beyond the sensible evidence and the logical rationality. I will therefore try to show how, at least on my personal account, the evolving picture of science during the decades of my living time has gradually contributed to develop, extend and increase my metaphysical and religious approach to reality.

We will try, above all, to update the view by which we can look at the cosmos today.

The body of opinion has been, during the last few centuries, the preferred ground for the development of what, under the generic name 'science', has been constructed as a body of self-convincing and autonomous knowledge, according to an outlook which is essentially mechanistic. Today however, after a long period in which determinism seemed to dominate uncontested, a picture of the physical world is spreading more and more, based both on the microscopic domain which is subject to quantum mechanics, and on the so-called 'deterministic chaos' of complex systems;

for both the exact predictability of physical phenomena, once considered the essence of physics itself, seems, instead, to be a type of limited case that acts as an excellent approximation only in very simple problems which are defined by a small number of variables; whereas real situations range from sets of molecules to galaxies of stars. It is such complications that make it practically inconceivable to analyse them in detail. Complications of this genre have become the daily bread of all that which goes under the name of complexity, from fluid dynamics to multi-molecular structures which are present in every aspect of biology. Consequently, the general explanatory picture of the physical world is gradually moving away from the idea of exact predictability of the future, which inevitably follows from detailed knowledge of a given initial situation, towards an unpredictability, which generally increases as the length of time increases. Therefore the prospective of 'total necessity', inherent in the Galilean laws of physics, was inevitably overlapped by a zone of growing cognitive indeterminability, which made the future less and less predictable.

Independently of the preceding developments the fundamental idea itself of strict causal deduction of one physical phenomenon from another, also found itself confronting an interpretative difficulty because the situations under consideration had become complicated. If, already, an excessive number of variables, as for example the total of the coordinates and momenta of the component particles of a gas, had asked, in dealing with it, recourse to purely statistical considerations, a heterogeneous system, formed by chains of diverse atoms, which one meets in macromolecular chemistry, seems to make almost obligatory a vision in which one can only deal with by simplifying and appealing to 'randomness'. It is on 'chance' in fact that the Darwinist vision of biology is founded. Now, instead, various researchers, on the basis of the most recent scientific results, are realising how biological experimentation is bringing to light the insufficiencies of Darwinism in explaining several of paleontology's fundamental data. Without going into detail, it is enough to specify that the attribution, due to pure chance, of the meeting between various biological molecular groups would require a period of time billions of times longer than the life of the universe; therefore the state of our earth would constitute, in itself, a type of 'miracle', accomplished once and for all, in spite of all predictable probability.

If the concurrence of billions of micro-causes between the constituent atoms and molecules, over a period of time billions of times longer than the life of the universe, is required in order to form any portion of living substance, it appears clear how, in order to deal with the physically 'complex' situations, it is opportune to devise new ways of thinking: first, that of overturning the sense of time, and instead of starting from the antecedent of the past, fix instead on the future, and therefore on the 'ends' which can be accomplished for any phenomenon. Physically speaking, the symmetry between past and future is an integral part of a four-dimensional vision: it is only the unidirectional flow of time which, for the human mind and life, differentiates it in such a large manner. Precisely for this reason, one would maybe expect that, with the polarization on the future, our intelligence could enter into a new perspective, complementary and integrating with that, which up to now, was confined to science.

That expectation, as is well known, has been encouraged by biology: if the large variety of micro-causes which play between the molecules makes a decipherable analysis of their reciprocal interactions extremely difficult, the final destination for which this complexity aims, comes together in a set of relatively simple properties, which summarise the objectives and the way that this complexity 'lives', that is eats, drinks, breathes, mates, reproduces; otherwise, it gives way to certain functions un-analysable in their microscopic detail, but it is the 'total behaviour' which forms that which constitutes a plant, an animal, a living being. For this the biological morphology, in its complexity, is much better described by this set of 'finalist' properties than by the unreachable multiplicity of the sets of micro-causes.

For this reason, from the view of the beings, it seems a general directive has almost emerged that alternates from the complementary prospective of 'causalism' on the one hand, 'finalism' on the other; in situations which are physically 'simple' the first is undisputed, whereas in those which are complex the latter is prevalent. This explains why, in the physics of Galilean phenomena only causality seemed necessary to explain the connection between these phenomena, whereas for those which, plausibly, are central to the biological structure, it is the 'finalism' view which, maybe, better captures the sense which we try to find in the panorama which surrounds us and in what we are. The complicated pass from the physics view to that of biology, is the crucial point which, to be understood, probably requires the superimposition of the two views, key to the unifying approach to that which is unexplainable around us and in us.

Does there exist maybe, today, some field within which it seems that this type of superimposition occurs? We think that there is, and consists of that set of data which goes under the name of 'anthropic observations'. Without going into too much detail, we will satisfy ourselves by emphasising how this perspective originates, in the ambit of physics itself, not

with the usual question of 'how?' a certain phenomenon occurs, but 'why?' it happens.

As is well known, the general laws of physics depend on a certain number of fundamental constants – such as the speed of light, Plank's constant, electron mass and charge, intensity of various types of forces and so on – which we take for that which they are; and we observe that, by these microlaws, complex, physical structure results as being capable of becoming the receptacle of life. It can easily be verified that if certain of these fundamental constants are changed by a few percent of their actual value, the physical substrate which leads to living beings would not have been realized in the universe. We do not intend to go over the reasons which lead to these observations here and are, in general, well known in scientific circles, in the strict sense of the word. Here we limit ourselves by assuming that such anthropical observations are a given fact and deduce the likely consequences.

To try to reduce to a purely 'casual' coincidence this unforeseen and sometimes very precise correlation between values of the fundamental laws of physics and the beginning of life, the so-called theory of the 'infinite universes' was created, in which each of these universes is equipped with one of this infinite combinations of all the possible values of the fundamental constants. It is then clear that, for almost all their entirety, the constants chosen by chance are inadequate to allow life to establish itself; this is possible only where the constants are correct, as therefore in our universe – and in few others. Nothing wonderful, then, about such a correlation between the fundamental laws and life; such is the explanation with the 'casual' presence of the infinite universes in the basic structure of the cosmos.

Why then, the invention of such a complicated theory with infinite universes of which, as far as I am aware, we don't have any indication in experimental observation? It is, therefore, to escape a metaphysical implication which could link the beginning of life with a 'preordained plan' chosen before the fundamental laws, and to escape in this way from having to postulate a non-casual nature of the cosmos and mankind.

It is worth noting that this objective contradicts itself right from the beginning: there would be nothing to say against the hypothesis in itself, if not for the fact that it is often viewed as a 'physical' hypothesis, whereas it is a purely 'metaphysical' model. To be 'physical' these infinite universes would have to be observable by us in some way: but since until now nothing has been seen, it is pure hypothesis in a field which has nothing in common with experimental science. Therefore, to avoid the metaphysical interference of a 'prior plan' that foresaw the beginning of life in the cosmos, and

therefore a 'Designer', scientism has invented an alternative hypothesis; but nevertheless it is metaphysical: this the only approach of the 'infinite universes' theory. The conclusion is in the fact that the anthropical observations cannot be explained with only physical arguments: and so a metaphysical finality which cannot be renounced emerges with the following inversion: if the laws of physics permit the passing from microphysics to that of the living structures, it does not appear to be prohibited to think that the microphysical world was chosen as such, so that it could derive the structure suitable to sustain life.

Naturally, such a proposal goes beyond the scientific views of anthropical observations: it transforms them into an anthropical principle, which is taking its place in the field of not physical but metaphysical cosmology. It is clear then that, scientifically speaking, nothing is prohibited, to those who want to adhere to the scientism view, appealing to the metaphysics of the 'infinite universes', as the experimental field, based on empiricism and reason, does not contain anything in itself which can supply clues about the true metaphysical. But if I, in so much as I am a man, spontaneously feel a need to adopt one or other metaphysics, I do not feel any hesitation in declaring my personal conviction that the anthropic view, that is the intentional primordiality of the project 'man' in the cosmos, assumed as a principle of cosmology, seems immensely more likely and convincing than that of the 'infinite universes': above all because of the role of exception that is attributed to life in the economy of the universe; and for this reason, as now we will try to acknowledge, not only to the physical nature, but also to the metaphysical in man.

If the majority of the conditions which allow the creation of biological beings in the cosmos refer to how to make the substrate of purely bodily life – which may be sufficient for inferior life-forms – much less, and in a less precise way, is to be said for those necessary to create the psychic level; and even less for a spiritual being; for the prevailing opinion is that we still know very little about the relationships between body, psyche and spirit. In spite of this, the fact that the name 'anthropic' is given to the above-mentioned observations demonstrates that the deep reason for our interest in this is, not only that they join the cosmos with life, but above all, because they form the first steps towards linking the cosmos with human life.

And what allows us to arrive at the creation of man? Not only a very long period of evolution, but more than anything else that, in the sequence of biological forms of more and more complex molecular structures, a point of stoppage is inserted to a given structure, that stamps a unique hallmark, special, foreseen in all the great religious traditions and expressed succinctly in the Bible: man as 'the image of God'.

We will certainly not try to comment on this biblical definition. We are convinced that any human babbling cannot dim the implications. And if therefore, despite its total incomprehensibility, we are now pushed to mention it, it is because we find it accomplished in us, on this earth, and are pushed to the following conclusions. If man appeared in the cosmos, and if the corporeity of this terrestrial world is controlled by the laws of physics, the obvious suspicion arises that it was foreseen that this cosmos must bring man into being. And if such correlations exist, why can't they be more drastically confirmed? That is if the laws of physics are exactly as they are, it was to allow the physical world to be a substrate suitable for the creation of man. In such a perspective, man appears then to be the end for which God created the world and man becomes the destination of the whole of creation.

If, in the field of physics, we believe that one can go further forward only with difficulty, there is nothing to prohibit us from taking further steps forward in the realms of metaphysics, which can, and in fact must, encourage the reconciliation of the apparently distant levels, but converging in a synthesizing picture which encloses them. If man, as 'the image of God', can be considered the ultimate purpose of the creation, is it not, maybe so, that in creation there would be a being which as 'the truthful image', would be suitable to host God himself the day in which He wanted to manifest himself directly to the world, not in His transcendence, but in a form accessible to the eyes and the human senses? For this reason the anthropic vision of the cosmos is really that which, leaving us to glimpse a structure suitable for the Incarnation, lends itself, better than all others, to support a metaphysically Christ-centred view. This reflection, it seems, aims to prepare for the bringing together of the two perspectives mentioned in the title of this paper. And from this point on, I cannot do other than emphasise that which for me constitutes the true metaphysics, with all due respect for the different opinions that many may have regarding this. If indeed the view of the cosmos was modified by the moving from the interests of the field of physics to those of biology and therefore human, a shift in a certain corresponding way, must obviously plausibly result in the centrality of the metaphysical, which moves us from a prevalently impersonal view to that which highlights some other Aspect of the Infinity of the Supreme Origin itself.

Maybe the metaphysical, which seems to lend itself better to a comparison bringing together how, in the western view of the cosmos, 'nature' was

intended, is the dominant Entity of the Hindu metaphysics 'Brahma nirguna', totally boundless and indeterminable, of which it cannot even be said to be 'One' but rather 'non-dual', because even the idea of 'Unity' would be too restrictive; and less often is 'Brahma saguna' referred to, the divine Aspect defined as Being, whose relationship with creation is 'personal', essentially tied to man.

Now this personal Aspect of God, secondary in India, is the prevailing conclusion from when the central point of the divine Attention moves towards Syria and Palestine to manifest itself to Abraham. And it is from this moment that the history of the personal God is given prominence, the protagonist in the events which will happen in the Occidental theatre, leaving the divine Impersonality in the metaphysical background.

It needs to be immediately noted how this passage, in the view of man, is fulfilled by various centuries, and perhaps a millennium, before any grasp of understanding of the physical field of our world. Therefore, when at the beginning of the 17th century, the experimentation and rationalization of Galileo and Descartes established the scientific view, the separation between the metaphysical-religious point of view and that of the physical-scientific was all but complete, to the extent of a practically total split in the 19th century between metaphysics based on the God-person and a physics which obeys the Impersonality of the laws of physics.

This is, in my opinion, the origin of the absurdity that has run rampant for at least three centuries in western culture about the incompatibility between science and religion. I have tried in various occasions to demonstrate that such an incompatibility does not exist and I have generally done so making a comparison between the physical view of the world and the impersonal view of God from the Hindu point of view.

But if now the main body of opinion in the world tends to shift more and more from the physical towards the biological, and centres itself on man, it will appear natural to spiritually jump on the related metaphysical step, for which, from Abraham's Revelation onwards, the divine Personality emerges from the 'Impersonality', dominant until now, to appear like a new protagonist. And how is it that such a divine Personality manifests himself if not through the word of the Sent, of Messengers, of the Prophets, of the 'Avatara' to use a Hindu word, human Spokespersons who speak of what surpasses the man, but which only in man is reflected and takes voice. In this way, by a double movement reciprocally inverse to the perspectives, physics on the one hand and metaphysics on the other, both tending to unity in man, notwithstanding his apparent cosmic insignificance, who

finds himself to be the element in which the creation is summarized, chosen as a support and as the conclusive element in successive theophanies in which the Divinity is revealed all along the whole of the creation events.

As it follows naturally I would now like to demonstrate, not only how man's role corresponds to the specifically Christian view, but that, in a certain sense, it is its most immediate accomplishment; not contenting ourselves, of course, with the superficial but diving into the deepest theological doctrine which today is most explicitly expressed in its fundamental centre which is intact and complete in the Eastern Church, in Orthodoxy.

In fact, the Truths on which the present Orthodox Church is founded are, in their totality, the fruit of the first seven Great Ecumenical Councils held at Constantinople or in the Middle East prior to 1054. Now before that year the schism between the Eastern and the Western Church still had not happened. The significance of this is that this Truth was not only typical of the Eastern Church but represented the belief of the whole Christian Church. And even if, with the addition of the famous 'Filiogue' the Roman Church broke away from Orthodoxy, it is a fact that the doctrine that was to be discussed there, which was before the schism, was at the basis of the two churches. And if the Western Church, because of various events in its history, made revisions which moved it away from certain aspects of its origins, the fact remains that these basic aspects, even if they are often neglected or toned down in different ways, are still inherent in its belief. The significance of which is that we are induced to evaluate the observations which here we will develop not as a focus on the characteristics of Orthodoxy but as the hidden centre, also when not explicit, of almost the totality of original Christianity itself.

I must for various reasons, limit myself to touching on only three essential points that I have in mind and do so in such a way as to emphasise both that which is shared and that which particularity distinguishes the Christian view from the other great traditions. On this premise of intent, it is necessary to start, for each of the points to be considered of the exemplified metaphysics, from the formalization of Hinduism, in order to reveal that which precisely defines the exceptionality of the Christian view.

First of all we will consider the relationship between the transcendent and immanent aspects of the Deity in both traditions. The absolute Reality, whatever it may be, is enveloped in all the wrappings of Maya, the cosmic illusion, which can be represented as a series of veils of varying thickness hiding one behind the other until finally the ultimate Reality appears. In the case where a veil is sufficiently transparent and part of the divine light

manages to shine through it, this makes us feel God as immanent in the whole of creation. But when the veils are thick and block all the signals behind them, this then is God as an inaccessible part of the cosmos and seems to be transcendent and totally unknowable in comparison to the weaknesses of humans means.

Now, even if the image of the veils isn't taken up in the ancient Christian tradition, this in itself is not enough not to make use of a symbol which, nevertheless, allows an equivalent type of deduction, as explicitly confirmed by many Fathers of the Church: the distinction, in the divine Nature itself, between that which forms the Essence and that which manifests itself as its Energies. And if the first, the Essence, is in itself unknowable and incommunicable, it is not the same for the Energies. In fact a religion, to be such, cannot only consist of a theology in the abstract which counters the Creator with the created. Its ultimate end cannot be but a road, that which takes us from the existing state upwards, approaching the One who, unknowable in himself, must leave us to discern from some signs which reveal, to those who seek them, the right direction to travel along. Given that the Essence of God is inaccessible and impenetrable to man, it is necessary to direct him to the correct path which, in some way, God communicates, always in Himself, but outside His inaccessible Essence, through the Energies or divine Operations which are an intrinsic part of His uncreated Nature, but which allow Him to proceed towards the external, to be communicated, to give of Himself. And this independently from whatever His surroundings, also in the absence of creation and even before the creation, God, in His incommunicable Essence manifests himself, nevertheless, through the irradiation of His Energies.

Thus we recognise that God is, as for India, immanent and at the same transcendent, totally transcendent in his incommunicable Essence and immanent in the cosmos through His continuous interventions with the multi-form Energies.

The first large distinction in the area of the non-created Nature of God which we have now mentioned between the Essence and the divine Energies, gives us the answer to another point regarding the nature and the role of the Sent or the Lord's Messengers. All of these, according to their own tradition, are bearers of the Word of God and, in some way, are sharers of a certain 'something' inherent in the divine Nature itself. If the Sent announces even only 'something' of such a Nature, the question immediately arises as to what depth of the divine Nature this 'something' must be related. The answer does not seem in doubt, the function of the

Sent, at whatever level he places himself, is that of demonstrating to the world this 'something'. He is therefore part of the divine Nature which is made known, which irradiates, which erupts out of Himself, he is part of the divine Energies, the Saints, the Prophets, the Sent and the Avatara demonstrate him in their profound essence, they are the irradiation rays of the Lord's Nature.

The third point that I wish to consider is in itself the decisive approach for an adequate evaluation of the role of Christ with respect to all the other great traditions. And this decisive point concerns that which until now was mentioned with a single word; the 'unknowable', as regards the Essence of the Deity, which we will try now to explain as far as possible.

Generally, a metaphysical system which wishes to represent the entire cosmos, gradually spreads in manifestation from the top down through the various levels, first informal (non-representational), then psychic formal and finally bodily formal, and the different steps little by little make our understanding of the premise more specific and detailed. For this reason it is a 'positive' theology called 'cataphatic' in that every level reached contributes to a better explanation of what was contained in the cause which produces it. Therefore, going back to the Principle, it becomes more and more specific and detailed from the body of knowledge which derives from Him, knowledge however which is incomplete or imperfect in that the infinite God can never be reduced to a finite sum no matter how large. On the contrary in the Hindu metaphysical view, one does not come close to God with that which He is, instead one stresses that which He is not. not body, not physic, not spirit, not intellect, he is above and beyond the Being itself. Given that any positive title acts as a restriction of His Nature, the only way to describe Him is in the use of negative epithets such as Unlimited, Infinite, Immeasurable, Unknowable, Uncontainable, and so on. Such a theology called 'apophatic' which goes from the bottom up, always less defined and comprehensible, cannot do other than lead to a total Unknowability of the divine Essence and His total transcendence with respect to every aspect of the created, the only fundamental certainty which human beings can arrive at.

Now if in India the denial of the duality constitutes the main way to try to see that which is unseeable in itself, this same denial of the 'dual', which separates and divides, is that which best marks out the Christian tradition. The denial of the 'two' expresses itself here, however, with the affirmation of the Three, that general symbol of how much it goes beyond every possible separation. Orthodoxy, today, and therefore all of ancient Christianity,

saw in the Trinity of God the same symbol of the divine unknowability which the Indian sees as non-duality.¹ The same incomprehensibility and elusivity for India is the non-duality of Brahma, the same incomprehensibility and elusivity for us are the Trinitarian Characteristics of God, a single Nature but Three persons, an incomprehensible mystery in itself, uniquely revealed to us which is explicitly confirmed in the Scriptures, concerning the coming of the Son from the Father and of the procession of the Spirit from the Father: in this way the Unity is included in the Triplicity, and the Triplicity itself gives the Unity a structure in which the One is Three and at the same time the Three reduces to the One.

The contrast between the two ways, 'cataphatic' and 'apophatic', is clearly found around the fifth century after Christ in the treatise about mystic Theology by Dionysius the Areopagite. It is from him that, within Christianity, the categorical affirmation comes that the main way to attempt to ascend to God is the negative 'apophatic', the unbreakable premise is the unknowability of God. If God is unknowable, all that we perceive or know acts as a screen or obstacle in approaching Him. Therefore every layer, visual, sentimental, intellectual must be stripped away in order to rise up into the unknown and gradually penetrate the divine Mystery.

The best example of this is Moses climbing up Mount Sinai leaving behind the camp, the men and even the priests to penetrate alone the mysterious Unknowability of the Deity with whom he speaks but whom he does not see.

The affirmation of the 'apophatic' method, inaugurated by the writings of Dionysus, was then adopted by most of Christianity by all the important theologians, above all from the Byzantine, Sinai and Greek areas, such as Gregory of Nyssa and Gregory Palamas, to surface in the field of philosophy and mysticism in Western Christianity, from John Scottus Eriugena up to Eckhart. There can be no doubt, regarding the spiritual realization, that the ancient contemplations of India found their natural successor in early Christianity.

Moreover the analogy can be inverted. If this was thought to be an element in favour of the efficiency and the universality of Hinduism to direct man who aspires to know God, well cannot one also turn the parallel upside down, and to discern in the Hindu meditative practices an anticipation of some centuries which later will become the oldest and most authentic of Christian practice to open the road which leads to God?

¹ See V. Lossky, *Thèologie mystique de l'Eglise d'Orient*, Chapter III.

I certainly do not have the ability, beyond these inadequate words, to go deeply into the examination of what is inexpressible in itself and of which others, with much better competence, have let us glimpse some tracks.

Therefore, I believe the point has been reached which makes clear the intention of this contribution: to accentuate the essential role of man in the cosmos both from physics on the one hand and metaphysics on the other. It seems to me that such an accentuation assumes a level of importance which is different according to the perspective with which each of us sees the world.

Those who limit their interest only to the physical field can omit all of the second part of this paper and concentrate their attention on how the physical world can reveal to us the role of man.

Those who, and under whatever form, be it religious or philosophical, feel again the presence of God in the cosmos, would recognise in the present considerations that specific metaphysical vision which corresponds to their faith.

Finally whoever adheres to Christianity finds that Father, Son and Paraclete are taken for their intrinsic Reality, whose setting, within the framework we have just discussed, places them in the Unknowability of the divine Essence, and would be themselves inexpressible and elusive, had not the Person of the Son, in himself unconceivable and unreachable, for a unique event in history, wanted to become incarnate in human form. And because the uniqueness of this event breaks the line of all the other great Sent, expressions of the Divine Energies, He came to create a unique and unrepeatable fact, since He who in this manifested and revealed himself is, nevertheless, the Un-revealable and Un-manifestable Himself.

This in our opinion, is the true exceptionality of Christianity: not only the Trinitarian view, the distinction of the three Persons, Father, Son and Holy Spirit, which – not being remotely imaginable for the human mind if not through the anthropomorphic models, and thus of all unreal – is none other than an expression, as already said, of the total unknowability of the Divine Essence; but that this unknowable mystery manifested itself in a human being and therefore subject to all the events in life.

One may not accept it; but if one does accept it, then the manifestation of Christ cannot do other than differentiate it from all the other great Sent, even if nothing is taken away from the full validity of the other Revelations into which He frames in, and summarises them in Himself.

The choice, between the two options, does not happen, in my opinion, at a rational level: it is a question of internal adherence, of direct intu-

ition, of faith and therefore of environment. No one is better than another for having made a given choice; whether one adheres to a particular philosophy, or to one of the divine Energies, or whether one points directly to the Essence, it is always the climb towards God which is looked for, both by all the believers on the earth and sometimes also by those who do not directly think about it.

I have thought that, if the development and fine tuning of the situation in the various sciences constitutes the main objective of an Academy such as ours, its most refined quality of being 'pontifical' should suggest not to overlook the connections of sciences that constitute the metaphysical background on which, to my mind, even the objectivity of the world is rooted. This is why I have ventured to present this perhaps too personal contribution; although such a precise focalisation is not frequently practised, I am induced to think that its happening from time to time might not constitute, even for those with completely different views on the subject, an inadequate occasion of reflection for meetings as the present one.