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## Mind in the Brain - Creation of the Greatest Virtual World

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### ABSTRACT

Human mind is a functional capability of the brain, by which information about sensory-motor contacts made through the nervous system are perceived and interpreted by the mind. While the detection and interpretations are subjective and experiential, they are based purely on a cascade of neurocognitive processes that unfold in the brain in response to external events or sequential changes detected over time and space. Experiential or subjective interpretations are generally based on the selected choices, and often depends on the cognitive judgments made by the individual. The cognitive judgments mold the drive present in the individual and it is experienced as positive or negative emotions by the individual. Drive is the fuel or energy present in the system for all responses and actions related to “seeking”, and they are automatically initiated when the drive reaches a Critical Level of Potentiation (Mukundan et al. 1). It is possible for an individual to become aware of the presence of the drive as well as the process of initiation of actions in the attempt to satisfying the drive. Scientific observations of the changes that occur in the physical and social environment, which are normally detected by the sensory-motor systems are repeatable and explain the time-space sequential relationships that exist in the physical universe. The major role of the mind is the experiential detection and interpretations of the sensory-motor events, which are experienced and expressed by the mental processes related to detection and expression. Subjective interpretations are generally based on personal experiences, which are highly suggestable and as per

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per the needs experienced at personal and group levels by the individual minds. Individuals create goals and purposes for all actions, and in the process, the new functional systems of the mind are also created according to neuroscientific principles. The physical world shaped by man scientifically for superior facilities are distinctly different from the functional world created for personal satisfaction, happiness, and as per their belief systems. Cognitively human mind may consider it necessary to find meaningful associations among the elements within the universe, and specifically for the purpose of life. Mind is indeed the greatest natural apparatus, naturally evolved in the human brain and could develop signal generation and processing abilities. Ability to sequentially relate signals across time and space became scientific processing, whereas simultaneous processing of signals helped create additional systems with purposeful functioning of the parts. Such processing using signals helped to create concepts, and find meaningful relationships of signals across time and space. Scientific thinking facilitated creation of new physical realities, whereas considering relationships across space and time helped creation of functional systems, meaningful only when simultaneous relationships could be established.

**Keywords:** Human mind, sensory-motor contacts, scientific relationships, sequential scientific relationships, cognitive judgments, experiential relationships, behavioral expressions, mental creation of positive and negative concepts of purposeful relationships.

### **Cognitive Processing Effects on the Drive**

Sequential processing of signals across time and space help to understand scientific relationships and employ such relationships for the creation of new physical realities. Simultaneous processing of time-space changes across different time-space domains helped to conceptualize functional systems, which human brain could create as the foundation of their physical and functional roles of existence across time and space. Cognitive processing carried out in the brain determining the positive and negative effects of the effects of responses and actions executed, molded the drive as positive or negative emotions. Positive

and negative emotions are generated, almost automatically, as an outcome of an individual's experiences and expressions., Emotions may arise while reacting to the cognitive judgments made about the behaviour of other individuals as well as while emulating other individuals and their experiences (Mukundan 1, 3 - 6, 9 -17; Mukundan, Kacker 2, 7, 8). Learning to control cognitive judgments and making objective decisions are indeed difficult tasks, which may require several years of learning and practice. On the other hand, following the examples of other individuals by learning to make cognitive judgments which would facilitate positive or negative emotions are easier. One does not

have to learn to mold the drive or arousal in a positive or negative manner without any cognitive judgment, which would need immense self-control. On the other hand, the process of directly learning experiencing and expressing positive or negative emotions are indeed acquired easily through social conditioning and using the cognitive judgments which may facilitate such social conditioning. Learning and mastering analysis of one's own thought processes and behavior, which may augment personal gains or mitigate losses, may be acquired through proper cognitive judgments and by molding one's own drive using such judgments. Although such practice may be extremely difficult and complex, one may acquire it through a rigorous practice of self-control, and intellectual contemplation and judgment. Emotional experiences and expressions occur in reciprocal manner as soon as one makes a judgment about the behaviour of other individuals when it is perceived to be relevant to the self or being affected by the behaviour. Beneficial or retaliatory effects of the deeds of other individuals may be promptly supported by what one considers successful or adequate responses from the self. If the interpretations of the behavior of others are carried out with patience and only in self beneficial manner, the emotional effects may be created fast with ease.

### **Positive and Negative Processing Effects on Drive**

In general, positive emotions are happily accepted by individuals, often with a sense of achievement and related satisfaction. On the other hand, negative emotional experiences occur when one loses loved ones or material possessions. Sometimes, relationships with significant others may turn into distressing and painful experience, leading to discomfort, depression, personal losses and pain, and resulting in aggressive responses or fear, anxiety, shame, etc. The drive gets molded positively or negatively based on the cognitive judgments made by one. Personal losses and gains in terms of interpersonal contacts, human

relationships, and materials shape the memory and content of the mind with which decision-making and judgments are carried out, and this continuous, ongoing process constantly mold our drive state and response pattern. Each individual gets trained in such cognitive molding from infancy by parents, siblings, and friends who are part of the psychosocial world of the growing child. This experiential shaping of mind occurs in a natural manner, based on the values of life practiced by parents and other individuals who are intimately related to the growing child. As each one of us is exposed to experience from the physical and social environment and learn coping and response patterns from the same, and the development of emotional molding and the associated emotional experiences naturally occur in every growing child in a unique fashion. The art of cognitive molding of drive is not developed as a basic developmental requirement in most of the human societies, although the external and internalized social norms and values channelize this process during human development to the most extent. Various theories related to cognitive development as a product of one's interactions in physical and social world are considered universal.

### **Creative Cognitive Processing**

The life style and the actions that a man may indulge in executing are for the development and maintenance of a living system and life style, which they have initiated and developed. The intricacies and the contents of the life are designed by the individuals in different subsystems are for fulfilling the systems they have planned and created. It is true that the life systems of the animal world are by and large naturally evolved, and hence the animal or plant biological systems are primarily governed by the laws of nature. However, human beings who have the capability to create new ideas could develop variety of systems (as part of civilization and culture), which are in constant change with different goals of life in different time periods and geographical locations. They have realized that the system of life they have learnt to build and

live are controlled by a force or drive, which is although constantly present and attended to, often extend beyond their normal or regular controlling needs. The biological drive is often conceived by many as a force beyond self-control, though optimal drive state is required for all types well organized responses and performance. As people could not scientifically comprehend and manage such a conceptual complexity of drive-cognition-action-emotion interactions, they developed concepts of a supreme spiritual power responsible for the management of both physical and psychological management of the universe, which many considered the embodiment of love, compassion and truth. People differed in these belief systems, as many considered the so-called supreme entity to have absolute powers to control people and the universe. Some could semantically conceptualize different systems of "supreme power". At another level of thinking and feeling, we have people conceptualizing that a divine power was controlling love and affection, helping people keep away from evil forces. On the other hand, there are indeed group of individuals, who believe that those who do not agree with them and have difference of opinion about beliefs, loyalty, etc. must be annihilated. They indulge in the practice of terrorist methods for removing those who do not agree with them. As against these belief centered systems, we are also able to think and manage with the universal forces as physical entities and deal with the world only from scientific points of view. Physical intimacy dependent growth and existence strengthened closeness between two entities or living beings, which developed into emotional intimacy. The closeness strengthened into physical intimacy, affectional dependency, and love for the other being. The emotional intimacy has been detected from plants, which developed into affection and love in human beings. The need for physical intimacy is cognitively understood and such cognitive judgments which reflect the need for intimacy or repulsiveness opposed to

intimacy are made as cognitive judgments by each living being.

### **Response to Cognitive Judgments**

The driving force within the system, which could be used for the initiation and maintenance of actions and responses, may require skeletal-muscular powers, or intellectual powers for maintaining and solving problems in different types of workloads. Finding solutions to critical intellectual problems, psychomotor solutions, etc. may require the sharing of the workloads by a team of experts. There may be only a few who may not make any attempt to identify the drive with any specific belief system, instead utilize the drive purely as a propelling force for achieving a relative merit in life. The enormous cognitive processing capabilities being enabled in the human brain have helped molding of the drive largely within the limits of one's own social and cultural milieu, which in turn shapes his/her personality and experiential effects and thought processes, which control the cognitive processes and judgments, causing building of diverse range of emotional experiences and expressions. There may be only very few who may be able to maintain their emotions without the influence of personal beliefs and needs, but for the majority of individuals emotions are always the outcome of and colored by personal convictions and motives. Similarly, individuals often develop a devotional relationship with a divine or spiritual force created by the individuals' own mind. This "spiritual force" eventually take control of the mental faculties as well as response and actions, thereby controlling the whole life style of the individual. Individuals with "external" locus of control, tend to assume that their mental power works on the spiritual strength of their devotion to the "supreme power", and they completely surrender themselves to the ideology of a specific God or religion or principles which often tend to benefit other human and living beings and also foster coexistence and good will. Molding of the drive by devotional thoughts and practices would allow the person experience the drive secondary

to the dominant motive of surrendering to the "supreme force", and thus would affect the entire personality, including cognitive functioning and actions in life. Some of the ancient traditions have encouraged individuals to learn complete self-control and not to get perturbed by situational demands and challenges or disturbed by their own needs or the lack thereof. This was practiced through a method called "Sthita Prajna", so that one would not automatically react to the emotional reactions of other individuals (Mukundan et al.18). The qualities of "Sthita Prajna", as briefly narrated in Bhagavad-Gita are: 1) being desireless and satisfied in the self, 2) maintaining stability in all situations, 3) having emotional stability, 4) having perfect self-control, 5) being in the state of tranquility, 6) feeling fullness of the self, and 7) feeling oneness with the universe.

### **Preattentive Emotional Response**

What has been special about the understanding of drive is the presence of the internal force or compulsion to carry out actions in the form of explorations, responding to external inputs which may hurt or cause pain, and keep closeness with other life forms which would give closeness, support, and affection. Yet another terms commonly used in the ancient times is that consciousness, which meant presence of life, awareness, and the capability for explorations and movements. However, neuroscientific thinking separated awareness as a separate functional system which occurs when listening brain listens to the talking brain during encoding and transcoding. Consciousness does not necessarily propel the system into responses or action. It was equally surprising when it was discovered that responses to external stimuli could occur without their perception or awareness.

Scientific or rational thinking does not directly support any spiritual power, and science as created and practiced by humans has enabled technological marvels in all walks of life in the world. But science has not yet been able to directly support or induce a life force with

"**consciousness**" in a machine, which could in turn develop such immense cognitive, sensory-motor capabilities, with such complex sensory-motor processing and emotive abilities like that of the human mind. Human mind is indeed the most complex system in the known universe. Human brain could be trained to experience sensations and also develop psychomotor effects through mere suggestions induced from outside or developed within (as it happens in hypnosis), and to carry on with functional changes beyond one's normal capabilities and physiological limits.

Within each human being, the drive works as the indispensable fuel for all types of sensory-motor and mental processing, which allow automatic responses as well as initiation and execution of planned actions. Responses to stimuli are known to occur through processing at the preattentive level itself (LeDoux 19 - 21), even without perception and awareness the presence of a stimulus. This happens at the subcortical level as part of the perception-action cycle, that provides the seat for the generation of drive and drive mediated direct responses. The subcortical areas have extensive network of connections with the cortical areas of the brain, which are known to allow mediation of neurocognitive processing associated with the initiation and controlled execution of actions. Absence of drive or arousal does not allow initiation of any action or response from the body. We know that life may achieve meaning and need for expressions, but they can be initiated only in the presence of drive or arousal. It is a common occurrence with many people that they fail to respond or initiate actions, in the absence of adequate drive or arousal from within. We do also know that the several sections of the brain, especially in the subcortical areas are needed for producing the behavioral effects of the drive that are deemed essential for life, as well as to induce the sensory-motor controls that are goal-oriented actions. Activation of specific cortical areas are needed for the initiation and controlled execution of those actions. The involvement of frontal

cortical areas in the initiation and planned execution of actions are already well established in several experimental and clinical lesion studies (Fuster, 22). Drive originated and evolved in living organisms primarily as a survival mechanism, and has achieved its complexity in form and manifestations in higher animals (e.g., primates and humans) by a sequence of evolutionary processes. In humans, drive has constantly been molded and shaped by civilizations and social forces, largely due to "neurocognitive sophistication" that human race is endowed with and improving upon. However, we do not have complete understanding about complex interactions of the drive system with other systems (e.g., perceptual/cognitive system, motor/action system, affective system, and other psycho-social motivational systems), especially in terms of what is achieved by mere presence of the drive in a living system, if it is not utilized for any response or action. On the other hand, we have already made devices/machine that use different fuels to generate movements and responses, which allow us to move around, and create new physical realities, etc. The physical realities which man has created would not have operated and become functional, without the controlled application of the fuel, whether in the form of oils, electrical energy, or solar energy, etc. The fuel/energy within the body allows it to functionally grow, and interact with the surrounding environment and people around. The social systems created by man allows to develop specific personal relationship with others, who get identified as parents, siblings, relatives, colleagues, and friends. There are also millions of other individuals who live on the same earth, with whom we share pleasantries as well as discomforts. They all use the same drive generated within the body system, created as a natural life product, though the fuel initiates independent actions and responses, which take each one to his or her specific goal in life at a time. The differences in drive among the people contribute to the differences in their performance and

achievements at different stages in life. We have succeeded in exchanging or transplanting the body organs across individuals, but could never transfer the drive. Once the drive ceases to be available within the body system, rehabilitative support is sought for carrying essential movements and actions, provided the actions and movements are essentially for the survival of the body system. We have succeeded in transplanting almost every body part, especially vital body parts, except brain. We are not truly sure if the drive is controlled from this area alone, or if the drive has any other origin and some other components, other than the functional capability that we have observed in a living being. Millions of individuals were born and later died, and not a single one has ever come back to life, though several characteristic features have been genetically transferred to successive generations. These genetically or epigenetically inherited features can possibly include even life styles of individuals.

### **The Drive and Automatic initiation of Premotor Activity**

The first important task that needs to find a proper answer or explanation is to know if the drive is primarily a physiological – biological initiating force or is it a psychological or psychobiological force that is used for initiating actions. It is important to examine what we consider the drive, which serves the psychological fuel to the system for the initiation and execution of actions. The psychological force that keeps the organism alive, active, and functioning has been often identified or described as a spiritual force. What one needs for initiating an action is the knowledge of the need for the action and preparedness for the initiation of the action, and a response can voluntarily or automatically be initiated. The persistent strength of the drive, and the planning capability of the individual could induce exciting changes in the working strategy of an individual, which may alter the whole life style enhancing achievements in life. This is a regular achievement pattern seen across millions of

individuals all over. A major personal feature of the strength drive is the capacity of the individual to draw the best of professional ability and personal strength, with high degree of cognitive molding of the drive as emotional strength, all of which strengthen the drive enabling the individual perform at the most efficient level and obtain the best results. This would require the supports from the parents, teachers, friends, whomsoever may play major roles in the life of the individual, as well as personal effort contributing to acquisition of skills, knowledge, and work dedication. The occurrence of preattentive emotional responses, which takes place without perception and awareness of the input signals are already well established (LeDoux 19 - 21) and the phenomenon is well known to occur primarily for the biological survival needs of animals. Additionally, readiness to act has been already researched upon, and we have seen that an action is always initiated well before one becomes aware of starting the action. Pre-action state is facilitated by the presence of beginning of a readiness potential, which occurs without the awareness of the presence of the potential, though the individual may get ready to act. The potential has been called the *Bereitschaftspotential*. Even though the individual may not be aware of the beginning of the potential, the occurrence of potential well before the initiation of the action indicates the readiness of the individual to make a specific response (Decckee, Kornhuber 23; Deecke, Eisinger, Kornhuber 24; Deckee 25 - 27; Shibasaki et al. 28 - 31; Libet 32, 33; Mukundan et al. 34; Khanna et al. 35; Singh, Knight 36; Ikeda et al. 37 - 41; Hamano et al. 42; Sakai et al. 43; Picard, Strick 44; Soon et al. 45). The readiness potential has to be initiated and reach a certain critical level of potentiation for initiating a motor action in the motor cortex. If the potential does not reach a Critical Level of Potentiation (Mukundan et al 46, Mukundan 47), the intended or desired action will not be initiated. On the other hand, an action may automatically be initiated when the drive is too

strong, even if the intended action may not have been a socially approved one. A strong drive or desire for a movement or action may therefor automatically trigger the motor potential initiating the occurrence of the action, though the individual may later repent on entertaining such drive which triggered the action. Repents in the presence of such high CLP during uncontrolled violent acts was revealed by many who was offered rehabilitative interviews and supports in prisons during their imprisonments for earlier violent engagements. behaviour If it reaches the CLP level, the specific action will be automatically initiated, well before the subject becomes aware of its occurrence. If the person does not want automatic initiation of an action to occur, the person must keep the pre-action potential or the drive at a low level, so that it does not reach the CLP level. In a simple button press paradigm, the negative potential starts almost 2 - 3 secs before a subject becomes aware that he is going to press the button. If the drive is high, it may reach the CLP level and the specific action would start without the awareness of the individual, though the individual always has the intention to make the response or action. The ability to hold the drive under control is therefore an important practice one should acquire, which one acquires through social conditioning, so that one would not indulge in antisocial activities automatically, because of high drive which could automatically initiate a violent action. Equally interesting is the effects of suggestibility for recognition in the brain, present in individuals who are subjected to hypnotic type of suggestions (Gruzelier 48, 49; Mukundan et al. 50, 51; Mukundan 52), while it is difficult to induce in those who are not suggestible, although there is no differences between the two groups of individuals in the intensity of sensory registration process seen as the amplitude of P1 event related potential. Suggestible individuals are those who have been endowed with or trained to have high suggestibility from childhood, who could easily accept ideas or concepts as suggested by others. Highly

suggestible individuals display significantly increased amplitude of P300 event related potential representing recognition of a change, novelty effect, or familiarity etc., even when P1 potential may show inadequate sensory registration of a stimulus (Mukundan et al. 50, 51). There is evidence of intense brain activation, with low signal strength, when the individual is suggested that he would receive a strong stimulus. On the other hand, a scientifically trained mind accepts such suggestions only if the same could be objectively proven and one could repeatedly make the same observations or repeatedly obtain the same findings. Human civilization shows dominance of presence of highly suggestible ideas and their acceptance in people as in the case of presence of a spiritual or divine force engulfing the universe. There have been limited number of individuals who preferred training scientific mode of thinking and acceptance of only scientifically proven findings, though each individual has the choice to select a style of thinking and living.

Brain activation developed during recognition and conceptualization is indeed the product of the participation of the brain in a proposed function or problem, which needs understanding and solutions. The sensory-motor effects or activation created in the brain depends of the level of processing one may indulge and create. These effects are the core of the experience which the activation creator of the brain alone would have. The experience acquired from brain activation through imageries related to semantic and sensory-motor processing may be as challenging, pleasant and satisfactory as one obtains during real sensory-motor contacts. The experience of the virtual world has become equally or more important than the experience of the real world. Our life styles are instating more on the experiences of the virtual world than that of the real world, and creation of the virtual experiences have become a necessity for scientific creations and innovations.

## **Semantic Creation of Sensory-Motor Activities and Contacts**

Need for semantic creation of the world, its origin, surveillance etc. have been of immense interest to most of the human beings, and the virtual world they created within the brain and the creations and changes each made in the virtual world represented the domain of 'mind' of each individual. The experiences of the virtual world created within each brain is a subjective creation. These experiences and their semantic and symbolic interpretations mold the drive within and create emotional experiences. The mind is considered the psychological equivalent of the presence of what a human being represents with his body. The semantic and symbolic creation of sequential and simultaneous relationships of components of the physical and social world, created through cognitive processing, and their effects molded on the drive as emotional experiences and expressions represented within and from the body constitute the mind and its activities in each individual. Every individual has the opportunity to build one's own mind and use the semantic and symbolic capabilities for creating own ideas as well as those made by others. Self-monitoring in the brain of the encoded and transcoded details of the sensory-motor contacts and possibilities provide verbal awareness of the same in each individual (Mukundan, Ajayan 53, Mukundan 54). The molded drive becomes an immense experience for each, when they represent happiness, comfort, and pleasant sensory-motor experiences. The positive as well as negative emotional effects are behaviorally expressed by each system. The world each brain creates semantically and symbolically represents the functional creation of the mind, which many have believed and still believe that the world is a concreate phenomenon in the neuroscience perspective, to start with, but it is very complex to understand how the brain creates the virtual world called the "mind" and lives in that virtual world accepting all values and



cortical issues which may or not have solutions.

### **Mental Creation - Interpretations of Sensor-Motor Contacts**

Man has succeeded in making the mind an extraordinarily objective processing capability, where it could search for objective relationships and be gratified with the objectivity practiced, or assign it capabilities which may be considered to have only preapproved relationships and responsibilities. What each mind could create semantically and symbolically along with the molded emotional effects of the drive provide each individual amazing experiences and expressions. The inner experience of each individual may be unique, with its unique meaning and relationships, which another person cannot necessarily experience with the same contents and components of meaning and emotional effects. All experiences and expressions may make use of the entire brain, providing global activation of the cells, though the ideas produced may be purely hypothetical and conceptual without any connection to the physical reality. Human beings could create the concepts of purposes, aims, and goals in life and create a model of life with these components as the control points, which became the core feature of human mind or the individual's unique personality. Scientifically thinking, we already know about time and space related ideas, and there is no way to conceptualize an absolute origin of the universe or any of its components. But we could additionally create unique and unparallel model of functioning of the universe and think in terms of an absolute presence of the forces and components of the universe, as a cosmologist or theoretical physicist would theorize it to be. There is indeed a strong personal need to conceptualize and believe in the presence of a supreme force controlling all these components of the universe, including their own body and mind. Each individual may establish strong mental concepts and experiential relationship with "higher force" they create and believe in a centralized power which

one believes to control own actions and responses of all including that of the self. The psychological or mental strength so created and acquired by the "higher force" may work as boon for many individuals, by deriving and utilizing part of that strength in all challenges, while this mental creation of the force and its attributions can also influence decision making and other mental functioning in a positive or negative way. There have been individuals, who believe that they have acquired extraordinary mental power in their path of life, seeking and believing that they have access to divine experiences and strengths, and could later influence hundreds of others with their strong emotional mental capabilities, during their personal struggles in life. They have always conceptualized as well as created unique cognitive processing judgments beyond the physical limits of time and space. Those individuals often conceptualized absolute spiritual entities supposed to be chiefly serving the spiritual domains, which they believe influence specific physical and mental changes and goals of life for personal advantages and even for helping individuals suffering from related calamities. Some of the mentally created capabilities and the relationships with them were suggested to be components of a spiritual world, where each person is believed to have specific roles to perform. Human mind performed and created by the brain is a virtual entity created based on the rational wishes and beliefs of the individual. Scientific creation of the relationships of its components is indeed a difficult rational game, which could be achieved by an individual only when all personal wishes are kept away and allow oneself to be influenced by any wishful thoughts. The only exception for ignoring any such effect is the practice of love and affection when one can give away his life to help and protect another needy person. Exceptionally or occasionally we come across individuals who wish to have their minds organized and functional only from scientific points of view in all personal and impersonal spheres of thinking and activities. Each individual life is for limited time

periods, with his or her own mental values of life, and with specific goals in various spheres of activities of life. Each may have positively or negatively defined emotional relationship with one another, with spectrum of emotionally molded life experiences. They are often continuously moving and changing their temporal and spatial relationships, though they learn to identify each specific domain by defining it at personal and group-social levels. Each person learns to identify specific roles of life, though these roles may change while achieving personal goals. They learn to live sharing the comforts and difficulties with others, and work to enhance their life style individually and in groups by sharing responsibilities. On the other hand, there are also those who inflict pain and destruction to others, so that they could take away their comforts of life and they could insist on the need to believe and practice their belief systems. Love indeed has been the strongest human emotion, which positively controlled the behaviour of individuals. Love has been molded and shared by people and considered to be practiced even by their presumed supernatural forces controlling their life. The mentally defined properties and qualities may be merely imaginative and unreal, and beyond scientific understanding; though they may be unique offering different spectra of life, which human being alone could experience and live upon. However, at the scientific levels, all these special meanings lose their relevance, as each goal is subjective and meaningful only to the individual, whereas the spiritually relevant meanings are far beyond the regime of scientific understanding of the mind. There have been always some individuals who inflicted pain and segregated sections of people as they were not considered to belong to the cast and creed shared by them, and they did not fall under belief systems regarding their superior powers. Nevertheless, there is indeed a large number of people who invest all their strengths in offering love and affection to all other living beings.

There may indeed be huge differences in the virtual world formed in different human minds, by each person, which may reflect the neurocognitive resources, personal needs and personal priorities and its effects on cognitive judgments and its effects on emotional molding of the drive of the individual. Mind could be used as an organ for creating both physical and artistic products. Scientific verification needs specialized studies and verification methods, whereas artistic creations are essentially experiential and expressive satisfaction. Scientific verification is not what one may look for an artistic idea, whether it is spiritual or any other type. Scientific verification would essentially require multiple physical verification. Beauty, emotion, etc. are essentially the qualities of products or creations of the mind, which could facilitate human relationships, as well as expand abstract ideas, and sense of beauty, happiness and love, etc. All these are indeed extraordinary experiential qualities (called "qualia") that human mind alone could subjectively create, specialize and enjoy, all of which can render living a more enjoyable and personally sought out and beautiful experience. Science and art could indeed supplement each other to generate a meaningful and beautiful life. Both scientific thinking and artistic creations may be facilitated by encoded, transcoded and symbolic expressive methods of brain functions, which could provide the same with complex base for further expansions of ideas away from what could be scientifically explained or proven.

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