

Understanding and dealing with the mental creations: living in real and virtual worlds

Abstract

Understanding own cognitive processing methods and the skills acquired help us to know the generation of mental processes and what we have achieved by the mental creation of thoughts, emotions, and sensory-motor contacts with reality. The human being has indeed developed a more complex faculty with higher processing capabilities compared to other living beings known to them on the earth. Man has changed reality as well as created several new realities, using their mental and physical capabilities, which helped to continuously yield a newer universe, though the universal laws have never been changed. These scientific laws of the universe have been understood and expressed using the relationships of components that constitute the multiples of entities at the physical and functional levels. The encoding capabilities, the emotional arousal, the existing knowledge base, the retrieval and remembrance abilities, and their modulated effects in the body and the specific positive or negative feelings created through cognitive processing, form the domain which we identify as the mind in each human being. Multiple functional properties emerge from the various brain-body-reality interactions, which constitute unique combination of functions such as creation of purposes, goals, plans of actions-responses, and their execution as per the anticipated and actual effects, all of which may be controlled or influenced by the emotional state induced by the cognitive processes already carried out. These become immensely enriched combination of virtual mental products unless and until the sensory-motor contacts could be made with the physical realities, when one experiences the sensory-motor contacts and the neurocognitively molded emotional effects of experiences and expressions are made. The extensive mentally created virtual realities, which are subjected to self-experience are always highly enriched and complex, which could find answers to various questions and uncertainties each may have regarding purposes, goals and controls needed in life.

Keywords: virtual reality, physical reality, brain-mental creations of virtual reality, scientific relationships in the physical reality, absence of scientific relationship in creation of virtual reality, creation of new scientific realities from virtual realities

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Introduction

Evolution of the human mind

Examination of ancient thoughts of human beings show that they had always considered mind as a separate and independent entity compared to the physical body, and body-mind together represented an individual. The non-physical existence of the mind was accepted and considered essentially as a force, as understood during cognitive processing, emotional arousal, emotional experiences and expressions.^{1,2} The signals representing the knowledge of the sensory-motor contacts are considered the essential representation of the mind. Symbolic and verbalized representation of sensor-motor contacts with physical reality and the relationships across signals giving rise to specific meanings constituted a domain, directly contributing to the presence of the mind. Being awake and monitoring the signals representing the sensory-motor contacts with reality constituted consciousness. Mind was and has been still considered to represent the psychic components of the mind, which many believe exist as part of the universe. The psychic and mental components are identical, whereas spiritual presence of mind primarily needs faith or belief in the origin of its presence outside the physical domain of the universe. Some of the behavioral components may be accepted as evidence or the manifested results of the presence of spiritual power. One has to

believe or have faith in the spiritual dimension, as well as believe that the body and the mind are being directly controlled by the higher independent power of the spiritual force. All sensory-motor contacts with reality, which we scientifically examine, are believed to fall under the spiritual power. One needs to essentially believe in the spiritual power, as it is beyond the physical domain for any scientific examinations and proving. All people believed and many continue believing that this power has been controlling the huge virtual world, and that this power is endowed with purposes and goals of the universe, and controls the entire universe. All those sensory-motor contacts, which could be physically and experimentally proven are considered scientifically proven realities as they could be repeatedly proven by all using the same methods. Encoding helps to create meaningful relationships using symbols or words, which could be verbally or symbolically represented. There is no need to believe in those meaningful ideas and relationships, as they could be repeatedly shown by all, and hence considered scientifically proven meanings or relationships. One may make a meaningful relationship using faith, though this may not be scientifically acceptable as the same cannot be scientifically verified. The worlds of meanings and physically proven relationships therefore are different, as per each person's need to be either scientific or faithful. Mind has been considered the seat of several meaningful ideas and emotional experiences, accompanied by retrieval processes for recognition and remembrance, though what

is recognized or remembered may or not have any scientific support of occurrence. The meanings produced in these cognitive processes are considered reflective products of the mind, as they are mentally created and understood, and their communications are possible only across different minds, which use similar codes and meanings. The process of coding and assigning meaning for each word and symbol is very important process for assigning specific meaning to a signals for taking out the same meaning for similar signals used by others.^{3,4} Signal detection and assigning meaning to individual signals, for creation of specific meaning reflecting specific relationship between sequence of signals are one of the most important functional characteristics of the brain. This process allows individuals to communicate with each other, as well as create own new relationships in thoughts, and express them for describing sensory effects of all signals, which may be part of the input signals, or signals which one expresses in the world. The domain of motor contacts is again extremely complex as these allow not only own movements, but also help make induce movements in others and systems one uses. Motor coordination and effects could make alterations in the physical contacts, and thereby create new physical realities, functions and properties for the entities and the components of the world. The meaning and the personal value of each entity and the behavioral relationship formed by each person may be unique, which is known to and experienced by the concerned person only, thereby creating an independent virtual world for the self or for each person, unless and until the same values are shared by others. Virtual reality was defined in the very ancient years as “Maya” during the “Vedic” periods with strong advice not to be influenced by this.⁵ Virtual reality has been generally defined as a computer simulated reality. However, it has been used in a larger sense and context in this article; it is also used to represent a mentally created conceptual idea, presence of which one may consider as real functional profile needed and allow many of them decide the pattern and flow of similar events in life. The experiences associated with each component of a virtual world ceases to be present when the individual is no more alive or present, though we could encode the meanings as ideas and store the ideas forever. Physical structures contributing to experiences may remain the same, though there may no more be anyone who may have the same earlier experience with them.

Each human being lives in two worlds. One is a conceptual self-created world, often absolute and essentially experiential to the self, and the other is the physical objective world, which is only relatively quantifiable and present beyond self-experience. The real world is composed of energy, integrated at atomic and molecular levels, the particles integrating into matter and living bodies, as in plants and animals, at multiple levels, and human bodies with brains. One may interact through life events with the conceptual virtual world, which may essentially be subjective and experiential, whereas the interaction with the real world is objective and quantifiable. Emotional interactions take place with both the real and the virtual worlds. The virtual world is always conceptualized and experienced, whereas the real-world components are only relatively present during experience and quantifications, and often with virtual equivalents. Experiential interaction occurs with both the worlds, generally with greater emotional arousal with the real world, when one engages in experiential interpretation of the sensory-motor contacts established, their purpose, and personal significance in terms of positive and negative emotions made. Though the components of the virtual world may be imaginary, one interacts with them emotionally and experientially and interprets whatever sensory-motor contacts could have been made by one. Most of the individuals generally accept their

virtual worlds as real and accept interactions as significant experience of their real world. One accepts that one may not or cannot make direct contacts with all physical realities at all levels, and several of these may remain only realities with distant effects at specific points of time, which could be scientifically measured occasionally. But we think and feel about them all the time. As virtual realities may easily be composed of one’s wishes, ambitions, and fears, and as one could easily conceptualize and even make mental imageries or virtual sensory-motor contacts, they may easily become more emotionally important for a person than physical realities of the universe, with which one may not make direct physical contacts. The virtual world may control the life style of an individual more effectively than the happenings of the real world, which could be controlled and altered. One may have only partial or incomplete knowledge of some of the happenings of the real world, which may or not be scientifically understood, though they may or not have direct or indirect effects on the living bodies.

It has been a regular habit with many human beings to mix information scientifically derived and that created based on the thoughts of virtual realities and project them both together. Issues not scientifically clear and understood are often explained using information created from the assembly of virtual realities. This has been an important step for the development of new reality information which would explain what is hitherto not known and understood. Creating virtual realities is indeed a very imaginative and creative cognitive procedure, which helps to experiment with newer possibilities, which may help in creating knowledge of new fictional possibilities. As human beings have learnt to consider a purpose for every action or response executed, they also think in terms of purposes for the presence of all entities in the universe, and for their functional properties. A purpose is often extended beyond the concrete goal of specific action, which they consider the need of their virtual world. Creating and thinking about the purpose of every action may become a habitual necessity. Thinking of purposes and creating ideas which explain each purpose have become an important activity for many persons, which may become more important than clearly defining the goals for the execution of various actions. Even though individuals may create ideas related to purposes, they also often readily accept them as purposes assigned to them by a higher power. Once a purpose is defined and accepted in this manner, it becomes necessary to further think and expand the ideas created, by conceptualizing the ways and means for achieving the purpose. It becomes equally important that one must describe and define the specific force or power which has the responsibility for the creation of human beings, other life forms, and all other entities of the universe, their purposes and their responsibilities of existence.

The advantage of developing such fictional virtual realities are that they help in the creation of physical models with new functional properties, which are not part of the world, and which may need new scientific explanations for their creation. We use a purpose for explaining the occurrence or the need for making a change, which would further help in the development of methods for the creation of new changes for achieving new specific objectives and results, as guided by the purposes devised. An automatic change in the prevailing conditions and happenings of a natural process may not happen, even though the changes are scientifically valid and acceptable. Changes in the states of physical and accompanying functional conditions could be scientifically explained, whereas those aspects spiritually explained are beyond such scientific realm of understanding. People have been always advised to merely believe in them and accept them,

as people had not developed scientific methods and explanations for those practices or steps of actions. However, as scientific thinking and explanations became possible, they created new methods of scientifically proving and explaining many aspects of the presence of universal functions and changes, though these methods could not either explain or attribute to another higher force responsibility for the presence of all entities and their functional properties at the level of the universe. However, scientific abilities are limited, which do not give man control over universe beyond limited range. Hence many people simultaneously entertain belief in the spiritual force, as well as scientific methods, which could be applied without any belief or faith in the methods.

Scientific explanations are evolved and they are dependent when specific changes constantly occur and the conditions could be monitored as well as caused to occur, when the same change repeatedly happens. Thus, if water is subjected to heat, and if the heat is raised to a certain specific level, water changes its state to steam, which needs specific explanation and it is considered scientific, as the same reason and processes will happen every time there is increase in temperature of water. The processes that take the substance to changes are the same, where the type and quantum of each change could be predicted and they happen as per the predicted rules. There are indeed multiples of such changes sequentially relating one stage with another, finally going through specific predicted states. There are millions of such specific changes, occurring at micro and macro levels, within the human body and everywhere outside in the material world of the universe, causing all the known and unknown changes occurring at all levels. Knowing such conditions have laid the scientific foundation of understanding the changes in the universe. The brain is indeed the core seat of all-natural cognitive processing capabilities of knowing these changes within and outside, with the presence of drive-energy required for cognitive and sensory-motor behavioral performances. The abilities that man has developed have resulted in the capability to control these changes, as well as control the execution of changes as per preplanned strategies. Human responses and actions are the source of initiating and executing the changes by individuals and through the artificial intelligence of systems, they have created. The executions thus take place at multiple levels initiated through actions and responses which lead to specific positive, negative or nil effects by changing the physical conditions and/or environmental structures by creating new materials with new processing functions. Making sensory-motor contacts with reality is therefore the foundation of human behavior and knowledge, though the brain becomes accomplished to make such contacts with physical as well as virtual realities. Equally amazing is that the brain has succeeded in creating equivalent equipment with similar as well as higher processing capabilities as that of the brain, which we call artificial intelligence, which have taken over execution of more complex functions. Creation and utilization of these virtual realities are basic needs for finally generating those sensory-motor contacts with reality as conceptualized by man. Creation and manipulation of virtual realities in this manner help simulate physical realities and help solve complex problems by the brain made systems. Instead of cognitive abilities, these systems are endowed with artificial intelligence as designed by the human brain. Brain normally creates multiple sensory images for their recognitions, for attempting to make imaginary motor contacts with the multiple virtual realities, and for experiencing accompanying emotional effects. The man-made systems have all these capabilities, except emotional arousal and emotion experiencing ability. All these processes help carry out simple to complex recognition, sensory-motor

contacts in dreams, sensory-motor imageries for remembrance.¹⁻⁸ There are several normal conditions such dreaming and fantasizing, and abnormal mental conditions of hallucinations etc., when virtual sensory-motor images are made in the brain. Virtual processing is also used for various normal cognitive processing and during actions and responses physically and mentally carried out. There are several studies showing brain activation during sensory perception and presence of imageries in the brain.⁹⁻¹⁶ These mental processes and exercises that each body-brain learns, help to build sensory-motor contacts and accomplish their conceptual equivalents with the real-world facilities. The physical sensory-motor contacts with reality may relatively be selective and infrequent in the active brain of human beings, whereas they may frequently indulge in entertaining such contacts with the virtual reality components.

Capacity of the brain for the detection of relationships as well as conceptual creation of these relationships with additional incorporation of functional changes at the physical levels have resulted in the creation of changes as well as new conceptual ideas on the universe with immense meanings for the present and predictions of the future. Variety of imaginary entities have been encoded over the ages often providing explanations of their physical effects and predicted changes that may happen, as understood and as per their knowledge base of the universe. As novel scientific explanations often require creation of new relationships, it has now become a habit to use similar current knowledge systems and methods for the creation of fictional science programs and for narration of their current fictional roles. The method has become a strong habit since early periods, as it helped create imaginary entities with specific purposes that could be created, which could be seldom or never scientifically proven or explained. When physical or medical effects are used for the control of negative physical effects, similar psychological and behavioral programs are instituted for controlling such changes which may be depicted from the virtual world. Belief in virtual forces and accepting them as a central master force controlling the universe has become a routine habit with many human beings. Many actions and reactions depicted are virtual or imaginary with conceptual explanations for the presence and occurrence of several of the effects or happenings. We create purposes and goals of life and struggle to achieve new creations, all of which bring about immense satisfaction in life. The facilitations of the virtual world make life more adventurous and often more satisfy for all. As long as the virtual world is only conceptual and experiential, the involvement encourages creative thinking and facilitates creation of new superior realities. The most positive satisfaction of the achievements acquired through these efforts is that the process could modulate own drive, when individual identifies the drive as the strength of a higher force helping one achieve the goals in life. A very significant effect is achieved when one considers the self being controlled by the drive is its acceptance as the force needed to propel one to live and to act. One gets privileged to obtain a choice of actions, according to the suggestions and controls one learns to accept as assigned or directed by this force. The virtual fictional world serves as the territory and gateway through which one could travel to reach the great challenges and targets in life. This driving force becomes a supporting strength for one's life and actions. The human brain has developed such immense capability to experience virtual realities, as conceptualized by and suggested to the brain. Each brain accepts its own meaning and emotional effects as individually and externally suggested and accepted. They could further conceptualize life as a force, shared by every living being or creature, even though we have never been able to either conceptualize or prove the presence

of such independent life force, which many of us have been calling “Consciousness”. The most striking and advantageous effect has been creation of imaginary situations and forces, which we have identified as the virtual world, and consideration of their effects in life. Brain could achieve almost miraculous effects, as the brain could be induced to think and feel with supernatural forces of the virtual world, which could yield such experiences, which appeared to be evoked by supernatural entities and experiences. Need to accept and make new changes and products in the universe require emotional supports, which most human beings derive by conceptualizing a supernatural force as the one responsible for empowering a person for working. The brain creation of novel ideas, products and changes in the universe has been attributed by majority of human beings to be the contribution of the supernatural force. Those who had the capability of superior intellectual and emotional capabilities within them, could accept the changes being created by brain-mind capabilities in them, as mentioned in some of the ancient philosophical scriptures of “Vedas”.¹⁷ Without such capabilities, most of the people accepted the universe and its products as the creation of a supernatural force. These different attributes are clearly evident in the thoughts and entities created by the brain-mind over ages.

What is truly experienced by each individual or even an animal is the cognitively molded emotional arousal, by the presence of simultaneous cognitive processes taking place.^{2,7,5,18} Such molding has positive or negative effects on the emotions by molding it positively or negatively. The complexity of the cognitive processing adds to the molding effects on emotion, and accordingly the emotional experience becomes complex. The unmolded emotion could be conceptualized as the life force, without which actions or responses could never be initiated. This emotional arousal has been identified as the driving force.^{18,21-25} Nevertheless, total absence of knowledge of reasons for the presence of life force and cognitive processing abilities in the body of a living being encouraged most human beings accept a supernatural force as responsible for actions and responses. We have considered this as a divine force, institutionalizing the world and running the life forms as well as the material world. Love and affection are the main action-response controlling forces in human beings. Their absence as well as presence of negative emotions, have always resulted in causing pain and hurt to the self and others, and these profiles and their effects keep frequently occurring among human beings. The strongest life force indeed became “love,” provided one learns to build the emotional force and apply it in life.¹⁸ Equally important is the experiences of pain, sadness, anger and fear, etc., which are cognitively molded emotions, producing experiences of depression, pain, fear, and related responses. The life force has been accepted as the driving force of life, as the body-brain alone do not have the potentiality to function independently for propelling the body to move, respond or to act, and carry out various mental functions. Awareness of actions and responses occurs only after the emotional arousal or the drive reaches a Critical Limit of Potentiation,²⁵ when the action or response would be automatically initiated. Verbal awareness itself is considered to occur only after verbal encoding or transcoding have taken place.^{19,20} Awareness has been considered an important component of being conscious. Becoming verbally aware of is indeed an important aspect of online monitoring the sensory-motor contacts and acquiring the specific knowledge. This could happen only through encoding and transcoding, when the listening brain monitors the output of the talking brain.¹⁹ However, awareness does not induce to act or respond, which could happen only if the system is emotionally aroused. Since awareness of an action occurs only after the specific

motor potential is initiated²²⁻²⁷ it has been suggested that man has no ‘free will’, which could intentionally control the initiation of an action, and hence the action is not automatically initiated. One must learn during the developmental stages to control the emotional drive so that the drive would not automatically reach the CLP and initiate an action or response, without awareness of the individual. This control must be acquired by each growing child through social conditioning in the early stages of growth. Such training helps one to keep emotional arousal under control and consider the social and personal acceptability of the responses before one allows him or she gets aroused to the level when a response would automatically be initiated. The continuous emotional arousal will not then automatically initiate the response. Absence of such training of the arousal of the drive or emotional arousal leaves a person without self-controls, when one may freely indulge in several antisocial activities. On the other hand, a person with poor emotional arousal or drive fails to make use of own drive or emotional arousal for the initiation of goal directed activities for various achievements in life. High intellectual or cognitive capabilities are not enough for one to carry out actions and achieve goals in life. Even an average intelligent person may achieve high goals, if he has enough drive to work and achieve such results. Presence of such cognitively positively molded drive and the consideration of its acceptance bring in peace and power to the person to live and carry out multiple actions with specific goals and achieve the various goals in life.

Another two paths which have caused differential adjustments and consequential changes of life pattern are caused by the potential capabilities of the living systems. One is created by the fact that one is bound to accept in life all-natural changes that may occur like the changes in weather, its effects on plants and other agricultural products, and other physical and functional changes that take place in the world, which all living systems have to go through and they react physically and physiologically. The second path opened for human beings to voluntarily perform actions for achieving goals in life for carrying out novel and self-defined actions, which facilitate creation of innovative changes, materials, and objects with new functions, all of which may bring about changes in the nature and the world they live. Thus, a human being could choose and perform actions, which may bring pleasure and gains or pain and losses to the self and others. We are in a position to choose a method or an object, using the freedom we have to decide and choose, or merely respond and act as per the drive. The human body indeed could be taken through positive or negative physical and mental conditions, based on neuropsychological judgments when the negative conditions may bring about changes causing physical discomforts, disabilities and pain, requiring corrections. Such calamities and tragedies may be attributed to the results of failure of the actions or responses already executed, or to the conditions present through which one is forced to go through. Painful results also occur in life when one fails in the use of personally chosen and engaged tasks for achieving success and happiness. Attributing such failures to external causes, self-failures or inadequacies always may facilitate one to repeat the efforts.

Awaiting death in old age may almost always cause distress and feelings of failure. Comfort is achieved by some by thinking about a possible life after death, elsewhere, provided one could develop belief in the possibility of such a virtual world. Many people have been practicing methods of anticipating such stage in each person’s life after death. Extensive possibilities of life after death have been conceptualized by many, and many prepare themselves, during their living days for such life after death. Observation of presence of similar

behavioral and physical characteristics across newer generations, through normal neurogenetic transmission as we understand today, earlier made people think about rebirth and continuation of life across generations, which became a part of the virtual world for many people. The human brain has been carrying out encoding and developing various physical and non-physical functional models using scientific methods, as solutions for innumerable physical and behavioral issues and problems, which facilitated creation of extraordinary and unique new models changing man's interaction with nature. Most human beings believe that development of these abilities and the controlling capabilities of these ideas are originally available with a super power of the universe, and hence that they may be exercised without any conflict. As this has always been considered a spiritual issue, it has never been an issue for any scientific study and explanations. Further, it would always help many human beings to find meaning and purpose to live and go through the life happily with or without turmoil and failures. Further, they learn to carry out their reactions with others using loving or violent methods of expressions, whichever they have been trained by their social systems through early social conditioning. There are also those, who prefer to live beyond this virtual world, accepting only scientifically and experimentally proven components of the world around them, though they may miss their great opportunity to create and accept a virtual world for themselves, and enjoy living in that real plus virtual worlds. The enormous creativity shown by man for understanding the existing physical and biological relationships across the components of the world has encouraged them to create new virtual realities, and later convert them to new physical realities, and thereby expand their existing real world. The habits of creation and maintenance of a virtual world inspire man to enhance thinking and creating abilities, as well as scientifically create part or full details of those virtual realities, and change some domains of the universe.

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Conflict of interest

The author declares that there is no conflict of interest.

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