

Deciphering Spiritual “Self” with Genetics and Data.

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Abstract

As Self is indestructible and cannot be explained with prima facie world view, it has been explained with the essence subjectivity and objectivity ingrained into the spermatikos (seed or logoi) of life. Therefore blending with the modern science phenomena of cell division where self replication of DNA(essence of Somatic cell division) takes place in the interphase stage of Mitosis has been explored as the seed or logoi and then indestructible characteristics has been described with Virtual Self evolved by Data. Hence ancient Philosophy, Genetics and Digital manifestation of human body can be combined to define the age old concept of Self in new light

Keywords: self, genetics, data, cell, genotype.

Introduction

“The Chandogya Upanisad

Gives us a remarkable story where Gods and Demons both are in an endeavor to learn the true nature of the Self, approached Prajapati, who maintains that the ultimate Self is free from sin, free from old age, free from death and grief, free from hunger and thirst, which desires nothing and imagines nothing. The persisting spirit remains constant in all the vicissitudes of waking, dream, sleep, death, rebirth, and deliverance. The whole account assumes that there is consciousness even in the unconscious states.”

Gods sent Indra, and demons sent Virocana as their representatives to learn the truth behind the concept of Self.

The first suggestion is that the self is the image we see through the eye, formed due to reflection in the water or a mirror. However, the conception of the self as the mere physical body is inadequate. To indicate that what we see in

another's eye, a pail of water or a mirror, is not the true self, Prajapati asked them to put on their best clothes and look again. Lord Indra realized the inadequacy and said to Prajapati that this Self (the shadow in the water) is well adorned, well dressed when the body is well dressed, well cleaned when the body is well cleaned so that the Self will also be blind if the body is blind, lame if the body is lame, crippled if the body is crippled and will perish as soon as the body dies. Such a concept cannot be accepted. Then the idea arises if Self is not the body, then it is a dreaming Self? The second suggestion is that the true Self is "he who moves about happy in dreams." Again, the question arises, and the difficulty is felt. Indra says that although the dreaming Self is not affected by the body's changes, in dreams, we think that we are stuck or chased; we experience pain and shed tears. We rage in dreams, storm with anger, do things perverted, mean, and

malicious. Indra feels that the Self is not the same as dream consciousness. The self is not a composite of mental states; however, independent, they may be of the accidents of the body. Dream states are not self-existent; Indra again approaches Prajapati, who suggests that the Self is deep consciousness sleep. Indra feels that, in that state, there is consciousness neither of the Self nor the objective World. Indra thinks that he does not know himself, nor does he know anything that exists. He is gone to utter destruction. However, the Self exists even in deep sleep. Even when the object is not present, the subject is there. The absolute reality is the active universal consciousness, which is not confused with either the bodily or the dreaming consciousness or the consciousness in a deep sleep. In the state of deep, dreamless sleep, the Self is wrapped around by the intellect having no consciousness of objects but is not unconscious. The true Self is the Absolute Self, not an abstract metaphysical category but the authentic spiritual Self. The other forms belong to objectified beings.

Self is life, not an object. It is an experience in which the Self is the knowing subject and is at the same time the known object. Self is open only to Self. The life of the Self is not set over against knowledge of it as an objective thing. Self is not the objective reality, nor something purely subjective. The subject-object relationship has meaning only in the world of objects in the sphere of discursive knowledge. The Self is the light of lights, and through it alone, is there any light in the universe. It is perpetual abiding light. Neither lives nor dies, which has neither movement nor change and endures when all else passes away. It is that which sees and not the object is seen. Whatever is a thing belonging to the not-self. The Self is the constant witness consciousness.

The four states stand on the subjective side for the four kinds of soul, Vaisvanara, the experiencer of gross things, Taijasa, the experiencer of subtle, Prajna, the experiencer of unmanifested objectivity, and the Turiya, the Supreme Self.

The Mandukya Upanisad, by analyzing the four modes of consciousness, waking, dream, deep sleep, and illumined consciousness, makes out that the last is the basis of the other three.

On the objective side, we have cosmos, Viraj, the World -soul Hiranya-garbha, the Supreme God, Isvara, and the Absolute Brahman. By looking upon Isvara as Prajna, it is suggested that the supreme intelligence that dwells in the sleeping state holds all things in an unmanifested condition. The divine wisdom sees all things, not as human reason does in parts and relations but in their existence's original motivation, simple truth, and reality. The Stoics call 'spermatikos' or the seed logo, which is manifested in conscious beings as several seed logoi.

Now relating the seed logos or spermatikos to the basic unit of life, i.e., cell, its structure which holds both the objective and subjective ingredients of Self. The genetic materials are the repository of the supreme intelligence seeded in unmanifested conditions. Each gene can be compared to Viraj to obtain the sequence of bases, i.e., genetic codes the experiencer of unmanifested objectivity or Prajna.

Co-relating with cell division

Let us delve into the details and phases of mitosis: **Mitosis** is a type of cell division in which one cell (the **mother**) divides to produce two new cells (the **daughters**) that are genetically identical to itself. In the context of the cell cycle, mitosis is the part of the division process in which the DNA of the cell's nucleus is split into two equal sets of chromosomes.

The great majority of the cell divisions that occur in the body involve mitosis. During development and growth, mitosis populates an organism's body with cells, and throughout an organism's life, it replaces old, worn-out cells with new ones. For single-celled eukaryotes such as yeast, mitotic divisions reproduce, adding new individuals to the population.

In all of these cases, the "goal" of mitosis is to ensure that each daughter cell obtains a perfect, complete set of chromosomes. Cells with too few

or too many chromosomes usually do not function well: they may not survive or even cause cancer. Therefore, when cells undergo mitosis, they do not just divide their DNA at random and toss it into piles for the two daughter cells. Instead, they split up their duplicated chromosomes into a carefully organized series of steps.

Phases of mitosis

Mitosis consists of four primary phases: prophase, metaphase, anaphase, and telophase. Some list five, breaking prophase into an early stage (called prophase) and a late step (called prometaphase). These phases occur in strict sequential order, and cytokinesis - the process of dividing the cell contents to make two new cells - starts in anaphase or telophase.

Stages of mitosis: prophase, metaphase, anaphase, telophase. Cytokinesis typically overlaps with anaphase and telophase.

However, the most critical phase is interphase, which is the most extended phase where self-replication of DNA takes place. This phase is the subtle phase where the most vital activity takes place. Can it be equated with *Taijasa*, the experiencer of quiet? It acts as a precursor of cell division, which is imperative to sustain and continue LIFE on Earth. It holds the objectified truth, i.e., *Viraj*, through the subjective vessel.

Interphase is the portion of the cell cycle that is not accompanied by gross changes under the microscope and includes the G1, S, and G2 phases. During interphase, the cell grows (G1), replicates its DNA (S), and prepares for mitosis (G2). A cell in interphase is not simply quiescent. The term quiescent (i.e., dormant) would be misleading since a cell in interphase is very busy synthesizing proteins, copying DNA into RNA, engulfing extracellular material, processing signals, to name just a few activities and things. The cell is quiescent only in the sense of cell division (i.e., the cell is out of the cell cycle, G0).

Interphase is the cell cycle phase in which a typical cell spends most of its life. Interphase is the 'daily living' or metabolic degree of the cell.

The cell obtains nutrients, metabolizes them, grows, replicates its DNA in preparation for mitosis, and conducts other "normal" cell functions.

In interphase, the cell becomes ready for mitosis or meiosis. Somatic cells, or normal diploid cells of the body, go through mitosis to reproduce themselves through cell division. In contrast, diploid germ cells (i.e., primary spermatocytes and primary oocytes) undergo meiosis to create haploid gametes (i.e., sperm and ova) for sexual reproduction.

Stages of interphase

There are three stages of cellular Interphase, with each phase ending when a cellular checkpoint checks the accuracy of the stage's completion before proceeding to the next. The stages of the Interphase are:

- G1 (Gap 1), where the cell grows and functions normally. During this time, a high amount of protein synthesis occurs, and the cell grows (to about double its original size) – more organelles are produced, and the volume of the cytoplasm increases. If the cell is not to divide again, it will enter G0.
- Synthesis (S), in which the cell synthesizes its DNA and the amount of DNA is doubled, but the number of chromosomes remains constant (via semiconservative replication).
- G2 (Gap 2), in which the cell resumes its growth in preparation for division. The mitochondria divide, and the cell continues to grow until mitosis begins. In plants, chloroplasts also divide during G2.
- In addition, some cells that do not divide often or ever enter a stage called G0 (Gap zero), which is either a stage separate from Interphase or an extended G1.

The duration of time spent in Interphase and each stage of Interphase is variable and depends on both the type of cell and the species of organism it belongs to. Most cells of adult mammals spend about 24 hours in Interphase; this accounts for about 90%-96% of the total time involved in cell

division. Interphase includes G1, S, and G2 phases. Mitosis and cytokinesis, however, are separate from Interphase.

DNA double-strand breaks can be repaired during interphase by two principal processes. The first process, non-homologous end joining (NHEJ), can join the two broken ends of DNA in the G1, S, and G2 phases of interphase. The second process, homologous recombinational repair (HRR), is more accurate than NHEJ in repairing double-strand breaks. However, HRR is only active during the S and G2 phases of interphase when DNA replication is partially or fully accomplished since HRR requires two adjacent homologous chromosomes.

Interphase and the cell cycle

When G2 is completed, the cell enters a relatively brief period of nuclear and cellular division, composed of mitosis and cytokinesis, respectively. After completing mitosis and cytokinesis, both resulting daughter cells re-enter G1 of interphase.

Interphase is preceded by telophase and cytokinesis of the M phase in the cell cycle. In an alternative fashion, interphase is sometimes interrupted by the G0 phase, which, in some circumstances, may then end and be followed by the remaining stages of interphase. After completing the G2 checkpoint, the final checkpoint in interphase, the cell proceeds to prophase, or in plants to preprophase, which is the first stage of mitosis.

G0 phase is viewed as either an extended G1 phase where the cell is neither dividing nor preparing to divide or as a distinct quiescent stage outside the cell cycle.

As this phase looks dormant, interphase does not describe a merely resting cell; instead, the cell is living and preparing for later cell division, so the conception was changed.

Therefore, this phase can also be equated with the deep sleep, "(self is consciousness in a deep sleep. Indra feels that, in that state, there is

consciousness neither of the self nor the objective world)."

The Stoics call 'spermatikos,' or the seed Logos manifested in conscious beings as several seed logoi are explicitly manifested by meiosis.

The primary difference between mitosis and meiosis is explained further to better understand "Spermatikos" coded with genetic information.

Similar to mitosis, **meiosis** is a form of eukaryotic cell division. However, these two processes distribute genetic material among the resulting daughter cells differently. Mitosis creates two identical daughter cells containing the same number of chromosomes as their parent cell. In contrast, meiosis gives rise to four unique daughter cells, each of which has half the number of chromosomes as the parent cell. Because meiosis creates cells destined to become **gametes** (or reproductive cells), this reduction in chromosome number is critical. Without it, the union of two gametes during fertilization would result in offspring with twice the average number of chromosomes!

Apart from this reduction in chromosome number, meiosis differs from mitosis in yet another way. Specifically, meiosis creates new combinations of genetic material in each of the four daughter cells. These unique combinations result from the exchange of DNA between paired chromosomes. Such trade means that the gametes produced through meiosis exhibit a fantastic range of genetic variations.

Finally, unlike mitosis, meiosis involves two rounds of nuclear division, not just one. Despite this fact, many of the other events of meiosis are similar to those that occur in mitosis. For example, a cell goes through an interphase period before undergoing meiosis. It grows, replicates its chromosomes, and checks all its systems to ensure that it is ready to divide. Like mitosis, meiosis also has distinct stages called prophase, metaphase, anaphase, and telophase. However, a key difference is that during meiosis, each of these phases occurs twice — once during the first

round of division, called meiosis I, and again during the second round of division, called meiosis II.

Meiosis I

As previously mentioned, the first round of nuclear division that occurs during the formation of gametes is called **meiosis I**. It is also known as **reduction division** because it results in cells with half the number of chromosomes as the parent cell. Meiosis I consists of four phases: prophase I, metaphase I, anaphase I, and telophase I.

Meiosis II

During **meiosis II**, the two cells cycle through four phases of division. Meiosis II is sometimes referred to as an **equational division** because it does not reduce chromosome numbers in daughter cells. Instead, the daughter cells that result from meiosis II have the same number of chromosomes as the "parent" cells that enter meiosis II. (Remember, these "parent" cells already have half the number of chromosomes of the original parent cell thanks to meiosis I.)

Meiosis is essential because it ensures that all organisms produced via sexual reproduction contain the correct number of chromosomes. Meiosis also produces genetic variation by way of the process of recombination. Later, this variation is increased even further when two gametes unite during fertilization, thereby creating offspring with unique combinations of DNA. This constant mixing of parental DNA in sexual reproduction helps fuel the incredible diversity of life on Earth.

Here, analogy can be drawn with the "supreme intelligence which dwells in the sleeping state holds all things in an unmanifested condition."

Genotype-Phenotype relationships

"The divine wisdom sees all things, not as human reason does in parts and relations but in the original reason of their existence, their primal truth and reality." This particular wisdom can be well explained by the genotype-phenotype relationships.

Phenotype refers to the observable physical properties of an organism, and this includes the

organism's appearance, development, and behavior.

Genotype refers to the chemical composition, which gives rise to observable traits or phenotypes. A genotype consists of all the nucleic acids present in DNA molecules that code for a particular feature.

"The first suggestion is that the Self is the image that we see through the eye, formed due to reflection in the water or a mirror. However, the conception of Self as the mere physical body is inadequate."

Hence, the appearance of the "Self" Lord Indra realized the inadequacy and said to Prajapati that this Self (the shadow in the water) is well adorned, well dressed when the body is well dressed, well cleaned when the body is well-groomed so that the Self will also be blind if the body is blind, lame if the body is lame, crippled if the body is crippled and will perish as soon as the body dies. Such a concept cannot be accepted. Can this inadequacy can be explained with the knowledge of the Phenotype and Genotype relationship where observable traits (Phenotype) are the results of different Genotype conditions:

1) Partial or complete dominance-Dominance affects the phenotype derived from an organism's genes, but it does not affect how they are inherited. Complete dominance occurs when the heterozygote phenotype is indistinguishable from that of the homozygous parent. However, sometimes the heterozygote displays a phenotype that is an intermediate between the phenotypes of both homozygote parents (one of which is homozygous dominant, and the other of which is homozygous recessive). This intermediate phenotype is a demonstration of partial or incomplete dominance. When partial dominance occurs, a range of phenotypes is usually observed among the offspring. Although the progeny may show a variety of phenotypes, each one will lie along a continuum bracketed by the homozygous parental phenotypes.

2) Codominance-As opposed to partial dominance, codominance occurs when the

phenotypes of both parents are simultaneously expressed in the same offspring organism. Indeed, "codominance" is the specific term for a system in which an allele from each homozygote parent combines in the offspring, and the offspring simultaneously demonstrate both phenotypes.

3) Overdominance- In some instances, offspring can demonstrate a phenotype outside the range defined by both parents. In particular, the phenomenon known as overdominance occurs when a heterozygote has a more extreme phenotype than that of either of its parents. Indeed, in a few examples, a trait that shows overdominance sometimes confers a survival advantage in the heterozygote (Parsons & Bodmer, 1961).

A well-known example of overdominance occurs in the alleles that code for sickle-cell anemia. Sickle-cell anemia is a debilitating disease of red blood cells, wherein a single amino acid deletion causes a change in the conformation of a person's hemoglobin. The person's red blood cells are elongated and somewhat curved, taking on a sickle shape. This change in form makes sickle red blood cells less efficient at transporting oxygen through the bloodstream.

The altered form of hemoglobin that causes sickle-cell anemia is inherited as a codominant trait. Specifically, heterozygous (Ss) individuals express normal and sickle hemoglobin, so they have a mixture of standard and sickle red blood cells.

"It is an experience, in which self is the knowing subject and is at the same time the known object."

Further elucidating the understanding of Phenotype can be described as a knowing subject as its traits are observable and measurable, i.e., Knowing Subject and Genotype, which determines the Phenotype at the same time the known object, i.e., set of genes their different combinations.

"The life of the self is not set over against knowledge of it as an objective thing."

This can be explained clearly by environmental influences on genes; organisms with identical genotypes, such as identical twins, ultimately express nonidentical phenotypes because each organism encounters a unique ecological impact as it develops.

Discussion

Digital manifestation of self-data

Prajapati maintains that the ultimate Self is free from sin, free from old age, free from death and grief, free from hunger and thirst, which desires nothing and imagines nothing. The persisting spirit remains constant in all the vicissitudes of waking, dream, sleep, death, rebirth, and deliverance. The whole account assumes that there is consciousness even in the unconscious states."

The above observation holds when we consider Data as a subset of Digital Identity or Digital cloning of Self. From where this Data originates, who creates it, who owns it, and who gets to capture it in the first place, the answer is Self; **it makes a virtual Self.**

Let us understand the data in detail, which gives the new meaning of spiritual self by digitization and explaining the essence of Prajapati's opinion about self mentioned above. Data dwell in shapeless, formless, free from all Worldly desires, free from life, death, hunger, thirst.

The word 'data' has its Latin root datum originally means "[a thing] given," and the French term for data, *donnee*, has the same meaning.

In the article "What is a Digital Object?" Yuk Hui provides a detailed description of 'Data.'

"Heidegger attempts to propose givenness as the condition of the appearance of the World that gives rise to a new interpretation of the relation between human beings and things. But we have to recognize that since 1946 the word.

"Data" has an additional meaning: "transmittable and storable computer information." This second sense of "data" suggests a reconsideration of the philosophy of objects since the givenness can no longer be taken as sense data or a mode of being together of man and nature; instead, one has to

recognize its material transformation. The significance of the new technique of data processing we now call digital is not only that with computers, we can process large amounts of data but also that by operating with data, the system can establish connections and form a network of data that extends from platform to platform, database to database. The digital remains invisible without data, or traces of data." Therefore, the data generated by the body (Self) can be stored in the digital wallet on a blockchain. The wallet collects and protects all the biological, financial, and geospatial data throughout the day and gives an option to decide how to use it. The medical records of self are central to this identity. When clinicians measure or monitor the parameters of various kinds, they are providing the service. The results, i.e., **data**, are assets derived from the body that can be transmittably explored for further study or research as a bundle of information.

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