

Prebirth Concept Of Knowledge

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Abstract

Intellect has been evolving alongside needs to gratify the needs and passions of human beings. The very essential and basic needs of species are meant to be resolved to suit the environment of life; these exist throughout the life. The inherited intelligence to resolve these needs is modified and later it is for each species to adapt the intelligence to suit such needs according to the genetic rules of evolution of the species. However, the human species are gifted with intelligence that governs the actions in a sensible and ethical fashion. The control the needs and the extent of gratification are kept in a healthy balance and the social laws have evolved. A harmonious civil society has also evolved to shape the intelligence accordingly. Some of deeds gratify the needs judiciously and some misdeeds occur. Constructive, prolife deeds are a privilege of dispassionate intellectuals and misdeeds become a passion for the neutral, anti-life or destructive individuals. The range can extensive and the civilizations evolve. We assert that knowledge, contemplation, and wisdom play a dominant role in the cornerstone of mind that in individually located in the brain (and of the pre-birth conditions in the wombs of the fetus that molded its personality). The genetic patterns of self interest groups (SIGs) and the selfless (SLIGs) interest groups are placed as two dominant nodes in the mind. The needs of societies, cultures, and nations have been contained in an overall sense of respect for life and justice for human rights. With due diligence, the Internet, machines, and humans can resist the new wave of oligarchs in the SIG groups in societies. Such a trend would assist justice with facts and truth, and reason behind science, to prevail for few more decades or eons.

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I. INTRODUCTION

Knowledge is encoded in the genes and embryonic life is intertwined in a very orderly fashion. Genes are segments of DNA¹ (deoxyribonucleic acid). These segments contain the code for a specific protein that functions in one (or more) types of cells in the body. Chromosomes are structures within cells that contain a person's genes. Chromosomes contain genes and the chromosomes are in the nucleus of cells. A chromosome contains hundreds to thousands of genes. Every normal human cell contains 23 pairs of chromosomes, making a total of 46 chromosomes. A trait is any gene-determined characteristic and is often determined by more than one gene. Some traits are caused by mutated genes that are inherited or that are the result of a new gene mutation.

The most important class of materials in the body is likely to be proteins. Such proteins build muscles, connective tissues, skin, and other structures. In addition, they make up enzymes. Enzymes are complex proteins that control and carry out nearly all chemical processes and reactions within the body. The body produces thousands of different enzymes. Thus, the entire structure and functions² of the body are governed by the types and amounts of proteins the body synthesizes. Protein synthesis is

¹ The pre-birth concepts and terminology in this section are documented extensively in medical discipline and embryonic sciences and are not elaborated here.

² Interestingly, these functions are remarkably parallel to the functions (micro-, mini-, sub-, macro-, global-) processes and functions in the CPUs, mini, min-frame, and global computers. Whereas nature has evolved the laws of genetics over the eons past, the order and structure in machines only from the days of von Neumann in 1948! In computer systems, the *opcodes* (*opc*'s) would correspond to functions of nature or *vfs*, and embryonic objects would correspond to the *operands* where the objects or *nos* are stored in the computer or networks.

controlled by genes, which are contained on chromosomes. The cycle is complete, iterative, and dynamic. In health and sickness, protein synthesis takes place continuously.

Normally humans have about 20,000 to 23,000 genes. The genotype (or genome) is a person's unique combination of genes or genetic makeup. Thus, the genotype is a complete set of instructions on how that person's body synthesizes proteins and thus how that body is supposed to be built and function.

The phenotype is the actual structure and function of a person's body. The phenotype is how the genotype manifests in a person (not all the instructions in the genotype may be carried out (or expressed)). Whether and how a gene is expressed is determined not only by the genotype but also by the environment (including illnesses and diet) and other factors, some of which are still unknown.

II. INTELLECT AND ITS ROLE IN ESTABLISHMENT OF ORDER AND STRUCTURE

A karyotype is a picture of the full set of chromosomes in a person's cells. Genes consist of deoxyribonucleic acid (DNA). DNA contains the code, or blueprint, used to synthesize a protein. Genes vary in size, depending on the sizes of the proteins for which they code. Each DNA molecule is a long double helix that resembles a spiral staircase containing millions of steps. The steps of the staircase consist of pairs of four types of molecules called bases (nucleotides). In each step, the base adenine (A) is paired with the base thymine (T), or the base guanine (G) is paired with the base cytosine (C). Each extremely long DNA molecule is coiled up inside one of the chromosomes. DNA (deoxyribonucleic acid) is the cell's genetic material, contained in chromosomes within the cell nucleus and mitochondria.

Except for certain cells (for example, sperm and egg cells and red blood cells), the cell nucleus contains 23 pairs of chromosomes. A chromosome contains many genes. A gene is a segment of DNA that provides the code to construct a protein. The DNA molecule is a long, coiled double helix that resembles a spiral staircase. In it, two strands, composed of sugar (deoxyribose) and phosphate molecules, are connected by pairs of four molecules called bases, which form the steps of the staircase. In the steps, adenine is paired with thymine, and guanine is paired with cytosine. Each pair of bases is held together by a hydrogen bond. A gene consists of a sequence of bases. Sequences of three bases code for an amino acid (amino acids are the building blocks of proteins) or other information.

Figure 1 depicts the configuration of Order, Structure, and Awareness of the unborn baby in the womb. These three nodes form a well-balanced triad for knowledge in the embryonic environment as the seminal cells are coming to life in the womb. The three nodes form the "knowledge cell" that evolves and carry the information clustered as microscopic knowledge (i.e., μk or δk) initially; but during the events to follow in a matter of a few days, weeks, trimesters, and months, the three nodes give "birth" to the inner fourth node generically named Intellect that carries genetic imprints of three outer nodes. This fourth node is a lifelong token of the verb functions or " vf s" that the unborn baby the noun object or " no " deals with the environment (*) in real life. The assertion that μk or $\delta k = (no * vf)$ is already performed as the human is being conceived. The influence of timing and the duration of events given to the unborn baby is prescribed as a definitive component of knowledge imparted to the child.

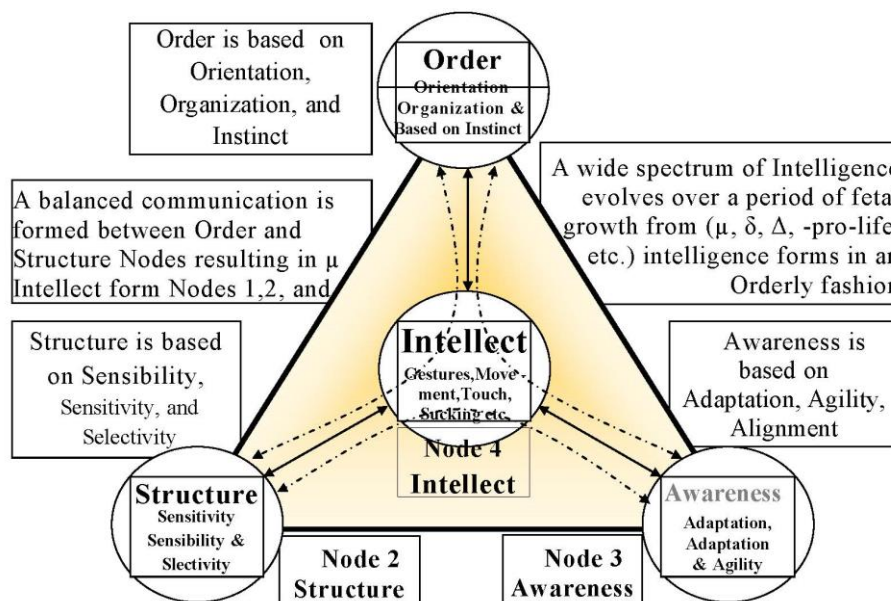


Figure 1 Depiction of Order, Structure, and Awareness in the environment of the womb as the baby is being conceived as a “clog of thickened blood”.

Order and structure nodes are two interdependent, primary, and seminal nodes. Their combinatorial functions between the initial "*nos₁*" need to be successfully completed for the next step of generating the "*nos₂*". Else, the next subsequent steps in building the genetic structure and the order within the cell would not follow. The order node enforces the sequencing of logical steps and the structure node would ascertain that the logical steps would progress harmoniously and congenially to become the set of "*nos*" (i.e., *nos₃*) for the next steps of generating innumerable "*nos₃*", etc. The process would repeat continuously till the *nos_{ii}*, *nos_{ij}*, *nos_{ik}*, etc., will be formed for genetic cells to reproduce themselves. These functions take shape as micro-, mini-, sub-, macro-, to global-, functions 2 in the womb.

The following sections deal with personal, conceptual, and intellectual assets of the ‘social agents’ who bring about changes in society. The topics presented here are social, personal, and environmental. Inspiration (including intent, goals, and directions, etc.) and energy (such as resources, time spent, personal, and preferential. etc.), Actions to make the change are related to the needs and their hierarchies (Freud [1], Maslow [2], and Ahamed [3]) are transformed into deeds with persistent will and skill.

Communication between Order and Structure Nodes

Interdependencies demand communication and nature has perfected this communication to be flawless. Most humans have the same basic characteristics (such as; one heart, two hands, two kidneys, etc.), even though the lesser features (such as; blood type, limb sizes, brain mass, etc.) can be different but within a range to make the functionalities different and interesting. In this vein, the communication³ between the O- and S- nodes (Figure 1) can also be different. Although perfect to make all humans be members of the race, they can vary enough to make every individual be within a range for the activities (*vfs*) to make the individual elite or barbaric. As humankind has evolved, so has the intellect for millions of years. The distinctive feature of these two nodes has not been explored in the human frame of knowledge because the human is only a cell or a group of embryonic cells. In a restricted time frame, even though neural connections may exist, neural characteristics can be different depending on lifestyle, diet, habits, and health.

Communication plays a dramatic role in all aspects of social and inter personal relations and also between the still unformed physiology of the infant. Generally, communication [4] starts out as being Simplex (i.e., unidirectional), but soon becomes duplex (i.e. bidirectional). In this classic style, the Order and Structure is established in the system; in this instance the system is the physiology of the baby still in the womb. There is, in fact there is Order in communication itself; the commanding node issues an instruction for the subordinating node to execute (i.e. a *vf* (an *OPC* in this case) is issued, as it is the case when the control register in a CPU decodes as to what instruction is to be executed for the CPU on the Operand(s) in the Operand registers.). In this ace the Oder node instructs the Structure node to set up a structure of the functions that the muscular system to listen and carry out that particular instruction

In an overall sense, the infant is coordinating the steps for the body function as the baby grows in the womb. A blue print of the order of functions in being "engineered" in the physiologic of the unborn infant to face life as an infant in the womb, as child, an adult, and to fend off the anti-life forces (the sicknesses, disorders, and deterrents to life.. This great feat of construction of life starts right in the womb, and is nurtured throughout life. Humans may call as divine or the scientists may just accept all of this as a programmed set of definitive pre-ordered functions that simply occur. A set of philosophic discourse are possible, but in the embryo these questions are peacefully resolved without a conflict or a hitch, but in vastly different ways; as many as the types of human personalities as the baby may chose to wear! The seeds of conception of the philosophers, the poets, the saints are planted in the clay; and in the same cast, the pettiness of crooks, thugs, and killers are also seeded. As scientists we find the innumerable faces of humankind in these unexplained

³ The exchange of signals between transmitter and receiver occurs in all communication systems. In the case shown in Figure 1, the situation is similar to –bootstrapping a computer or initiating a device on a network. These procedures are well documented in computer and network textbooks. For the neural connectivity between nodes 1 (O), and 2 (S), nature has made the initiation of signals to make the flow orderly from node 1, and to receive the order and execute the –Order command and continue to establish the structure of “*nos*” objects at this node. In the duplex mode, the –O receives the signal from the S node, thus establishing structure in the O node and conversely order in the S node. Nodes “learn” to act and react cooperatively and continuously.

forces at the beginning of life on the earth (i.e. the womb of all life forms).

In the communication sciences [4], numerous types of networks, and systems (e.g., home, local -area, metropolitan area, wide area, national, global areas, terrestrial, space, interplanetary) exist. Numerous modes of communications, (such as simplex, duplex, time compression multiplexing (TCM), synchronous, asynchronous, etc.) have been successfully deployed, and numerous operating systems and their protocols also exist.

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Even though it is implied that order (O) is more fundamental than structure (S) in the domain of knowledge, the two nodes are inseparably intertwined. As much as the male and female genes are essential to initiate reproduction, it is our conjecture that order and structure are equally important at this stage of human embryonic conception.

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Awareness Node at Node 3 and Intelligence Node at 4

Node 3 acts as an intermediary between nodes 1 and 2. It serves as a housekeeper to manage the flow of Order from 1 to the growth of Structure in 2. This node acts as a protocol manager to supervise those orders from 1 are properly structured in 2, and communicates back to 1 to send the next order to be structured in the next layer. The entire process is repeated until a Unit, group, or set of layers make up a functional module or unit.

The functional modules at 1, 2, and 3 prompt yet another function; the capacity to learn the processes within the execution of functions in 1, 2, and 3, and store them away in Node 4. This background function of natural learning leads to intelligence at 4. The processes with the 3 and node 4 (see Figure 1) are interdependent as the functions in 1 and 2.

Cyclic Loops Linking the Four Nodes 1, 2, 3, and 4

Nature remembers and repeats what it learns. Each independent function is learned to preserve life.

Each interdependency is learned and repeated, i.e., the concept the learning and repeating occurs via nodes 3 and 4 where awareness and intelligence are also learned and repeated.

Thus, the linkages between the four nodes 1, 2, 3, and 4, have six, two node-node links between two sequential nodes,

three, three node-to-node links,

sixteen, four node-to-node links, and one node graph that is a collective of all nodes.

The directionality of the traverse can be important but not considered in this section. The direction and starting nodes and end nodes are both important in the mutation of genes leading to an additional element of complexity in the formation of the baby. Multiply traversed loops add further variations in the way and style the baby takes its form in the very early stages of infantile development.

Knowledge from Womb to Childhood

Knowledge is essential to gratify the needs of all organisms. During the early stages, the needs and knowledge are both primitive and the solution to needs could be as simple as lips to the body for the newborn baby, or from hand to mouth for the child. Nature and evolution have provided the genetic knowledge for the earliest needs. As a child knowledge is derived from many extraneous resources. The phase for the knowledge transitioning into childhood is shown in Figure 2.

The four basic nodes shown in Figure 1 are retained in both Figure 2 and the transition of knowledge as the child grows to knowledge in adulthood is more tedious and cumbersome. The patterns of interactions and the nodal contents are radically different; whereas the baby is handed down the genetic code to function to provide order and structure for the baby in Nodes 1 and 2 (Figure 1), the child must learn all the effort (i.e., *vf s*) to manipulate the noun objects (*nos*) that are also radically different from those in the womb.

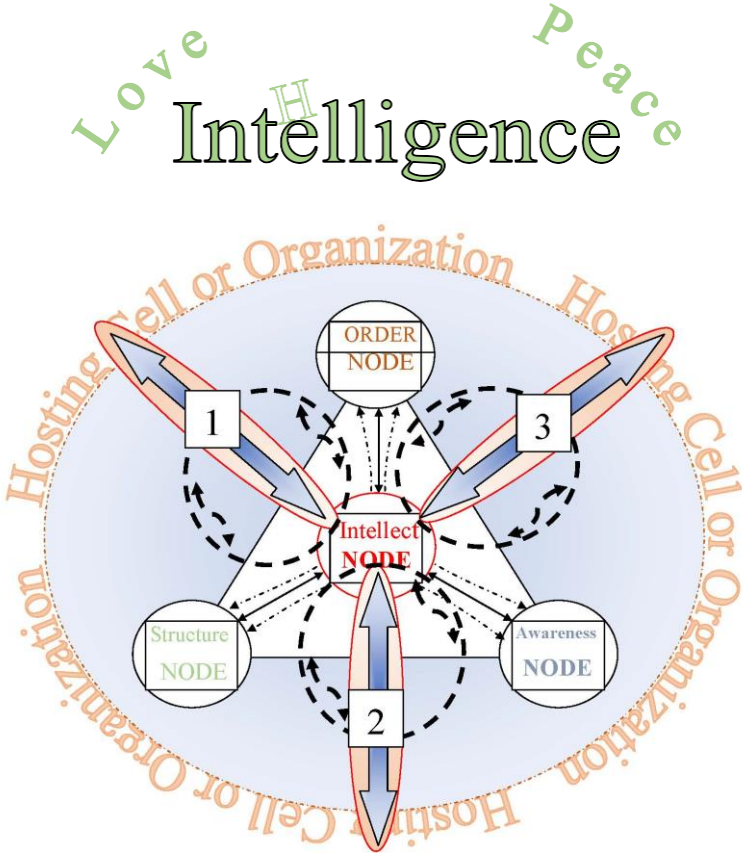


Figure 2 Transition of knowledge of a baby from the environment of a womb to the knowledge in childhood.

Perhaps the hard part of adjustment as a child is to learn the convolutions or the protocol associated with each of the *vfs* with each of the *nos*. Further, since the interaction is in the duplex mode, the child must understand the “language” of interaction. Baby talk is not an advanced form of rollover in the womb. In most instances, the external environment is less understanding or even hostile. This uneasy form of learning is depicted in Figure 2 as the broken circle between the intellect in the middle and the three nodes 1, 2, and 3.

III. KNOWLEDGE FROM CHILDHOOD TO ADULTHOOD

Knowledge during adulthood grows rapidly to cope with the needs to be gratified during this phase of life. It is expected that the adult will handle the extended responsibilities with a much more extensive and greater knowledge base. In fact, the learning and reconstruction of knowledge already in the mind continue to persist provided the mind and psyche are functional. A healthy mind in a healthy body and an up ‘to-date’ knowledge base to solve and resolve the needs as and when they arise will make living possible (and even enjoyable) in this knowledge age.

This scenario is depicted by a “knowledge star” (KS, depicted in Figure 3) to be consistent with the four nodes shown in Figure 1. We depict a KS with numerous nodes and interconnected links to carry the concept of Order and structure introduced in Figure 1. At least two nodes (O and S) are necessary (see Figure 1) to begin a knowledge platform and four nodes will be necessary to build an Intelligent Knowledge Platform (InKP)

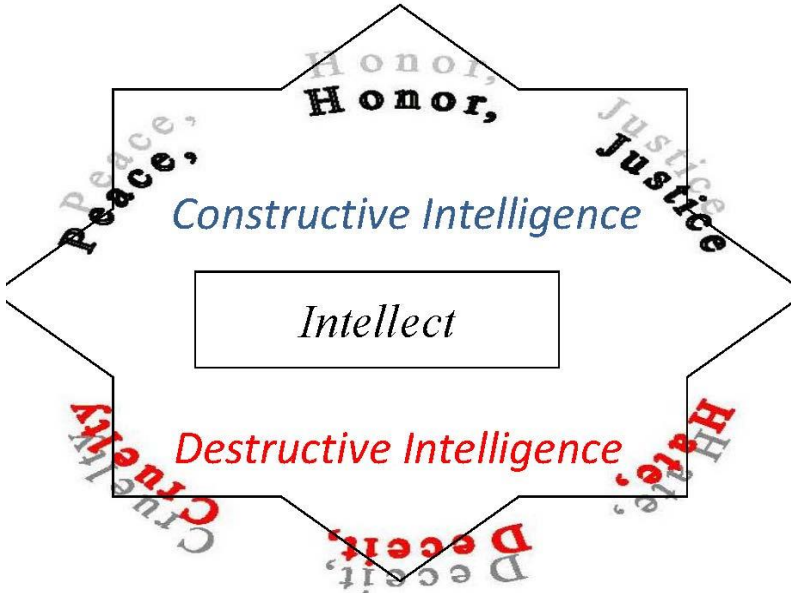


Figure 3. Schematic for a sample 9 node Intelligent Knowledge Platform.

To be practical and realistic a nine-node InKP with an Intelligence node in the middle of the Figure 3 is shown in Figure 4. The eight peripheral nodes could be chosen to suit the configuration of the problem at hand. Knowledge, being dynamic will be represented by the differently chosen nodes and link configurations with strong and weak links.



Figure 4. Details of the 9 node Intelligent Knowledge Platform.

The human Intellect is the prime mover that can focus on any of the eight peripheral nodes but also relate to and elaborate on the influence of the other nodes via Internet linkages. Forward and backward influences can also be easily traced.

When such typical nine-node IKnPs are coupled to Figure 1, the adult patterns of behavior can be traced back to the genetic code and very early environment in the womb of an individual. The intelligent Knowledge Platform approach is a scientific tool that can be easily implemented in corporate environments. For example, if a six -node platform is appended to an Internet-based Management Information System. (IMIS), then the peripheral nodes can be chosen as Planning, Organization, Staffing, Implementation, and Control as suggested by Peter Drucker [5]. We suggest two additional nodes; Financial or Cash Flow Analysis, and Demand Projection also added to Drucker’s original analysis of corporate activities.

Another definitive application is in the domain of politics where the number of peripheral nodes can be

very large. Simple-minded human guesswork can lead to hundreds of mistakes. Typical such failures are Climate Change, Global Warming, Plastic Pollution, extinction of rare species, etc. Independently tackled the problems do not get solved but linger on and on for generations.

IV. FUNDAMENTAL BASICS OF KNOWLEDGE IN THE MIND

The domain of knowledge is the domain of freedom of the mind itself. The mind conceives, visualizes, creates, imagines ,elaborates, comprehends, grasps ,realizes, understands, constructs, forms, reconstructs, reorganizes, recreates, renovates, modernizes ,reorders, enhances, develops, enriches ,improves ,boosts ,iterates reconstructs, repeats, recapitulates, rehearses, iterates, rehearses, builds, apprehends, and rebuilds. The human mind remains but the structure changes from infancy to adulthood and perhaps into old age. The verb functions, convolutions and the dynamic attributes of the mind change accordingly causing different behavioral patterns of the same human from pre-birth, infancy, childhood, different stages of adulthood, and the old age.

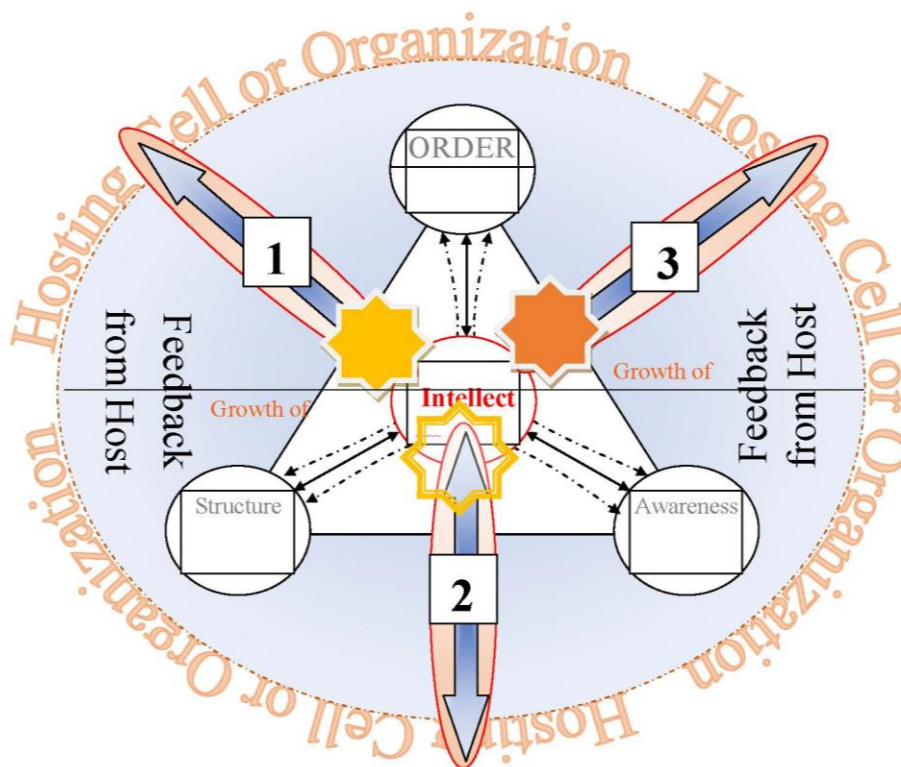


Figure 5 Transition diagram from the knowledge structures of an infant to childhood and onto to adulthood and old age. The eight vertices of the three stars are indicative of the InKP in Section III..

These verb functions (V, v, VF, vf) are appropriately convolved ($*$) with the nature and attributes of the mind (N, n, NO, no) that hosts the array of verb functions yielding an element of knowledge ($\delta k = n *v, N *V, etc.$). This δk has structure, path(s), continuity, logic, inference, constructs, timing, sequence, interdependence(s), etc. When and if there is a perfect convolution, δk becomes perfectly universal, entirely self-contained, and totally unique. This condition being impossible to achieve, humans attempt to create useful, economic, and valuable δk 's that con themselves combine, and convolve themselves even though they might be short-lived, finite, goal-oriented, and significant in their own limited time and space.

V. CONCLUSIONS

This paper integrates the findings and inferences from numerous disciplines. Perhaps the most important integration occurs in the middle body of the paper that combines the functions and processes from embryology and communication systems. The seminal concepts from communication system that keep hierarchies of life organizations and structures in (reasonable) stability and harmony is as vital as the life and medical sciences the keep the human physiology in (reasonable) health and peace. In a sense, the paper presents a bold step in presenting the continuum between the pre-life force the shape human life itself from genetics to adulthood. The sociological laws that contour behavior of infants, children, and adults are further extended into

the science of building social machine from a network of AI based computer systems and the CPU's, KPU's and their switching systems. All these subsystems can be Artificially Intelligent in their own right. The human beings that monitor such machine need the extended perception of global 'noun-objects'. This rare ability will become essential if the human race needs to be ahead of the super-cosmic entities.

We also perceive many philosophic variations of possible designs for knowledge to be scientific and yet be machine-executable. This realistic stance lets knowledge that is vast and comprehensive in nature, become tame and comprehensible in mind. Further, being uniform in time and space has three distinctive features from a human perspective: a) knowledge that is beyond complete human understanding even though perceivable, and b) knowledge that approaches and intersects human comprehension to deal with it and make it useful and c) knowledge that is well understood and falls in the realm of sciences and to deploy it for general use and solve routine problems. Accordingly, the following sections expound on one of the unique features of knowledge (that knowledge is continuous) to classify it.

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