

Life and Evolution in the Integral Vedanta of Sri Aurobindo

Marco Masi*
Independent Scholar
E-mail: marco.masi@gmail.com

ABSTRACT

The recent revival of metaphysical frameworks in Western consciousness studies, such as panpsychism, cosmopsychism and its idealistic and monistic versions, is viewed from the standpoint of an extended and more consistent spiritual emergentist evolutionary cosmology in the light of the Indian mystic, poet and philosopher Sri Aurobindo (born Aurobindo Ghose; 1872-1950). This integral Vedantic cosmology, whose conceptual foundations were summarized in a previous paper (Masi, 2021), will be further outlined and thus furnish a more coherent metaphysical framework, inside which several of the issues and shortcomings that vitiated the previous ontologies can find their natural accommodation. We will also point out how this ontology is in line with modern scientific findings and, in some respects, even anticipated them.

“Consciousness is a fundamental thing, it is the fundamental thing in existence—it is the energy, the action, the movement of consciousness that creates the universe and all that is in it—not only the macrocosm, but the microcosm is nothing but consciousness arranging itself.”

Sri Aurobindo, Letters on Yoga I, pg. 22

Introduction

The impressive expansion and progress of neuroscience and the development of new technologies for functional brain imaging opened to scientists and philosophers a completely new domain of investigation into the workings of the human mind. Especially during the last three decades, many findings uncovered the neurological aspects of brain activity and even more groundbreaking discoveries are to expect.

However, there is now a growing awareness that questions of a more philosophical nature won't be answered by a mere functional investigation. In particular the questions on the nature of phenomenal experience and what appears to be the emergence of consciousness in the evolutionary natural processes not only remain unanswered but there has been no tangible progress towards their resolution. The belief that the progress of modern neurosciences would shed light on David Chalmers's notorious 'hard problem of consciousness' (Chalmers, 2015) has turned out to be much too optimistic. Consciousness in its subjective and experiential dimension stands out as a phenomenon alien to any attempt at scientific determination. Inside a naturalistic framework, the origin and ontology of the phenomenal subjective conscious experience remains an irreducible and intractable entity.

Although most scientists and philosophers still maintain a stance of reductive material monism, there now exist a growing academic philosophical movement that seriously consider alternative ideas and posits consciousness as a fundamental and irreducible ontological primitive. To a lesser degree but, perhaps, as a non-negligible factor, some were also influenced

by a skepticism towards neo-Darwinism as the ultimate paradigm for a materialistic non-teleological account of evolution.

This has led to a rediscovery of some Western and Eastern teachings on the nature of consciousness. A clear symptom which shows how western metaphysics is reconsidering its own roots is the revival of old metaphysical worldviews like philosophical idealism, panentheism, panpsychism and further developments or modifications of them. In particular, philosophical idealism and panpsychism (for a review see (Chalmers, 2019) or (Skrbina, 2017)), I. Shani's 'cosmopsychism' (Shani, 2015) and B. Kastrup's 'cosmoidealism'¹ (Kastrup, 2018), just to mention the currently most considered works, developed new metaphysical cosmologies and strived to make sense of consciousness and mind in the light of modern neuroscientific findings.

We will first examine these with a critical review which highlights their strengths but also their shortcomings and which will motivate us then to look beyond their monistic or dualistic approach, expanding it to Aurobindo's 'integral cosmology'. Special attention will be given to what we termed as an 'integral teleology'.² After a short summary of Aurobindo's ontology and its spiritual emergentism, a coherent frame that embraces and enlarges the physical Darwinian evolution to Aurobindo's evolutionary metaphysics will be outlined. Modern theories of consciousness and evolution will thereby be reframed from a spiritual emergentist perspective that resolves naturally the seeming contradictions and inconsistencies which have otherwise remained unsolved and plagued these metaphysical models.

I. The comeback of the conscious Universe

1. From panpsychism to cosmopsychism and beyond

Philosophers like Leibniz, Spinoza, Whitehead or William James, expressed a panpsychist view in one form or another, namely, that everything is fundamentally a form of consciousness or mind. In this view, raw, inert matter - that is, a stone, a molecule, an atom, or an elementary particle - also has some primitive form of primordial conscious experience. 'Micropsychism', conjectures that even an elementary particle, such as an electron, has - or rather *is* - an elementary form of consciousness which, whenever it interacts with other particles, has an inner experience or some form of primitive awareness. According to this view, its aggregation with other particles, like nuclei made of protons and neutrons, into atoms and molecules first, then by a combination of cells into living organisms, formed, by successive and cumulative stages of evolution, increasingly complex and conscious lifeforms. Panpsychism conceives, therefore, of the emergence of consciousness as a cumulative aggregation of elementary conscious mental units, sort of 'psychic atoms,' leading to an increasingly self-aware entity through a bottom-up process. 'Constitutive panpsychism' posits that there is some complexity law which, by complicated mutual dynamical interactions and interrelations among the single units, allows for a growth of consciousness that is somehow proportional to the number of units and the complexity of the organisms they constitute.

Though panpsychism is still a reductionist understanding of consciousness, it is nonetheless a first step away from a monist materialism insofar that it reverts the paradigm: Not matter but mind and/or consciousness must be posited as fundamental. The hard problem of consciousness is so avoided from the outset.

Over the last decades, this view has been revitalized as a possible alternative to orthodox physicalism. Most notably, panpsychism has been reconsidered in its different forms by modern leading philosophers in the field, like Thomas Nagel (Nagel, 1979), Galen Strawson (Strawson, 2006), David Chalmers (Chalmers, 2015), and Philip Goff (Goff, 2017).

However, panpsychism does not come without drawbacks. The most notorious issue is illustrated by the 'combination problem' (or 'subject summing problem'): How does a

combination of a myriad of fundamental experiential entities yield the familiar human conscious experience? There is no apparent reason to believe that combining low-level forms of minimal experiences should result in a unified high-level form of phenomenal experience and cognition. Even if we assume that only some specific types of combinations lead to high-level forms of consciousness this still does not explain why a particular functional combination—however complicated, special, and unique—results in a conscious subject with a mind that are, in all respects, very different from the sum of the elementary experiences from which they are supposed to arise. Or, to put it in the terms of the so-called ‘subject combination problem’: How do several micro-subjects combine to yield a single macro-subject?

Some philosophers, moved by this unconvincing aspect of panpsychism, but still determined to not fall back to the physicalist standpoint, considered the opposite viewpoint of micropsychism: that of ‘cosmopsychism’, a term and model originally introduced by Itay Shani (Shani, 2015). It replaces a bottom-up with a top-down approach and conceives of the whole cosmos as the ultimate conscious being. From this perspective, the universe is a sort of cosmic Mind, i.e., a unitary conscious entity that is reminiscent of the same concept appearing in several Eastern traditions. Assuming a universal Consciousness as the ontological primitive solves the combination problem because it is the high-level consciousness, rather than the low-level subject, which is the starting point. In this metaphysical ontology, the human mind, its mentation, and our subjective experiences are a fragment, a localized ‘spot’ of a much larger cosmic consciousness and cosmic Mind. If one extends subjectivity not only to matter but also to all space and time and sees the universe as a ‘super-Subject’, then the panpsychist’s explanatory gap incarnated in the combination problem resolves naturally in a top-down decombination that does the job, namely, a process of self-individualization of this universal consciousness in space and time by a fragmentation in itself.

This, however, immediately raises the opposite question of the ‘individuation problem’ (alternatively called also the ‘decombination problem’ or ‘decomposition problem’): How do these segments of universal consciousness, and that we experience as a subjective individuality, having private experiences and individual mental contents, come into existence? After all, we cannot (at least not consciously) read each other’s minds.

More recently Shani contended that there is in principle no insurmountable individuation problem in the context of cosmopsychism. (Shani, 2022) Because, if we don’t misunderstand the individuation problem as a mirror-image of the micropsychism combination problem, contradictions naturally resolve. Swami Medhananda’s comparative analysis of Aurobindo’s world-affirming monism with cosmopsychism (Medhananda, 2022) further substantiates the complementarity between universalization and individuation. The latter approach we will briefly take up again later in this paper.

An interesting proposal on how the decomposition problem can be solved comes from Kastrup’s cosmoidealism. (Kastrup, 2018) In this theoretical framework everything is mental, and the inanimate world is an extrinsic expression of the thought of the cosmic Mind, which Kastrup called ‘Mind at Large’ (borrowing the term from Aldous Huxley’s idea of the brain as a ‘reducing valve’ of a Mind at Large (Huxley, 1954)). In this universal idealistic model, all living organisms are ‘dissociated alters’ of this cosmic consciousness. He was also largely inspired by Schopenhauer and his vision of the world as Will (Kastrup, 2020).

Let us look at this ontology a bit more closely:

Kastrup identifies every experience, be it cosmic or individual, as a ‘pattern of self-excitation of cosmic consciousness’ analogous to modern quantum field theory, which describes every elementary particle as a harmonic oscillator localized in the space and time of a fundamental quantum field. In this view, every experience corresponds to a particular pattern of self-excitation of this cosmic consciousness.

Cosmoidealism posits ‘discrete centers of self-awareness’, or the ‘alters’, that arise due to some dissociative process that psychiatrists know as ‘dissociative identity disorder’. A person suffering from dissociative identity disorder exhibits multiple personalities as though the same body contains (or is possessed by) several different subjects with different minds and personalities. Kastrup submits that these different subjects—that is, different alters—are not fictional personalities created by a brain disorder but real dissociated centers of awareness caused by the same dissociation process in cosmic consciousness which leads to the formation of our subjective individuality, the ‘I-ness’ we experience as sentient beings.

Furthermore, Kastrup identifies metabolic systems as the ‘dissociative boundary’ inside which we experience our separate phenomenal consciousness. Metabolic processes in closed biological systems, such as a living cell or a multicellular organism like a plant, animal, or human being, delimit the dissociative boundary between our individualized phenomenal experience and the cosmos from which it has dissociated. In this view, all the matter and the complex structures we observe in the universe are thoughts of Mind at Large. Also, all the physical phenomena we perceive, such as light, electromagnetic, and nuclear forces acting in space and time are thoughts of this cosmic Mind impinging on our sensorial organs and bodies, the alters’ dissociative boundary.

Finally, in this cosmoidealist view, the cosmic consciousness is not really a self-aware superconscious being capable of a higher cognitive process; rather, it is a reactive and instinctive Being which does not really have a goal or preconceive a cosmic evolutionary project. It is a sort of borderline between a pantheistic and panentheistic conception of a Spinozian God, which, as in Schopenhauer’s world conception, simply is and acts only by a blind Will which is not self-reflective and, by being and becoming in an undirected evolutionary process, grows in its self-awareness. This also answers the question about the existence of suffering in this seemingly unconscious cosmic play. Mind at Large has no moral or ethical values; it is just an instinctive Being which, through material processes, slowly becomes self-aware but can’t do anything other than express and follow its own automatic instinctually.

2. Critical assessment

If we have indulged particularly in these modern forms of idealistic and spiritualistic theories, excluding other proposals coming from different fields of the modern philosophy of mind³, this is because in some respects they come closest to the integral Vedanta Aurobindo outlined already about a century ago. In fact, while cosmopsychism and cosmoidealism are in line with the mystic tradition of Eastern philosophies, it is worth outlining points of convergence and differences in comparison to an integral cosmology. Perhaps, the most notable departure of Aurobindo’s is his spiritual emergentist aspect. Cosmopsychism, cosmoidealism and all traditional Eastern metaphysics, still lack of an evolutionary dimension.

While Kastrup’s approach solves the combination and decombination problem, it raises the question of how Mind at Large could form the first metabolic system from raw insentient matter in the first place? According to this model, before the formation of the first metabolic unit, namely, a biological cell, there was no mind or consciousness at work on a spatially and temporally localized scale. There was only a blind instinctive Mind at Large without dissociated discrete centers of self-awareness. How can mere instinctive impulses create such an amazingly complex, efficient and self-reproducing thing like a living cell? A cell is a much more complex object than the most sophisticated supercomputer, airplane, rocket or spaceship. But those complex machines don’t self-assemble itself by mere instincts, let alone reproduce. It seems implausible that this could happen even after 13.8 billion years of a blind Mind at Large at work. This issue returns us back to yet another form of combination problem: one can’t see why and how combining infinitely many mechanistic ‘instincts’, no matter how much time passes, should supposedly lead to anything creative and cognitively more developed other than yet

another blind ‘super-instinct’? It is hard to believe that a blind cosmic will without any form of intelligence could master an evolutionary process with such a fantastic complexity and leading to an incredible variety of life-forms.

Cosmopsychism and cosmoidealism are theories of universal Consciousness that fixed their attention too much on resolving the individuation problem but lost sight of the evolutionary emergentist dimension of life and consciousness—something which is naturally harmonized in an integral cosmology.

What follows is an integration of the above metaphysical frameworks inside the metaphysics of Aurobindo’s cosmology.

II. Integral Teleology

1. The integral Vedantic cosmology in a nutshell

It is impossible to do justice to the subject of Aurobindo’s integral Vedanta with a brief summary.

Unfortunately, a rigorous academic introduction from the perspective of the modern Western philosophy of mind is lacking. Precisely this deficiency motivated the author to write this essay. The only papers the author is aware of is M. Cornelissen’s ‘topography of consciousness’ (Cornelissen, 2018) and Swami Medhananda’s evolutionary cosmopsychism (Medhananda, 2022).

For a more in-depth exploration of Aurobindo’s cosmology and spiritual practice the reader will have to resort to the vast variety of his original writings (especially (Aurobindo, 1914-19), (Aurobindo, 1914-21), (Aurobindo, 1927-50) and (Aurobindo, 1950).)

For a non-academic introduction, see a classic like Satprem’s ‘Adventure of Consciousness’ (Satprem, 1964) or an introductory guide to Integral Yoga such as (Aurobindo, 1993). To place these in a modern scientific context it might be useful to resort to the author’s book ‘Spirit call Nature’ (Masi, 2021 b).

However, in order to keep this paper self-contained, let us outline the main traits of Aurobindo’s evolutionary ontology relevant to the present context.

To keep in mind is the fact that Aurobindo’s cosmology and cosmogony was not the result of a metaphysical speculation. Aurobindo claimed that it was rather based on his mystic experiences and heightened states of consciousness. Once established in a unitary consciousness, what he called the ‘supramental Gnosis’⁴, Aurobindo reported what the world disclosed him when seen from super-cognitive states of consciousness.

One of the central themes emerging from this vision is an ever-present progressive spiritual emergentist paradigm. Contrary to the common scientific Darwinian concepts of evolution, which conceive only of an undirected cumulative speciation determined by natural selection and random mutations, and where any notion of ‘progress’ is absent, in Aurobindo’s integral teleology one admits of a progressive emergence of the Spirit in matter. “The gradual self-liberation from bondage to Nature is the true progress of humanity.” (Aurobindo, 1910-50, p. 50), This Spirit will transform and mold life to the image of an original spiritual perfection, though still invisible to the ordinary mind. Man is a transitional being that is going to become a ‘gnostic being’. According to Aurobindo, since ‘all life is yoga’, by a conscious effort—that is, by practicing consciously a discipline of mental, emotional and spiritual self-perfection, like yoga—we will ascend the ladder of self-awareness.

But the universe is not about matter, mind and spirit alone. Aurobindo invites us to refrain from these too coarse-grained universal models. The strong departure of Aurobindo from (past, and to a large degree still present) Western thoughts, is the distinction between consciousness and mind. Consciousness and mind are not synonyms, rather the latter is derivative and subordinate to the former:

The 'Mind' in the ordinary use of the word covers indiscriminately the whole consciousness, for man is a mental being and mentalizes everything; but in the language of this Yoga, the words mind and mental are used to connote specially the part of the nature which has to do with cognition and intelligence, with ideas, with mental or thought perceptions, the reactions of thought to things, with the truly mental movements and formations, mental vision and will etc. that are part of his intelligence. (Aurobindo, 1927-50, pp. 168, Vol.I)

Mind is that form of cognition that produces incessantly thoughts, mental representations, fleeting images that come and go in space and time. Consciousness is immutable, that which becomes aware of these thoughts but is the unaffected 'witness' that stands beyond space and time. Mind is only an intermediate step in the evolution of cognition. There are several higher intuitive domains which climb up the ladder of consciousness from mind to the divine Gnosis, what he called the 'Supermind'. The cosmopsychist's or cosmoidealist's universal Consciousness, Mind at Large, cosmic Mind, are only one aspect of a cosmology with a more elaborated hierarchical structure of existence and states of consciousness, and that Aurobindo termed as the 'planes and parts of being' and subdivided in a 'lower hemisphere' of ignorance and a 'higher hemisphere' of knowledge.

The lower hemisphere is constituted by the mental, the vital and physical 'universal planes'—that is, a cosmic Mind (the cosmoidealist's Mind at Large), a cosmic Life (the vitalist's universal plane of 'life-energies')⁵, and the cosmic Body (the physicist's physical universe). Individuation occurs on all three of these universal planes. The 'parts' of the being reflect the universal 'planes' of existence in individuated forms. The relationship between the universal and the personal is reflected in a process of individuation that 'mirrors' the universal planes in the structure of the individuated personality. In line with the Samkhya Yoga philosophy, also Aurobindo maintains that there are different 'subtle bodies' or 'sheets' beyond the physical body, namely a 'vital' body (the life-part of our being ruled by a life-force and which, on the psychological level, expresses in us as emotions, passions, desires, etc.) and the mental body (mind).

At the bottom of this lower hemisphere, one finds matter and also the 'subconscient', 'inconscient' and 'nescient' planes.

In this lower hemisphere the Divine is immanent and directly active and still contains in its bosom the principle of unity in diversity. But it is the spatial and temporal dynamic manifestation of a divine entity in its involuted form where the process of fragmentation has led also to a self-forgetfulness of the original Spirit.

While, by rising one's conscious awareness to the higher hemisphere, Aurobindo describes in the Life Divine how one enters progressively trans-rational forms of cognition, and that he called the 'higher mind', the 'illumined mind', the 'intuition mind', the 'overmind' and, at the highest summit the divine Gnosis, or the 'Supermind' (Aurobindo, 1914-19, pp. 972, pt.II, ch.XXVI) (see also Cornelissen's account of Aurobindo's 'topography of consciousness' (Cornelissen, 2018)).

While these layers of existence, with their hemispheres, represent the manifest aspect of the universal consciousness, the transcendent aspect is twofold.

First, at the top of the ladder of consciousness is (in line with the ancient Indian Upanishads) the transcendent unmanifest non-temporal unchanging, undifferentiated and impersonal Brahman, the Satchitananda of the Advaita Vedanta, which is at the same time 'Existence-Consciousness-Bliss'. These are triune qualities of the same and still undifferentiated Absolute and which differentiate only in the realm of divisions and polarities of the manifest cosmos as three different aspects of an immanent Divinity in its impersonal and personal forms. Aim of

the integral yogi is not to realize only a supreme consciousness in a state of 'liberation' ('moksha'), or nirvana, but to transform all parts of our earthly existence by an evolutionary process and make them ready to hold the Spirit from which they originate.

This transformation is mediated by the second aspect of the Transcendent. As we are going to see in more detail, according to Aurobindo, on the other side of this process of individuation stands the 'divine spark', the individual transcendent identity-soul, the 'psychic being', a mystic 'inner flame' that when awakened is felt behind the physical heart and which, by the process of transmigrations, evolves and grows from life to life. It is "that spark of the Divine which is the true psyche" (Aurobindo, 1914-21, p. 175) which evolves from the mineral to the plant, from the plant to the animal, from the animal to the human and, more recently, it is now evolving from the human towards the gnostic being.

Of course, like in all Eastern philosophical traditions, also Aurobindo sees this soul transmigrate from life to life, from body to body. Otherwise the evolutionary process of the psychic being would stop after the first incarnation.

The Supermind, the divine plane of existence connecting the Transcendent with the Manifest, works always by a principle of utmost unity, oneness, and indivisibility, while the overmind functions as a delegate of the Supermind in manifestation and is the first principle of division and polarity:

By the Supermind is meant the full Truth-consciousness of the Divine Nature in which there can be no place for the principle of division and ignorance; it is always a full light and knowledge superior to all mental substance or mental movement." (Aurobindo, 1927-50, pp. 146, Vol.I) – "The Overmind is a sort of delegation from the Supermind (this is a metaphor only) which supports the present evolutionary universe in which we live here in Matter. (Aurobindo, 1927-50, pp. 137, Vol.I)

The Supermind keeps itself behind a veil and intervenes in the evolutionary drama only indirectly through the overmind, not with its full power. It is a divine and creative 'Real-Idea' or 'Seed-Idea', a sort of 'super-archetype', that organizes the cosmos in its spatio-temporal manifestation. It is "...this Truth-consciousness, this Real-Idea by which the conscious force of the transcendent and universal Existence conceives, forms and governs the universe, the order, the cosmos of its manifested delight of being." (Aurobindo, 1914-19, pp. 171, bk.I, ch.XVIII) A supermental Real-Idea, coming from a universal plane, where everything that exists is its expression 'percolating' down through the higher hemisphere first and then into the lower hemisphere. It expresses itself as a universal organizing and active Will-Force, Life-Force and lastly, on the physical plane, as a physical force—the 'Chit-Tapas' or 'Chit-Shakti' of the tantric tradition of the Advaita Vedanta.

In the lower hemisphere it has become mechanical and increasingly deterministic on the universal planes of the cosmic mind, the cosmic life and the cosmic physical universe, which, however, are not independent from the cosmic subconscious, cosmic inconscient and cosmic nescient basis. The blind forces we observe in Nature are only the expression of an involuted and self-forgetful consciousness in matter that has become mechanical and deterministic in the domain of separation and duality, or what Aurobindo labeled the 'lower-Nature' ('Apara-Prakriti'), and more generally considered as a 'domain of ignorance'. But beyond this lower-Nature there is acting immanently a 'higher-Nature' ('Para-Prakriti') and whose dynamics are much wider, comprehensive, and following laws of unity in knowledge.

It is in this sense that the apparent contradiction between the mechanistic aspect of the universe and its divine origin and basis dissolves. Cosmopsychism, cosmoidealism and also several Western metaphysical lines of thought are embraced. For example, the universe of the Spinozian panentheist and of the analytic idealist are already contained in this integrating

universal perspective, but they represent a subset of it, namely the blind will at work in the lower-Nature, failing to see the existence of its supervenient counterpart that works things out behind the human ordinary sensorial appearances.

This dichotomy between a manifest Nature, ‘Prakriti’, and a transcendent spirit, ‘Purusha’, is a recurrent theme in the ‘integral yoga’ (also called ‘purna yoga’) of Aurobindo which he adopted from the Indian Samkhya philosophical tradition. He called his yoga ‘integral’ because it aims at the transformation of all the being, not only of our mental part. But we could also say that Aurobindo’s integral Vedanta is ‘integral’ inasmuch as it integrates the Western forms of philosophical idealism of universal consciousness with traditional Indian cosmologies, expanding it to several planes of consciousness, together with an evolutionary vision. An integral Vedanta that complements the classical non-dual Advaita Vedanta metaphysics with an evolutionary dimension.

Moreover, he extends evolution to a preceding ‘involution’ according to which an original Spirit plunged itself into matter by a process of fragmentation and, thereby, lost the conscious contact with itself in a material forgetful oblivion. “Evolution is an inverse action of the involution: what is an ultimate and last derivation in the involution is the first to appear in the evolution; what was original and primal in the involution is in the evolution the last and supreme emergence.” (Aurobindo, 1914-19, pp. 886, bk.II, ch.XXIV) It is after this involution that, by a process of evolution and unification, this involved spirit is now finding its way back to itself. According to Aurobindo its primordial and subconscious aim and purpose is that of finding back to its original ‘delight of being’, a delight which is the ultimate nature of the Satchitananda from which it originally emanated.

This cosmology can be summarized with the following table.

<i>Planes and parts of being</i>	<i>Hemisphere</i>	<i>Nature type</i>	<i>Manifestation layer</i>	<i>Emergence</i>
Satchitananda – Psychic being			Transcendent-Unmanifest	
Supermental	Higher hemisphere	Higher Nature (Para-Prakriti)	Manifestation	
Overmental				
Higher - illumined – intuitive mind				
Mental	Lower hemisphere	Lower Nature (Apara-Prakriti)		
Vital				
Physical – Inconscient - Nescient				

It is this integrality that is appealing as a synthesis of knowledge between East and West, consciousness and evolution, science and spirituality. Something that the panpsychist, cosmopsychist and cosmoidealist frameworks are lacking or still struggling to embrace. An integral cosmology that is a panentheistic, emergentist and an evolutionary teleology. In fact, a cosmology which bases itself on an ever-existent and supreme Consciousness which works out by a Consciousness-Will and a Consciousness-Force all events in time and space, is inherently a cosmology to which we could ascribe an aim, a purpose, a *télos* entailing a finalistic conception standing behind all the cosmos. The question is if and how this can consistently be integrated into the conceptual framework of modern science based on a mechanistic conception where any final causes are expunged from the outset.

2. Integral abiogenesis

Aurobindo did not express particularly strong opinions on the matter of the evolution of life in scientific terms. Firstly, because he was neither a scientist nor a philosopher but rather a mystic and spiritual master who developed a practical psychology with no interest in developing scientific theories. Secondly, it goes without saying that in the 1920s the scientific knowledge was not as advanced as contemporary science. Nevertheless, the metaphysical framework of integral yoga can furnish a valid contribution to the modern philosophy of mind and can shed light on several issues that otherwise remain inexplicable or still obscure or half-lit phenomena in the current scientific and philosophical paradigms.

a. Life and the creative Real-Idea

At the very beginning of the adventure of consciousness—even before the creation of the first cell—Aurobindo delineates a cosmogony where all the determinations are the result of a cosmic ‘exclusive concentration’. In Aurobindo’s vision the cosmic consciousness (containing the cosmic Mind, the cosmic Life, and the cosmic Matter) is a representative power of the overmind that is still able to see the unity in diversity and multiplicity in the manifesting universe but represents also the first power of individuation in the manifest cosmos.

In fact, the individuality is the result of an overmental particularization in the cosmic Mind, cosmic Life and cosmic Body. It is a process that starts from the universal planes ending into the individuated parts. This could be considered Aurobindo’s response to the individuation problem, and that has been recently outlined by Swami Medhananda (Medhananda, 2022). For the details of how this process of self-limitation solves the decombination problem, we defer the reader to his paper. Here, we will focus on the evolutionary aspects that all start from this cosmic process of exclusive concentration upwards leading to the aggregation and combination of lifeforms.

The metaphysical principle that leads from the One to the many, manifests first in a multitude of ‘infinitesimals’, such as particles, atoms and molecules—that is, by a physical decombination first. Matter is a nescient involved consciousness that emerged due to the extreme and exclusive concentration of the cosmic Mind in itself, and which is a power of division, polarity and fragmentation. “The nature of the action of cosmic Mind is the cause of atomic existence.” (Aurobindo, 1914-19, pp. 252, bk.I, ch.XXIV) “... the inconscience, the inertia, the atomic disaggregation of Matter must have their source in this all-dividing and self-involving action of Mind by which our universe came into being.” (Aurobindo, 1914-19, pp. 250, bk.I, ch. XXIV) However, the subjective experience is still not inherent in these cosmic particularized expressions. Here is where the integral cosmology meets with the panpsychist view. But it is not to be confused with panexperientialism—the view that individual particles also have a degree of subjective interiority. The micro-experience is perceived on a different experiential plane: In the cosmic Mind and cosmic Life planes because of, but not in, the electron, atom or molecule. One might say that it is a Super-Subject, that experiences the clash of point-like forces of every particle in the universe as its own experience without a separate subjective individuation in these points. If the electron has any primitive or elementary experience, as the panpsychist contends, it would be the localized experience of a cosmic Mind or universal consciousness in itself. Matter is an involved nescient form of consciousness constituted by a collection of subatomic particles whose interaction is determined by a mechanical Will-Force. Physical force is a blind force that senses, seeks, and feels, but is not that of an individualised subject identifying itself with a tiny particle. There is nevertheless the cosmic consciousness that experiences through each electron its material ‘universal body’. It is what the mystics report when they lose their sense of subjective separation and melt into a state of universal or cosmic consciousness which is that of a cosmic spirit and cosmic Nature, perceiving all the forces *within* itself.

The cosmic consciousness is that in which the limits of ego, personal mind and body disappear and one becomes aware of a cosmic vastness which is or is filled by a cosmic Spirit and aware also of the direct play of cosmic forces, universal mind forces, universal life forces, universal energies of Matter, universal Overmind forces. (Aurobindo, 1927-50, pp. 272, Vol.III)

A cosmic consciousness that is as much conscious as a whole and with every event, interaction of forces, impact, and movement, from clusters of galaxies down to the electrons, as an impersonal experience of, and in, itself.

It is this aspect that Spinoza perceived or the cosmoidealist conjectured about: That of a Divinity which has still to become conscious of itself by an apparently blind and instinctive self-finding process of evolution. But in Aurobindo's integral cosmology this is only an external aspect of the Divinity, not its entire nature. It is the projection in the domain of Para-Prakriti that renders the omniscient as seemingly ignorant. It is the Divine that puts up the undivine mask and plays its part luring us—that is, itself—into the cosmic illusion of Maya.

But how did the first cell form from a collection of non-living infinitesimals if there was no individualized consciousness and only an instinctive cosmic Mind? Kastrup advances the interesting hypothesis of the 'dissociated alters' embodied in every metabolic system but, as we have seen, it leaves an explanatory gap.

It is the same problem that plagues modern biology as well. Despite decades of research, the question of how from a non-living prebiotic chemistry emerged such an amazingly complex structure as a living biological cell with all its functionalities and its ability to grow, divide, self-assemble, reproduce, and transfer genetic information by mechanisms of inheritance remains unanswered. We suppose that things may have happened in the infamous 'primordial soup' or in particular environments where organic compounds could build up. Some chemical pathways may have been catalysed by energy sources of geothermal activity, as in deep sea hydrothermal vents, or near geysers, or because of volcanic eruptions. According to another hypothesis, the theory of 'panspermia', the prebiotic material might have been synthesised first in the outer space and brought to Earth by meteor, asteroid or comet impacts. We find many ideas, speculations, conjectures, but the processes that led from non-living matter to the first enclosed living membrane—presumably some primeval prokaryotic cell or bacteria—remains a deep unsolved mystery and, at the time of this writing, nothing indicates that it will be dispelled soon.

From the integral perspective, the abiogenesis—the process of the origin of life— and its subsequent evolution are, instead, turned upside down.

First of all, the aggregation of matter does not 'produce' any consciousness or mind but only furnishes a physical basis for its material manifestation. In Aurobindo's cosmology, consciousness, mind and life do not need any physical substrate to exist; they are principles of existence and manifestation already pre-existent as universal planes in a pre-physical Nature. The material aggregation appearing first as organic macromolecules, then as unicellular and multicellular organisms throughout an aeonic biological process is a reflection of the powers residing on subtle universal planes gradually manifesting on the physical plane.

[...] there is a conceptive self-extension of being which works itself out in the universe as substance or object of consciousness and which cosmic Mind and Life in their creative action represent through atomic division and aggregation as the thing we call Matter" (Aurobindo, 1914-19, pp. 253, bk.I, ch.XXIV) - For Life here assumes as its mould material substance, and material substance is Being infinitely divided and seeking infinitely to aggregate itself; between these two impulses of infinite division

and infinite aggregation the material existence of the universe is constituted. (Aurobindo, 1914-19, pp. 206, bk.I, ch.XX)

The aggregation of neurons in a brain do not ‘generate’, ‘create’ or ‘cause’ consciousness, rather they are the generation, creation and effect of a universal consciousness, universal mind and universal life that uses it as a means of self-expression by the appropriate combination of a multiplicity of material units. The emergence of the first cytoplasm was not the cause of the emergence of consciousness but the effect of the workings of the super-conscious Para-Prakriti in the realm of the sub-conscious Apara-Prakriti. It is by a progressive descent into the material manifestation of a conscious Life-Force from the cosmic Life-plane that the first material cellular aggregate forms. In Aurobindo’s spiritual emergentism, Life and Mind are not an epiphenomenon of matter rather are immanent cosmic principles that progressively emerged *through* matter. He applies the same principle to all the higher levels of consciousness, also these will progressively emerge and manifest in the evolutionary process leading to a future ‘gnostic life’ on Earth. From the standpoint of the integral cosmology, what we commonly call ‘evolution’, is the emergence of a higher-Nature that transforms the lower-Nature, from a Prakriti of ignorance into a Prakriti of knowledge.

Secondly, it is due to the indwelling presence of the supramental creative and formative Real-Idea that things emerge and take form, first involved and then evolving out of the unconscious in a dynamical and temporal material universe. It is this immanent Real-Idea that builds in a spatio-temporal reality its own forms and types on the different planes of manifestation, if they are capable of containing its indwelling spirit. A gnostic creative Power that works out by its conscious Force new physical aggregates and which, by a grouping and association builds a material basis to create and multiply an original cytoplasm that leads to the formation of the first living unity, the cell.

Thus the whole process of differentiation by the Real-Idea creative of the universe is a putting forward of principles, forces, forms which contain for the comprehending consciousness all the rest of existence within them and front the apprehending consciousness with all the rest of existence implicit behind them. (Aurobindo, 1914-19, pp. 137, pt.I, ch.XIV)

From this integral perspective, we can frame a metaphysical model that faces the combination and decombination problem affecting the modern idealistic philosophy of mind in a more coherent manner.

It is not an aggregation, combination, decombination or recombination of particles, cells, organs or whatever material objects that leads to a new subject having experiences. It is consciousness, life, mind and at the highest levels of the hierarchy of consciousness and existence, the Real-Idea which organizes, combines and decombines. It is by this indwelling super-conscious impulsion that the unconscious infinitesimals associate themselves together by a slowly increasing organisation of a seeking ignorance struggling for knowledge on the “blank slate of the nescience”. Distinctive of a conscious Force playing with its own idea are the patterns with an identical rudimentary basis for all living organisms in a cosmic play of sameness and variation. The “interchange, intermixture and fusion of being with being, is the very process of life, a law of its existence.” (Aurobindo, 1914-19, pp. 214, pt.I, ch.XXI) This is not just a rephrasing of sexual reproduction, but a view of life that posits ‘fusion’ as a creative principle creating and ruling life. Something reminiscent of the theory of ‘symbiogenesis’, the evolutionary theory of the origin of eukaryotic cells from prokaryotic organisms such as bacteria and that holds that the organelles of eukaryotic cells (e. g. mitochondria) are descended from formerly free-living prokaryotes taken one inside the other by a fusion process.

Thirdly, in contrast to the transcendent Self which is considered the ‘One without the second’, its delegate in the manifestation of pluralities, the overmind, is not only a power of separation, polarity and fragmentation in the physical realm but on all universal planes. It does not only create the ‘physical quanta’ by an act of exclusive self-concentration in the physical plane and thereby creates the material particles, but acts by the same principle on all universal planes. The first cell (perhaps just a membrane enclosing some organic molecules) emerged in this difficult self-seeking blind process as a first ‘point of life’ a ‘quanta of life-form’ as the determinate of a determining conscious Life-Force from a non-physical cosmic life-plane in the material earthly physical plane. By this mechanism the life-plane first determined this ‘life-quanta’ which, on the physical plane, we recognize as cells.

As Life here establishes and maintains its operations with difficulty on a foundation and in an environment of general Death, first in infinitesimal points of life, in quanta of life-form and life-energy, in increasing aggregates that create more and more complex organisms, an intricate life-machinery, Consciousness also establishes and maintains a growing but precarious light in the darkness of an original Nescience and a universal Ignorance. (Aurobindo, 1914-19, pp. 310, bk.II, ch.I)

But also a first intimation from the mind-plane manifested in form of a primeval mental element. The living cell is not only infused with the vital energy from the vital plane but begins to contain already a first primordial ‘mental-quanta’. It is no longer a completely nescient material aggregate, such as the mere mechanical blind reaction of the electron, atom or molecule, but begins to manifest the first primitive forms of subconscious mechanical cognitive awareness. Not just a completely self-absorbed and utterly involuted mind and life which is completely unmanifest in the dead stone. Rather, the first localized expression of a Life-Force from the universal Life-plane which displays a primordial life instinct of a guideless sense that feels and clasps, a seeking ignorance that tries to know, “a groping consciousness in a voiceless world” (Aurobindo, 1950, pp. 133, bk.II, canto IV). The first visible physical result of the lower-Nature’s cosmic life enters matter by the pressure of a conscious Force with a primordial element of cognition.

It is now known that even single-celled organisms display some form of ‘basal cognition’ that previously was believed to be possible only in brains or organisms having at least some primitive nervous system. It turns out, however, that at least some cells can learn, associate, develop conditioned behaviors, and change them by anticipatory skills. There is clear evidence of conditioned behavior in amoebae (De la Fuente, et al., 2019), escalating actions to avoid an irritant stimulus (Dexter, et al., 2019), amoeba-like slime mold that can find the minimum length between two points in a labyrinth (Nakagaki, et al., 2000) and can minimize the network path and complexity between multiple food sources (Nakagaki, 2004), and bacteria acting with a collective intelligence (Lyon, 2015)). For a scientific review of basal cognition see (Lyon & al., 2021) or (Gershman & al., 2021).

Of course, Aurobindo could not know of these modern findings, but in the frame of his spiritual emergentism this is not simply an adaptive behavior of a mechanical automaton which mimics a cognitive behavior, rather it is cognition itself that is fundamental and that inevitably must be inherent even in the simplest organism. Because “Matter is a form of veiled Life; Life a form of veiled Mind” (Aurobindo, 1910-50, p. 502) and “in our body’s cells there sits a hidden Power that sees the unseen and plans eternity.” (Aurobindo, 1950, pp. 169, bk.II, canto V)

In this ‘integral abiogenesis’, the properties that are commonly accepted as being characteristic of life are considered immanent will-forces and not derivative aspects of a complicated biochemical reaction. The will to self-preservation, the instinct of survival, emotions, feelings and the pleasures in existence are not mere behavioral outcomes of some

material metabolic machinery but are already intrinsic aspects originating from the vital cosmic plane that is precedent to the physical one and, ultimately, the expression of a Spirit's Will to delight.

According to the Samkhya worldview, the way in which this vital force organizes its impact with the material plane is explicated by the three 'qualities' or 'forces' called 'gunas'. The three gunas are called: 'sattva' (equilibrium, balance, equipoise, adjustment, correction, adaptation, order, harmony, calmness), 'rajas' (activity, dynamic movement, passion, energy, excitement, desire, egotism, restlessness), and 'tamas' (inertia, inaction, inconstancy, ignorance, passivity, stability, inactivity, lethargy). Each of these qualities is present everywhere in some combination and in form of a mutual interaction and relationship, with one or the other dominating.

These are considered not just human psychological traits but much more universal principles inherent in all matter, life, mind and every phenomenon in the universe. Aurobindo identifies the three gunas as the 'three modes of Nature' or the 'three modes of cosmic force' (Aurobindo, 1914-21, pp. 232, pt.I, ch.X). They are the 'noumenal engines' of Nature's determinism. In the interplay between life and matter and in their physical appearance, sattva, rajas and tamas manifest and effectuate physically their dynamical action in the evolutionary process as 'retention', 'active reaction', and 'passive reception' to outward impacts, respectively. Sattva retains impressions as its inner self, rajas plays itself out as energy and force, while tamas has not only a negative connotation, it can also absolve to a positive function, such as stability, and is a necessary ingredient in evolutionary processes as well.

This has not to be interpreted as a metaphor or mere analogy but has a physical significance.

Receiving and retaining the impacts of the outer world shape the impressions of this first life-quanta. On the base of these impressions, it also reacts to the outer conditions and begins to maintain a two-way communication that forms, shapes and molds it as times passes.

"This evolution is effected by the three gunas, the triple principle of reception, retention and reaction to outward impacts; as fresh forms of matter are evolved in which the power of retaining impacts received in the shape of impressions becomes more and more declared, consciousness slowly and laboriously develops; as the power of reacting on external objects becomes more pronounced and varied, organic life-growth begins its marvellous career; and the two, helping and enriching each other, evolve complete, well-organized and richly-endowed Life." (Aurobindo, 1914, pp. 241, pt.II)

Also, the physical senses of sound, touch, sight, taste and smell are not seen as being just a sensorial evolutionary material outgrowth of the organisms but, rather, as being themselves already inherent powers in and of more subtle planes of being, each representing the more fundamental sense for vibration, contact, form, and 'substance-sensing'.

The Samkhya's description is reminiscent of what biology is becoming about. Reframing it in modern language, it sees the organization, sensing and development of the first life form as beginning on the basis of a bi-directional informational exchange with the world. Modern biology speaks of information stored in the DNA being the result of a population adaption to the environment and the information about this environment being fixed—that is, retained—in the genome.

Moreover, this 'spiritual abiogenesis' based on the triple process of retention, reaction and reception suggests an analogy with a well-known and characteristic function of living organisms: homeostasis. In modern terms, homeostasis is defined as a self-regulating process by which biological systems maintain stability and adapt (sattva) while adjusting to changing external conditions—for example, the regulation and balance of temperature, chemical

concentrations or other metabolic functions in response to the stimuli of the environment to maintain constant internal conditions. While homeostatic processes were already known in the middle of the 19th century, their centrality has been recognized only recently (for a modern review in a historical context, see (Billman, 2020)). American physiologist J. Scott Turner even goes so far as to suggest that homeostasis is the naturalistic bedrock phenomenon of the emergence of cognitive systems. (Turner, 2017) Cognition, intentionality, purpose and desire are all a ‘wanting’ to attain a biological state by a homeostatic re-adaptation.

According to this spiritual cosmology, information exchange and homeostasis are the outer expression and a superficial manifestation of a deeper life-principle inherent in the material world, reflecting a relationship between spirit and matter. It is this way of seeing that is decisive and makes all the difference between a naturalistic concept of evolution and Aurobindo’s spiritual emergentism.

It might be interesting to point a peculiarity of this evolutionary integral Vedanta. According to Aurobindo’s cosmology, the non-physical planes of cosmic existence are non-evolutionary, what he called the ‘typal worlds’. Only in the physical plane evolution occurs. The function of these typal worlds, instead, is to furnish the in-between vertical planes in the cosmic structure that links the supreme consciousness with the physical plane whose destiny is to manifest the Supermind in a completely new creation. At this evolutionary stage, the Supermind cannot manifest in the involved nescient matter without transforming it first. This it actualises only indirectly, by penetrating through this cosmic ladder of universal planes. Nevertheless, everything was, is, and will continue to remain under the control of the higher wisdom of Para-Prakriti, the higher-Nature, that determines by a Force of Knowledge the downpouring of the Real-Idea in the progressively gross planes with its Consciousness-Force and Consciousness-Will directing the formation of the material aggregation from behind, by a concealed and implicit operation in the Apara-Prakriti, the lower-Nature, manifesting it as a force of ignorance.

The Real-Idea has been ‘precipitated’ into the physical and which, to the intuitive Platonic mind or the philosophical idealist, indeed appears as an archetype which still retains something of its original identity. It is the human mind that has lost the ability to seize the inherent *télos* in Nature’s processes. “Only the eternal Real-Idea is firm and maintains a certain ordered constancy of figures and relations in the flux of things, a constancy which the Mind vainly attempts to imitate by attributing fixity to that which is always inconstant.” (Aurobindo, 1914-19, pp. 179, pt.I, ch.XXVIII) And yet, intuition sometimes captures subliminally a more or less vague and pale *redux* and fragment of this distant Seed-Idea standing behind the display of natural phenomena. A divine gnosis that at the lower planes expresses in reduced forms of cognition, namely human’s analytic mind with its intellectual ideas and half-lit intuitions.

This subverts also the way in which we think of meaning, purpose, aim and goal-directedness. This integral teleology not only posits a directedness, an aim, and purpose in evolution, but also contends that meaning, a semantic content, cognition and ideas are pre-existing and immanent in Nature as an original Real-Idea.

It may not be a coincidence that a discipline that studies and investigates the production of meaning in Nature exists, namely biosemiotics, and which studies the signs and meanings in the biological realm (for an introductory essay see (Else, 2010)). By complicated signal pathways in cells—that is, multistep signalling processes that involve long chains of chemical reactions forming, for example, self-reinforcing cycles we might call ‘habits’—life can be interpreted in a unified model as a process of transcription (*sattwa*, the retention of impressions), transmission (*rajas*, the active reaction) and reception of signals, messages, and meanings between living beings (*tamas*, the passive reception to outward impacts).

Applying system theory, cybernetics and information theory, life could be conceived as a self-organizing complex system where molecular and intracellular signalling pathways acquire a biological meaning and represent a significance which ascribes a qualitative aspect to physical

attributes which, otherwise, would have not revealed the role of signs and its meaning other than that of a fuzzy play of chemical exchanges which, in itself, would be without whatsoever apparent meaning or significance. In a certain sense biosemiotics studies the language of life in its representation and meanings of biological codes. From genetic code sequences, of which DNA is the most known and paradigmatic example, to less well-known but perhaps even more interesting cases such as intercellular signalling processes. It discovers that there is no real demarcation line between the human's generation of meaning and intentionality and the generation of signal and messages with an ascribed functionality—that is, 'purpose'—in the workings of a natural world which, in the eyes of naturalism, should have none. Words as 'message', 'signal', 'code' and 'sign' are considered as being only metaphoric and that could someday be reduced to the mere chemical and physical interactions of complex adaptive systems. But these terms remained ineliminable, especially with the accelerating discoveries in cell signalling studies. There is something inherent in Nature that refuses to allow us to eliminate what we call 'meaning', 'purpose' and 'intention', as if they would represent and stand for an idea, a blurred image of an original idea, a Real-Idea. From his mystic heights Aurobindo sees the phenomenal universe as the reflection of a supramental Sign, Symbol and Meaning and that mind can only vaguely seize or superficially intuit.

b. The evolution of the soul

But how and why does in these 'life-quanta' and 'mind-quanta' a sentient subjectivity come in? According to the non-dual Advaita Vedanta every individual is an individualization of the transcendent Brahman in the manifestation. A non-evolutionary self-existent and timeless spiritual individuality beyond space and time: The 'Self' or 'Atman' or 'Jivatman' or just 'Jiva'. Aurobindo's vision embraces this identity as well but extended his metaphysics to an evolutionary soul.

Evolution is working out an ever-increasing self-awareness by an individuation of the cosmic Self in a 'psychic entity' that forms the psychic being, the evolutionary soul. The Jiva or Atman came about from the process of self-limitation and self-determination of the infinite Consciousness (Medhananda, 2022). It is a finite representative individuality of the infinite impersonal Brahman. But while the Jiva is our individuated spiritual core that does not participate in the phenomenal and temporal universe, the psychic being takes form in—and is formed by—the evolution in time. The impersonal divine Absolute, the 'portion' of the Absolute which is the Jiva, and the psychic being are three terms of the Transcendent. The first two are immutable and do not evolve, while the latter is a mutable soul that progresses by an evolutionary process. All the Jivas are a multiplicity of the Divine and which 'appear through' the created existence, being divine sparks that contain something of the Existence-Consciousness-Bliss of Satchitananda from which they have been emanated. As analogy, we can metaphorically see the Divine as a hologram, while a portion of it is the Jiva. This portion, however, still contains the image of the whole. It is still the image of the same divinity but in its individualized form in Nature reflecting only part of its potentiality.

But it is the psychic entity which is of evolutionary interest in our metaphysical teleology. According to Aurobindo it grows, develops and evolves by the accumulation of experiences in a process of transmigration from one physical embodiment to another, forming the psychic being.

There [in the true invisible heart] dwells the little spark of the Divine which supports the obscure mass of our nature and around it grows the psychic being, the formed soul or the real Man within us. It is as this psychic being in him grows and the movements of the heart reflect its divinations and impulsions that man becomes more and more aware of his soul, ceases to be a superior animal and, awakening to glimpses

of the godhead within him, admits more and more its intimations of a deeper life and consciousness and an impulse towards things divine. (Aurobindo, 1914-21, pp. 150, pt.I, ch.V)

Aurobindo contends that from the most elementary forms of life to more complex ones, a psychic entity grows into a progressively formed psychic being. First in a single cell, then in a pluricellular combination, then in an organism with increasing organic complexity and, while the psychic develops, also the Jiva increasingly ‘appears through’. But while the organism is a material individuation of the physical plane, the psychic being is a transcendent, yet immanent personality. Not the passive witness, the Purusha, but an individuation that participates in the cosmic play. Not just a determination but also a determinant.

While, as a mystic and poet, Aurobindo only rarely made direct references to evolutionary biology, it is clear that, according to this spiritual emergentist scenario, the complexity of the physical aggregate reflects not only a determination coming from the physical environment due to a Darwinian selective pressure. It comes increasingly also from within, namely from this ‘inner flame’. How much evolution moulds us from without or from within depends from the evolutionary state of this soul, the psychic being. A ‘newborn’ transcendent soul that has just formed and is at the very beginning of its evolutionary journey through the eonic material processes of the physical universe, is still an almost complete unconscious entity. It will have to start from the bottom of the divided and differentiated nature of the material cosmos—that is, it may identify with the involved and almost nescient experiential phenomenality (say a cell, a plant, or some primitive living form). An unevolved soul will be more prone to the clash of forces of the lower-Nature. On the scale of multicellular organisms, such as plants the spiritual identity of the being is still far from being formed.

Nonetheless, plants express and have a sensibility to psychic properties. Their beauty in form and color is not just a human interpretation and their tendency to grow towards light is also not a purely mechanistic photosynthetic reaction, but are psychic expressions on the physical plane. They express an aspiration towards the Light of the Spirit which, on the physical plane, is expressed as the electromagnetic force. Plants have a longing towards harmony, beauty and good. Something Plotinus recognized: beauty is a power of the One flowing into things, a principle of unity emanating from the eternal Good and one that we, as souls, recognize in forms because they reflect what is in us and, deep down, is like us. We might say that beauty in material forms mirrors God’s delight.

In the human, however, the inner intimation is increasingly present and, while still its bodily and psychological needs and urges are determined by material factors, the psychic presence has become a non-negligible evolutionary factor. In the human the psychic expression is no longer covered by the nervous reactions like in the animal, rather by its concentration on the ‘mental body’. But it is an inevitable outcome that this stage of evolution will be transcended too, leading to the appearance of the gnostic being.

In this view, the combination problem receives a ‘soul-emergentist’ answer. It is not by combining or decombining material aggregates that a conscious subjective self appears, because a pre-existing psychic entity growing into a psychic being already exists in an unmanifest mode as an emanation, or spark of the universal Self. It is the transcendent central being that, by an identification and fusion in and through matter, leads to the aggregation of a material structure around it that reflects the metabolic individuation. Aurobindo sees the soul that aggregates, not the aggregate forming the soul.

Moreover, from the integral standpoint, natural selection is not just a sifting procedure, it is also determined by the subconscious energy in the type of species which answers to the need of the environment while in another species it remains unresponsive and, therefore, unable to survive. The reactions of a living creature to the external stimuli do not depend only on its

physical constitution and chemical status but also depend on how it feels, perceives and experiences the environment from the inside. It is not only a nervous sense-based automatic reflex of the body to external contacts, even though this is the predominant aspect in the most primitive forms of life (and not absent in humans either), but also a response that comes from within. Natural selection is, on one side, the external repeated attempt of the lower-Nature to combine, mix and then dissolve several potentialities and types, like in an everlasting alchemical process. On the other side it is also determined by an internal pressure that subconsciously tries to realise an innate bliss, harmony, power, and the delight of being which was lost in the involution of matter.

While the concept of involution might sound in conflict with the modern understanding of evolution and cosmology, it doesn't contradict it, rather it complements it. For example, the dichotomy between the growth of consciousness and the organic change in evolution—that is, speciation—is already contained in this integral view. One is the expression of the other, bidirectionally.

[...] the psychic being, the soul personality in us, does not emerge full-grown and luminous; it evolves, passes through a slow development and formation; its figure of being may be at first indistinct and may afterwards remain for a long time weak and undeveloped, not impure but imperfect: for it rests its formation, its dynamic self-building on the power of soul that has been actually and more or less successfully, against the resistance of the Ignorance and Inconscience, put forth in the evolution upon the surface. (Aurobindo, 1914-19, pp. 928, pt.II, ch.XXV)

Thus, the integral concept of evolution is not seen solely in terms of the result of physical forces but admits also psychological forces playing a role, from the inside-out of the organism. Aurobindo's evolutionary vision is more in line with the modern 'extended evolutionary theory' or 'the third way' (e.g., (Laland, 2015) or (Shapiro, 2021)) that, among other things, decouple genotypic and phenotypic changes by emphasizing epigenetic variation, the role of the environment and the response of the organism to it and its ability to modify it, non-genetic and behavioral inheritance, punctuated equilibria, symbiogenetic processes, etc., complementing the neo-Darwinian Modern Synthesis formulated in the 1940s which explained the evolutionary phenomena as a process prevalently based on natural selection, adaptation and gradual and accidental genetic drifts. In this contemporary view of evolution the microevolutionary genetic predetermination still plays a role but is no longer thought as the sole factor, also macroevolutionary factors play a role. An organism is not seen as a passive container of 'selfish genes' rather as an active player that can decide the evolutionary outcome.

Just to clarify how there is no contradiction between the naturalistic and this metaphysical standpoint consider the following example. It is now accepted that, contrary to 'gradualism'—that is, the idea that selection and variation occur in small increments—also 'punctuated equilibrium' (Gould, 1983) of sudden large mutations in one or few generations can occur, and which can eventually lead to a new speciation. This view of the evolutionary temporal dynamics that contrasts a slow and gradual evolutionary progress, is already inherent in the integral evolution. Because Aurobindo's standpoint sees it also from the perspective of the evolution of the indwelling spirit rather than focusing exclusively on the mechanistic physical processes: When the species rests for a long time without externally visible phenotypic changes, it may develop new powers of consciousness internally. The physical surface-form remains substantially almost unaltered, but the being is growing inwardly in consciousness and in its cognitive abilities. Once this internal process has arrived, by a sort of 'interior accumulation', at a threshold or 'critical mass', it manifests the inner change in a sudden external leap by creating

a new physical form in few cycles of psychic transmigration. Humans may well be at this threshold between one and the other evolutionary stage.

c. Death, natural selection and saltation

With the emergence of the first self-reproducing living cell, death makes its first appearance on the stage of the cosmic drama. From the perspective of this integral evolutionary cosmology, death is not a malady or an inevitable accident.

According to the aurobindonian teleology, in the night of the nescience of matter the untransformed physical is still not ready to hold the fullness of the powers of the Spirit and is still subjected to processes of dissolution. Physically, it stems from the inability of the material sheet—that is, the physical biological cells—to keep up with the inner pace of transformations. The untransformed body that still has not been subjected to a higher spiritual transformation isn't able to keep up with the pace and plasticity of the indwelling spirit, the psychic being, and the development it could achieve due to its experiential life journey and of its transmigrations. Despite their initial vital and embryonic mental element, cells are still subjected to the subconscious, inconscient, and nescient planes of inertia and ignorance—that is, to processes of degradation and finally dissolution. If matter would be capable of embodying the full power of life and of the Spirit it would be able to cope with the process of the physical disaggregation caused by the cells injuries and death. The death of an organism is determined by its inability to transform quickly, flexibly, and with a plastic adaptation, not only to the physical environment, but also to that of the indwelling spirit. Modern cell biology begins to recognize that, at least in principle, cells are immortal. Curiously, it seems more difficult to explain death than immortality; modern science still struggles to explain the aging process in a satisfactory way.

But the trick of a wisdom of an immanent Consciousness in Nature to maintain (literally) alive the still not fully expressed Real-Idea is reproduction. The cycle of renewal performed by reproduction and death avoids the premature dissolution of the species which, from the spiritual perspective, is the manifestation in matter of a trans-physical archetype inherent on other planes of existence, and which are themselves a top-down pouring into matter of the Real-Idea. Reproduction was the first primal instinctive necessity without which the species' archetype could not be maintained to progress in a domain of ignorance unable to hold the Spirit. The instinct of survival and the sexual urge are no fortuitous coincidences, but the very basic preconditions for a physical vital existence that, although subconsciously, strives to maintain an inherent plan.

Moreover, death is part of the evolutionary process that allows an evolutionary soul to create different experiences in different forms and lives. Death is a transition that allows for a further psychic progression, not an annihilation or a reset that throws the being back to a point of departure. Therefrom another second aspect of the function of reproduction and death appears: It becomes also a means for the growth of the individuated spirit. Death becomes an opportunity of renewal and further growth of the psychic being sustaining the material structure. It is the physical dissolution we call 'death' that allows the spirit to enter new physical combinations and make new experiences on the material plane it otherwise couldn't have. The cycle of life offers to the indwelling presence of the psychic to continue to grow in a variety of physically more perfected generations on the material plane. Paradoxically, on the occult level, one of the *raison d'être* of death is to accelerate evolution.

III. Conclusion

We presented an integral cosmology in the light of the vision of Sri Aurobindo. This is neither a monistic nor a dualistic ontology, but rather a multidimensional description of reality as it appears from higher states of consciousness. It results in a vision based on Eastern and

Western philosophies and amended by an evolutionary emergentism that extends Western models which recently gained some attention, such as cosmopsychism and cosmoidealism. The conceptual difficulties and the internal inconsistencies of the latter find a natural resolution in the context of this extended integral cosmology in an evolutionary and trans-rational perspective. Consciousness studies and modern scientific findings which challenge the physicalist worldview may find here a coherent and elegant systematisation in form of an advanced metaphysical teleological perspective. Even though it takes quite a bit of an effort to get acquainted with the richness and complexity of Aurobindo's cosmology we believe it to be the most promising theoretical framework that can accommodate both science and spirituality in a unique synthesis of knowledge between Western and Eastern materialistic and metaphysical cosmologies.

We also discussed how Aurobindo's 'integral view' sees the evolutionary and cosmic creative process from a very different perspective but without running in contradiction with the Darwinian evolution. It rather extends, complements and integrates it. It is not the processes as such that an integral cosmology questions. It is the way of seeing the very same phenomenon that changes. Strictly naturalistic evolutionary theories struggle to eliminate final causes, reducing it into a blind and automatic clockwork without meaning. Instead, for Aurobindo, evolution is not just a process of mechanical creation but of a superconscious emergence, until finally the supramental consciousness will take full control and transmute all terrestrial life.

NOTES

¹ The term 'cosmoidealism' we borrowed from D. Broderick who cites D. Chalmer in (Broderick, 2018).

² The terms 'integral cosmology' and 'integral teleology' are the author's one.

³ Such as Steve Taylor's panspiritism (Taylor, 2020) or research inspired by the Asian tradition, especially the Advaita-Vedanta; see, for example, Miri Albahari's take on 'perennial idealism'. (Albahari, 2019)

⁴ Capital letters will be maintained according to Aurobindo's nomenclature.

⁵ It will hardly escape the attention of the reader that this panentheistic, evolutionary and emergentist cosmology has a pronounced vitalist component. In fact, Aurobindo uses such terms as 'vital plane', 'Life-Force' or 'Life-Energy' throughout his writings. In a separate article (Masi, 2022) we argue that it is a common misconception that modern science has dismissed vitalism or, at least, the form of vitalism this integral cosmology posits.

REFERENCES

- Albahari, M., 2019. Perennial Idealism: A Mystical Solution to the Mind-Body Problem. *Philosopher's Imprint*, 19(40).
- Aurobindo, S., 1910-50. *Essays in Philosophy and Yoga*. Sri Aurobindo Ashram Press, Pondicherry ed. s.l.:s.n.
- Aurobindo, S., 1914-19. *The Life Divine*. Pondicherry: Sri Aurobindo Ashram Press.
- Aurobindo, S., 1914-21. *The Synthesis of Yoga*. Pondicherry: Sri Aurobindo Ashram Press.
- Aurobindo, S., 1914. *Isha Upanishad*. s.l.:Sri Aurobindo Ashram Pondicherry.
- Aurobindo, S., 1927-50. *Letters on Yoga*. s.l.:Sri Aurobindo Ashram Press.
- Aurobindo, S., 1950. *Savitri*. Pondicherry: Sri Aurobindo Ashram Press.
- Aurobindo, S., 1993. *Integral Yoga: Sri Aurobindo's Teaching & Method of Practice*. s.l.:Lotus Press.
- Billman, G. E., 2020. Homeostasis: The Underappreciated and Far Too Often Ignored Central Organizing Principle of Physiology. *Front. Physiol.*
- Broderick, D., 2018. Consciousness and Science Fiction. In: s.l.:Springer, p. 38.
- Chalmers, D., 2015. Facing up the problem of consciousness. *ournal of Consciousness Studies*, 2(3), pp. 200-219.
- Chalmers, D., 2015. Panpsychism and Panprotopsychism. In: *Consciousness in the Physical World: Perspectives on Russellian Monism*. s.l.:New York: Oxford University Press., pp. 246-276.
- Chalmers, D., 2019. Idealism and the Mind-Body Problem. In: *In William Seager (ed.), The Routledge Handbook of Panpsychism..* s.l.:Routledge, New York, pp. 353-373.
- Cornelissen, M., 2018. The Self and the Structure of the Personality: An Overview of Sri Aurobindo's Topography of Consciousness. *International Journal of Transpersonal Studies*, 37(1).
- De la Fuente, I., Bringas, C., Malaina, I. & al., 2019. Evidence of conditioned behavior in amoebae. *Nature Communications*, 10(3690).
- Dexter, J. P., Prabakaran, S. & Gunawardena, J., 2019. A Complex Hierarchy of Avoidance Behaviors in a Single-Cell Eukaryote. *Current Biology*, 29(24), pp. 4323-4329.
- Else, L., 2010. A meadowful of meaning. *New Scientist*, 207(2774).
- Gershman, S. J. & al., e., 2021. Reconsidering the evidence for learning in single cells. *eLife*.
- Goff, P., 2017. *Consciousness and Fundamental Reality*. s.l.:New York: Oxford University Press.
- Gould, S., 1983. Punctuated Equilibrium and the Fossil Record. *Science*, Volume 219, p. 4584.
- Huxley, A., 1954. *The Doors of Perception*. s.l.:Chatto and Windus.
- Kastrup, B., 2018. The Universe in Consciousness. *Journal of Consciousness Studies*, 25(5–6), p. 125–55.
- Kastrup, B., 2020. *Decoding Schopenhauer's Metaphysics*. s.l.:Iff Books.
- Laland, K. N., 2015. The extended evolutionary synthesis: its structure, assumptions and predictions. *Proc. Roy. Soc. B*, 282(1813).
- Lyon, P., 2015. The cognitive cell: bacterial behavior reconsidered.. *Front Microbiol.*, Volume 6, p. 264.

- Lyon, P. & al., e., 2021. Basal cognition: conceptual tools and the view from the single cell. *Philosophical Transactions of the Royal Society B*, 376(1820).
- Masi, M., 2021 b. *Spirit call Nature*. s.l.:s.n.
- Masi, M., 2021. *Consciousness and Evolution in the Integral Cosmology of Sri Aurobindo*. s.l.:s.n.
- Masi, M., 2022. Vitalism and Mentalism: Time for a Comeback. *Upcoming*.
- Medhananda, S., 2022. The Playful Self-Involution of Divine Consciousness: Sri Aurobindo's Evolutionary Cosmopsychism and His Response to the Individuation Problem. *The Monist*, Volume 105, pp. 92-109.
- Nagel, T., 1979. Panpsychism. In: *Mortal Questions*. s.l.:Cambridge University Press, p. 181–195.
- Nakagaki, T., 2004. Obtaining multiple separate food sources: behavioural intelligence in the *Physarum plasmodium*. *Proc. R. Soc. Lond. B*, Volume 271, p. 2305–2310.
- Nakagaki, T., Yamada, H. & Tóth, Á., 2000. Maze-solving by an amoeboid organism. *Nature*, 407(470).
- Satprem, 1964. *Sri Aurobindo or The Adventure of Consciousness*. s.l.:Lotus Press.
- Shani, I., 2015. Cosmopsychism: A Holistic Approach to the Metaphysics of Experience. *Philosophical Papers*, 44(3), pp. 389-437.
- Shani, I., 2022. Cosmopsychism, Coherence, and World-Affirming Monism. *The Monist*, Volume 105, pp. 6-24.
- Shapiro, J. N. D., 2021. What prevents mainstream evolutionists teaching the whole truth about how genomes evolve?. *Progress in Biophysics and Molecular Biology*.
- Skrbina, D. F., 2017. *Panpsychism in the West*. s.l.:MIT Press.
- Strawson, G., 2006. Realistic Materialism: Why Physicalism Entails Panpsychism. *Journal of Consciousness Studies*, 13(10-11), p. 3–31..
- Taylor, S., 2020. An introduction to panspiritism: an alternative to materialism and panpsychism. *Zygon - Journal of Religion & Science*, 55(4).
- Turner, J. S., 2017. *Purpose & Desire: What Makes Something “Alive” and Why Modern Darwinism Has Failed to Explain It..* s.l.:Harper Collins Publishers..