

Research Article

Thought-forms and Primary Mental Cognitions as a Basis for the Formation of the Way Culture Knows the World

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Abstract

The study puts forward a number of hypotheses that can explain the nature and formation of thought-forms and mental cognitions as the basis on which a culture creates its unique way of knowing the world. The hypotheses were derived from a comparison of metaphysical and natural science (evidence-based) approaches. These scientific approaches identified three chronological types of civilisations that exist today. These civilisations still today use three different generalised ways of knowing the world. The way of knowing the world is determined by thought-forms, which are filled with basic (primary) cognitions. Thought-forms are universal for all mankind, but their cognitive content is unique for each culture. Thought-forms are organised in human psychic matter. They are filled with basic cognitions due to the matrix structure of psychic matter. Cultures develop around the way of knowing the world formed at the dawn of their birth. Cognitions that arise in the mental field as a functional of psychic matter are built exceptionally according to the already existing template, which is the way of knowing the world.

Keywords

Psychic Matter, Way of Knowing the World, Thought-form, Mental Cognition, Z-matrix of Culture

1. Introduction

Despite the natural commonality formed by each culture, each of the cultures and cultural civilisations existing today differ from each other in the way of knowing the world. The way of knowing the world arises at the dawn of culture and is connected with many processes occurring both in biological matter and in the quantum space of the world. The basis of the way of knowing the world is primary thought-forms filled with mental cognitions. Understanding of interrelation of a human being with the natural world around him will help to explain how universal thought-forms are filled and how each culture forms its own way of knowing the world. Although

thought-forms are the same for each culture, the primary mental cognitions formed from intuitive knowledge differ. This is an important issue that points to the origins of cultural differences and their depth. Until today, this issue has not been raised and has remained unexplored. This determines the relevance of the study.

Studying the dissimilarity of cultures as a difference in their way of knowing the world will allow representatives of different cultures and civilisations to come closer to understanding each other and improve intercultural communication, which to date remains formal due to the superficial perception

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of cultures of each other. The study of each culture's way of knowing the world requires particularly careful consideration and analysis, which will help to understand the models of the world built by the culture and avoid bias in the process of communication with representatives of other cultures. Today, two approaches to understanding the relationship between man and the world around him and, consequently, to civilisations' perception of each other - metaphysical and natural-scientific - have taken hold in world science and in relations between existing civilisations. On the one hand, they have different views on the processes of thought-form and primary mental cognitions formation and are the guiding vector in man's cognition of the world around him. On the other hand, civilisations perceive the other within the framework of their own approach, superficially approaching a different understanding of the world. The aim of the research was to study the nature of thought-forms and primary mental cognitions, as well as the influence of energy-information processes on their emergence in the period when culture was born.

Hypothesis of the research: psychic matter as subtle invisible matter fulfils several functions, in particular: it is a repository of all types of memory; in it thought-forms are created on the basis of energy-informational templates. Energy-informational templates are universal for the whole human community. Their structure is matrix. Any kind of matter is created by combining energy into a matrix structure, which allows to fill it with information. Any matter possesses some basic matrix, which we called Z-matrix (zero, primary). Z-matrix sets different forms, including psychic matter. The first basic cognitions (ideas about the nature of the world), with which thought-forms are filled, originate in it. The thought-forms filled with basic cognitions create the foundation of culture and are the basis for the culture to form its way of seeing the world. The mental appears to be a functional of psychic matter in which culture, using its created way of knowing the world, forms its picture of the world.

The objectives of the study are to analyse the psychic and mental from the perspectives of biology, neuroscience, quantum physics, psychology, cultural studies and linguistics. The main objectives of the research: 1. To define and explain the models of human connection with the natural world order existing today in different cultures. 2. To substantiate the nature of the psychic in terms of biological science, neuroscience and quantum physics. 3. To study the understanding of the mental in modern science and ancient science, to find points of contact in the understanding of this issue. 4. To determine the relationship between proto-events and thought-forms. 5. Justify the expediency of introducing the concept of z-matrix and explain its role in the formation of mental cognitions.

The methodological basis of the research is the system approach, which allowed us to consider the studied phenomena in the interdisciplinary field and to find research points of

contact between biology, neuroscience, quantum physics, linguistics and cultural studies.

Inductive-deductive method allowed us to process disparate information from different fields of knowledge and to identify systemic existing problems concerning the understanding of thought-forms and mental cognition.

The comparative method allowed to show the existing connection between the modern state of scientific knowledge and ancient scientific concepts, which today are reflected in the practice of Hinduism.

The hypothetical method allowed us to derive a number of hypotheses about the existence of psychic matter as a receptacle of memory and a place of formation of energy-information patterns in which thought-forms are formed and the first basic cognitions originate. We assumed that the formation of any type of matter - visible and invisible - is based on a matrix structure, which we called the z-matrix.

2. Psychic and Mental: Two Approaches to Understanding the Models of World Order

2.1. Modern Scientific Approaches to Civilisational Models of Man's Relations with the Natural World Order

In the scientific world today, two approaches to understanding the Universe and man's place in it have taken hold. The philosophical (metaphysical) approach considers the Universe and man as 'living' matter and tries to explain the existing links between them in terms of their functional properties. The natural-scientific (evidential) approach rationalises the relationship between humans and the Universe and explains it in terms of mechanisms of interaction based on functional characteristics. But still these approaches cannot comprehensively and comprehensively explain the three basic models of man's relationship with the natural world order created by civilisations existing in the prehistoric and ancient world and crystallised over millennia. The first model arose in the pre-historic period in the civilisations preceding the civilisations of ancient Egypt and Sumerian civilisations. The second model arose in the first civilisations of the ancient world that existed in Egypt and the East. The third model also emerged in the ancient world, but in the first civilisations present in Europe. These models are presented as levels of measurement of the quality of the connections established by humans at the dawn of the emergence of cultures with the world around them. They also demonstrate how the representation of these connections has changed over the long period of human development. This may help to explain the phenomenon of the development of human thought in different civilisational formations existing today. The three models identified by us can be regarded as a level chrono-

logical hierarchy, each level of which proceeds from the previous one, generalises it and forms a new, different model. The first model of man's relationship with the world order around him, formed in the prehistoric world, undergoes some metaphysical changes in the two subsequent models that emerged in the ancient world. While the first model demonstrated the unity of properties and characteristic qualities of the world forms, and man was considered as one of such forms, in the second model the changes referred to metamorphoses in the connections between internal properties and their external relations (manifested in the metaphysical concept of the world's integrity in the image of one God). In the third (the latest model, which is closest to the present day in terms of time), the links between external relations to external objects were formed (manifested in the metaphysical concept of reality as consisting of a multitude of universal segments). All three types of models are reflected in the modern world. The cultures existing in the world are defined in these models or gravitate to them, being under the influence of the common space.

All the previously proposed classifications of civilisations reveal the reasons for their emergence, modes of activity or prospects of their development from the technological point of view. Thus, the classification proposed by A. Toynbee unites all previously known historically formed civilisations, the emergence of which, in his opinion, was influenced by the challenges of the natural and social environment [36]. N. Danilevsky's classification is based on the cultural-historical type of civilisations [8]. S. Huntington considers civilisations in terms of genesis and their historical development [18]. N. Kardyshev's classification is based on the technological development of civilisations and proposes to classify civilisations within the framework of measuring the amount of energy that a civilisation can use for its needs [21]. In the proposed classification Liu Cixin proceeds from the ability of civilisation to control and manipulate the dimensions of the microcosm, i.e. its quantum dimensions. He believes that mankind in the present time should be attributed to the civilisation of zero type, because mankind is not able to control additional dimensions, which, according to the researcher, there are 11 in the Universe [7]. In contrast to existing classifications, our understanding of civilisation models and ways of their development is based on the models of human connection with the surrounding world order formed over millennia. The proposed hierarchy of models of human connection with the surrounding world order can be used as a tool to help understand how different cultures cognise, understand and comprehend the world around them and how they form their own patterns of thinking. Let us present and explain these models in reverse hierarchical chronological order.

The Western world (Western civilisation) has made a huge leap in experimental scientific research during several centuries. It tries to explain everything happening in the Universe and in man himself on the basis of natural-scientific principles, and moving further and further away from the metaphysical

basis of understanding the world. Perhaps this is due to the fact that the West has continuously continued the scientific and worldview past of peoples distant to it both historically and territorially, and completely different in worldview. Western civilisation continuously assimilates, processes and transforms the knowledge of these distant cultures and peoples. And as a result of this rethinking there is a need for such a proof-based scientific explanation of the world and man in particular. The modern natural-scientific paradigm is a phenomenon of transformation developed by Western civilisation, which today strives to technologise and theorise the world without considering the place of man in the harmonious system of the Universe. Human nature is separated from the nature of the world, they are seen as two opposing forces. The model presents man's relationship with the natural world order as his external relation to the external properties of the object, i.e. man and the world are rationalised. The connection between them occurs only through man's rational use of the self-created rational world. The causal thinking developed by Western civilisation is linear. It does not envisage the integrity of the world and presents it as separate segments.

Eastern civilisations, including both Islamic civilisation and Confucian civilisation, are based on metaphysical foundations, as their focus of attention is directed to their own past and their development is based on the use of knowledge gained over many millennia. This knowledge gives man an understanding of himself and shows his limitless inner potential, which he can use for the benefit of society and the world. In doing so, natural scientific approaches are not denied, they are one of the special cases from the general. The model represents man's connection with the natural world order through the influence of the power of the higher order (the highest ideal) on the maintenance of man's inner harmony, i.e. through the mediation of the inner relation to the external object, man's inner properties are changed. Harmonisation is possible only by approaching the highest level of quality of the higher ideal. The sensual-empirical thinking supported by these civilisations is multidirectional.

The focus of civilisations and cultures of the African continent, tribal cultures of America, South-East Asia, Oceania is also directed to their own past, but still this focus remains shifted towards natural philosophy - understanding of the nature of the world and man as an integral system. Wisdom, as a source of harmonious coexistence with the natural world, is manifested through the deep connection between man and the world around him. This helps man to see himself as a part of nature and to discover in himself its limitless possibilities. The eternal state of unity creates the inner well-being of man. This approach can be regarded in scientific terms as metaphysical-subjective and can be associated only with the science of the future, in which neuroscience and quantum sciences will be united into one neuroquantum science to explain this phenomenon. The model represents the direct connection of man with the natural world order through resonant interaction with natural forms of objects, i.e. harmonisation of inner and

outer is possible through entering into resonance with the external properties of natural form. In this way, a high quality of connection with all levels of the world - from the physical to the spiritual - is maintained, which is seen as harmony. The intuitive thinking espoused by these cultures is all-encompassing and involves a constant weighting on all levels of simultaneously incoming and outgoing force. This comprehensiveness of thinking is what Szabo called quantum thinking, as the ability to see a problem from all sides and hold more than one view. The world in this model is harmonious, non-hostile and limitless for man in its natural forms.

Thus, over the millennia of mankind's existence, several models of human relations with the surrounding world order have been formed, which we have generalised and proposed to consider three as the main ones. The first model emerged in the prehistoric period in the civilisations preceding the civilisations of Ancient Egypt and Sumerian civilisations. The second model arose in the first civilisations of the ancient world, which existed in Egypt and the East. The third model also arose in the ancient world, but in the first civilisations present in Europe. All these models are inherent in the understanding of the world as energy, on which the existence of man himself depends.

2.2. Psychic and Mental from the Point of View of the Western Natural-scientific Paradigm

The representation of the world as vibrating energy is associated with a new vision to the understanding of man himself and his connection with the surrounding world in the model established in the European civilisation. This new vision within the framework of the evidential approach demonstrates the attempts of modern scientific thought to return to the deep essence of human existence. These attempts are made within the linear causal thinking and segmented world inherent in this civilisation. Not departing from the natural-scientific paradigm, science, having allowed the existence of invisible matter and being in a constant proving process about its existence, has allowed the existence of invisible world invisible by a human being, having singled out two segments from it: quantum surrounding world and psychic world of a human being. Matter of both the physical world and subtle matter came to be seen as vibrating energy. 'All life exists in a sea of vibrations, and rhythm is fundamental to all living things. The diurnal, seasonal, monthly and solar cycles, as well as the vibrations of our planet's resonant electromagnetic field, create the symphony of rhythms in which life on earth exists. Our life contains an imaginable infinity of rhythms, with vibrations at the atomic, molecular and within the rate of biochemical reactions' [27]. 'There is a close relationship between information and matter, which is constantly renewed in a co-ordinated and hierarchical order' [14]. Thus, within the existing model from the positions of linear causal thinking and developed natural-scientific approach modern science tries to find and explain connections

between mental and biological human being, to explain connections between quantum particles and energy vibrations, connections between psychic human being and his perception of visible surrounding world, first of all social. All these connections science tries to explain using the laws of the physical world and the developed evidentiary tool for their explanation.

The underlying psychic (neural, biochemical) processes of human perception are identified as mental processes and are associated with the activity of the human mind as a set of abilities for thinking, cognition, understanding, perception, remembering, generalising, evaluating and decision-making by a person. According to neurophysiologist Michael Graziano, the nature of connections between neurons of a particular brain determines the essence of this brain and its difference from others. The same character of connections between neurons determines the psychic activity of a person, which explains the difference of psychic tasks and mental needs of a person [16]. In addition, it also determines the basic (genetic) patterns of human behaviour. Thus, human psychical activity is connected with the peculiarities of neurobiological processes of his brain. These characteristic connections between neurons also determine the peculiarities of human perception of the world around him.

2.2.1. Biological Mechanisms of the Psychic

Perception is related to stimuli, brain responses to these stimuli, and the state that emerges due to a continuous stimulus-response process). 'Response selection arises through the activation of stimulus-response associations that combine perceptual and motor processes. The operations of forming a response to a stimulus correspond to the goals of the task being performed' [17], and in doing so, response selection occurs. Stimuli are vibrations coming both from the surrounding world and from the inner world of a person. 'Stimulus-response compatibility refers to the fact that certain types of tasks are performed more easily and better due to the way stimuli and responses connect to each other. Incompatible mappings are slower than compatible mappings through an increase in the time between stimulus and response code' [24]. The disappearance of the conflict effect of incompatible mappings is influenced by the fact that information from memory displaced resources for distractors [40]. In addition, cognitive control of concurrent, interfering stimuli is an important brain function that influences behaviours by modulating multiple stages of perception, cognition and action, by retrieving relevant information and suppressing irrelevant aspects in the face of competing input [31]. Cognitive control over conflicting sensory input is central to human adaptive behaviour. Studies have shown that the brain detects conflict in the absence of conscious awareness, suggesting that the brain can detect conflict fully automatically and without attention [34]. The state of a person's inner world depends on two processes: neuro-mechanical (movement of blood, lymph, transmission of neuronal impulses through nervous tissue, cell

respiration, cell division processes, etc.) and chemical-biological (proteins, amino acids, etc.), which support neuro-mechanical processes. The peculiarities of the course of these processes potentially strongly influence the intra-individual variability that is associated with human behaviour [4]. 'Metabolic activity of the brain is related to movement. Increased blood flow is observed during stimulus-related movements compared to self-paced movements' [24]. Functionally, both processes occur with the release of a certain amount of energy.

A certain amount of ejected energy creates vibrations, which are the energy component of a human being. All biological matter (including man himself), as well as any other, consists of vibrating quantum particles. 'The language of energy codes of living matter consists of sound, light and vibration. Every living system in nature vibrates. We are immersed in an endless vibrational field and energetically vibrate at specific frequencies. From DNA to the centres of the brain through receptors and cells, there is a continuous exchange of information through vibrational flow. We are surrounded by vibrational sounds that signify the rhythms of our lives, and our body itself also continuously generates sounds' [38]. Vibrations are everywhere around humans and the human body itself creates vibrations. Studies have shown that the frequency of brain and body vibrations are harmonised [23]. Vibrations and sound are the formative matrix of the entire universe. Everything in nature is shaped by energy that vibrates and communicates through its own sound signature. 'Each cell in our body vibrates at specific frequencies, generating its own particular 'sound signature'' [38]. 'We have evolutionarily inherited a vibrational sensitivity that is hard-programmed into our body and brain. Humans are endowed with a high density of mechanoreceptors in the skin, ligaments, blood vessels, joints and organs to detect vibrations. Vibration detection is an essential sense for maintaining communication with the environment' [30]. The brain, participating in the processing of vibrational information, works simultaneously with both internal and external vibrations, thus ensuring balanced (harmonious) activity of the human biological programme. The biological programme of adaptability and survival contains reactions to energy vibrations of heat and cold, light and darkness, satiation and hunger, smell and mating as an elementary biological 'pleasure'. All structures of the human brain are involved in the processing of all these vibrational frequencies. The brain constantly balances vibrational frequencies according to the programme given to it by nature. If in some milliseconds or even less the difference in vibratory frequencies is in the high frequency range, in the middle frequency range or in the low frequency range, then different sensations experienced by a person are 'switched on'. 'The doctrine of vibrations proves that all our sensations are vibrations: so the warmth which man feels is nothing but the action of thermal vibrations. The colour with which the whole world around him is coloured is the action of light vibrations, etc.' [32]. All the sensations and states experienced by a hu-

man being are embedded in his biological programme. The supra-instinctive emotions [25] express the human condition and are 'felt' by the human being as coming from within. Modern science has proven that humans have a 'second brain' located in the gut. It is so called through the variety of neuronal cell types and complex integrated circuits that allow the enteric nervous system to autonomously regulate many processes in the intestine [1]. The sensations and states a person experiences originate in this brain. 'The gut-brain axis is a bidirectional integral system whose components significantly influence the gap between the gut microbiota and the brain. An increasing number of different species of gut microbes are thought to regulate brain function. In the course of evolution, microbes have colonised plants, animals and humans, establishing complex relationships between microbe and host. The microbes in our intestinal tract are 10 times larger than we are, and the microbial genome is thought to be 100 times larger than the human genome' [29]. The gut-brain axis transmits information in the form of vibrations of the microbiome, which is involved in chemical and biological processes. Having received information about the state of the internal environment of the organism and balanced it with the incoming vibrations of the external world, the brain creates the state of 'pleasure or displeasure' felt by a person. Since all structures of the human brain are involved in these processes, any of the states is 'fixed', first of all, by a supra-instinctive emotion [25].

Supra-instinctive emotions "frame" a certain state of the human organism caused by biological stimuli - irritants, which leads to its "recording" in memory and creation of a corresponding pattern. Supra- instinctive emotions accompany these states and strengthen or weaken them. These are the basic emotions of the emotional brain. 'Emotions can serve an adaptive function... the function of emotions is to decouple stimulus and behavioural response, allowing flexible adaptation to the world around us' [6]. The number of biological stimuli is determined by the human biological programme. It cannot increase because the biological world of nature has remained the same for millions of years. A tree remains a tree, water remains water, wind remains wind, etc. Only the variety of social situations that humans encounter throughout their lives has increased. Neither the number of rhythmic brain frequencies, nor stimuli-intrusions, nor reactions to these stimuli, nor supra-instinctive emotions have increased anything, because man is not able to influence his biological programme or change anything in it. All other emotions that psychology identifies and studies are not the product of the human neurobiological system. These emotions can be regarded as socially conditioned and they are the product of human-created language and fixed social relations. The languages of all cultures without exception contain the names of all primary supra-instinctive emotions. In this case, situations of inconsistency of emotions between cultures are self-evident, as they are determined by different social situations and, accordingly, have different psycho-emotional

backgrounds. Language has created socially determined situational emotions. Ancient cultures had a deep understanding of the world, so it was extremely necessary for them to 'switch on' supra-instinctive emotions of 'pleasure' and to try to control supra-instinctive emotions of displeasure, because this indicated an imbalance of the state of the neuro-biological system (energy-biological) - the most important system for human functioning in the surrounding energy-informational world. Apparently, being in clearly delineated habitats, for example, Africa, Middle East, and, contacting or not in one time interval, with each other, they developed a model of knowledge about the basic structure of the world and man and formed ideal links between man, his energy-biological nature, and the surrounding world order. Beliefs were born out of these models.

Thus, in ancient cultures the place of 'dwelling' of emotions was considered to be feet and head. Such understanding of interrelations in biological system of the person was inherent to pre-historical civilisations and civilisations of chronological beginning of the ancient world. In late chronological period of the ancient world the place of concentration of emotions began to consider heart. The heart became a social instrument, fulfils function of empathy, socially conditioned emotions are built around it. Thus, for one biological stimulus-irritant there is one supra-instinctive emotion and some number of socially conditioned situational emotions. If one cultural society does not encounter a situation that is characteristic of another culture, or it is not meaningful to that cultural community, then there is no emotion and there is no understanding of it. In the modern world, cultures are in close contact with each other, but even such contacts cannot 'convince' another culture to accept a socially conditioned emotion of another culture that is not characteristic of its society. A similar situation can be observed within Western cultural societies. Take, for example, two similarly expressed emotions such as sadness and thoughtfulness. If one person's reflections lead him or her to the emotional state of thoughtfulness, and the person next to him or her has never used such a thought process, then, accordingly, there is no such emotion as thoughtfulness in his or her language. This person perceives the emotional state of thoughtfulness of the other as sadness. If the first person tries to explain his emotional state to the second person, it will still remain incomprehensible to him. Thus, the language and situational reactions of the first person contain the socially conditioned emotion 'thoughtfulness' and 'sadness', while the second person operates only with the socially conditioned emotion 'sadness'.

2.2.2. Memory as a Receptacle of the Individual World

The human brain, simultaneously working with the vibrations of the external and internal world, must not make a mistake. It means that a certain template is laid down in the biological programme. This template contains vibrational settings of the biological system. The template and settings

are what we call memory. Memory is also a part of the biological programme of a human being. Feelings are formed due to simultaneous control of energetic and biological (material) processes by the brain. But, arising as a result of energetic processes, sensations must 'materialise'. Their 'materialisation' takes place through the organs of smell and touch as particularly sensitive primary organs of perception and other senses.

A person perceives the world around him as a continuous series of events. 'The perception of events is a set of mechanisms by which the organism represents the activity in which it is deepened... the perception of events is related to the control of action, language and memory' [41]. In addition, simultaneously with perception, the biological programme of memory also operates, which begins to 'record' the events of the external world. The 'quality and nature' of perception is influenced by the neural connections that are formed individually. A person's reactions to the external world will develop according to this biological memory programme. 'Just as there are structural connections between events in perception, there are connections between events in memory' [41]. The brain works with vibrational frequencies, biological memory works with states. An image is created by all receptors. Subsequently, memory works only with images. Memory stores only those images that correspond to the biological template. It means that the memory of all people stores the same images (archetypes according to K. Jung), as all states are determined by the laid down biological programme. Hence the notion of collective unconscious or collective memory. For example, a sunny day, regardless of a person's location (tundra, desert, sea, mountains, a glimmer of light in a cave or a gorge, etc.) causes a state of calmness and peace in a person (provided that the work of the brain fully corresponds to the biological programme without the so-called 'niggles'), but long cloudy days cause a restless state. Memory has recorded the sun as calmness, so when one sees the sun, one experiences a state of calmness, etc. Perception and memory produce different subjective experiences [10]. The nature of neural connections, affects the specificity of information processing. The nature of neural connections is determined by the first images received by a person, which Carl Jung called archetypes (Mother, Father, Child, etc.) and which the child's brain 'read' from the state of the mother. The same events can be processed differently by different people's brains. Consequently, memory images are different and the memory programme in general is different for each person.

According to neuroscientists, the process of perception starts when the sensory zones in the cerebral cortex are excited at their peak. It involves the 5 main sensory organs. Their main task is to form connections with the world around a person. The idea existing in neuroscience that the same mechanisms are involved in the processes of perception and sensation can be explained by the functional duality of this mechanism. At the peak of excitation of sensory zones, when all receptors from the sensory organs are maximally activated,

sensation is weakened and perception is enhanced. Thus, the brain 'self-adjusts' to the perception of the world around it, but according to the memory programme that it has already compiled and fixed. Perception, by definition, is an integrative process that generalises many individual features of objects into their integral image. Consequently, excitation from sensory zones should be transferred to integrative (perceptual) zones of the brain. Here sensory information is compared with images stored in memory, resulting in its recognition.

Man's mind is formed by his perception, in which the instinct of curiosity plays a primary role. The human mind is his subjective experience [11]. The number of created and fixed memory images depends on the intensity of manifestation of the instinct of curiosity. Children are a provable example of this. Only thanks to the instinct of curiosity the brain of children actively develops neural connections.

Thus, perception is based on a biological memory programme that works with a template of emotional and biological states. We have schematically and generalised the mechanisms of creating the mental as a neuro-biological phenomenon. We need this to explain the following postulates.

2.2.3. Mental and Mind as Two Corollaries of One Psychic Process

Psychic and mental are not only terms from different fields and directions of knowledge. Mental appears as a consequence of psychic processes, but does not determine them. All occurring psychic processes are connected with constant tuning of the vibrational frequency of the brain. The vibratory tuning is influenced by the biological programme and memory programme. The mental, on the other hand, is formed by the succession of events of the external world, the images of which are constantly correlated with the already existing primary images-states laid down by the memory programme. 'The readiness of the infant to accept certain features of the natural environment indicates that people easily process certain types of information about the natural environment, either on the basis of innate or acquired principles. These early preverbal understandings of the physical environment eventually serve as building blocks for the development of more abstract concepts. Over time, people easily integrate incoming information with existing knowledge structures' [39]. The mental, as a product of the human mind, is shaped by and directly expresses both perception and language as a means of thinking (inner speech). The mental as a term of modern science is not related to the neurobiological mechanism underlying perception. It is related only to the treatment of perception by means of language and the meaning it gives to it. Language does not create the mental, it is an instrument of its explanation. The term 'mentality' itself appeared in Western European scientific thought in the early 20th century thanks to C. Lévy-Bruhl, who introduced it to explain the 'pra-logical' thinking of Asian and African cultures.

Cognitive science considers perception, memory, cognitive

processes, human experience as mental. Hence the concept of 'human mental field' arises. Consciousness is also included in the mental. But if science has somehow sorted out and explained the other components of the mental, the question of consciousness remains debatable to this day. The existing different approaches to the definition of consciousness do not demonstrate the integrity of approaches to understanding this issue.

If each person creates his or her own particular mental field, then a community of people also creates the mental field of that community. Culture becomes the mental field of any community. Consequently, the mental field of a person is in the mental field of culture and the mental field of culture influences the mental field of a person. In the mental field, culture stores the memory of all the events that took place, which had a significant impact on its formation and development, as well as all the cognitive phenomena that shaped it. No matter how a person, being in the mental space of culture and being connected to its memory, does not try to go beyond its mental space, his brain has already fixed in its memory programme the memory programme of culture. And this testifies to the fact that a person thinks in the categories of his culture. Representatives of different cultures will understand 'consciousness' differently. In cultures with metaphysical and metaphysical-subject approach, consciousness is 'embedded' in all cognitive phenomena and any phenomenon contains it. In cultures with a natural-scientific approach, consciousness is studied as part of the cognitive process.

In cultures with metaphysical and metaphysical-subject approaches, for example, the human ability to perceive and understand cyclicity can be seen as 'consciousness'. Let us take the Chinese culture, for which the metaphysical approach is fundamental, as an example and turn to its origins. In ancient Chinese culture, the modern concept of 'consciousness' was reflected through the character '时' and stood for 'time'. This character consists of two '日' and '之'. The character '之' is a phonetic character, but also has the semantic meaning of 'going', 'suitable'. '时' denotes the movement of the sun, which was the earliest method of measuring time, and also implies the four seasons as well. This is an indication that in Chinese culture, one's ability to subject one's life to time is perceived as one's consciousness.

For an example of cultures with a metaphysical-subject paradigm, consider the culture of the Himba people of Africa (Northern Namibia). This nation has such a tradition. The date of a child's birth begins from the moment when the mother realises that she is ready for the child to be born. Her readiness is not conditioned by socially accepted time. It is her own time. She goes into the woods and listens to the sounds. Different sounds begin to sound like a song. The Himba believe that this song is the code for the child who wants to be born. The woman chooses a father for the child and teaches him this song. At the time of conception, they both hum the song of their child. The same song is sung for the last time when the man dies. In this way, the Himba combine biological energy

with the energy of the world. They have no concept of time as a social phenomenon. The consciousness of the Himba is embedded in this phenomenon, because it is important for them to unite into one (common) all energies under the control of man and under the control of nature.

Thus, the above examples confirm the fact that consciousness in cultures that use a metaphysical approach to explain the models of connection between man and the surrounding world order is 'included' in all cognitive phenomena. It is present everywhere that human perception touches. But it can also indicate that the mental field formed by a culture is timeless and is stored in its memory in any form, be it hieroglyphs, traditions, etc. The perception of a human being as a carrier of this culture is not a matter of time. Human perception as a carrier of this culture and its mental field are in constant interrelation and mutual influence.

2.3. The Psychic and the Mental from the Perspective of the Metaphysical Paradigm of Ancient Cultures

The notion of the world as universal forces of nature, which are supported by deep energy (energy of the sun or fire) more than 6 millennia ago entered the spiritual and health practices of cultures that came out of prehistoric civilisations and the first civilisations of the ancient world. The concept of deep energy and universal forces of nature, as well as the developed principles of human interaction with them are the basis of this model of human connection with the natural world order. Universal forces of nature are energy flows emanating from the deep energy. They create the diversity of its forms, give life force to the whole living world and man in particular. Everything in this world has vitality due to the balance of flows.

Both man and the world around him are connected by these flows of vortex energy, which, combining with form, creates a certain order. This order is formed according to a certain pattern and gives the life force its intended function. Patterns (biological programmes) are archetypal functions, they control and direct the evolution of forms in nature. Each natural form has points of entry and exit of energy flows. In a human being such points are the nerve centres (chakras). Nerve centres located all over the body have their ascending hierarchical structure directed from bottom to top and connect energies of the dense, physical body with energies of the subtle, invisible body that gives the biological form of a human being life. The balance of incoming and outgoing energies from the nerve centres is very delicate and it is easy to break it and thus slowly reduce the quality of vital energy. In order to constantly maintain the vital energy a person must enter a state of resonance with something so that an exchange of information takes place. This exchange of information really brings objects, subjects and humans closer to each other [22]. For example, various human figures inherent in ancient African cultures and temple figures of various deities inherent in

Dravidian cultures have in some places depressions or points, which enlivens the form itself and makes it a suitable object for restoration by man of his vital energy by resonance. Musical instruments, especially drums, also throat singing, typical for Turkic, Chinese cultures and for mantras, create the effect of resonance with natural forms of nature, which enhances the passage of energy through a certain area of the human body.

The energy of man and the energy of nature are understood as the power of man and the power of nature in metaphysical models of the relationship between man and the world order explained through a metaphysical approach. Special attention is paid to cognitive awareness, through which the individual achieves inner balance independently of external circumstances.

2.3.1. The Human Biological Programme and the Psychic as a Bioenergetic Template

The natural element of deep energy is the energy that binds the mind, body and spirit of man together as biological and psychic. A person's spirit is their breath. The energy that comes with inhalation has specific effects on the functions of the respiratory, digestive, circulatory, cardiovascular and nervous systems. The energy of the human body moves along certain established pathways and each person's nerves (neural network) combine in a unique way to create energy cycles. Vital energy is connected to the nerve chakras - powerful energy centres that are the central points of all nerves and resemble the shape of a triangle. Feelings that a person experiences are the expression of different levels of vital forces of a person. In the central points of all nerves (chakras) energy is expressed in different aspects.

The energies of a person's mind, body and spirit are linked and considered as their bioenergetic fields. Classification in this case is a way to explain the connections of vital energy with different types of human matter.

The first human body is physical. Being a biological system, it is connected by energy with other biological systems of the world around man. and is subject to the same universal laws of the physical world. For example, birth and death of a human being, rebirth or blossoming and dying of nature (depending on seasons or seasons, e.g. Africa, South India, etc.), development and gradual depletion, i.e. extinction of chemical processes occurring in biological systems, etc. The physical is an object or energy-filled form. Vortex energy, passing through invisible points of nerve centres located in the human body, becomes functional and maintains order according to a pattern. The world is integral and indivisible and any natural form is filled with life. All human life is one integrated process and nerve centres (chakras) and energy fields are only a classification and they are generalised. The nerve chakras (centre points of all nerves) have a gross form in the body. Their subtle forms are called fields. Within these fields there may be outer fields, which are external to the body, and inner fields, which are internal to the body. If one wants a more

meaningful and fulfilling life, one stays in one's inner field (world). Staying in the outer world is like taking a step backwards.

The second human body, the etheric or vital force body, is related to the vibrations with which the brain works. These vibrations are determined by the internal state of the biological system. They are created by the stimulus-irritant and the reaction-vibration of the brain to this stimulus. In this way, the brain is included in the balanced operation of the biological system. Brain vibrations control the balance in the biological system and keep its work stable. Similar vibrations come from the whole world surrounding a human being.

The third human body is the astral body, which is responsible for energy exchange with the surrounding world. This body is connected with the emotional brain and supra-instinctive emotions. In Hinduism its distance is fixed at 10 - 100 cm from the physical body. This is the distance of action of external stimuli which correspond to the internal stimuli of the human being laid down by the biological programme. It also designates that the man is capable to react only to those external stimuli which are loaded in memory by his biological programme. On other stimuli the human brain and the human himself is not able to react, as the human brain has a certain number of frequencies (rhythms) laid down by the biological programme. The human brain cannot work outside these rhythms. This can also explain the limitation of human sense organs. The main task of the human brain, as it seems to us, is to maintain energy biostasis between the internal and external environment. This energy exchange is related, for example, to a person's waking and sleeping phases, reactions to the amount of light energy, etc. Thus, during the day the brain works with one range of vibrations, and at night it switches on other vibrations. Thus photosynthesis - it stops during the day and activates at night. Both man and nature 'grow' with the minimum amount of light energy, i.e. at night. The peak of sensory activity of the brain and as a consequence the human perception of the world around him is connected with the existence of this emotional (astral) body. Experiencing and stress weaken the emotional body, and thus weaken the very perception of a person of the world around him.

2.3.2. The Mental Body of a Person as an Energy Field of His Mind

Mental energy is the vital energy, the life force of man.

The fourth human body is the mental body, in which human thoughts are formed. In this body the model of a person's mind is 'assembled', the core of which depends on the quality of perception, more precisely on its breadth and variety. The difficulty at this stage is that the brain must constantly hold the balance between the perception of the external world and the work of the biological programme. Although modern science understands the concept of mind as a set of perceptual abilities, which include consciousness, perception, thinking, reasoning and memory, they all depend

on the neural connections created by the brain and its ability to balance the external and internal environment of the organism with the help of these connections. Only on the balance of these environments can a person live and develop. This is because the vibrations or rhythms of the brain work with energy. It is energy that 'holds' the human biological body together. Stimuli and reactions to stimuli are cyclical internal energy that creates certain states. Thinking helps to 'exit' energy from one cycle and move it to another cycle. The other cycle has to do with external energy exchange. Thus, the human mental body implies a constant exchange of energies between two let's call them energy vessels. It is something like a big and small circle of blood circulation. The circle (cycle) inside a person can by definition be called a small energy circle. The outer cycle depends on a person's thoughts. The more intense the instinct of curiosity, the wider the outer energy circle becomes. Vibrations of the world around us, including the Universe, scientists call 'strings' of energy, which are able to vibrate and a person is able to create an infinite number of images. A person is constantly in an energy cocoon, the limits of which can be limitless. Any thought is an impulse of energy. The stronger the impulse, the brighter the image that arises. Lao Tzu said: 'Be attentive to your thoughts - they are the beginning of actions' [35]. Physicist David Bohm [5] pointed out that thought creates the world. Man communicates with the universe through his mental field. John Bell's theorem says that there are no isolated systems, each particle of the universe is in 'instantaneous' connection with all other particles [3]. The whole system, regardless of the distance between its parts, functions as a single whole. And a human being is a part of this system. By means of the mental field a person not only communicates with the energies of the Universe, but also creates his world, filling his space created by thought with images. Consequently, being in one social community, not only exchange of thoughts takes place between people, but also a common mental field is created. Obviously, it is this field that Z. Freud called the collective unconscious, where collective images are stored [13]. When creating his theory of the unconscious, Z. Freud proceeded from the earlier published works of V. Bekhterev [2] and from the representations of Hinduism, which he learnt about from his friend. It is in the mental field that culture 'takes root'. According to James Jeans: 'The concept of the universe as a world of pure thought sheds light on many problems' [19]. Thus, the mental field 'works' with memory, which stores the 'stimulus-response-to-stimulus' memory reference point contained in the biological programme, and thinking, which is influenced by both perception and the memory reference point. Perception 'works' with images or, as physicists say, pure energy. Thinking can work with both perceived images and the starting point of memory. This means that thinking with images has no apparent cause and effect relationship. Thinking involving a memory reference point 'stitched' into the biological programme operates with a causal aspect.

Cause and effect is a biological programme, since the stimulus is the cause and the response to the stimulus is the consequence resulting from the stimulus. Obviously, in logical thinking, the memory point serves as an image of the construction of the world and the events in it. It may seem interesting that psychologists confirm the fact that logical thinking is preserved even under severe stress. Human intelligence is built on logical thinking. The ability to balance between logical thinking and perceived images, i.e. to smooth them emotionally to the level of supra-instinctive emotions, is considered by Western science as 'pra-logical thinking', and for cultures for which this way of thinking is traditional, wisdom.

'Mentality is opposed to matter, or, in more modern contexts, to the brain. The relation between 'brain' and 'mentality' can be explained as follows: the brain is understood as the material substrate of 'mentality', and 'mentality' is presented as its inherent functionality' [15].

It is interesting to note that this fourth human energy field was described by Carl Linnaeus in his work 'The System of Nature' (1736) as the highest ability of modern man to produce thought and for this he introduced the term *Homo sapiens* as a thinking man. The term 'nous' as the human ability to understand what is true and real was known as early as in ancient Greek civilisation and was already part of the cognitive phenomena of more ancient cultures. In the Hausa language, for example, the word 'nous' means 'common sense' and is borrowed from ancient Arabic, which evolved from the languages of earlier predecessor cultures. Although the first references to Arabic are found in Akkadian inscriptions that date back to the 9th century BC. In the languages of other African cultures, the word 'nous' is understood as knowledge (Ga language), as understanding (Yoruba language) or as awareness (Acholi language). In Tigrinya, a language belonging to the Semitic language family, 'nous' is understood as perception. In some languages belonging to the Sino-Tibetan language family, notably Dzong-ke, 'nous' is understood as an idea. In other African languages, notably Alur, a language of the Venda speaking peoples of southern Africa, 'nous' is understood as wisdom. In some Dravidian languages, notably Kannada, Inuktitut, 'nous' refers to perception. Virtually all cultures of the African continent and Southwest Asia (where the Neolithic Revolution began about 13,000 years ago and permanent settlements appeared) understand the word 'nous' to mean both wisdom and intelligence at the same time and associate it with thinking. For example, in the Telugu language, mind is understood as a state of love or hatred for all living things or human beings, or the ability to understand the world around us (Yoruba language), etc.

We took this word on purpose, because it not only confirms ancient and modern scientific provisions about man, his mental, but also shows from what aspect of perception and understanding of the world the culture was starting from in order to form its spiritual values.

Thus, in the world pictures of different cultures "nous" is presented and understood in different ways. From the point of view of the natural-scientific approach, 'nous' is the human ability to understand what is true and real, later thought. From the metaphysical approach perspective of ancient cultures 'nous', e.g. Hinduism, is the energy that unites the 4 (out of 5/7) energy bodies of the human being. In terms of the metaphysical-subject approach 'nous' is a space-cleansing energy (e.g. Bemba language).

3. The Human Environment: The Universe and Its Potentials

3.1. Proto-events and Thought-forms

From the point of view of quantum physics, the Universe is an energetic substance whose vibrations are created by constantly vibrating strings of energy (strings). These vibrational motions give rise to different properties of matter. The properties of matter are determined informationally. This means that not matter itself, but its structure and properties are carriers of information. Thus, an energy-information system is formed in the energy substance. This system manifests itself as gross matter with certain properties in the reality visible to man and as subtle matter with certain properties in the reality invisible to man. Both types of matter are created primarily by the vibrations of waves, but the properties of gross matter are also determined by the vibrations of microparticles. The vibrations of both types of matter create a unique pattern of nature and man, and create an infinite variety of proto-events. In science, there are suggestions that proto-events are experienced from specific neural patterns, or from the interaction of proto-consciousness with the neural activity of the brain [37]. Proto-events are created by neural impulses continuously and can exist for one millisecond or even less. Several proto-events can occur in a minimal unit of time defined by a human being. Such proto-events create information vibration clots, which the human brain is capable of capturing. In addition, external sensory signals are very important for the proper development of neural circuits. This sensory experience that humans receive postnatally in their lives leads to the formation of long-term memories and and other adaptations in the adult organism [12]. This suggests that proto-events become events through this sensory experience. Sensory experience is superimposed on protoevents formed by the neural activity of the brain and in this case a library of schematic scenarios is created in memory, according to which the brain further constructs events. The brain constructs a representation of events from the library of schematic scenarios and activation of a particular scenario influences how the event is segmented in time [9].

Thought-forms are compacted information clots, which the brain transforms and fixes in memory as a potential event. We assume that the number of thought-forms is finite and it cor-

responds to the number of possible variations of the human brain. Thought-forms are filled with 'material' information processed by the brain, which it receives from the senses. Carl Jung suggested that the human mind is governed by a system of forms, archetypes, which are powerful, real, though invisible. They exist in a mental system of a collective, universal and impersonal nature. From this system invisible forms can appear in our mind to guide our representation, perception and thinking [20]. Quantum wave functions are archetypes [33]. 'Materialisation' of information occurs through language. It is reproduced in the mental as a thought image. Thus, the mental emerges simultaneously with the emergence and development of language, unlike the psychical. The psychical, as part of the biological programme, exists outside of time; this programme is constantly reproduced in the human race over many millennia. The mental is temporal and is reproduced within a certain time frame of the existence of both a single person and society. Being a superstructure over the psychic, the mental 'fits' into a certain pattern of human psychic matter. This psychic matter is the repository of memory, so the mental also forms its memory. Mental memory is the memory of one or several (out of many) information-energy templates. In these same templates, thought-forms 'appear'. In other words, any information-energy template in its 'formalised' form (structured in psychic matter as a memory) is a thought-form. All events in human life and in the life of society are constructed according to these templates. Thus, we can assume that psychic matter invisible to the human eye is created by the brain as a part of the human biological system as a place where proto-events are transformed into events stored in memory. Psychic matter is a receptacle of three types of memory: 1) biological, which stores information about ideal patterns (templates), by which disturbed biological processes are restored; 2) psychic, which "processes" proto-events, it is connected with the emotional part of the brain and supra-instinctive emotions, it is in it that information-behavioural templates are laid down; 3) mental, in which all events occurring in human life are "adjusted" and "arranged" in already existing templates. Since society consists of individuals, they are probably capable of forming a unified psychic field as psychic matter (see our work on the psychic field of culture), which also stores universal patterns developed by society at the dawn of its existence, according to which the memory of society, in particular, and culture, in general, is formed. The memory of culture is also formed in the mental.

Events fixed in the mental memory exist without expiry of the statute of limitations. In psychic matter a set of thought-forms is also created, which are already predetermined by the biological programme of a person. As we said above, the brain works only with a certain number of vibrational frequencies, so the psychic matter created by it is able to create only a certain number of thought-forms. Obviously, information-energy patterns are also built on these thought-forms. Thought-forms exist outside of time, they are

constant and do not depend on race and culture. Having received information signals from sense organs that 'work' with different kinds of matter (visible and invisible), memory 'gets' already formed primary information-energetic templates and transforms proto-events into an event as a thought-image in psychic matter, as if according to set moulds. Psychic matter displays states, so memory stores information about states.

And so, biological matter is subject to the laws of time, psychic matter as an energetic substance exists outside of time. Despite the fact that the set of thought-forms is predetermined by the biological programme of a human being, they have no statute of limitations, because they are in psychic matter. In psychic matter in the form of memory all events that have happened and events that will happen in the future are stored, because they all fit into the primary energy-informational patterns. Let us recall the concept of 'karma' in Hinduism and in Dravidian cultures. These templates are capable of unfolding and collapsing at the right moment of time.

3.2. Potencies as Proto-events

Energy-information processes of unfolding and folding are characteristic not only for all living things as visible, but also for all living things but not visible. In the 21st century there has been a significant change in the Western understanding of the cosmic order, which has led to the discovery of a non-imperceptible sphere of the Universe, which consists not of material things but of forms. These forms are real, though invisible, because they have the potential to appear in and act in the empirical world [33]. Physicists claim that the entire human environment is coiled in a spiral. One of the explanations of the vibration of energy threads (strings) is that they, being in motion, are constantly twisting and untwisting. Such a procedural state of energy is perceived by man as eternal life or immortality. A spiral is an ideal energy-information form, capable of holding a huge amount of energy. The spiral ideal energy form also implies both creation of any type of matter and any type of information. The spiral shape of biological matter surrounding human beings was noticed by a mathematician, who is now known to European science by the Fibonacci series of numbers he created.

The physical world visible to the human eye is understood as natural or biological. The physical world invisible to the human eye is understood as quantum world. Quantum world and systems created in it are dynamic. Dynamism is determined by constant change of vector movements of energy flows. Energy flows cross and create 'excited state' of quantum system, which leads to change of vibrational frequencies in biological system and appearance of new processes in subtle matter, which is also psychic matter. We can assume that to explain such changes Aristotle used the notion of 'potency' as a transition from one mode of being to another or emergence of some new being. 'By potency we call the limitless or the empty. The limitless can no longer become energy; it is always potency, for no matter how much we divide it, it

can always be divided further. Consequently, its potency is not exhausted, and the essence of the limitless - precisely as having no limit - remains unchanged. It is only in knowledge that the limitless is something definite, since it is nevertheless something in general. Potency in this sense, as we call it limitless potency, is the potency of essence. Potency in connection with motion, on the other hand, is the principle of change in another, or inasmuch as it becomes another. Potency is not matter, but presupposes matter for its existence and at that matter, which would not hinder the potency, but entirely subordinate to it' [26]. Potencies predetermine the informational nature of waves and particles, one of the consequences of which is the creation of different types of matter with different vibrational frequency. In modern neuroscience there is a concept of potentiation as an increase in the efficiency of physiological mechanisms after a period of their previous activity. For example, memory formation is influenced by long-term potentialisation and molecular changes [28].

Thus, psychic matter as the matter of the quantum world, which contains thought-forms in the form of information-energetic templates and which is a receptacle of memory, is also spiral. Events in psychic matter are constantly unfolding and, having settled in an energy-informational template, are twisted. And so it happens constantly and endlessly. In addition, intuition originates in this type of matter. Intuition is the potency of the world caught by the brain, which is transformed in psychic matter as a proto-event and activated in it as an event.

3.3. Z-matrix as a Tool of Formation of Mental Cognitions of Culture

As it was said above, psychic matter as a memory storage is invisible. From the point of view of the natural-logical approach, it is segmented. From the point of view of the metaphysical approach, it is hierarchised. Energy, of which psychic matter consists, possessing the properties of function, acquires a matrix structure. Energy with the properties of function is capable of creating any matter with a system of connections. The system of connections is formed only in the presence of matrix structure. Matrix is functionally ordered energy. Spiral form of matter and matrix structure of matter do not contradict each other.

The matrices involved in the processes of creation of any type of matter come from a certain basic matrix, the elements of which in any configuration are found in all matrices derived from it. Let us call this basic matrix z-matrix, from the word 'zero'. This zero matrix is the whole and indivisible, the primordial basis of all processes and various matter, the world visible and invisible. In cultures that use a metaphysical approach to explain the world, the zero matrix is represented as deep energy (the energy of the sun or fire). The Z-matrix is the basis (or the deepest layer) of all things in the universe, visible and invisible, and becomes universal universal knowledge. The ancient etymology of the word 'knowledge' defines it as

'the action or process' of transformation.

The Z-matrix is also the basic identifier of a human being. Having found its functionality in a certain natural form, it starts to work according to the pattern laid down in the form. Its further copies are made according to this basic template of the form. It is thanks to the z-matrix that man is constantly drawn to harmony. But very often the replicated original harmonious z-matrix is reproduced in the mental world of a human being as a non-harmonious low-quality copy. Such a low-grade copy is capable of destroying the harmonious integrity of human biological and psychic matter.

Culture as a system is also formed on the basis of z - matrix. The zero matrix of culture is the collective unconscious (according to K. Jung) or the mind common to all people, the only eternal of all parts of the individual soul, according to the metaphysical approach. The unconscious, taking shape in psychic matter, becomes a thought-form. The first cognitions appear in basic (primary) thought-forms. These first cognitions are the same for all cultures (for example, body movements in space), as they are not yet fully represented by means of language.

In psychic matter as a quantum system, which repeats the structure of the primary z-matrix, the potencies of proto-events are transformed into psychic events. When creating copies of the z-matrix in the individual psychic field of a person and the psychic field of a culture, an energetic alphabet (like the chemical alphabet of the Mendeleev table) is used. The alphabets of ancient civilisations of the pre-historical period can be considered as energy-informational. This energy-informativity was preserved partially in hieroglyphic writing and runic writing. With the emergence of language, cognitions are differentially represented in the mental field of a culture and are regarded as its mental cognitions. In this case, the Z-matrix becomes a tool for the formation of mental cognitions. Therefore, despite their primary universality, mental cognitions differ across cultures. The first cognitions contain information about the human species as such, its original essence. It is available to humanity through meditative practices and other forms through which humans attempt to approach the essence of the world and connect with the universe. We believe that the main function of a highly developed culture is to bring man closer to his ideal essence, that is, to provide ways of knowing the world that will bring the man of that culture to his inner harmonious state.

Mentality determines behaviour and depends on culturally created ways of knowing the world. The culturally created mental cognitions are the guiding vector of human cognition of the world around him, on the one hand. On the other hand, mental cognition is intuitive knowledge reflected in sacred behaviour. Sacred behaviour is an action that is aimed at the spiritual development of a person. Culture balances mental cognition as a way of knowing the world and mental cognition as intuitive behaviour and sacred action. If culture is not capable of balancing these two types of cognitions, then society is incapable of its spiritual ascension and is entirely dependent

on material goods in an attempt to replace spiritual needs.

Thus, the z-matrix as a primary energy structure becomes a tool for forming thought-forms and creating mental cognitions. The collective unconscious is the z-matrix of culture. Individual copies of the z-matrix are created in the human psychical field, in which universal thought-forms are filled with primary cognitions as universal knowledge. Culture on the basis of universal knowledge creates its authentic way of knowing the world around which it forms subsequent mental cognitions in the process of its development. In the process of individual psychical activity a person acquires knowledge through mental cognitions. The concept of z-matrix as a novel term requires further scientific explanations, including the definition of the mechanisms of interaction between the basic matrix and its derivatives, as well as how these derivatives influence the formation of the authenticity of culture.

4. Conclusions

Having analysed all the material presented we have come to the conclusions:

- 1) In all three identified models of human connection with the natural world order there is an important emphasis on harmonisation of human vibrational frequencies and the world around him, which takes place in the psychic matter of man. The difference in these models is the place of mental and psychic in the processes of harmonisation and, consequently, the ways of its achievement.
- 2) The natural-scientific approach explains the connection of man with the natural world order through the interrelation of neurobiological processes as vibratory and vibratory energy processes of the human surrounding reality. This interrelation is not considered as unified and holistic. The metaphysical approach explains the connection of a human being with the natural world order as an energetic interaction, the nature of which is unified and integral.
- 3) The mental, from the point of view of the natural-scientific approach, arises as a consequence of psychical processes, but does not determine them. From the point of view of the metaphysical approach of ancient cultures, the mental and psychical are considered as a single energy field, which is determined by the state of human energy bodies connected with each other and consisting of matter's different types.
- 4) In both approaches psychic matter is considered as matter of the quantum (subtle) world, in which energy-informational patterns receive their matrix structure, which allows to fill psychic matter with thought-forms. Such matrix structure can be considered as basic for any type of psychic matter. It is designated as Z-matrix (zero matrix). The collective unconscious is the Z-matrix of a culture, which was formed in its psychic matter.
- 5) Culture on the basis of the Z-matrix combined by thought-forms in its psychic matter and filled with universal knowledge creates its authentic way of knowing the world, which governs all its mental cognitions arising in the process of culture development.

Author Contributions

Oksana Leontyeva wrote section 1 and p. 2.1, 2.2.

Marina Teplenko wrote Section 2.3 and did a full editing of the text of the article. The authors jointly wrote the introduction, conclusions and section 1.1. The authors read and approved the final manuscript.

Conflicts of Interest

The authors declares that there are no conflicts of interest.

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