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Humanity in the Universe: Between Embodied Incommensurability and Intentional Infinitude

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The paper discusses a perennial dichotomy of the human place in the universe related to its physical embodiment and, at the same time, to its epistemological infinitude. In different words, on the one hand humanity is physically incommensurable with the universe, on the other hand the whole universe is defined and articulated by man. It is claimed that modern cosmology is functioning in the conditions of the paradox of human subjectivity, which has been known since ancient Greek philosophy. The presence of this paradox explicates the essence of the human condition. Any attempt to represent the universe in the phenomenality of objects, that as devoid of the human insight, leads to the diminution of personhood and reduction of humanity to the artefacts of the physical and biological. However, even if cosmology advocates such a vision of the universe, personhood is not eliminated but is “present in absence”. Cosmology becomes an apophatic tool in explication of personhood as centre of disclosure and manifestation of the universe. Correspondingly cosmology exhibits itself as a characteristic middle between the natural and human sciences.

Keywords: embodiment, humanity, intentionality, life-world, microcosm, nature, paradox of subjectivity, personhood, space-time, universe.

We know that man is closely allied with nature not only in the sense that he is part of it...but also, and even above all, in the sense that each impulse of his soul finds a profound and wholly natural substructure in the world, and in that way reveals to us a primordial quality of the structure of the universe.

E. Minkowski, “Prose and Poetry”, p. 244

Introduction: Cosmology in rubrics of Embodiment and Historicity

If cosmology, as a product of human activity, pretends to deal with the universe in its totality, assuming this totality in the natural attitude of

mind as omni-spatiality and omni-temporality, it must exercise bravery in combination with a healthy scepticism of making pronouncements about the whole, by being only a tiny part of this whole. In spite of the fact that the philosophical mind, that is, a critical mind, accounts for its own

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incomprehensibility of this totality on the grounds of the finitude of humanity, this finitude was at the same time counterweighted by its alleged infinitude. For example, Kant, when discussing the analytic of the sublime, took it as quintessence of human existence and asserted that as creatures dependent on the senses we are finite, while as creatures of reason we are capable of absolute freedom and independence. The universe can be paralleled with the sublime according to Kant's definition that "the sublime is that in comparison with which everything is small". Then, in his logic, nothing which can be an object of the senses can be considered as the sublime. However, and here Kant gives credit to humanity as capable of extending the realm of the senses: it is because "there is in our imagination a striving towards infinite progress, and in our reason a claim for absolute totality, regarded as the real idea, therefore this very inadequateness for that idea in our faculty for estimating the magnitude of things of the sense excites in us the feeling of the supersensible faculty" (Kant 1951 [§25], p.88). It is this supersensible faculty that makes it possible to produce the idea of the universe and thus to pretend for being commensurable with it. However, as was pointed out by J.-F. Lyotard, it is not in all cases that the sublime can be processed and integrated in the framework of experience. It can provide such an excess of sensibility and imagination that the finite human being cannot cope with it, and the origin of this Lyotard finds in the traumatic beginning of human life which in turn entails a radical, that is *unmasterable finiteness* of human beings (and thus, logically, their unmasterable incommensurability with the universe) (Lyotard 1997, p.243).

Practicing cosmologists, however, dare to speculate about the universe as a whole postulate the contrary, that is that there is an intrinsic *commensurability* between their embodied intellectual abilities and the grand-total of being

which this intellect attempts to encompass. Here they follow Pascal, who in his *Pensées* anticipated a simple truth that in spite of the fact that the universe in its deep foundations and origin is hidden from the human grasp, to know the nature of things humanity must assume its proportion to nature: "It is a strange thing that [men] want to understand the beginnings of things and from that to progress towards the knowledge of everything: for that is a presumption as infinite as the object of their exploration. We surely cannot make plans like that without an infinite presumption – or an infinite capacity – like nature itself" (Pascal 1959, p. 73). For most of working cosmologists this commensurability is taken as a premise, for otherwise their work could not even begin. In the history of philosophy of mathematics one can find an interesting trend of relating the finitude of human beings as creators of mathematics with its very origin (Becker 1938). Mathematics is seen as the mastery of the infinite so that only finite beings can make sense of the problem of the infinite; only they want to master it and thereby find themselves "confronted by the abyss of the unsurveyable, innumerable, and undeniable" (Ströker 1965, p. 306).

The commensurability between humanity and the universe, assessed by the philosophers of existence amounts to that "...the physicist continues to think of himself as an Absolute Mind before the pure object and to count also as truths in themselves the very statements that express the interdependence of the whole of the observable with a situated and incarnate physicist" (Merleau-Ponty 1968), p.15). Thus cosmologists exhibit that mode of thinking, which can be characterised as an anonymous and collective rational core, striped of particular historical and personal incarnate situatedness in the world. Anonymous and collective nature of scientific thinking follows from the requirement that scientific knowledge and the method must be "public", so that the

results of science can be presented to a wide audience and this ultimately establishes science as linked with *episteme* (as being different to personal opinions.) However the requirement of “publicness” of science allows one to pose a question of its subject or subjects. It is clear that in order to achieve a universal communication and public structure of knowledge one must strip off all historically contingent and empirically individual characteristics of subjects making them indifferent. In this case the truth established by one will be the same for another (Ibid., pp.16-16). In other words, the commensurability between historical embodied consciousness and the totality of the universe is achieved by means of a radical reduction of all contingent properties of thinking (as related to situation in history and science pertaining to it) and equating the scope of consciousness’ receptacle to the totality of all articulated facts about the universe. Here the classical Cartesian constitution of the subject of knowledge is implied, namely the deprivation of this subject of any contingent characteristics makes this subject a-temporal and a-historical, attributing to its thinking capacity the qualities of absolute knowledge. The subject itself becomes universal and eternal so that it is here where the optimism of cosmologists lies: the knowledge of the universe is possible because of the universal and absolute nature of the subject of science. However, as it was pointed by Kant in the context of the notion of the world, this optimism can be justified only as related to “thinking of” or “imagining of” the universe, not knowing it. A careful consideration of the Cartesian constitution of the subject of knowledge, historically corrigible in view of Kant’s stance on it, tells us that this subject can only be achieved as a sort of eschatological reality, as an ideal which plays a regulative role with respect to particular scientific research. Then this implies that the representation of the universe as a whole as commensurable

to scientific consciousness also represents an ideal, an asymptotic guideline which drives research which will never exhaust this ideal in every particular stage of it.¹ Correspondingly, when cosmological consciousness forgets about a simple truth that its own facticity is related to embodiment in the physical which, as science itself demonstrates, is not immutable and hence contingent. Thus there arises a general problem of reconciling historical contingency of forms of embodied consciousness with the alleged apodictic nature of its judgements about the universe.

Since cosmology pretends to deal with knowledge of the totality of the universe it is legitimate to pose a question about the human capacity for such knowledge. This in turn implies an enquiry into the human condition in general. One of the basic assumptions of the European intellectual tradition (in its deviation from the characteristically pre-modern Christian stance on anthropology) is that human nature, or human phenomenon, is part of the encompassing reality (that is, *nature*). The seeming efficacy of the methods of physics, for example, is transferred to anthropology and creates another conviction that one can exhaustively comprehend the meaning of human existence by methods of the natural sciences. What this means is that nature at large as well as human nature, as part of it, was implicitly conceived of as objects present-to-consciousness. In this case the reality of nature, as the collection of things and objects given to this anonymously present consciousness in their sheer facticity, had to be apprehended by science and knowledge through revealing the essential, universal and common characteristics of these objects. Since human nature was considered as part of nature at large, it acquired the features of things (in the phenomenality of objects) within nature whose knowledge meant to know essential and shared physical and biological characteristics

of human beings which aim to define this very human nature although with a total disregard of personhood as the otherness to nature entailing existential uniqueness.

The major difficulty with this naturalistic stance is that it predicates human nature as being part of and determined by nature at large while this very nature can be attained only from within its particular fragment, that is, *human nature*. It becomes clear that a philosophical ideal for radical enquiry about the knowledge of nature (or being) as devoid of any presuppositions about what has been sought can hardly be achieved because philosophy is created by human beings who cannot be removed from the central and initial point of any enquiry about nature (or being). Thus, it is understood that the question of nature and human beings in nature in particular, is most intimately connected with the question of *how this being can be attained*. Since it seems evident that the comprehension of being can only be reached from within the *experience* of what human beings themselves are, the attainment of nature (being) is always linked to that particular being which humans are. Thus if we refer to the universe as being a “part” or “mode” of being in general, one must admit that the being of the universe is always disclosed through the being of human beings.

Speaking differently, a *concrete* human existence (as incarnate existence in situation) becomes the root and source of access to the universe. But what is so particular about human existence? What does this existence mean? Existential phenomenology assigns to the term “existence” a special meaning by affirming, for example, that this “term” serves not to express that something actually belongs to the realm of existing realities, but to indicate *that mode of being which is proper to man and precisely constitutes him as human be-ing*. Existence in this sense is only intrinsic to human beings, and it

is this existence that makes them a fundamentally special mode of being. Thus the *existence* of the universe in this view can only be understood as the transferral of the mode of human existence to what we call the universe. In a different language, the universe is manifested or subsisting through articulation by human beings.²

Existential phenomenology considers human existence as a primordial phenomenon, as an initial fact of any further philosophising about the world, which cannot be fully reduced to something else or demonstrated by reference to “the outside” of this existence. Theology in its “explanation” of the mystery of human existence asserts creaturehood of humanity, as the radical otherness to God serving at the same time the basis for the unity and hence objectivity of all hypostatic (personal) humanity. The existence of a particular human person is not something which is inherent or latently present in the world, but represents an event which is initiated *in* creation but which is not *of* creation. Christian anthropology argues that human subjectivity is inconceivable without embodiment, so that human existence is constituted by the unity of the body and soul. However, this unity is not an elementary fact of being-in-the-world, which can be easily taken as an initial point. In a Christian perspective the unity of body and soul is hypostatic, so that genuine existence is rooted in the mystery of the human hypostasis which transcends the world. This existence has its ultimate source in the transcendent Divine, in whom human soul and body inhere in their hypostatic unity. Christian anthropology asserts that human beings are constituted not only through their “natural” predisposition to transcend their own subjectivity in the world, but they also have some ability and will to transcend the very relationship between their subjectivity and the world, that is to transcend being-in-the-world³; this makes it possible to articulate *nature* in general (and

human nature in particular) not only through its relationship to human intentional consciousness, but to position nature with respect to God. In this logic it is through this other-worldly dimension that humanity can have ability to articulate the world as a whole by effectively positioning itself outside the world; human consciousness is commensurable with the entirety of the universe due to the similarity of their foundations in the other of the world. In this sense a universe of a human being would be always existentially co-present and unique to this being by the fact of creation, although its context as related to living experience would become completely contingent and probably incommunicable to the other. This would create a problem of articulation of *the* universe as totality within history, as communion in community of human beings. Christian theology responds to this by asserting cosmic history as part of the history of salvation (Clément 1976) thus exercising a move similar to that of existential phenomenology.

It is clear that the views of existential phenomenology, which in its methods mimics that which has been asserted in theology, are stated as radically different in comparison with the scientific natural attitude which treats humanity as thing among other things. According to existential phenomenology all particular manifestations and all meanings of things in the world can only be understood and receive their foundation as correlates of the human hypostatic subjectivity whose mystery itself is never exhausted by means of the physical.⁴ This implies that any scientific activity, including cosmology, cannot discard the tacit presence of human existence in their assertions of reality. Any attempt to speculate about the universe as if it is done in the name of anonymous and impersonal absolute consciousness becomes no more than a fallacious ambition of the human reason to produce syllogistic insights on the nature of

the universe by disregarding the transcendental conditions of its presence in the world. This entails that cosmology with respect to its claims about the universe, cannot be consistently understood without taking into account the nature of human beings who create cosmology. As it was expressed elsewhere: “Man and the universe are like two parts of the same book which can be understood only by means of one another” (Dondeyne 1958, p. 10), (Köhler 2011, p. 37).

Subjectivity and Incarnate Existence

Existential phenomenology and existential tradition in general object to that stance of modern science which positions humanity as part of the outward reality (nature, world, universe) as if this reality existed independently of the constitution of this reality through human insight. Rather than beginning with nature and then seeing human life as its part, it argues for the reversal of procedure, that is seeing the human reality (as existential events) as the primary fact of any enquiry so that nature is to be seen in light of it. This implies that not only human reality cannot be a subordinate part of the natural universe, but the methods which are used to study the universe are not applicable to the phenomenon of humanity and human reality, because the latter is never an “object” present to itself, that is subjective reality can never be made an “object-thing” in spite of the fact that this subjectivity is always tacitly assumed in all modes of vaguely understood objectivity. Thus existential phenomenology insists that the ultimate meaning of the universe can be unfolded only by starting with human reality as separate and different in kind from the realm of the objectivised nature.⁵

The existence of humanity is intimately connected with the interiority of its intentional consciousness. But the affirmation of this interiority as a definition of the physically real

human being leads naturally to the transcendence of the sphere of pure subjectivity through embodiment in order to become something special and concrete, that is to be placed in a particular space and time. Human beings find themselves already in the world, in a particular place and at a particular time, and it is through subjectivity they try to find understanding of their meaning which cannot be reached without transcending towards the world. This involves this subjectivity in a relationship with the world thus constituting the foundation of all meanings, associated with the articulation of the universe as a mode of this relationship which “produces the natural and antepredicative unity of the world and our life, being apparent in our desires, our evaluations and in the landscape we see, more clearly than in objective knowledge, and furnishing the text which our knowledge tries to translate into precise language” (Merleau-Ponty 1962, p. xx).

Existential phenomenology argues that the natural attitude with its opposition between subject and object must be overcome in order to discover the primordial field of the human being-in-the-world, in which the actual contact with the thing “awakens within me a primordial knowledge of all things” and my finite and determinate perceptions’ become partial manifestations of a power of knowing which is coextensive with the world and unfolds it in full extent and depth” (Ibid., p. 430). By being completely encompassed and permeated by the world, there can not be anything in human beings which belongs to the world but does not belong to human beings.⁶

The involvement of human beings in the world, the access to the world, and to its meanings, has its deepest ground in consciousness, which forms de facto the *universal and sole medium of access*. However, when one asserts the primacy of consciousness one means the perceptual consciousness which makes the contact with the reality which is not consciousness itself.⁷ This is

the sphere of immediate sense-perceptions and meanings which forms the foundation which one needs in order to construct the world through a scientific thematization and conceptualisation. Consciousness being in an intricate link with the world does not represent itself entirely as an agency responsible for the constitution of the meaning; for, being responsible for the constitution of the meaning, it at the same time is perceptive of the meaning. Phenomenology doubts the legitimacy of any claim about existence of the ever-made pre-existent world without human beings; but it also denies the possibility that the meaning of the world, as given together with the meaning of man, can have its foundation outside the bundle of the world and man.

The sense of this “bundle” can be explicated through the terms: “dialogue” and “participation”. This view implies that science does not represent an objectivising description of the world on the side of an epistemological subject, which does not belong to the world and extracted from it. Cosmology, taken in its ontological meaning is an *event* of the universe itself. In this sense cosmology is limited by an ontological status of the participant of the world. Here is an interesting explication of what is meant by the dialogue between humanity and the universe and participation in the universe’s constitution. According to J. Kockelmans the meaning of the world arises in the encounter between man and the world and “exists only in an interplay of question and answer... Meaning arises in a dialectic relationship between man and the world, but it is not possible to say which of the two first begins the ‘interplay’ and which of the two first gives meaning to the other” (Kockelmans 1966, p. 53). In similarity with this J. A. Wheeler asserted a dialogism in relation between man and nature: physical reality reveals itself as an evolving complex of meanings in the course of the interplay between questions and answers which

the human subject addresses *to* and receives *from* that “out there” which is articulated by human observers as the physical reality and nature. He writes: “Physics gives light and pressure-tools to query and to communicate. Physics also gives chemistry and biology and, through them, observer-participants. They, by way of the devices they employ, the questions they ask, and the registrations they communicate...develop all they know or ever can know about the world” (Wheeler 1988, p. 5). The world is not a clock-like machine which has been pre-constructed and then discovered by human observers; it is a self-synthesized system, coming into existence through the articulation of impersonal reality “out there” via questions and answers processed by a collective of persons-observers who are capable of establishing the meaning and interpretation of their observation-participancy which ultimately leads to the constitution of the integral view of nature.

By defining human existence as being-in-the-world, existential phenomenology asserts an inherent relationality between humanity and the world, the relationality which constitutes their ontology as relationship, not just simple epistemological coordination. Then “knowledge” can be treated as a special mode of this relationship. The world-pole of this relationship then appears only as its projection to human consciousness, that is things are presented to subjects as they “look” at them, but not what they are.⁸ Knowledge as a mode of relationship between humanity and the world can be described as a particular intentionality of the embodied consciousness towards the world, which treats this world as existing outside and independently of the sphere of subjectivity. This corresponds to the natural attitude which dissects the immediacy of being-in-the-world, extracting from it only the mode of its explicit or visible “presence” to consciousness. However, the exercise of the natural attitude

presupposes a kind of “pre-scientific” knowledge, as awareness of the surrounding “medium” in which human incarnate subjectivity functions, but which “shows” itself in its empirical absence.⁹ This “pre-scientific” knowledge can be described in terms of incarnation: “To be incarnate means to appear to itself as body, that is this particular body...” (Marcel 1940, p. 31). Or, in different words: “Incarnation is the situation of *a being who appears to himself to be*, as it were, *bound to a body*.”¹⁰ In Marcel the ontological event when “existence comes into being” is linked to incarnation, which is a primary and incomprehensible mystery: all attempts to state what incarnation means are approximate and ultimately inadequate. Marcel calls the situation of incarnate existence a “concrete reality” which is neither exclusively physical nor psychological but which marks the limits of actions of an incarnate subject.

The body, as individualised flesh in empirical space and time, plays a central role by co-ordinating the incarnate conscious self, with the rest of what this self treats as the objects of its intentional grasp. This co-ordination can be expressed in the language of consubstantiality of the human flesh with the material content of the universe: “To say that something exists is not only to say that it belongs to the same system as my body..., it is also to say that it is in some way united to me as my body is.”¹¹ The sensible universe then represents the extension of the body of humanity in a very non-trivial sense: it manifests the ongoing incarnation of humanity.¹² Since incarnation, or “being in situation” cannot be objectified in terms of external constraints, the same is true with respect to space and time which, as part of one’s being in situation, come together with this situation. Space expresses here some characteristic of dynamics of life, being thus a relational “entity” with respect to that human agent who makes room for itself as

place and space. Making space constitutes a part of that creative development which accompanies any incarnation or being in situation, so that space acquires some specific forms of hypostatic expression of one's being, providing thus forms of communication of different persons as different "beings in situation."

The co-ordination with the world is understood as an inherent consubstantiality, and it refers to what human beings share with each other and with the substance of the universe in a transcendental (not only empirical) sense. This means that the 'matter' and 'nature' have transcendental meaning as different expressions of that consubstantiality of the *flesh* with the whole universe. It is in this sense that one can argue that consubstantiality must not be understood only as sharing of nature and physical substance, but rather as a fundamental feature of humanity that relates itself to the universe. In this sense consubstantiality of flesh is related to the similarity in orders of creation.

Incarnation in flesh reveals itself *in* space through a particular body but it is itself not *of* space: the incarnate consciousness manifests itself as non-local (that is transcending the boundaries of a body) and stretching across the universe thus carrying the whole world together with the body¹³; while being *in* a body it is not *of* the body, and this is the reason why it represents a typical situation when, in spite of its obvious personal *presence* as a body, the foundation of a sheer contingent facticity of this presence is unavailable to consciousness's grasp. Thus incarnation cannot be phenomenised even to the reflective consciousness of the incarnate person (no access to the mystery of one's birth). This implies that every particular experience of the universe, as reflected and articulated through incarnation cannot be studied in the same way as the universe is studied in cosmology in the phenomenality of objects. In cosmology the

collective and anonymous subjectivity creates a picture of the universe where a concrete human consciousness acquires the features of a contingent epiphenomenon of the physical by disregarding the centrality of the multihypostatic humanity as being the centre of disclosure of the universe from within the human, Divine – oriented history.

**Humanity's position
in the universe
and paradox of human subjectivity**

In spite of simple philosophical truth that everything which is affirmed through observations and measurements receives its meaning and interpretation from within human subjectivity, modern science is still wrestling with the idea that reality, let us say physical reality, cannot be alienated completely from the acts of an apprehending intellect. Science pursues in many of its areas the methodology which is historically identified with the name of Descartes and which in which it attempts to establish an ideal of objectivity of its theories by making a split between subjective conditions of any human knowledge and the meaning of this knowledge which it tries to objectify. According to this view the object of knowledge is an objectively existing world, which is fully explainable and can be expressed in precisely formulated laws. The fundamental premise of the natural attitude of science, is that the world exists in itself in its entirety and possesses a rationality that can be fully understood. Scientism, as a radical implication of the natural attitude, follows a definite criteria of objectivity, based on the principles of quantity: whatever can be quantified and mathematised according to certain rules, is objective by definition. All those aspects of "reality" which cannot be quantifiable are not objective and therefore meaningless, whereas the subject of knowledge, is treated as pure

consciousness, which is fully transparent to itself and which faces the rational world objectively, that is, it grasps the universal aspects of reality (the world is reduced to our consciousness of it).¹⁴ This ideal of knowledge was a certain reaction against embodiment and an attempt to free the knowing subject from body's situatedness or localising entanglements. In view of some trends in contemporary philosophy of science this ideal of knowledge (which can be qualified as a sort of foundationalism) is arguable. It is enough to point towards research on transcendental appropriation of modern physics in order to realise that the very criteria for objectivity changed by taking into account the historical and instrumental context of science which brings with it the human factor.¹⁵ This latter is ultimately linked to existential phenomenology's stance on embodiment which avoids any lapsing in the foundationalism, because it positions its view on the cognising self as neither being grounded by the world nor being itself the ground of the world.

In order to illustrate the point that knowledge in modern cosmology is imbued with human presence one may consider a simple example from popular scientific books which gives an account about the place of humanity in the overall structure of the universe. If one tries (in the natural attitude) to demonstrate the whole grandeur of the world in terms of typical sizes of objects, putting atoms, molecules, DNAs etc together with mega-objects like planets, stars, galaxies, clusters of galaxies and even the whole universe, then humanity finds itself in somewhat strange situation because the planet Earth inhabited by human life, occupies a tiny portion of volume of the visible universe; also the spatial scale of human body (10^2cm) is negligible in comparison with the radius of the visible universe (10^{28} cm). In a similar vein if the universe had a beginning 13.7 billion years ago, and then developed to its present state, it is not difficult to realize that the phenomenon

of humanity came into existence at a very late stage in the history of the universe, so that the universe was devoid of human life (and hence devoid of self-expression) during the most part of its "history". It is then not difficult to realize that if the human presence in the universe is judged from the point of view of its spatial and temporal dimension, human beings, considered as physico-biological bodies, turn out to be a contingent and *insignificant* part of the universe.

The paradox which is present here arises when one realises that the very representation of the universe as a whole, including all different levels of its physical structure, and the very positioning of all objects in the universe against a spatial grid, is the product of human intellectual activity. The paradox is obvious: the finite, even insignificant embodied human agencies in the vast universe articulate the entire universe from a point-like position in space and time. Humanity actualises in knowledge the totality of the universe as its intentional correlate and this manifests a fundamentally non-local essence of human presence, being a quality and a mode of being which transcends the finitude of its corporeal place, as well as all particular objects and laws associated with this corporeity.

One can see that if cosmology positions humanity in the vast universe, assuming that the universe (as entity) is pre-existent (with respect to the human intelligence), then, humanity represents a particular type of "objects", passively dependent on the universe. The so called "anthropic inference" in cosmology refines assertions about humanity's position in the universe by recapitulating consubstantiality of the universe and humanity in quantitative terms pertaining to specific embodiment.¹⁶ In a way, this is a trivial observation which affirms self-consistency of the human knowledge of the universe with the physical conditions of embodiment which make knowledge possible.

However, the anthropic inference deals with the necessary conditions for physical and biological existence of humanity and does not cover the hypothetical realm of its sufficient conditions, related to humanity's intellectual capacity.¹⁷ In this sense the famous and simplistic characteristic of humanity as "microcosm" turns out to be fundamentally insufficient.¹⁸ The mystery of the sufficient conditions remains obscure in the same sense as the inability to account for the contingent facticity of all, including consciousness itself. In the natural attitude, where one attempts to explain the origin of consciousness as the epiphenomenon of the physical and biological one fails to recognise that it attempts to explain itself from itself. This fallacious logical circle originates in the fact that physics and biology operate in the framework of the already given consciousness but this very consciousness never becomes their subject matter.¹⁹ A. Gurwitsch comments on this accentuating the personal dimension of embodied consciousness: "what is decisive and crucial importance is not whether the existence of consciousness is conceded or denied but rather that, even if this existence is conceded, consciousness and whatever pertains to it are considered as "private" and thus not on principle subject to scientific investigation" (Gurwitsch 1974, p. 133). It is because science cannot accommodate the dimension of personhood that it has to abandon the reference to embodiment at all and to treat consciousness as a medium of access which is hypostatically uniform and thus non-observable. Through such an oblivion human presence becomes irrelevant to the universe whereas sciences themselves become obscure.²⁰ As it was eloquently put by Merleau-Ponty: "Scientific points of view, according to which my existence is a moment of the world's are always both naïve and at the same time dishonest, because they take for granted, without explicitly mentioning, it, the other point of view, namely

that of consciousness, through which from the outset of a world forms itself round me and begins to exist for me."²¹

The ambivalence in assessing of humanity's position in the universe can be expressed in terms of a famous philosophical *paradox* asserting that while being *in* the universe, humanity is not *of* the universe that is, in a certain sense, it transcends the universe by "holding" it through humanity's grasp. The dualism in human position in the world, which is present in this paradox, constitutes the inherent feature of any cosmological discourse which has to reconcile the locality and contingency of cosmic position of humanity with its abilities to transcend this locality and encompass in theory the universe as a whole. Any naturalistic attempt to suppress or subvert the essential ambiguity of consciousness of being in the world²² and, at the same time, of the whole world distorts a truly scientific interpretation of the universe.

The abovementioned paradox was coined by E. Husserl as "the paradox of human subjectivity being a subject for the world and at the same time being an object in the world".²³ However, in its essence it was known since ancient times, and Kant, for example, expressed it in his *Critique of Practical Reason* as the difference in appreciation of the things which fill the human mind with "the starry heavens above and the moral law within": "The former begins from the place I occupy in the external world of sense, and enlarges my connection therein to an unbounded extent with worlds upon worlds and systems of systems, and moreover into limitless times of their periodic motion, its beginning and continuance. The second begins from my invisible self, my personality, and exhibits me in a world which has *true infinity*, but which is traceable only by the understanding, and with which I discern that I am not in a merely contingent but in a universal and necessary connection, as I am also thereby with all those visible worlds."²⁴ The paradox received

numerous formulations and interpretation (see (Carr 1999)) so that we provide the reader with a few clarifying references. M. Merleau-Ponty, rephrased the same paradox in the context of the tension between two descriptions of the human condition: “on the one hand man is a part of the world; on the other, he is the constituting consciousness of the world”; this tension is to be overcome on the ways of existentialism.²⁵ E. Fromm, departing from a psychological dimension, gave to this paradox a status of “existential dichotomy” arising from the fact that, according to him, man emerged in being as “anomaly” and “the freak” of the universe, whose being in a state of constant and unavoidable disequilibrium, anxiety, dissatisfaction and restlessness, which follow from being part of nature and transcending it.²⁶ Similarly to Fromm, R. Ingarden describes the existential dichotomy as a very special and doubly-complexioned of man’s feeling of being, on the one hand, quite alien to everything that happens in nature independently of him, so that he sees himself deprived by it of any kindly help and almost loses trust in fate; on the other hand, “in his pure and autonomous essence he feels himself to be something that stands out above nature, something that is so much more dignified than purely physical processes or what transpires in animals, that he cannot feel in solidarity with nature and live fully happily by being united with it in its domain” (Ingarden 1983, p. 17-18). According to Fromm and Ingarden’s insights humanity, when it narrows its perception of the place in the universe to the status of a thing among other things, dooms itself to depression and anxiety of its own insignificance in the vast cosmos because life is enslaved and controlled by it. Contrary to this the cosmos acquires some inward meaning if humanity sees itself as the centre of its disclosure and manifestation. Then the universe receives intrinsic human qualities thus being united to humanity: the question then

is not of being positioned in the universe, but that of living here and now in communion with the universe. But this communion means much more than sheer consubstantiality. It means that a human being can “transcend” the universe while retaining its immanence with the universe. As was emphatically asserted by M. Scheler: “Only man, because he is person, can rise *above himself* as a living being and make all to be its subject of knowledge, including himself, as if he would be a single centre on *the other side* of the space-time world. But this centre of human acts appropriating the world, its own body and its psyche cannot be itself a “part” of this world, that is, it cannot have any definite “where” and “when”; it can only be in the highest foundation of being. Thus man is a being which is above himself and the world.” (Scheler 1994, p. 160).

Hermann Weyl invoked this paradox as a riddle of the two-fold nature of ego, which, according to him, is beyond the limits of science: “On the one hand I am a real individual man, born by a mother and destined to die, carrying out real physical and psychical acts, one among many... On the other hand, I am ‘vision’ open to reason, a self-penetrating light immanent sense-giving consciousness or, however you may call it, and as such unique. Therefore I can say to myself both: ‘I think, I am real and conditioned’ as well as “I think and in my thinking I am free” (Weyl 2009, p. 197). The paradox of human subjectivity reflects the fundamental existential dichotomy of the incarnate human condition as that primary reality from which any realistic cosmology and its philosophy must originate. And it is the inability of science to account for this paradox that leads inevitably to transcending tendencies to look for its foundation through the other-worldly connotations.²⁷

Such connotations were implicitly present in theology and religious philosophy. As an example, we provide few quotations from the

earlier Christian literature as well as from the 20th century religious philosophy which explicate the sense of the paradox. Here is a passage from St. Gregory the Theologian (Naziansus) (dates) with a characteristic formulation of the paradox: "...Having decided to demonstrate this, the Artificer of the universe, the Logos, created man as a single living creature from both elements, that is to say from the nature of both the visible and the invisible worlds. On the one hand He took the body from already pre-existing matter, on the other He endowed it with breath from Himself, which Scripture terms the intelligent soul and the image of God (Gen. 1:27; 2:7). He sat man upon the earth as a second world, a great world in a little one, as a new kind of angel, adoring God with both aspects of his twofold being, fully initiated into the visible creation but only partially into the invisible, king of all that exists on earth but subject to the King above, both earthly and heavenly, both transient [by nature AN] and immortal [by the image AN], both visible [sensible by body AN] and invisible [intelligible by reason AN], situated between greatness [lord of the universe AN] and lowliness [slave of the universe AN], at the same time both spirit and flesh..."²⁸. In St. Maximus the Confessor (dates) the paradox was interpreted in the context of faith in God who created man in his own image and likeness, so that initially man was "like" God, that is he was "all in all". C.f. (Col. 3:11). For example, Maximus the Confessor described this presence of man in all things in terms of a potential unity of all creation, which was to be realised by man as originally created: "...man was introduced last among existent things, as the natural bond mediating between the extremes of the whole through his own parts, and bringing into unity in his own person those things which are by nature far distant from each other..."²⁹ Man was created in order to mediate between all divisions in creation, for example between the

sensible (visible) and intelligible (invisible); he writes: "As a compound of soul and body he [man] is limited essentially by intelligible and sensible realities, while at the same time he himself defines [articulates] these realities through his capacity to apprehend intellectually and perceive with his senses."³⁰ For Maximus, however, the dichotomy, present in this affirmation was not a problem, for according to his theological position the fundamental non-locality which is present in human insight about the universe originates from the human ability (as God-given) to comprehend the intelligible realm which contains ideas about the universe as a whole.

Another quotation is from a Russian religious philosopher N. Berdyaev: "There are in personality natural foundation principles which are linked with the cosmic cycle. But the personal in man is of different extraction and of different quality and it always denotes a break with natural necessity. ... Man as personality is not part of nature, he has within him the image of God. There is nature in man, but he is not nature. Man is a microcosm and therefore he is not part of the cosmos" (Berdyaev 1944, pp. 94-95)³¹; hence "the place of man in the natural world is tragic. Man is not only an object in this world, first of all he is subject which cannot be deduced from an object. Taken with this the relation of man to cosmos is defined by its being microcosm; he enfolds cosmos and history. Man cannot be a part of something, he is the whole. Through the spiritual in him, man is not subordinated to nature and independent of it although natural forces can kill him. If man would be just a natural and finite being, his death would not be so tragic: what is tragic is death of an immortal being who aspire to infinity. Only from an object-perspective man is part of nature; from a spiritual perspective, nature is in him. He is a slave of nature and he is its lord" (Berdyaev 2003, p. 588). This can be paralleled with P. Florensky, according to whom "nature and man are both

infinite. And it is because of being infinite, that they are commensurable and can be parts of each other...Man is in the world, but man is complex to the same extent as the world. The world is in man, but the world is also complex as man” (Florensky 1994, p. 188); “Man is the recapitulation of the world, its summary; the world is the disclosure of man, its projection” (Ibid., p. 187). S. Bulgakov contributed to the same stream of thought: “On the one hand, man is potential all, the potential centre of the antropo-cosmos, which, although, not yet realised but is being realised, on the other hand man is the product of this world, of the empirical” (Bulgakov 1993, p. 160). Another Russian religious philosopher V. Nesmelov describes the human knower as both a living organism and a transcendental subject. According to Nesmelov man is a Person who asserts itself as a free agent of its own volitions and is called by Nesmelov as absolute and unconditional being because he knows through knowing himself. The human person represents that link, or pole of being, where the unconditional and conditional meet (Nesmelov 1905, pp. 64-65).³²

The implicit presence of the paradox in all scientific affirmations of the universe reflects the intrinsic split between the two different modes of intentionality. The self-awareness of its own transcendental nature happens when the intentionality has to deploy its means to cope with the constraints and pressures of the outer world (embodiment, for example). The more the universe attempts to crush human existence under the weight of astronomical facts, the more the egocentric intentionality prevails as a measure of resistance to it. The more the pressure of the outer world relaxes, the more the same intentionality relaxes and the transcendental “I” looses itself in the outer things. Thus the constraints of the constitution of the outer world which escape clear-cut definitions and visibility constitute the very intentionality to the extent

that it cannot fully cope with these constraints (Vialatoux 1965, p. 34). Then one can see that the paradox of human subjectivity is not simply an epistemological conundrum, it reflects a genuine ambiguity or bipolarity of human beings, which must be balanced and *existentially* balanced (c.f. (Leprince-Ringuet 1973, p. 164). S. Frank made a valuable comment that any attempt to remove this ambiguity or explain it away leads to the distorted anthropology and hence cosmology:

Through his body and carnal life, and external layer of his mind determined by its connection with the body, man in himself forms part – a subordinate and insignificant part – of the objective world...Through his depths – through the kernel or root of his being, and in this sense through his true essence – he belongs to the transcendent primary reality...(Frank 19??, p. 34). Man thus has a dual nature, and every theory of life which fails to account of both aspects of his being is bound to be inadequate (Ibid.). ..The structure of our being is complex and antinomic, and all artificial simplification distorts it (Ibid., p. 35).

The dichotomy between faith and reason by the virtue of its factual existence manifests and explicates the complex life of man as being split in its intentionalities between the mundane things of the world and their underlying foundation, including the foundation of the very consciousness which is responsible for the facticity of both, theology and science.

Spatial and temporal expression of the paradox of human subjectivity

The paradox of human subjectivity in the world can be understood in a different way. On the one hand, being inseparable from reality in virtue of its embodied intentional consciousness, human persons can exist only in the context of their immediate non-distance from reality (consubstantiality). On the other hand, being

a hypostatic formation (humanity is endowed with an ability to inhere the universe in its own subjectivity through the fusion of knowledge, to form the meaning and act in the universe as its self-consciousness and self-realization, or, theologically speaking, as its hypostasis³³), that is being fundamentally different from other material things, human persons are “infinitely” ontologically distant from those other things (which makes it possible to neutralise object within the primary relationship with subject and transform it into one-sided submission³⁴). The ability to distance themselves from outer things (even, in abstraction, from one’s own body), makes human persons equally positioned with respect to all objects in the universe, so that they can be articulated by human subjectivity as different and uniformly distant from it. Paradoxically, on the one hand, because of the infinite ontological distance from all things in the universe humanity is hypostatically commensurable (and thus equally close) with respect to all objects in the universe, including the universe as a whole, whereas on the other hand, being corporeally at non-distance from the universe, humanity is physically incommensurable with the universe.

The paradox of human subjectivity can be formulated in terms of space, that is in terms of humanity’s topological position in the universe (this will make the paradox even more close to the paradox of space in the Incarnation³⁵). The formulation of the paradox in terms of space is achieved through a metaphor of the container and of the contained: on the one hand by its physical and biological parameters humanity is contained in the universe, on the other hand the universe itself is “contained” by human subjectivity as its intentional correlate (that is enhypostatically). In this formulation the ontological centrality of humanity is contraposed to its cosmographic mediocrity (cosmological principle). The distinction between two worlds is

accentuated here: the one which is affirmed by cosmology as existing whole and scientifically thematised in terms of elements and essences, and another one, associated with the immediate life of consciousness, the so called life-world, the medium of indwelling into which every human being is brought into existence. For every particular being their life-world, being “here and now”, is linked to the planet Earth and thus is geocentric. Earth is ontologically central in a spiritual sense (c.f. (Lossky 1997, p. 64)), in the sense of “wherefrom” manifestations and disclosure of the universe do originate. In spite of the fact that astronomy and cosmology deal with Earth as an object and ascribe to it a movement in space, both of them were produced by human beings on Earth, and it was here, on this planet, that scientific thought developed the definitions of motion, rest, space understood in a general objective sense. Cosmologists’ statements concerning the indifferent position of Earth in cosmic space (cosmological principle) receive their meaning from experiences acquired here, on the planet Earth. The *here* which is the place of this initial experience *is not* therefore a place in space, since it is itself a place of origin of a notion of space.³⁶ In this sense the cosmological principle, as a philosophical hypothesis articulating the uniformity of space at large, enters into contradiction with the singular and unique “here” which is radically incomparable with any “there” thus predetermining the non-homogeneous topology in any ideation about space at large. The nontrivial nature of this last comment follows from a phenomenological stance on space as not pre-existent objective out there originating from subject’s passive contemplation of it, but in terms of subject’s comportment “in” it. This, so called, attuned space becomes an initial instant and a medium of disclosure of that “objective” space through relation to which this subject is constituted as corporeal existence in the

universe. However this relationship is manifest of a paradox similar to that of the container and of the contained put in an interrogative form: how can one grasp the relationship of a particular being (subject) as if it “in” space when this being is essentially constituted by being ‘over against’, and hence beyond space?³⁷

What is obvious, however is that the constitution of space, first of all of the attuned space is intertwined with and not detachable from the fundamental aspect of human embodiment or corporeity, where the latter manifests itself as a living being in relation to other beings and to the world, in whom this relation is announced and articulated in a way of its sense-reaction and its comportment, or its action in situation. In this sense the constitution of space in all its varieties (from attuned space to mathematical space of the universe) represents the modes of explication of embodiment or corporeity through which human beings interact with the world. Thus the lived body entails a kind of lived space which bears the character of self-givenness “in the flesh”. In other words the initial point of any discourse on corporeity and associated spatiality implies a kind of knowledge as presence “in person” or “in the flesh” as a mode of givenness of an object in its standing in front of the functioning corporeity.

In cosmology, by articulating the entirety of the universe human beings remain corporeal, so that their corporeality as relationship to all things contains in its facticity the very premise of being incommensurable physically and commensurable hypostatically to the totality which humanity attempts to reveal in cosmology. The attitude to this totality is two-fold: on the one hand humanity attunes to it through belonging to it; on the other hand, through a non-egocentric intentionality humanity positions itself as if it were beyond the universe, “looked” at this universe as an object and depict the latter as something being present over against “the flesh” and in person.

However, since humanity cannot abandon its position of corporeal existence in situation on the planet Earth, all cosmological models contain the elements of this given embodiment even in those cases when they predicate the universe in trans-human or even non-human (the early universe or multiverse) terms. In other words, the commensurability with the universe, as the transferral of some human qualities to it, is not *of* space, but originates *in* space.³⁸

And finally, a brief note on the temporal dimension of the paradox³⁹. Despite science’s claims that intelligent humanity is an insignificant and accidental evolutionary artefact in the material universe⁴⁰, philosophers object to this by pointing out that human consciousness cannot be explained in terms of cosmic factors as well as in terms of the evolutionary theories (both cosmological and biological) that themselves are mental creations. This brings a temporal dimension to the paradox by pointing out that any speculation about the world as it existed prior to emergence of conscious humanity is a dubious enterprise, for what is affirmed as existing in pre-historical time still has features of that consciousness which is limited by the conditions of embodiment at present.⁴¹ This implies that the very history of the universe, given through the display of its frozen past, has sense only through the historical consciousness of human beings.

If human history is treated only as an *epiphenomenon* or as a continuation of the natural history of the universe, then the emergence of the phenomenon of humanity in the late history of the universe is merely a contingent aspect of cosmic and biological evolution and thus has no philosophical meaning. Any question about mankind’s significance or insignificance has meaning only if the whole of natural history is seen through the “teleological eyes”, which are themselves not an integral part of the scientific attitude. If, on the contrary, human history is not

only distinguished from the natural history of the universe, but actually understood as incorporating natural history as the unfolding constitution of the world and humanity within human history, then human history ceases to be a part of cosmic determinism and acquires some features of a “trial”, an “event” (the “humankind-event”⁴²) in which man’s intrinsic freedom and a dualistic standing in the universe are encapsulated.⁴³ The centrality of humanity’s position in the universe (as a subject of history of this universe) thereby acquires some teleological connotations: the universe needs humanity in order to be explored and thus transfigured (through knowledge) through the acquisition of the *sense* contrary to its seeming non-sensical contingent facticity. This point gives another dimension to the stance of phenomenological philosophy that the world is radically human in a non-trivial sense: “if man is attached to the world, the world likewise is attached to man, in such a way that it is no longer possible to speak about a world-without-man” (Luijpen 1960, p. 25). The world, being a container for humanity is contained by human person not through the power of physical forces (consubstantiality), but through the power of intellect, which makes humanity as conscious persons equally, that is, qualitatively *distant* from the world in its apprehending capacity to articulate the world.

The paradox of human subjectivity and personhood

The paradox of human subjectivity in the universe can be further explicated as pointing towards the different positions human subjectivity can adopt with respect to ontology of being. On the one hand there is an explicit treatment of the world in terms of thinghood, that is, in terms of things pre-given in order to be recognised by thinking consciousness. In this sense the universe pre-exists as substance and the ultimate

ontology of being is thought to be the ontology of this substance. Then the facticity of human beings in the universe is treated as the variation of this substance. In this case, humanity being a part of the universe experiences fear that the laws of the universe with their contingent, but fine-tuned outcomes at some stage can remove the phenomenon of humankind from it. On the other hand there is a different intuition that things which are out there, objects and entities in the universe appear not as external and hostile environment but as the manifestation of the living presence of humanity in the universe which actually makes all these things *beings*. The making of the universe must not be understood as manufacturing things from some pre-given material, but rather as *creating* things in a rather different sense. To create in the sense of personhood means not to physically dominate the pre-given, but to create such an ontological situation where all so called things acquire the “presence” relevant to the totality of existence understood not in terms of substance but in terms of *hypostasis* (personhood). Humanity itself becomes present and manifest through transferring its hypostasis to being. This hypostasis is not something which ‘pre-exists’ in substance or in nature, it is not an impersonal combination of the worldly elements or platonic forms, but the center and the ultimate beginning of all articulated existence.⁴⁴

The paradox of human subjectivity can thus be explicated as the tension between ontologies of being based either on substance or on hypostasis. For example, in modern physics and cosmology the grandeur of the world is understood through particles, fields, space-time, planets, galaxies, the whole universe, but, as we have pointed out above, there is no place for human subjectivity and personhood. The personal characteristics of those who create the physical picture of the world are remarkably missing from the very result of their activity. One can say that while being tacitly

present behind the works of its own creation, personhood as the source of this creativity, is absent from its own creation. The picture of the universe is the manifestation of personal presence in the universe, but persons who created this picture are not explicitly found in it.⁴⁵ Cosmology in its outward expression creates such conditions for unconcealment of the universe which takes place at the expense of concealment of persons.

Personhood is missing from the natural sciences because they approach human beings in the same way as they approach other things, that is in the phenomenality of objects: one needs to “mortify” human beings and reduce them either to “walking dust” or to impersonal physico-biological robots in order to affirm their presence by means of observation and rational induction. But personhood as existential events escapes scientific grasp by transcending either materialistic definitions or idealistic beliefs. Personhood manifests itself as that givenness which cannot be subjected to any constraints of matter or categories of the understanding. This is the reason why it is impossible to define personhood in the way one defines things. Things can be defined because they can be possessed and operated, but it is impossible to possess persons.⁴⁶

However, in spite of all the insufficiency of science to deal with the problem of personhood, persons do not disappear but reveal themselves in a rather dramatic way. Since humanity as personhood is not content with the presence of beings in the world as they are given to it empirically and studied scientifically. As we pointed out in the Introduction humanity wants to recognise beings not so much according to their nature, but as results of *free will*. Thus by subjugating that truth which is gained on the grounds of the scientific to the desire for truth of the whole created existence humanity exhibits its hypostatic essence, that is its personhood.

Humanity as personhood prefers to express its own presence by appealing to the belief in the trans-worldly source of this existence in the conditions of its incapacity to overcome the absence of personhood in scientific articulations of the world. Humanity makes this effort as a resistance to being contained by the universe and being comprehended in the phenomenality of objects. It does not want to be manipulated through circumscribability and individualisation which are inherent in spatio-temporal representations of the universe. It is in this sense that humanity as personhood longs for truth of existence which is *in* this world but not *of* this world. This longing forms spiritual motives of humanity and points toward the *telos* of explanation of all, in which the paradox the human hypostatic existence as presence in absence will have to be finally resolved.

The reinstatement of personhood implies that one must turn to the foundations of the sciences, their origin in constitutive acts of subjectivity. The absence of personhood in the resulting scientific picture of the world must be subjected to the phenomenological scrutiny in order to recover back those intentionalities of human subjectivity which led to the development of the world-view in terms of efficient physical causality. We have here a kind of a phenomenological reversal in attitude to cosmology: to look at it not from the point of view of the content of its theories and their alleged reference to the physical world, not to enquire into the meaning of concepts, such as, for example, the universe as a whole, its origin etc., but, in fact, to use cosmology as a hermeneutical tool for understanding humanity itself, to use the human image of the universe as a kind of mirror through which human subjectivity and persons constitute themselves. It is through this shift in attitude that the sense of cosmology can be reversed: it can be seen as that activity of the human self, which through its outward

look establishes itself and brings out (according to its will) the absence of personhood in the mathematized science to its explicit philosophical presence. The phenomenological reversal to the noetic pole of cosmological research is thus dictated by the work of intentionality. Seen this way, cosmological research exhibits an interesting interplay between the elements of the natural and human sciences that we discuss below.

The phenomenological reversal of such a construct as the universe as a whole (which served for the naturally oriented mind as the ultimate objective background of all facticity of life), reveals this construct as a certain structure of the incarnate transcendental subjectivity. If in the natural attitude science affirms the explicit presence of the universe at the expense of the absence of personhood, in the philosophical attitude the universe as an intentional correlate of human subjectivity does not possess qualities of “out there” that is not measured in terms of distance. It is not the “other” as object here or there, above or below, right or left, near or far. The universe in all its entirety is posed as existent in the human hypostasis, but since this entirety is not available to any empirical acquisition, this *enhypositisation* manifests the universe’s presence in absence. This result is not surprising, for as human personhood escapes complete definitions by manifesting itself through “presence in absence”, the universe, being a mirror of the human reason through which humanity constitutes itself also escapes complete definitions thus acquiring a mode of “presence in absence”, that is a mode of personal “opposite” of dynamic ecstatic reference. When one articulates the universe in terms of measurements of distance one loses personhood; when one brings the universe to being a personal “opposite” of ecstatic reference one loses the sense of the universe as extended space and time. The universe can then be understood as a kind of

otherness of personhood which is present in the event of person’s self-affirmation.

The positioning of human beings in the universe in terms of extended space and time represents a mental abstraction from the living experience (personal ecstatic reference) as that context where human beings conceive themselves as unique forms of existence. There is an immediate living context common to all human beings which makes their life meaningful and valuable regardless of what scientific books write about human insignificance on a cosmic scale.⁴⁷ But this living context, the life-world in the terminology of Husserl, is not taken into account by science (as an ingredient of its own constitution). This indicates that the scientific picture of the universe, and hence its assertions about the insignificant place of human beings (as physical bodies) in it, represent abstractions from the living experience. The abstraction of the universe as the measurable and extended distance manifests the ideal of classical rationality to objectify the meaning of things (events) by means of paralleling the immediate experience of these things through their intelligible image in an abstract “space”, which contains universal structures accessible to every consciousness.

This implies mathematics as a language of description, that allows everyone to position a physical event (as an existential event) in the abstract mathematical space and time. Then one can realize that the “physical” reality, which is articulated by conscious beings in the intelligible world contains in itself non-empirical elements, rooted in the trans-empirical nature of human subjectivity. This implies that “nature” (or the universe), understood classically as something which is independent from acts of consciousness cannot function anymore as a logically consistent notion, for it involves human consciousness in its definition as constitution. This is, in fact, a new

saying of that which W. Heisenberg advocated long ago, namely that the natural sciences are created by men, and that the function of the sciences is to be a part of the interaction, or relationship between nature and human beings.⁴⁸ This entails the conclusion that scientific *reality* is not only the realm of the outer world, but also the realm of consciousness's work in scientific discourse. Reality becomes a relation, an *encounter*, a coexistence of oneself and the world, ordination of the world to one and opening of oneself to the world, at once oneself and that which is other than oneself.⁴⁹ Correspondingly physical theories of the universe can be interesting not only for the sake of physics and cosmology *per se*. While studying physical nature we also study the relationship between us and nature, and as a result, we study human nature. Cosmology, being initially a natural scientific aspiration towards the whole universe, thus becomes the "cosmology" of the interior cosmos of the human mind. Cosmology becomes a science of the human affairs whereas the universe, as science portrays it, becomes a "mirror" of the human embodied soul, the vision of humanity inside out. By paraphrasing a passage from M. Merleau-Ponty, one can suggest that scientific thinking of the universe, a thinking which looks on from above, and thinks of the universe as an object, must return to 'there is' which precedes it, that is to the site, the soil of the humanly produced and modified world, as it is in our lives and for

our actual bodies which we call ours, this sentinel standing quietly at the command of our words and acts (Merleau-Ponty 1993, pp. 122-23). The same can be reformulated differently.

Since from a phenomenological point of view the structures of the disclosure of embodiment are part of the same cognitive life that extends to things like the categories of thinking, the exact sciences, logic and mathematics, the very paradox of human subjectivity in the universe contributes towards the constitution of the person understood as a transcendental subjectivity that faces its own corporeality through the empirical structures of the world. In other words, the very constitution of corporeality as an intentional correlate of consciousness takes place through the positioning of conscious bodies in the background of all cosmic things. But this implies that cosmology, as a special physico-mathematical thematisation of this corporeal background, contributes indirectly towards the problem of the hypostatic corporeality, that is "to the site, the soil of the humanly produced and modified world" as that personal "opposite" of dynamic ecstatic reference. Here we come to a threshold in our discussion of the meaning of the human dimension in cosmology by formulating a thesis that cosmology is such a discipline where the demarcation between the elements of the natural and human sciences becomes very loose: cosmology functions at the crossroads of the natural and human sciences.⁵⁰

¹ See an interesting discussion on the eschatological sense of the ideal of rationality in science in (Goutner, 2008).

² One can employ a theological terminology by saying that the universe is enhypostasized by human being. The Greek terms *enhyposstatic* or *enhypostasis*, which were introduced in theology by Leontius of Byzantium in the context of Christological discussions of 6 – 7 centuries, have meaning according to *A Patristic Greek Lexicon* as "being, existing in an hypostasis or Person", "subsistent in, inherent". Florovsky refers to the terms used by Leontius by saying that *enhypostasis* points towards something which is not self-contingent, but has its being in the other and is not contemplated as it is in itself. *Enhypostasis* is the reality in the other hypostasis. (See, for example, (Florovsky 1987, pp. 191-203). An example, which illustrates what the existence in a hypostasis or person means, can be borrowed from a sphere of theological anthropology which asserts that "man is hypostasis [personality] of the cosmos, its conscious and personal self-expression; it is he who gives meaning to things and who has to transfigure them. For the universe, man is its hope to receive grace and to be united with God" (Gregorios, 1987, p. 83). The universe as *the expressed and articulated existence* is possible only in human hypostasis, that is it acquires some qualities of existence if it is reflected in the personality of humanity. Using the words of Maximus the Confessor, every intellection about the universe inheres as a quality in an apprehending being (compare with his, *Two Hundred Texts on Theology and the Incarnate Dispensation of the Son of God*, 2.3). The universe

thus acquires qualitative existence in the being who apprehends it. Prestige in order to illustrate how the apprehending knowledge becomes hypostatic existence refers to Clement of Alexandria (*Stromata*, 4:22, 136:4), in order to articulate the point that speaking of knowledge, “apprehension extends by means of study into permanent apprehension; and permanent apprehension, by becoming, through continuous fusion, the substance of the knower and perpetual contemplation, remains a living hypostasis. This appears to mean that knowledge becomes so bound up with the being of the knowing subject, as to constitute a permanent entity” (Prestige 1955, p.176). The link between the universe as articulated existence and the apprehending being is not ontological, but rather hypostatic or personal. A Patristic theologian would say that existence of the universe as the articulated existence is *hypostatic* existence, that is the universe is *enhyposstatic*.

³ This is terminology from (Heidegger 1998, p. 78).

⁴ In this sense phenomenology reproduces a Christian stance on anthropology as being apophatic because it tells one exactly what human person is not (see (Clément 2000, p. 30).

⁵ C.f. Kant’s assertions on irreducibility of reason in *Critique of Pure Reason*, A553-557.

⁶ This thought can be interpreted as *consubstantiality* between humanity and the universe. However it does not preclude humanity from being incommensurable to the universe in terms of extended space and time. In a theological stance, however, this does not mean that human beings cannot have a mode of existence different from the physical world. In addition to this one must add that the term consubstantiality must be used with caution. The universe, as cosmology claims, consists of 96 percent of matter which has no direct physical interactions with those atomic structures which constitute the visible universe and human bodies, in particular. However, one can speak in this case of consubstantiality with the universe in a transcendental sense: the invisible part of the universe are constituted through cosmological research as necessary cosmological elements for human existence. Thus the term consubstantiality reflects not only that link with the universe, which is empirically available, but has transcendental origin.

⁷ In G. Marcel’s words: “My actual state of consciousness, which is bound up with the position of the organic body that it expresses, is the landmark in relation to which the infinite multiplicity of what can be thought by myself as existing is ordained. All existence can be traced back to this landmark, and outside of all relation to it, it is only by an abstraction that we can think existence. To think a thing as existing is to think oneself as the perceiver, it is to extend one’s experience in such a way that it comprehends even that which it appeared to leave outside itself. This does not imply the kind of subjective idealism which attributes a privileged value to the immediate date of perception, but only the affirmation that existence supposes a relation to an immediate thought in general, that is to say to my thought” (Marcel 1952, p. 14).

⁸ As was expressed by P. Florensky, “All that which is knowable by us is that which is grasped by us, and by us transformed into ourselves...Through the act of knowledge all becomes our likeness” (Florensky 1994, p. 184). Things appear to humanity only within the context imposed by the very fact of its existence. In this sense the existence of things encodes the presence of humanity. By observing some things one can infer to the fact of existence of human beings. (Heidegger 1962, p. 88).

⁹ F. Nietzsche called this awareness “great reason of flesh” (c.f. “Von den Verächtern des Leibes,” *Also Sprach Zarathustra: Ein Buch für Alle und Keinen* (Nietzsche 1919)). Flesh does not mean the body, which, extended in the space of the world, is found there perceived or rather sensed, but it means my unique body, which alone senses the bodies of the world. It is *my* flesh that senses bodies that themselves do not sense: it senses everything else only by sensing itself sensing. E. Levinas calls a similar mode of awareness as “non-intentional consciousness” which “accompanies all intentional processes of consciousness and of *myself* who, within this consciousness, “acts” and “wishes”, and has “intentions”. This is awareness of consciousness, indirect and implicit, without an initiative to get back on myself, without aim; a passive consciousness as time which passes and makes me old without my involvement” (Levinas 1998, p. 80).

¹⁰ (Marcel 1965, p.16) (emphasis added). Marcel defines here existence in a way similar to that which was later used by E. Levinas, who spoke of *hypostasis* as an ontological event wherein “the existent contracts its existing” (Levinas 1987, p. 43).

¹¹ (Marcel 1965, p. 15). C.f. P. Florensky: “Biologically, all that which surrounds us is our body, the extension of our body, the aggregate of our complimentary organs” (Florensky 1994, p. 184). W. Heisenberg expressed a similar thought by assigning to technology the meaning of extended biological functions: “Technology no longer appears as the result of a *conscious human* effort to extend man’s material powers, but rather as a large-scale biological process in which man’s organic functions are increasingly transferred to his environment.” (Heisenberg 1958, pp. 19-20). P. Heelan proposes the manifest image of nature as the totality of empirical horizons reached by human subjects through embodied intentions. In this case the body as subject is used by these intentions to extend itself into the environment and then to be adapted to any bodily extension (Heelan 1972, pp. 497-501).

¹² (Marcel 1952, p. 259). Certainly this thought can be extended by saying that the past is not only related to my body as such. It is related to my conscious body which attempts to realise its past also in a strictly historical sense. To understand our past as history in general means to understand deeply and incorporate it in ourselves in order to become ourselves. One must attempt a breakthrough towards our past as origin from which all our present and future emerges. C.f. (Jaspers 1982, pp. 84, 117).

¹³ This is a premise of commensurability between consciousness and the universe based in consubstantiality.

¹⁴ One should remind to the reader that the natural attitude of exact sciences to what they called the “real” and “objective” stands in opposition to the *philosophical attitude*, which does not take for granted any presupposition of the given experience and anything pre-given as obviously existing. The latter considers it an error to assume that scientific knowledge is pure mirroring of the world-in-itself, as well as the very assumption that there can be established an access to the world-in-itself in its absolute detachment from human senses and intelligibility. The overcoming of scientism and the natural attitude assumes thus that one cannot substitute the “objective” world of physical sciences for the fullness of experience of the living world by human conscious beings.

- ¹⁵ See more details in (Bitbol, Kerszberg, Petitot 2009).
- ¹⁶ Literature on the “anthropic inference” in cosmology and associated fine-tuning is vast. See, for example, a classical book of (Barrow, Tipler 1986) as well as more recent (Barrow, Morris, Freeland, Harper 2008).
- ¹⁷ The sufficient conditions become actual in the present state of technology when humanity can control the factors of life’s existence on the planet Earth from the side of so to speak “negative conditions”: indeed it is in capacity to exterminate life on Earth so that the future continuation of life depends not only on the natural conditions and possible disasters which can terminate this life, but also on a conscious desire to have this life. This desire, however belongs to the sphere of the human morality and humanity’s vision of its own destiny and that is why is not entirely controlled by the physical factors. In this sense the sufficient conditions of existence of humanity in the universe depend on humanity’s own vision of its place in the universe, its importance or non-importance for the fate of the universe itself. Correspondingly cosmological research turns out to be important as contributing to the realisation of cosmic goals of humankind. (See discussion in (Nesteruk 2003, pp. 195-208).
- ¹⁸ Being popular in Classical Greek philosophy, the idea of microcosm was criticised in Christian literature because it did not take into account the intellectual abilities to disclose the sense of the universe. Consubstantiality is triviality and, according to Gregory of Nyssa, “there is nothing remarkable in Man’s being the image and likeness of the universe,...in thinking we exalt human nature by this grandiose name (microcosm, synthesis of the universe) we forget that we are thus favouring it with the qualities of gnats and mice. (Quoted in (Clément 2000, p. 34). Gregory’s comparison of humanity with mice is remarkable, because it is a very popular nowadays to advocate, on the grounds of biological evolution, that humanity did not progress too far from the animal-like state because humans and mice share 96 percent of their DNA.
- ¹⁹ B. Carr comments on this situation in physics: “That physics has little to say about the place of man in the universe is perhaps not surprising when one considers the fact that most physicists probably regard man, and more generally consciousness, as being entirely irrelevant to the functioning of the universe”(Carr 1998, p. 152).
- ²⁰ A. Gurwitsch described this state of affairs as inability of science to give an account of its own possibility and efficacy: “All questions concerning human reason ...are eliminated from the sciences;.. if the human mind and human rationality are either overlooked or explained away in a naturalistic fashion, the sciences themselves become unintelligible; ... the sciences appear as most ingenious technical devices which one may learn to use...but whose interior mechanism and functioning remain utterly obscure” (Gurwitsch, 1966, pp. 399-400).
- ²¹ (Merleau-Ponty 1962, p. ix). Apart from inadequacy in comprehension of foundations of science the whole stream of thought can be supplemented by a spiritual sentiment, namely that separating the world and the universe from the conditions of functioning of human subjectivity, science based on the natural attitude, by using the words of the Russian philosopher S. Bulgakov, acquires lifeless intentionality and orientates us in the kingdom of dead things (Bulgakov 1993, p. 207). A French phenomenologist E. Minkowski expressed in a similar way that everything that science touches “becomes something immobile, dead nature” (Minkowski 1970, p. 246).
- ²² In words of A. Gurwitsch “[Consciousness’s] acts, on the one hand, depend functionally upon extra-consciousness facts and events, in this sense being effects of the latter, and, on the other hand, have presentational and cognitive function with regard to all mundane events and acts, including those upon which they depend causally” (Gurwitsch 2010, p. 160).
- ²³ Husserl formulated this paradox as follows [mention that Husserl formulated this paradox in the context of analysis of science]: “Universal intersubjectivity, into which all objectivity, everything that exists at all, is resolved, can obviously be nothing other than mankind; and the latter is undeniably a component part of the world. How can a component part of the world, its human subjectivity, constitute the whole world, namely, constitute it as its intentional formation...?” (Husserl 1970, p. 179).
- ²⁴ (Kant 1959, p. 260) (emphasis related to “infinity” has been added)). Kant’s usage of the adjective “infinite” has a two-fold meaning here: on the one hand he speaks of the “true infinity” as that which is related to what things really are, not simply to their appearances. On the other hand, speaking of the “infinite elevation” he, de facto makes a statement of the incommensurability of human beings with all other natural things. The incommensurability, which is in different words can be described as the unbridgeable gulf between human person who articulate the things in the universe, and these very things which have no power of self-reflection and articulation at all. More than that the very notion of infinity as arising from freedom and inexhaustibility of the moral law is typically a human attribute in spite of a fundamental finitude of the human embodiment and the fact that it is because of this that anything which is received by us is conditioned, that is finite. (See more details in (Moore 1988).
- ²⁵ “There are two classical views: one treats man as the result of the physical, physiological, and sociological influences which shape him from the outside and make him one thing among many; the other consists of recognizing an a-cosmic freedom in him, insofar as he is spirit and represents to himself the very causes which supposedly act upon him.” (Merleau-Ponty 1982, pp. 71-72.)
- ²⁶ In Fromm’s words “He [man] is set apart while being a part; he is homeless, yet chained to the home he shares with all creatures. Cast into the world at an accidental place and time, he is forced out of it, again accidentally. Being aware of himself, he realises his powerlessness and the limitations of his existence. He visualises his own end: death. Never is he free from the dichotomy of his existence: he cannot rid himself of his mind, even if he should want to; he cannot rid himself of his body as long as he is alive...” (Fromm 1967, p. 40).
- ²⁷ The detailed discussion of the paradox of human subjectivity in a theological context can be found in (Nesteruk 2008, pp. 178-84).
- ²⁸ *Oration 45, On Easter*, 7 [ET: (Nellas 1997, p. 203)].
- ²⁹ *Ambigua* 41, PG 91, 1304-1312B [ET: (Nellas 1997, p. 212)].
- ³⁰ *Ambigua* 10:26, PG 91, 1153B [ET: (Palmer et al 1986, p. 277)].

- ³¹ Berdyaev insists that the mystery of human personhood is related to its dual nature: on the one hand to its intrinsic natural (physical) necessity, and on the other hand to its ability to transcend the limits of this nature as being an image and likeness of the highest being, as a microcosm before whom stands the whole majesty of nature (Berdyaev 1944, p. 81; 1989, pp. 294-96). Berdyaev blames the science of his time for not being able to realise the depth of the problem of humanity and, according to him, this is why one must ascend to religious philosophy, which is the only means that can handle the problem of man. Another representative of Russian religious philosophy and Orthodox theology, Fr. Sergei Bulgakov, also builds his attitude to science on the basis of a criticism of its fragmented description of reality and limited capacity of comprehending the world as living nature. The mathematical universe expels living subjects by converting it into the kingdom of shadows and “subjectless” objects: “science exercises the intentional murder of the world and nature, it studies the corpse of nature...” (Bulgakov 1993, p. 199). Bulgakov realises, just as Berdyaev did, the fundamental paradox of science: on the one hand science transforms the world into a lifeless mechanism, on the other hand, science itself was produced through the self-determination of the subject in the object (p. 205). The source of science, the foundation of its possibility, is to be found in humanity. Otherwise science becomes no more than an ingenious tool whose ultimate sense remains utterly obscure. Bulgakov anticipated this way of thought by formulating the thesis that to understand science one should turn to the understanding of man. It is not science that explains man, but man who explains science. Philosophy of science is a branch of philosophical anthropology (p. 188).
- ³² Nesmelov points to the vanity of all scientific attempts to “explain” personhood in its incarnate conditions. In its displayed givenness it can be studied, but the fact of its existence, as a *real fact*, can only be interpreted through the help of the Bible, in which the existence of man is posed as a fact of the relationship between God and the world. It is the mystery of the facticity of the hypostatic being of persons that leads all philosophy and science to the idea of the free creation of persons by God, persons which sustain that mode of being from within which the disclosure and manifestation of the universe take place.
- ³³ See the explication of this in (Nesteruk 2003), ch. 7.
- ³⁴ See more in (Yannaras 2004, p. 114).
- ³⁵ See on the topological paradox of incarnation (Torrance 1997); (Nesteruk 2003, pp. 226-36); also (Nesteruk 2013, pp. 323-28).
- ³⁶ This is theologically similar to what Christ as the Logos experiences with respect to the whole universe: the universe, being a spatial extension with respect to his human nature, is beyond space, that is not in space, with respect to his divine nature.
- ³⁷ (Ströker 1965, p. 15). This reminds a Kantian stance on human being as being simultaneously phenomenon and noumenon: on the one hand space is an a-priori form of sensibility which allows a subject to order its experience; on the other hand this form of sensibility is unfolded not from within that space which is depicted by it, that is it comes from beyond any possible spatial presentation of experience.
- ³⁸ For human beings to achieve the sense of commensurability with the universe one must be in space as a delimiting of their embodiment. Interestingly that this conclusion is similar to a Christian theological stance on space in the context of knowledge of God. It is because the incarnation of the Logos of God took place in rubrics of space and time, that no knowledge of God is possible outside the ways of Christ in space and time. (See, for example, (Torrance 1997)).
- ³⁹ C.f. N. Berdyaev’s “Meditation on the eschatological metaphysics. Creativity and Objectification”, in (Berdyaev 2003, p. 523).
- ⁴⁰ Some scientists, however, claim that the universe is intrinsically imbued with life, so that its outcome is not an accident. See, for example, in this respect (De Duve 1995); see also (Barrow et al. 2008).
- ⁴¹ The discussion of problems connected with the description of those eras which were not lived through by human consciousness can be found, for example, in (Aron 1938, pp. 39-46).
- ⁴² This is terminology from (Nesteruk 2003), ch. 7. C.f. (Morin 1982, p.120).
- ⁴³ C.f. with the Orthodox cosmology’s claim that cosmic history is part of the history of salvation related to humanity, and not vice versa (see (Clément 1976, p. 80).
- ⁴⁴ See more details on the explication of the meaning of “hypostasis” in (Nesteruk 2003), ch. 7.
- ⁴⁵ In terms of a historical reference one can point to Erwin Schrödinger who in his work “Mind and Matter” emphatically exposed a state of affairs in “the world of science” (contemporary to him) as “becoming so horribly objective as to leave no room for the mind and its immediate sensations” (Schrödinger 1992, p. 120). In the same paper he wrote: “Mind has erected the objective outside world of the natural philosopher out of its own stuff. Mind could not cope with this gigantic task otherwise than by the simplifying device of excluding itself – withdrawing from its conceptual creation. Hence the latter does not contain its creator”. (Ibid., p. 121, see also p. 122). To make his arguments stronger Schrödinger quotes similar passages from C. G. Jung (“The flood of external objects of cognisance has made the subject of all cognisance withdraw to the background, often to apparent non-existence”, p. 120) and C. Sherrington (“mind, the anything perception can compass, goes therefore in our spatial world more ghostly than a ghost....It remains without sensual confirmation and remains without it forever”, p. 121.)
- ⁴⁶ (Clément 2000, p. 30). Knowledge of persons is possible only through love, so that the Cartesian “Cogito ergo sum” must be replaced by “amo ergo sum”. G. Marcel, in a similar vein, develops an idea that love of a person precludes possession of this person in any possible sense (Marcel 1965).
- ⁴⁷ The articulation of insignificance of humanity in the universe plays a strange role in contributing towards the disappearance of existential function of modern science. The statement of this insignificance represents some scientific truth which is valuable for science itself. It does not affect at all a “man from the street” who “feels” in some manner that science literally “has nothing to say to him”. Consequently “man of science is incapable of telling him how to live, what is the significance of his job, what are those historical events which have grave consequence for his life.” (Strasser 1967, p. 211). It is in this sense science as activity does not affect the life-world as the sphere of existential events in their sheer facticity.

⁴⁸ (Heisenberg 1989, p. 69; 1958, p. 24) (emphasis added).

⁴⁹ (De Waelhens 1957, p. 168). C.f. J. A. Wheeler's ideas on the dialogical character of study of the universe, when the resulting picture of reality appears as a cumulative result in the chain of questions to and responses from that which out there (see, for example (Wheeler 1994) and bibliography therein).

⁵⁰ See the detailed discussion of this thesis in my paper (Nesteruk, 2011).

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Человек во Вселенной: между воплощенной несоизмеримостью и интенциональной бесконечностью

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В статье обсуждается вечная философская проблема двойственности положения человека во Вселенной: с одной стороны, человек, будучи воплощенным физически, конечен, с другой – эпистемологически он неограничен. Другими словами, физически человек несоизмерим со Вселенной, эпистемологически же он охватывает всю Вселенную. Современная космология функционирует в условиях этого парадокса, известного со времен классической греческой философии, и, таким образом, эксплицирует сущность амбивалентного человеческого состояния. Любая попытка представить Вселенную как целое в феноменальности объектов, то есть как лишенную присутствия человеческого взгляда на нее, приводит к отрицанию личностного существования и сведению Феномена человека к незначительному физическому и биологическому артефакту. Однако даже если космология ратует за такое видение Вселенной, личность не исчезает из картины Вселенной, но становится «присутствующей в отсутствие»: личность как центр раскрытия и манифестации Вселенной эксплицируется в космологии апофатически. Соответственно космология позиционирует себя как познавательная активность, принадлежащая как области естественных, так и области гуманитарных наук.

Ключевые слова: воплощение, вселенная, жизненный мир, интенциональность, личность, микрокосм, парадокс субъективности, природа, пространство-время.
