



The cosmic roots of human nature and our culturally conditioned self-image

Attila Grandpierre¹

Received: 18 September 2020 / Revised: 16 December 2020 / Accepted: 28 December 2020
© Academy for International Communication of Chinese Culture 2021

Abstract Human nature is rooted in the fact that we are living beings and rational beings. According to the comprehensive science that is based on the independent principle of biology, human nature is rooted in the cosmic life principle and in the universal principle of reason. Human beings have a Nature-given, real self-identity that is rooted in the fundamental cosmic life principle, the principle of reason and biological autonomy. Our autonomy, which we identify as our Self, is in its very basis intimately related with the life of the Universe, because our vital instinct is identical to the life principle of the Universe. At the same time, our self-image is usually shaped on the basis of the dominant culture of our society. A culture identifying ourselves with an alienated self-image leads us to become alienated from our original and natural identity given by the cosmic roots of our Self. At present, a dualistic worldview is still dominant in Western civilisation. It is this worldview which is the root cause of alienation. Understanding that this worldview is incomplete at the ontological level can free our mindset from the alienating worldview. It is encouraging that comprehensive postmodern science has already proven on exact mathematical grounds that we are existing in a Living Universe that is governed by the same life-principle which is accessible within us in the form of our intrinsic vital instinct. The cosmic creativity and vitality of the life principle can be realized by us when we listen to it. Our genuine human abilities can develop within favourable family contexts and under conducive social conditions. We show that long-term sustainable development requires a culture in which our socially imprinted self-image is in harmony with our original, natural Self. Remarkably, the results presented in this article offer exact scientific foundations which can be connected with traditional Chinese ideas like *tian ren he yi* (“Heaven and people in harmony”), “Heaven, Earth and I were produced together, and all things and I are one”, “The great virtue of Heaven

✉ Attila Grandpierre
grandp@iif.hu

¹ Konkoly Observatory of the Hungarian Academy of Sciences (Retired), Budapest, Hungary

and Earth is called ‘life-giving’”, “What Heaven imparts to man is called human nature”, and “Human nature is composed of *qizhi* (vital energy and raw stuff)”.

Keywords Nature of life · Biological · Autonomy · Natural self · Ontology · Self-image

Introduction: human nature and the nature of life

What is human nature? It seems that we are living beings and rational beings in the most fundamental and universal sense. At the same time, until we know what life is, and what the rational mind is, we cannot be sure. *Are we really living?* Taking into account *alienation* being so characteristic and profound in the West, it seems not. Moreover, it seems that the rational way of thinking occurs much more rarely than it would be desirable. *It is important to clarify what life is and what reason is. This will lead to an understanding how we can become less alienated, more living and more rational beings.*

In today’s biology, life, as in Schrödinger’s book (1948, p. 71), is usually defined by its different aspects like metabolism or reproduction. Yet at the same time, these aspects in turn are defined by life. For example, in *The Penguin Dictionary of Biology*, Abercrombie and his co-workers defined metabolism (1990, p. 357) as the “sum of the physical and chemical processes *occurring within a living organism*”. The question of how to define life is begged in such circular ways of reasoning. The astrobiologist Cleland (2006, p. 597) has pointed out that the only solution to this problem is to develop an *adequately general scientific theory of life*: “Many biologists believe that neo-Darwinian evolution (also known as the “modern synthesis”) provides us with such a theory. Unfortunately, however, this is not the case.” Let us refer here to only the unquestionable fact that neo-Darwinian view of evolution does not supply the exact mathematical formulation of the fundamental universal laws of biology, and therefore it does not explain the *behaviour* of living organisms in a way physics explains the behaviour of inert matter. Matter is the behaviour of that which is governed by the least action principle, that is, inert matter, physical matter, is governed by the laws of physics. Living organisms do not. While physical laws prevail regarding the matter of living organisms, their behaviour is not governed by the principle of inert matter. That is the point. *We need a theoretical biology which is on a par with the depth and explanatory power of modern theoretical physics.*

Such kind of a theoretical biology must be a general biology determining the mathematical equations of the universal laws of biological motions. The Nobel-lau-reate biologist Alexis Carrel has already called attention to the fact that biologists obtained a tremendous amount of data, but they cannot interpret this data scientifically in the absence of equations determining biological changes.

There is a strange disparity between the sciences of inert matter and those of life. Astronomy, mechanics, and physics are based on concepts which can be expressed, tersely and elegantly, in mathematical language. They have built up a universe as harmonious as the monuments of ancient Greece. Such is not the

position of biological sciences. *Those who investigate the phenomena of life are as if lost in an inextricable jungle [...]. They are crushed under a mass of facts, which they can describe but are incapable of defining in algebraic equations.* Descriptive science classifies phenomena. But the unchanging relations between variable quantities—that is, the natural laws—only appear when science becomes more abstract. It is because physics and chemistry are abstract and quantitative that they had such great and rapid success. In learning the secret of the constitution and of the properties of matter, we have gained the mastery of almost everything which exists on the surface of the earth, excepting ourselves. The science of living beings in general, and especially of the human individual, has not made such great progress. It still remains in the descriptive state. (Carrel 1959, pp. 14–15)¹

It seems that the situation today is the same. In an article published in the prestigious journal *Nature*, the biologists Roger Brent and Jehoshua Bruck have put it this way:

Today, by contrast with descriptions of the physical world, the understanding of biological systems is most often represented by natural-language stories codified in natural-language papers and textbooks. This level of understanding is adequate for many purposes (including medicine and agriculture) and is being extended by contemporary biologists with great panache. But insofar as biologists wish to attain deeper understanding (for example, to predict the quantitative behaviour of biological systems), they will need to produce biological knowledge and operate on it in ways that natural language does not allow (Brent and Bruck, 2006, 416).

Apparently, it seems almost nobody realized that *such a powerful theoretical biology had already been worked out by the Hungarian biologist Ervin Bauer (1935/1967).*

The nature of life according to the exact theoretical biology: Bauer's theory

Among others, Newton, Maxwell, Einstein, Heisenberg and Schrödinger worked out general theoretical physics by formulating the fundamental equations of physics. In biology, such a crucial development is due to Ervin Bauer. The main question of this general biology has remained unanswered by Darwinism. Darwinism answers the question: what is the cause of the evolution of species? An exact general biology must answer the more general problem: what is life? *Bauer's work answers this question in a way suitable to show the direction for the development of all branches of biological sciences.*

Bauer in his most important book *Theoretical Biology (1935/1967)* defined general biology as *the science studying the most general laws of motion of organized living*

¹ Unless otherwise noted, all omissions and entries in square brackets as well as emphasis in all quotations are by the author.

matter that expresses the universal laws of biological changes. He formulated the most general theory of biology in a way that is valid for all kinds of organized living matter and prevailing within every condition. He pointed out that there is only one proper approach to prove that biology has its own *general laws* determining the mode of existence of organized living matter. On one hand, the perspective provided by Bauer represents this approach in the sense that it is the way to discover and analyse the general theoretical laws of living substance and to demonstrate how these laws are manifested in different living beings and in different forms. On the other hand, it must show that the same general theoretical laws of living substance are expressed in all the empirical laws of the special branches of biology and that in the diverse laws of life phenomena the same laws of motion of living substance prevail. Bauer succeeded in both respects.

He is actually presenting a series of arguments showing that *living organisms invest work on the debit of their free energy content, and this work make the inner conditions of the organism time variable in such a way that the organism regenerates its capability to do work* (Bauer 1935/1967, p. 50). Bauer found the most fundamental law of biology that determines the universal aspect of the spatio-temporal behaviour of living organisms. He formulated this universal law of biology in the sense that “the living and only the living systems are never in equilibrium; they unceasingly invest work to the debit of their budget of free energy against the equilibration which might occur for the given initial conditions of the system on the basis of physico-chemical laws” (Bauer 1935/1967, p. 51). This universal principle of biology was named Bauer’s principle after him. It determines the universal aspect of all biological behaviours. Most remarkable is the fact that this principle assumes the existence of a continuous biological activity working against equilibration that should occur on the basis of physical laws.

From the mathematical form of his universal principle, Bauer derived the fundamental equations of the metabolism, reproduction, growth as well as all the fundamental phenomena of life, metabolism, reproduction, regeneration, growth and responsiveness. He derived from his principle also the law of the increasing potential of living matter as the general law of evolution (Bauer 1935/1967, pp. 184–195). This is why we can state that Bauer’s theory is the only version of modern theoretical biology capable of following in the footsteps of modern physics, extending and increasing its explanatory power further towards deeper aspects of Nature, to achieve an *exact* general theoretical biology. Let us add that Bauer and his co-workers carried out detailed experiments and proved the empirical validity of Bauer’s principle (Bauer 1935/1967, pp. 184–195).

Bauer’s general biology reached the ultimate aim of biology

Hempel (1966, p. 94), the pre-eminent philosopher of science wrote: “One of the principal purposes of science [is] the attainment of a simple, systematically unified account of empirical phenomena.” Richard T. Weidner in his entry “Physics” of the *Encyclopaedia Britannica* expressed the goal of science very similarly:

[The] goal [of physics] is the formulation of comprehensive principles, or laws of physics, that summarize disparate phenomena in the most general possible way [...]. Its ultimate objective is the formulation of a few comprehensive principles that bring together and explain all such disparate phenomena [...]. The ultimate aim of physics is to find a unified set of laws governing matter, motion, and energy. (Weidner 1988)

With the help of Bauer's principle, biology reached that "principal purpose" of science. It plays the same unifying role in biology as the least action principle does in physics. Namely, all the fundamental laws of biology had been derived from it. It is an exact, mathematically formulated, general theory of biology built in a way required by the main road of natural sciences' millennia-old development: searching and finding the universal laws of Nature. Indeed, the theoretical biology of Ervin Bauer makes a step ahead on the main road of science, offering fundamentally new perspectives for it. It is the next milestone after the discovery of quantum physics. The author of the present paper has shown that Bauer's theory can be formulated in the language of modern physics as an extended form of the principle of least action (Grandpierre 2007). Accordingly, the least action principle corresponds to a special case of the life principle, valid in the limit of "least" action. Being so, it is not physics, but biology that is the fundamental science.

Discovering the tendency of Bauer's principle to act *always against the direction prescribed by physics* may be consistent with the laws of physics only if *Bauer's principle can harness all the physical laws for the sake of biological purposes*. This would be also expectable, since we as living beings are able to govern our bodily behaviour. Biology is the control science of physics, controlling and governing the physical conditions in a way suitable to realize biological purposes. *The situation between biology and physics can be compared to the relation between a driver and its car*. The driver controls the car and drives it towards human aims, while the physical laws prevail and control the behaviour of the car at a lower level.

The active aspect of life: autonomy

The *biological work* cannot be actualized without the *active* contribution of the living organism itself. As we learned from physics, all work requires energy, since energy is defined as the capability to do work. *Biological work requires biological energy*. As Baumeister (2012) stated, psychologists' research programmes that have been pursued over the past two decades have led the researchers to bring back the Victorian notion of willpower as a limited supply of energy that is used for control and self-discipline. This means that biologically mobilisable energy exists in the form of *emotional and intellectual energies*. Living beings are sensitive beings, they have emotional life. Living beings are active beings, therefore they make decisions, and they have their own mental capacities enough to know how to decide for maintaining their life. While in physics the factor causing change is physical force, corresponding to change in physical energies, the corresponding factor of change in

biology is *motivation*. *The two fundamental types of motivation are emotional and intellectual motivations.*

Living organisms must initiate their own actions in order to regenerate and recharge their full biological potentials. Such a self-initiated activity requires self-determination, in other words, decision making. Decision making is possible only if living organisms are autonomous. Bauer's principle assumes, implicitly, the existence of *biological autonomy*. The physicist Paul Davies characterized biological autonomy in his book *The Fifth Miracle: The Search for the Origin of Life* as enigmatic and unexplained.

As a physicist, I am used to thinking of matter as passive, inert and cloud-like, responding only when coerced by external forces – as when the dead bird plunges to the ground under the tug of gravity. But living creatures literally have a life of their own. It is as if they contain some inner spark that gives them autonomy, so that they can (within limits) do as they please. Even bacteria do their own thing in a restricted way. Does this inner freedom, this spontaneity, imply that life defies the laws of physics, or do organisms merely harness those laws for their own ends? If so, how? And where do such “ends” come from in a world apparently ruled by blind and purposeless forces? This property of autonomy, or self-determination, seems to touch on the most enigmatic aspect that distinguishes living from non-living things, but it is hard to know where it comes from. What physical properties of living organisms confer autonomy upon them? Nobody knows. (Davies 1998, 8–9)

The author of the present paper and Menas Kafatos from Chapman University, California have worked out the development of *the theory of genuine biological autonomy* (Grandpierre 2012; Grandpierre and Kafatos 2012, 2013). We have thereby shown that *biological autonomy is the self-determining activity of living beings*, and it is an inevitable aspect of all biological behaviour. Bauer's principle cannot prevail without the living organism's active contribution to initiate the biological work. Biological autonomy is based on the ability of the living being for self-determination. Self-determination is only possible if there is a “room” for it, that means, if physical determination is not complete. It is well known that the only realm of physical indeterminacy occurs in quantum physics, within the Planck limits. Biological self-determination is possible where physical determination is incomplete. This means that *biological autonomy begins below the level of the quantum vacuum, that is, below the sea of virtual particle pairs. It exists and acts at a deeper level of Nature.* We arrived at the next level of Nature in a way similar to the case when someone studying the ultimate causes of our hand's motion is arriving at the problem of the generation of the biocurrents running our nervous system, the biocurrents that are initiated and shaped in our brain by our decisions. *We have been arriving at the realm of biological causes, the ones which create the physical forces from emotional and mental energies by the “spontaneous” creation of the suitable virtual particle pairs.*

Genuine biological autonomy is the ability to act, to initiate an action, to decide in favour of one or the other option. *Decision-making is the bridge between the emotional-intellectual and the physical world.* Biological causes can initiate biological

behaviour which differs from the inertial behaviour occurring within the same initial conditions on the basis of physico-chemical laws. *As we had shown, biological causes may generate physical causes by mobilising biologically governable energies of the living organism and utilize them for the creation of virtual particle pairs in the quantum vacuum in a way according to biological purposes.* The flux of these biologically controlled virtual particles then generates physical forces according to biological purposes. For the psychologist Gruen (1988, p. 1), “[a]utonomy is that state of integration in which one lives in full harmony with one’s feelings and needs”. Biological purposes of human beings are life-affirming emotions, feelings of joy, sorrow, pain (Gruen 1988, p. 2), the need for exploring life and the world, to love, to play, to think, to understand life and the world.

The causes of biological changes: motivations

We can say that our natural human motivations are thoughts and feelings. *In biology, motivation plays an analogous role to that played by the moving force in physics.* While physical causes work with physical forces, *biological causes work by way of motivations.* It is the vital energy that is present in our *feelings and thoughts, the two main types of motivations.* Biological causes are physically effective, because biological motivations have energy; and this energy, when directed by biological autonomy, can create virtual particle pairs. This means that when living organisms invest biological work, it is invested by biological causes. *Bauer’s principle works by way of biological causes: motivations.* The biological “ends” do not come from the physical world ruled by blind and purposeless forces, but from the biological world ruled by Bauer’s principle that is independent from physics and is harnessing the laws of physics like a driver is directing his or her car.

Extending the Bauer’s principle to include motivations—the life principle

Bauer’s principle states that living beings continuously and actively recreate their *vital “level” “above”* the deathly equilibrium by their fundamental biological activity. Since living beings are sensitive beings, the “elevation” showing up in Bauer’s principle appears not only in their continuously regenerated free energies ensuring their capability to act. Instead, it appears in the *level of their well-being*, first of all, *in the elevation of their emotional well-being.* In this way, we are led to generalize *Bauer’s principle* (Grandpierre 2015), *extending it to emotional and intellectual motivations* for reaching a high level of physical, emotional and intellectual well-being, much above the level of mere survival. *This more general principle urging us to increase or to “elevate” the quality of life is called the life principle.*

The philosopher and mathematician Whitehead (1929/2018, p. 8) found that life is the source of the continuous three-fold urge to live, to live well, and to live better. This is in complete agreement with the life principle. Therefore, *we can regard the life principle as the principle of best life.* Regarding emotions, the life principle

urges all living beings to feel better, increasing the quality of our emotional world. Regarding intellectual activities, the life principle motivates the biosphere, and pre-eminently human beings to think better, heightening the quality of our world of thoughts.

The seven fundamental communities of life in the cosmos

Seeing the world from the aspect of the life principle, it applies to all life-forms equally. There are some life-forms which have extraordinary significance for us. This is because life has a fundamentally communal nature. Regarding human existence, we can find *seven fundamental levels in the organisation of life in the Cosmos*, embedded into each other like Matryoshka-dolls: that of *our cells, our individual lives, our family lives, our social lives, humanity, the life of the biosphere and the life of the Universe*. All seven levels of our lives are equally important for our overall spiritual well-being and good quality of life. The supreme level of life is the life of the Living Universe. The course of our life runs in the right direction of life when our decision-making ability is in line with the principle of best life. *The life principle urges us to continuously maintain the full, physical, psychological (emotional and spiritual), and mental (intellectual, rational) quality of life of our individual, communal (in our family, society, humanity, biosphere) and cosmic beings (our personal relations with the Universe) and to make life as great, happy and extraordinary as possible*. The principle of life is the law of prosperity, the completion and perfection of a profound, happy and meaningful life. Our individual life is inseparable from our family life, social life, our actions as members of humanity, terrestrial community of life and the partners of the Living Universe. *It is our Nature-given duty to do our best for the betterment of life on all these seven levels*.

New sciences connecting life with the universe

In the 20th century, a whole series of new branches of science has been born, the common characteristic of which is that *life has an important role in the basic fabric of the Universe*. One of them is the anthropic cosmology, born in the second half of the 20th century, called attention to the fact that *all the fundamental physical constants, the physical laws and the vacuum fluctuations that generated the Big Bang are such that their properties like shape and actual values are all found in a relatively narrow region, so that they are fine-tuned for life* (Barrow and Tipler 1986; Barrow et al. 2008; Dick and Lupisella 2009). Another branch of science, searching the relationships between life and the Universe, is called *astrobiology*. One of its main results is that *in the Universe the development of conditions favourable for life is a cosmic imperative, and we live in a bio-friendly Universe* (Davies 2006). The Gaia-theory recognized that *the Earth is a self-regulating system, which keeps the physical conditions of the Earth in the range favourable for life*; despite the significant changes that occurred in solar luminosity and the terrestrial atmosphere during the last four billion years (Lovelock 1979). These new branches confirm the cosmic

prevalence of the life principle, and *the life principle explains the main results of all these new sciences*—as the author of the present paper has shown in the book *The Book of the Living Universe* (Grandpierre 2012), developing *the theory of the Living Universe*.

Our universe is a living universe

Humanity as a species is the product of biological evolution, arising from the development of the biosphere. Our capability to act, to initiate biological work by biological causes cannot arise from the gigantic cosmic network of physical causes. We had seen that Bauer's principle does not originate from physical laws but prevails independently at a deeper level of reality. This means the abiogenetic origin of life claiming that life comes from non-life is built on a mistaken premise. *The ultimate, all-embedding level of life is the cosmic life.* The Universe is evolving, regarding its observable surface, by the physical forces between the elementary particles. As the author had shown in his paper "The Fundamental Biological Activity of the Universe" (Grandpierre 2018), at its deepest level, *the Universe evolves by a cosmic sea of biological motivations generating continuously virtual particle pairs in the quantum vacuum.* The Universe is not only the physical, but also the biological universe, *a Living Universe.*

The cosmic life principle prevails beyond the level of physical existence, beyond the quantum vacuum. Life is more fundamental than non-living matter. *The ultimate level of reality is the world of cosmic emotions and thoughts.* This means that cosmic life is eternal, happy and meaningful, since life, being more fundamental than inert matter, governs the latter according to its purposes, heightening its emotional and intellectual level. *The life principle can ensure a great height of emotional and intellectual well-being at the level of the Living Universe.* As our ancients knew, *our Universe is a Living Universe, profoundly happy and meaningful. Its two fundamental components are the life principle and biological autonomy.*

The ultimate, self-creating reality: cosmic life

The ancient Greeks attempted to clarify the nature of the ultimate and self-existent reality, without reaching this goal. The theory of the Living Universe expanded the set of explanatory tools and offers a new approach to solve that problem. In order to be self-existent, primordial reality must act as its own cause. *The ultimate reality must be self-creating.* Now let us take into account that self-creation is *action*. Action requires the presence of life. Consequently, the requirement of self-creation can be fulfilled only when life is already present. Now let us also take into account that *life is not only a necessary but also a sufficient condition for self-existent reality*, because *the essence of life is that it creates and maintains life, that is, itself.* Cosmic life is the *par excellence* self-creating and self-reality. Cosmic life continuously generates its own existence, according to the life principle. All life that exists arises from life, at the deepest ontological level of the Universe, beyond the level of inert

physical matter, and is capable to generate and move physical matter by biological causes. It is life that establishes life and maintains life in existence. It is life that is directed towards continuously self-establishing itself. Cosmic life is the ultimate self-creating loop of causality in process. Cosmic life is reality at work, the Living Universe as a “work in process”. *The Living Universe is the primordial, eternal and ultimate self-existent reality that is its own cause, continuously.*

The existence of the cosmic life principle shows that life is not metabolism plus reproduction. Instead, *life is the self-existing reality that urges all living beings to maintain, propagate and improve life. Life is action for life, action for making our life better. It makes exuberance and well-being as the normal state of living organisms, high above the level corresponding to the survival level.* Life is, first of all, the activity striving for perfection, prosperity and welfare; mere survival without profound happiness and meaning has no value. *Alienated beings who ignore the priority and the elevating, mobilising quality of the life instinct and even do not hear its voice, and so avoiding the possibilities to act for the betterment of life, are doomed to lead lives which become more or less empty—meaningless lives departing from the main, natural road of life.*

Humanity as a species is the product of biological evolution, arising from the development of the biosphere, from the development of cosmic evolution, from the Living Universe.

Cosmic roots of human nature: the life principle, the principle of matter, the principle of reason, and the self

Humanity is the manifestation of the eternal life principle and its tool, the principle of reason. The cosmic life principle prevails in the entire Universe, the unified whole of everything that exists, including the realms of matter, life and mind. For the Living Universe, the life principle can be regarded as its vital instinct. Since we are embedded in the Universe, the cosmic life principle prevails within us. It is identical with our personally accessible vital instinct. The ultimate factor driving humanity’s life is the eternal, cosmic life principle.

This means that humanity cannot become manipulated forever. We have the possibility to live with our natural motivations even in a civilisation attempting to alienate us from our deepest human motivations. Our life has its own cosmic roots that are causally prior to our social nature. *These cosmic roots are the ones that maintain our life, regenerate our cells, heal our wounds and urge us to win over alienation, to regenerate our genuine human nature in our social life, to experience the wholeness of life, to live life fully. These cosmic roots urge us to win over alienation, to find our way of life that heals us as human beings and makes us fully living beings again.*

Our vital instinct is much more than a mere instinct of survival, as it is conceived on the basis of the materialistic worldview dominating Western civilisation. Our vital instinct is the life principle uplifting all life towards the highest quality of life, the ultimate principle that embraces the entire Universe and unifies the All into an organised whole that is the One. The One is the unified form of the three fundamental principles of the Universe, namely, the principle of matter, the life principle and

the principle of reason, while the latter involves in itself the principles of logic. The principle of matter is the least action principle that expresses Nature's economy in terms of energy and time. Remarkably, *the principle of matter is the ideal tool of cosmic life*, since it realizes life's purposes in the most economic manner in terms of energy and time, with utmost ease. It makes life easy and amazingly efficient. It is enough for us to "wish" bending our finger, and—lo and behold!—the matter of our finger obeys with utmost ease. The principle of reason is also an ideal tool of the life principle. Whitehead (1929/2018, p. 4) pointed out that *the function of reason is to recognize the most favourable conditions for life*. From the three fundamental principles of the Universe the ultimate one is the life principle which unifies these three principles into the One. *When our feelings are in full agreement with the cosmic life instinct regarding its breadth and depth, we experience the wholeness of life, and our happiness is complete.*

The Universe is the unified whole of everything that exists. Human beings consist not only of physical atoms, but also of feelings and thoughts; what is more, we consist of three cosmic fundamental principles. Being so, we human beings are, fundamentally, not finite beings, since the three fundamental and creative principles of the Universe belong to us, to our very constitution. Since the ultimate principle of the three, the life principle, contains in itself the entire Universe as the unified whole of all existents, therefore *we human beings are, ultimately, infinite beings, containing within us the entire cosmic reality, the Living Universe, embedded in our vital instinct. Our life instinct embraces the entire Living Universe. When we are living fully in harmony with our deepest cosmic roots, we are living as cosmic beings.*

What is the self?

The "core" of the Self is decision-making. Decision-making is the ontological bridge between the three ontological levels of the Universe: that of life, matter and mind. This means that the centre of our autonomous Self is a cosmic agent. Our Self is the manifestation of the active nature of cosmic life.

The "body" of our Self is our unified system of decision. We must decide and act because we are living. Our actions are initiated by our living nature and are to be realized in the world. Our unified system of decisions should work according to the nature of life and to the nature of the world. This means that we must cohere our system of decisions according to the nature of life and to the nature of the world. Human beings are in a Nature-given situation in which the philosophy of life and the worldview must be in harmony. If the Universe would be inanimate, as the materialistic worldview suggests, it would involve an antagonism of our philosophy of life and our worldview, drawing with itself a permanent existential crisis, depression and psychopathological behaviour. Our result that the Universe is living, solves this fundamental problem. *Our ontological Self lives in the cosmic context of our life.*

Decisions are directed towards values. Our unified system of decisions is reflected in our fundamental value system. Values correspond to emotions. The "body" of our Self is the way in which our emotional world is organized. In other words, it is our soul. Our soul exists beyond—and, possibly, within the quantum vacuum—, as a unique way

of biological organization that creates the patterns of virtual particle pairs serving biological aims corresponding to that way of organization. Our Self can be harmonious only when in harmony with the Cosmic Self that is the deepest root of our personal Self and our seven fundamental, Nature-given communities of life. When our Self is harmonious, it is also harmonious with the life principle. Accordingly, it is driven by the deepest fundamental principle of the Living Universe without serious hindrance. It offers us the feeling of utmost happiness and eternal stability. When our rational mind is in harmony with the cosmic life principle, our mental activity reaches its natural completion, in harmony with our intuitive mind, endowing us with the highest rate of creativity. We become fully motivated towards improving the quality of life at all the seven communities of life. It is the communal context which gives meaning to our life.

While the centre of our Self, decision-making is invariant, the “body” of our Self, the soul is time variable and capable of development. All of us have a Nature-given soul, given in its initial state when we are born. Our Nature-given soul is in full harmony with the life principle and the Cosmic Self. At the same time, we have a responsibility to shape and develop our soul. Since the Nature-given organising principle of our soul is the life principle that drives cosmic evolution, and we experience the utmost happiness when being in the highest harmony with the life principle, *the natural course of our life is personal development, improving the organisation of our emotional and intellectual life*. It belongs to the natural tasks of our life to develop our personality and make it better.

The Self is a fundamental tool or a crucial aspect of the life principle that belongs to the very nature of life: activity. The Self is inseparable from the life principle. If there would be no Self, the life principle could not act, and the Universe would become inert. *The Self is the only thing by which the Universe can act in the world*. The Self is the knife by which the One is cutting itself into the All. The Self is the somersault by which the cosmic life lands within us. *Our personal Self is rooted in the Cosmic Self. We can grasp our full, cosmic identity instinctively by our intuition, since our Self is inseparable from the cosmic life instinct embracing the entire Universe*.

The Self is the manifestation of the life principle, being its centre of activity. The natural task of the Self is to make the conditions favourable for life and improve the conditions of life. *Our personal Self is the ambassador of the Cosmic Self on Earth*. Our happy and meaningful life depends on our ability to serve our vital instinct fully. When we serve our vital instinct, we serve to make the conditions of universal life more favourable. The seven communities of life are of outstanding importance in that respect. *Our Self lives, first of all, in the natural world order, that is, in the fundamental context of our cells, our individual path of life, our family, our nation, humanity, Gaia and the Living Universe*.

The clothes and the metamorphoses of the self

It is a remarkable feature of the Self that it can transform itself into different contexts and serve as the local centre of identification. *In the same way as the Cosmic Self had been transforming itself to our personal Self, our Self may wear new*

'clothes' and can identify itself with them. Remarkably, the original variety of the Self as it exists in reality does not disappear in this process. In this way we have a variety of selves and corresponding identities. Indeed, we have cultural identities, which at the broadest level are civilisation identities (Huntington 1996, p. 20). We may have at the same time a national identity, a family identity and an individual identity. Many people identify themselves with their individual body, others by their individual soul, others by their self-consciousness. In the Nature-given context we have all these together at all the seven levels of life. We have seven fundamental, Nature-given identities, corresponding to the seven levels of life. In the consumer society, many people develop a consumer self (Curtis 2010), the "ego" in the expression "egoism".

Gordon W. Allport, the founder of personality psychology, pointed out that, *in the West, parents usually do not allow children's innate "explorative drive" to prevail*. As a result of the systematic parental scolding and humiliation, the children will increasingly feel that their personality is at fault. It makes them suffer and suffer. Finally, there is usually no other way out, and the children gradually give up their natural inner urge to rely on their own life instinct and replace it by socially learned schemes. They come into conflict with themselves. The original, natural Self of a toddler becomes derailed. It happens, usually, at the age of three to five. By this time, as Allport expressed it (1961, p. 116), "The I of the Western man sticks out like a stubbed thumb. In other cultures, it blends more readily with nature and with society." In other words, the *Western people become alienated from Nature and their natural Self in their early childhood*. In this age, the Western man's I, more precisely, the image of Western person about his or her self-identity becomes derailed and mistaken. Our natural Self, which connects us to Nature as a whole, becomes overshadowed by a false self-image, by the "ego". As Allport had pointed out, such a derailment of our Self leads to trying to compensate the loss by egoism. At this point, our life loses the inspirational, incessantly tingling cosmic power that inspires original thoughts and fills our lives with joyful enchantment that reaches the sky.

Losing the authentic connection with our Nature-given Self, we become easily deceived about who we are. As it was shown so powerfully by Adam Curtis in his film "The Century of the Self, Part 1: Happiness Machines" (2010), *the all-consuming "Self" dominates today in the United States had been developed by conscious efforts of businessmen and statesmen*, starting from Edward Bernays who invented the public relations profession in the 1920s. Brandt documents this process in greater detail (2007). Paul Mazur, a leading Wall Street banker working for Lehman Brothers in 1927, is cited: "We must shift America from a needs- to a desires-culture. People must be trained to desire, to want new things, even before the old have been entirely consumed. [...] Man's desires must overshadow his needs." (Curtis 2010)

As Montagu wrote (1988, p. viii):

In the Western world, at least, we do not learn to become our true selves, to become ourselves, but to become a confusion of other people's selves, false, inauthentic selves. Thus deformed, we go through life attempting to play the roles that are expected of us. And thus it comes about that the child, living in a world he never made, in a sick society, powerless and helpless, ruled by rulers,

comes to feel toward adults much as the inhabitants of an occupied country feel toward the occupiers. It is a feeling that the adult scarcely ever is able to throw off [...]. And so we go on living by the will of the occupiers rather than by our own.

In the last centuries, almost all people become westernised to a certain extent. For example, Han wrote (2008) that in the 21st century even in China the neglect of people's emotional and spiritual needs led to a chaos within China's social value system. Due to the mindset of modernism imprinted to the next generations by the worldwide introduction of the materialistic curriculum, a significant part of the next generations becomes nihilistic. As was noted by Mahatma Gandhi, "*for me, real freedom will come only when we free ourselves of the domination of Western education, Western culture and Western way of living which have been ingrained in us, because this culture has made our living expensive and artificial*" (Gandhi cit. in Mukherjee, ed. 21995, p. 136). Instead of learning about the traditions of our nation, about local cultures and worldviews, about the importance of family, human relations and respecting all life, about how to live a happy, meaningful and fulfilling life, the curriculum is based on a worldview in which physics is the fundamental science, ancient Greek and Roman history is regarded as fundamental etc. Recognising the unfavourable aspects of such phenomena, Han (2008) reports on how China changed its direction of development towards a harmonious society in which the natural feelings, values and desires are attainable in the society.

At present, civilisation diseases are spread in a dramatically increasing rate. Continuously and dramatically, an increasingly larger part of the youth becomes idling, depressed, psychotic, suffering from behavioural diseases, dependent on drugs; some even escape to suicide, or commit murders cold-bloodedly, some become victims of sects. *Such phenomena are much more dangerous for the future of humanity than atomic bombs, environmental destruction and climate change* (Kopp and Skrabski 2006, p. 226).

One of the main points of this essay is to argue that all the tremendous efforts invested into the social manipulation of humanity will be rejected by all people in the end, because all of us, from the point of view of our deepest Self-identity, are identical with our cosmic roots, and these are eternal powers of Nature. *Humanity is living in a living Universe, and this great cosmic living organism will regenerate all its degenerated parts sooner or later by its all-powerful life principle*. When we understand that our life instinct is the uplifting creative principle of the Universe and become conscious to make our worldview complete and balanced, the course of our life may change. The Universe is living within us, and humanity will find the way winning over alienation.

On the potential of our natural genius

There are other phenomena confirming the derailment of western life so early. *At the age of three to five, human creativity reaches the level of creative genius in 98% of children*. Unfortunately, from that time on, it becomes dwarfed. Psychologists

George Land and Jarman Beth, following decades-long thorough surveys (1992, p. 153), found that by the age of 25 to 30, it drops below 2%. According to a British survey, three to five-year-old children ask 300 to 400 questions a day from their parents. However, in no more than a few years, the number of questions is rapidly diminishing. Unfortunately, even highly loving parents do not notice the unnatural character of such developments because this phenomenon is general, and they are also the victims of alienation. It may seem that this is the price of becoming an adult with a mature personality. In reality, such a derailment of our personalities is profoundly unnatural, and it is possible to avoid it. Let us notice once again that Allport (1961, p. 116) also wrote: “*In other cultures, it [the I] blends more readily with nature and society.*” In other words, in cultures other than the Western one, man’s identity is closer to their cosmic roots in Nature and in society.

Thomé H. Fang, an outstanding Chinese philosopher of the twentieth century, stated that the ultimate value and goal of Chinese people regarding life is comprehensive harmony. Fang had seen the fundamental characteristic of Chinese philosophy in a *cosmic life principle* (Fang 1957, p. 44). *Tian ren he yi* 天人合一 (Heaven and people in harmony) is a prominent view in Chinese philosophy and has been the most desirable accomplishment for many in Chinese culture. Ancient Chinese ideas like “Heaven, Earth and I were produced together, and all things and I are one”, “The great virtue of heaven and earth is called ‘life-giving’”, and the “qi”, the cosmic life principle, are fitting remarkably to the comprehensive life-centered worldview establishing the harmony of body, soul and mind, as well as individual, society and Nature presented in this article. Remarkably, an innumerable number of statements very similar to the above ones obtained on the basis of the theory of the Living Universe are present in the Chinese idea of selfhood, as Tu Wei-ming described them (1985, 1989). For example: “*sagehood means the most genuine and authentic manifestation of humanity*” (Wei-Ming 1985, p. 15), “What Heaven imparts to man is called human nature” (Wei-Ming 1989, p. 5), the Confucian perception of the self as a centre of relationships (Wei-Ming 1985, p. 12) that develops through the structures of the self, the family, the country, and the world (Wei-Ming 1985, p. 14), “a person’s natural disposition [...] is what the Confucians refer to as that aspect of human nature which is composed of ch’i-chih (vital energy and raw stuff)” (Wei-Ming 1985, p. 171).

Conclusions: regaining our healthy, complete and harmonious self

Part of human nature is given by Nature; another part comes from society. The ground of our personality is given by Nature, the construction built upon it is given by culture. The basic directivity of human nature is towards uplifting life in the comprehensive and profound context of the Living Universe. Our genuine human abilities can develop and flourish only in a society establishing their favourable conditions. Our full human potential can be nurtured only in a culture which is in harmony to the cosmic roots of our ontological Self.

In order to live fully with the cosmic roots of our Selves and live the life we are born into, we need to mobilize all our energies and abilities at all times. *Recognising*

the cosmic roots of our Self, and appreciating the comprehensive, ontologically complete and healthy worldview it is possible to win over alienation and regain our healthy, complete and harmonious Self. We can regain our genuine human nature implanted into us by the Living Universe.

Authors' contribution I am the only author.

Funding There was no funding.

Data Availability Not applicable.

Code Availability Not applicable.

Conflict of interest I declare that there is no conflict of interest in the publication of this article, and that there is no conflict of interest with any other author or institution for the publication of this article.

Ethical Statements I hereby declare that this manuscript is the result of my independent creation under the reviewers' comments. Except for the quoted contents, this manuscript does not contain any research achievements that have been published or written by other individuals or groups. I am the only author of this manuscript. The legal responsibility of this statement shall be borne by me.

References

- Abercrombie, Michael, M. Hickman, M. L. Johnson, and M. Thain. ⁸1990. *The Penguin Dictionary of Biology*. London: Puffin.
- Allport, Gordon Willard. 1961. *Pattern and Growth in Personality*. New York: Holt, Reinhart & Winston.
- Barrow, John D., and Frank J. Tipler. 1986. *The Anthropic Cosmological Principle*. Oxford: Oxford University Press.
- Barrow, John D., Simon Conway Morris, Stephen J. Freeland, and Charles L. Harper Jr. 2008. *Fitness of the Cosmos for Life: Biochemistry and Fine-Tuning*. Cambridge: Cambridge University Press.
- Bauer, Ervin. 1935/1967. *Elméleti biológia [Theoretical Biology]*. Budapest: Akadémiai Kiadó [1967, in Hungarian; 1935, 1993, 2002, in Russian].
- Baumeister, Roy F. 2012. Self-control—The Moral Muscle. *The Psychologist* 25 (2): 112–115.
- Beth, Jarman, and Land, George. 1992. *Breakpoint and Beyond. Mastering the Future—Today*. New York: Harper Business. A Division of Harper Collins Publishers.
- Brandt, Allan M. 2007. *The Cigarette Century: The Rise, Fall, and Deadly Persistence of the Product that Defined America*. New York: Basic Books.
- Brent, Roger, and Jehoshua Bruck. 2006. Can Computers Help to Explain Biology? *Nature* 440: 416–417.
- Carrel, Alexis. 1959. *Man, the Unknown*. Bombay: Wilco Publishing House.
- Cleland, Carol E. 2006. Understanding the Nature of Life: A Matter of Definition or Theory? In *Life as We Know It*, ed. J. Seckbach. Dordrecht: Springer.
- Curtis, Adam. 2010. *The Century of the Self—Part 1: “Happiness Machines”*. Video source. <https://www.youtube.com/watch?v=DnPmg0R1M04>. Accessed 15 Dec 2020.
- Davies, Paul. 1998. *The Fifth Miracle. The Search for the Origin of Life*. London: Penguin Books.
- Davies, Paul. 2006. *The Goldilock Enigma. Why is the universe just right for life?*. London: Penguin Books.
- Dick, Steven J., and Mark Lupisella (eds.). 2009. *Cosmos and Culture—Cultural Evolution in a Cosmic Context*. Washington: NASA SP-4802.
- Fang, Thomé H. 1957. *The Chinese View of Life. The Philosophy of Comprehensive Harmony*. Hong Kong: The Union Press.
- Grandpierre, A. 2007. Biological Extension of the Action Principle: Endpoint Determination beyond the Quantum Level and the Ultimate Physical Roots of Consciousness. *Neuroquantology* 5: 346–362.

- Grandpierre, Attila. 2012. *Az Élő Világegyetem könyve*. [Hungarian: *The Book of the Living Universe*.] Budapest: Titokfejto.
- Grandpierre, Attila, and Menas Kafatos. 2012. Biological Autonomy. *Philosophy Study* 2 (9): 631–649.
- Grandpierre, Attila, and Menas Kafatos. 2013. Genuine Biological Autonomy: How Can the Spooky Finger of Mind Play on the Physical Keyboard of the Brain? Chapter 9. In *An Anthology of Philosophical Studies*, vol. 7, ed. P. Hanna, 83–98. Athens: Athens Institute for Education and Research.
- Grandpierre, Attila. 2015. *Héliosz – A Nap és az élet új nézőpontból*. [Hungarian: *Helios Theory. A New View of the Sun and Life*.] Budapest: Titokfejto.
- Grandpierre, Attila. 2018. The Fundamental Biological Activity of the Universe. *Analecta Husserliana* 121: 115–140.
- Gruen, Arno. 1988. *The Betrayal of the Self. The Fear of Autonomy in Men and Women*. Berkeley: Human Development Books.
- Han, Ai Guo. 2008. Building a Harmonious Society and Achieving Individual Harmony. *Journal of Chinese Political Science* 13 (2): 143–164.
- Hempel, Carl G. 1966. *Philosophy of Natural Science*. Englewood Cliffs, N. J.: Prentice-Hall.
- Huntington, S.P. 1996. *The Clash of Civilizations and the Remaking of World Order*. Touchstone Books.
- Kopp, Mária, and Árpád Skrabski. 2006. “A támogató család, mint a pozitív életminőség alapja”. [Hungarian: “The Supporting Family as the Foundation of Positive Quality of Life”]. In *A magyar népesség életminősége az ezredfordulón*. [Hungarian: *The Quality of Life of the Hungarian People at the Turn of the Millennium*.], ed. Mária Kopp and Mónika Erika Kovács, 220–232. Budapest: Semmelweis Kiadó.
- Lovelock, J.E. 1979. *Gaia. A New Look at Life on Earth*. Oxford University Press, Oxford.
- Montagu, Ashley. 1988. In Gruen (1988), vii–ix.
- Mukherjee, Rudrangshu, ed. 2019. *The Penguin Gandhi Reader*. New Dehli: Penguin Books.
- Schrödinger, Erwin. 1948. *What is Life? The Physical Aspect of the Living Cell*. Cambridge: Cambridge University Press.
- Wei-Ming, Tu. 1985. *Confucian Thought: Selfhood as Creative Transformation*. New York: State University of New York Press.
- Wei-Ming, Tu. 1989. *Centrality and Commonality An Essay on Confucian Religiousness*. New York: State University of New York Press.
- Weidner, Richard T. 1988. Entry “Physics”. *Encyclopedia Britannica* 25: 841.
- Whitehead, Alfred North. 1929/2018. *The Function of Reason*. Princeton: Princeton University Press/The Best Books Publishing.