



The Cause and Effect Law

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Abstract

This is a multidisciplinary research and review paper and borrows ideas from philosophy, physics, mathematics, engineering, economics, medicine, soul theory, etc. The soul theory is very well known and is thoroughly described in both Vedas and Bible. Thus the soul theory is not a new age concept; it is an ancient age concept. The soul theory gives the ultimate unified view of everything. It shows that the truth is universal, unique, and eternal. Therefore, it will be wrong to treat any subject in isolation. If we do, then that subject will be wrong for both nature and engineering, and also for the authors and for the society. To make it readable, understandable, and self-contained the article has become long. The cause and effect law is probably the least understood law by the academic community. Yet, it is the highest level law describing the global plan of the universe. We start with Newton's third law, called the action-reaction law. But then we find that this law has an assumption of isolated environment, and therefore it is inadequate to describe life. So we eliminate that assumption and extend it to the simultaneous action-reaction of all objects of the universe. It now becomes somewhat meaningful, but still the universe cannot be understood. It does not tell us, in principle, how to incorporate into the existing global plan of the universe, the activities related to the reincarnation of all objects. Then we modify the law farther, using the soul theory, to explain the complete global plan, over the entire space and time of the universe. We find that there are two root causes for everything, and an amazing result – effect is ever existent. That is, there is a 3D-video memory of the universe, which anyone can see at any time. Simply speaking, this is a consequence of reincarnation. But we have to acquire an ancient skill, called yogic power, clearly described in the Bible and the Vedas, which is a part of the soul theory. There are modern people who can watch this 3D-video and predict the future events exactly with all details, without any assumptions and approximations. We give one such modern example. We will see that the cause and effect law, simultaneity law, memory in the universe, global plan, destiny law, are all synonyms. That is if one is proven or observed then all are proven. This final result, the destiny law, already exists in both Bible and Vedas. Since it is destiny, nobody should be blamed for anything that happens in the universe and on earth. Simultaneity means we are all equally responsible, not just for now, but for the entire space-time events.

Keywords: *Cause and Effect; Root Cause; Efficient Cause; Material Cause; Soul Theory; Definition of Truth; Laws of Nature; Yogic Power; Third Eye Vision; Memory in The Universe; Engineering Experiments*

Introduction

1.1 The Universe

Galileo - For thousands of years, people on earth believed that the sun goes round the earth until Galileo observed that it was the other way round. It is the earth that goes round the sun. But then Galileo was jailed by the money power. This Galileo phenomenon changed the history of the mankind. We decided never to go against the money power. We have changed our scientific process from universe to local and narrow subjects. We have changed from the observation of nature to the ideas and thoughts based on assumptions. We ignored the ancient books, describing nature, and started creating our own books. We did not critically perform the literature survey. We relied on engineering without knowing that the engineering is part of nature and therefore will ignore all our assumptions.

Why So – As a consequence of the Galileo phenomenon we see that so many western and eastern philosophers have said the same thing; and we wonder why such things happened: Mark Twain said – Majority is always in the wrong; Tagore said Sab Jhut hai – Everything is false; Ayn Rand said – Truth is not for everybody; Carroll Quigley said – education is false; Keynes said – not even one man in a million knows how economy works; Bertrand Russell said – mind does not know anything; Nietzsche said – Universe will be meaningless without the soul theory. It seems Nietzsche has found the answer. We go to the microscopic level to find that Samkhya of Vedas has the answer and Nietzsche got it right. These references are mentioned later in this article.

1.2 Missing Fundamentals

We can see that even after five hundred years of Galileo our people are not satisfied with the state of the earth. This has happened because many fundamental problems prevented us to discover the truth.

No definition of truth - It is unfortunate that our modern society does not have a definition of truth. If we do not know the definition then we cannot learn about the truth. Merriam Webster dictionary defines truth as “a judgment, proposition, or idea that is true or accepted as true.” This definition has many problems. First, truth is defined using the word true. Then it says if it is accepted by you then it is true for you and if it is not accepted by me then it is not a truth for me. This is a very precarious position, it essentially means, you have your own truth and I have my own truth. If this is the case then Galileo would still be in jail today.

Missing simultaneity - It is quite obvious that all objects in the entire universe are simultaneously and continuously interacting with each other, for all time and for eternity. It has been shown that such interactions create a global plan for the universe, which causes a perfect determinism [Das 2013b]. Classical physics and its third law of Newton which is the action-reaction law, when extended by eliminating its assumptions, can provide a mathematical formulation justifying the existence of this global plan [Das 2012a]. But this formulation cannot provide where, when, and how a person will be born, and how that person’s new life activities will be integrated with this existing global plan.

Objects are unique - Such an approach, based on Newton, fails to give a unified theory working behind this global plan, which is also called the destiny law. The reason behind these gaps is that the classical physics, including quantum mechanics (QM) and special relativity (SR) ignores the concept of the soul theory, and assumes that everything is made of material only. This new version of the cause and effect law (CEL), which incorporates the soul theory, will fill the gaps and show that this global plan is not dynamic, but constant, and is defined for eternity. This approach will explain how some modern human yogis [Das 2020b] can predict the destiny exactly and with all the precise details. We give some

examples. This will prove that all objects are unique and therefore there is no chaos, random events, or probability in our lives or in the universe.

No Assumptions allowed – Assumptions and approximations are different. If you have ten forces working on an object and if you consider only one of them then it will be an approximation. But if you neglect all of them and consider isolated environment, like in Newton’s first law, then it will violate the simultaneity law, and will be wrong, as we show later. There are other kinds of assumptions that make theories wrong, like using infinity, assuming straight line, using real numbers, using money, etc.

1.3 Fundamental Sources

Memory in the Universe - This new version of the CEL, which is described in both Vedas and Bible, says that every object has a soul, and that soul has manufactured that object according to the destiny of that individual object. It shows that there are two root causes: the root material cause and the root efficient cause. This root efficient cause is called the soul. The CEL also says that the effect remains forever even without the application of its cause, contrary to what the classical CEL says. This feature indicates that all events remain as 3D video in the memory of the universe, and a seer yogi will be able to see that memory in all its exact details [Das 2012b], as illustrated by a modern example.

Observing the Nature - This soul theory will show that the only way to know the truth is to observe the nature, just like Galileo did, that is, no engineering experiment can prove any theory of modern science. It is well known, and also briefly described in this article, that modern science is based on assumptions. Therefore, the results are also assumptions only, and cannot have any truth value. Engineering is a part of nature, because it uses objects of nature. Therefore, all engineering experiments will automatically reject all assumptions, and thus fail to prove any science theory.

Religious Books - This article distinguishes between religions and their corresponding religious books. Its focus is only on the books of religions and not in the religions. It tries to avoid all religions as much as possible. That is, Vedas are different from Hinduism; Hinduism does not understand Vedas, and does not follow the Vedas. Also, only texts written by seer yogis (drashta) are considered as part of Vedas. Not anybody can write Vedas. The same thing is true for the Bible and Christianity also. We will find that all major ideas of the Vedas, at least ten of them, are there in the Bible also. Therefore the original books of Judaism, from which the Bible was created, should contain much better, more detailed, and reliable information.

Highlights - We will discuss the specific contents and the characteristics of the religious books, in details in the main body of this article. However, to quickly satisfy the curiosity of the reader about Vedas in Bible, it can be pointed out that the destiny concept is in the [Bible Ephesians-1:11]. A large number of examples of yogic power are there in the [Bible Exodus]. They are not myths; some literature survey will show that even many modern yogis can perform such miracles [Das 2020b]. But the best of all is the three words sentence “God is spirit” in [Bible John-4:24]. Vedas have devoted an entire book called Samkhya Karika [SK] and explains this three word sentence using seventy two-line verses. This is the foundation of the cause and effect law. It essentially says – “Spirit is same as the soul. You have a soul inside your body. And that soul has manufactured you according to your destiny. Therefore, that soul is your God. And similarly, my soul is my God.” We give one modern example later from the observations of nature just like Galileo did, to illustrate the point. Thus this three words sentence is the core idea of the soul theory and the CEL. More details are discussed in this article and references mentioned.

1.4 Multidisciplinary Scholars

Many well known authors have worked on multidisciplinary fields, but not all saw the unified concepts. Bertrand Russell correctly found that there is no cause and effect; it is only a formula [Russell 1929]. But he did not realize that the same formula represents the destiny law, the highest level law of nature. Friedrich Nietzsche was quite knowledgeable in Vedic theory, but somehow he did not see the Veda's presence in the Bible. His eternal recurrence [Nietzsche 1911] concept made a fundamental contribution, but he missed that the root material particles have three properties which continuously vary. Thus he missed the uniqueness of the destiny law. Victor Hugo, the author of *Les Miserables*, is a brilliant author, a thorough research scholar in various subjects, and his story is like a poem. His description of poverty will resonate all over the world, and it is still valid, and pulls all of us down to the ground. However, he failed to see that the poverty is caused by the money power. He wrongly thought that the education can eliminate poverty. He talked about the soul theory but he also thought God exists. His thoughts are described in some details in the destiny chapter of the *Soul Theory* book [Das 2014b]. He mentioned about Rothschild but his research did not take him to the role played by the money power, not even in the battle of Waterloo, an important theme in his book *Les Miserables*.

USA & India - Four other persons must be mentioned in this context of need for multidisciplinary approaches to research – Benjamin Franklin (1706-1790) of the United States. His signature is there in all three fundamental documents of the US government – Declaration of Independence, US Constitution, and the Treaty of Paris. He was a businessman, published newspaper. He invented bifocal lenses for eyeglass, electric lightning protector for houses, and he was the founder of the Pennsylvania University, etc.

Carroll Quigley's book *Tragedy and Hope* is a must read book [Quigley 1966]. This is the only book that integrates money power and its role in the society. The book was banned, but when US President Bill Clinton praised him many times, then the ban on the book was lifted. It is now freely available on the internet. Never in the history of our earth have we ever seen money power as such a powerful global king.

Satyajit Ray (1921-1992), was the Oscar winning film director of India. His multidisciplinary research in economics, business, reincarnation, poverty, etc., is very authentic and realistic. He not only revealed the fundamental problems he also presented the solutions [Ray]. Rabindranath Tagore (1861-1941), a Nobel laureate poet from India, may be considered as the greatest philosopher in the world; nobody expressed the soul theory and the objectives of life in so many ways. His language, thoughts, expressions, and universal coverage, are for eternal bliss. It should be recognized that without the soul theory science cannot be a reality.

Friedrich Nietzsche says [Nietzsche 1910] – “But an essentially mechanical world would be an essentially meaningless world.” He is very correct. That is the theme of both Vedas and Bible.

1.5 Unified Theory

There is a unified theory for knowing the truth and also for knowing the falsehoods. Many philosophers have discovered this principle, as briefly mentioned below. Light cannot be seen at any place, but if you place any object at that location only then you will see both light and darkness.

Microprocessor - The unified theory, global view, etc., are everywhere visible right in front of our eyes and in our thoughts. Let's take the computer as an example. Isn't it amazing that how naturally a computer can solve all types of problems in our society? How is it possible that it does this miracle? - It has a very small microprocessor inside it, which can be programmed, and that means the microprocessor has some logic, arithmetic unit, and interrupts, that convert all our problems into its own hardware

principles. Thus every problem in our societies, like poverty, economics, business, medicine, engineering, mathematics, history, language, arts, entertainments, etc., must have that same fundamental logic hidden behind them.

Unification by Math - The same is true for mathematics. The simple equation $y=ax$, represents so many theories of physics: Ohm's law of electrical engineering relates voltage and current; Hook's law for spring force and spring displacement; commodity price and flow of goods in economics; water pressure and water flow rate; Newton's second law, the force (y) = mass (a) times acceleration (x); Newton's third law, reaction (y) = opposite ($a=-1$) of reaction (x); etc. This equation represents a simple situation, working in an isolated environment, but still gives a unified view point. Here x is an independent variable, interfacing an object a , and producing an output or dependent variable y .

We can extend the above equation to multi-variables to find that all the laws of physics can be reduced to, or derived from, the conservation law [Das 2012a], which says - sigma of everything is zero, or $\sum a_i x_i = 0$. This is also described in Vedas and Bible. Vedas say "nonexistent cannot become existent"; similarly the [Bible Ecclesiastes-1:9] says "Whatever has happened will happen again, there is nothing new under the sun." We will describe some such laws in details in the main text. Some obvious examples of sigma law are: summation of all currents is zero at any junction point, the Kirchoff's current law; same is true for Kirchoff's voltage law – summation of voltages around a loop is zero; D'Alembert's principle – summation of all forces at a point must be zero; etc. We will show that Newton's second law, Newton's third law, and the second law of thermodynamics, when extended, are no exceptions. Indeed, the entire universe has only one law, the conservation law, and therefore that law gives a unified theory. We will see that it is also same as the cause and effect law.

Unification by Money - Money is another most important global unified force on our earth. But destiny is of course above the money power. Using money, you can do anything you want. You can give money to anybody to kill anybody; you can give money to create a war, destroy a nation. Education, science, medicine, engineering, religions, etc., are all created, monitored, and controlled by money and money power. Central Bank (CB), the source of the money and money power, is the global king of the earth. Never in the history of the earth have we seen such a powerful king. Nobel Laureate in economics, Milton Friedman has correctly said –"How to get rid of the Fed is the unsolved problem of the day." The Fed is the CB of the USA. The root cause of all problems on earth is the money and the money power, both originating from the CB [Das 2020a].

Unification by Soul Theory - Soul theory gives the highest level unified theory for the entire universe, including the earth [Das 2017c]. It is discussed thoroughly in Samkhya, which is a part of the Vedas, and also in the Bible. It describes the cause and effect law, simultaneity law, and the global destiny of the universe. It does so in a perfect deterministic way and shows how the universe demonstrates all its laws, so that we can observe, learn, and emancipate. We will see that without soul theory, everything on earth will appear wrong, but in reality it is all planned and is destiny.

1.6 Article Layout

Thus the paper is organized in three parts. (a) There is only one law that we have found so far and it is called the sigma law or the conservation law. All the other laws and theories are either false or can be derived from or reduced to the sigma law. (b) We extend this sigma law to the cause and effect law (CEL) based on the simultaneity of action reactions of all objects of the universe and the soul theory. (c) Then we show that this process, the CEL, can only produce a finite and periodic universe.

Thus the content of the rest of this article has the following sections and subsections.

Definition of truth, Assumptions vs. approximations, Philosophy vs. truth, Mathematics is wrong, Numbers in nature, Newton's second law, Newton's action-reaction law, second law of thermodynamics, Causality literature, Destiny law, Yogic power, Two causes, Properties of root causes, The cause and effect law, Periodicity and finiteness, Infinity applied to nature.

It is not necessary to know all these subjects individually to know that they are all wrong. There is a unified principle also to know that they all must be wrong. Every subject has assumptions at their root level, and also at higher levels. If you can find them then you know that the entire subject must be wrong. If you know the soul theory then also you know truth cannot be found in subjects that ignore soul theory. But to make it convincing, we pick some specific examples to illustrate the need for this cause and effect law.

The article is large, because, for the general readers it was necessary to introduce some fundamentals, either using theories or using examples, of many subjects from multiple disciplines. It has some mathematics; if you read it then you will find that they will reveal something to you, even if you are not a mathematical person. The text within, will help you to maintain the continuity of thoughts.

2. Definition of Truth

Galileo - The data cannot reveal the truth. Likewise, as we will see, that the effect cannot also indicate the cause. In the past, for thousand years, more than two billion people on the earth knew that the sun goes round the earth. All these people observed the sky, they saw the same data, and they believed what was told to them by money power. Then a scientist, named Galileo (1564-1642), observed the sky and discovered that it was the other way round – the earth goes round the sun. But Galileo was jailed for going against the money power.

2.1 Analysis – Galileo Phenomenon

1. The Galileo phenomenon says that never discover the truth. All truths will eventually go against the money power. Such phenomenon is still happening all over the world, in corporations, universities, governments, etc., since money power is same all over the world. Even your colleagues, friends, family members, will go against you. Such Galileo-s are given various names today - whistle blowers, un-patriots, terrorists, most dangerous men, etc.
2. There are some valuable lessons to be learned from here. (a) Data does not mean anything. It never indicates the truth. What two billion people saw was all wrong. (b) Even how the data is produced cannot be known and therefore cannot represent the truth. (c) Only nature can demonstrate the truth, nothing else can. We show below, that humans cannot produce the truth. Truth is multidimensional and eternal. (d) Our society does not have a definition of truth. And therefore we cannot find the truth. (e) The idea that if you do the same thing in the same way, then you will always get the same results is obviously true even for false theories. Thus such repeated experiments cannot demonstrate any truth. (f) Also, no process can be repeated exactly, because environment changes and the ages of the objects also change.
3. Since Galileo phenomenon, no scientists have ever observed the nature to discover the truth. The scientific process has forever changed to: – (a) start with some unfounded assumptions. (b) Manipulate the assumptions, often times with extensive sophisticated mathematics, like Fourier Transforms, Hilbert Space, Banach Space, Operator theory, Measure theory, etc. (c) Perform some experiments and interpret the results as correct, and declare that the discoveries are the laws of nature.

4. No engineering experiments can prove any scientific theories. Engineering is part of nature, because it uses objects of nature. For example electronics uses transistors, resistors, capacitors, etc., which are made from materials in the periodic table of chemistry. Therefore, nature and engineering will automatically reject all assumptions of all theories, including mathematics, thus invalidating the theories.

2.2 An Example of Falsehood - Newton's First Law

To illustrate the nature of falsehoods, how science changed after the Galileo phenomenon, and be more specific, let us select Newton's First Law, which we still study in our high school science classes. Newton (1643-1727) said [Das 2012a] – "(1) In the absence of any unbalanced forces (2) an object will continue in motion (3) in a straight line (4) with a constant velocity."

Have you ever observed any such object on earth or in space? No, of course you have never seen such an object. Item (1) in the law, is the assumption of isolated environment, which is impossible, because gravitational forces are always there. In the deep space and also on earth, the sum total of all gravitational forces from all objects of the universe, at every point in space, is non-zero, and is continuously changing in both magnitude and direction, because all objects in the universe are continuously moving. Thus item (4) of constant velocity cannot be true. Since all objects are continuously moving, the item (3) is also not feasible; there is no straight line in the universe.

Thus Newton's first law is completely wrong, false, meaningless, and cannot work in nature. This has happened because Newton did not observe the nature, like Galileo did, and instead started with two assumptions (1) and (3). The following statements can be found in a physics textbook [Ferraro] about the Newton's first law:

"We could hardly sustain that this principle (First law) is a strict experimental result. On the one hand it is not evident how to recognize whether a body is free of forces or not. Even if a unique body in the universe were thought, it is undoubted that its movement could not be rectilinear and uniform in every reference system."

QM and SR - We will discuss Quantum Mechanics (QM) and Special Relativity (SR) later in this article to show that they also have similar problems, with their own assumptions, like Newton's first law. The cause and effect law therefore cannot be an exception. The cause and effect law is probably the least understood concept by all scientists and philosophers of all branches. We will see that the destiny is the highest level law of the universe, even above the money power. There is a purpose and need for everything, maybe even for the money power. Vedas say we are helpless.

2.3 An Example of Truth - Reincarnation

Reincarnation is the most important example of truth. But it is not found everywhere; it is definitely not there in the mainstream. However, if you search the internet carefully and research on it [Das 2013c], then you will find many convincing proofs of reincarnation. Once you learn about reincarnation then of course you will find it everywhere. You will not be able to explain adequately many activities of a newborn baby up to the age of two years, without the concept of reincarnation. We will discuss many such truths later.

Western Philosophers - It must be understood that the truth is not everywhere, particularly in the modern times. Mark [Twain] said, "Majority is always in the wrong". The well-known economist [Keynes] said, 'Not even one man in a million can know how the economy works'. The following can be found in the thoughts of German Philosopher [Nietzsche], 'All things are subject to interpretation whichever interpretation prevails at a given time is a function of power and not truth'. Here power should

be considered as money power. Ayn [Rand] said, “The secrets of this earth are not for all men to see, but only for those who will seek them”. The secrets should mean the truths.

If you read carefully the Vedas, and for that matter all books of any religion, including the Bible, you will find that the following definition of truth is embedded in their pages, stories, verses, etc.

2.4 DEFINITION OF TRUTH (T1): The truth is defined using the following three sentences. All three sentences are important.

“(1) The laws of nature are the only truths. (2) These laws are created by the objects of nature and their characteristics. (3) Nature always demonstrates all its truths.”

Examples of Laws - Item one says that the laws of nature are the only truths. Note that we are not talking about the laws of physics. Laws of physics are not same as the laws of nature. As an example of truth, death is a law of nature. Every object in the universe dies, including humans, animals, plants, stars, galaxies, etc. If I release a ball then it will fall on the ground, and everybody will see it. Thus the gravity is a law of nature. However, we also know that there are yogis [Das 2020b], who can levitate themselves defying gravity. This shows that, physics does not understand gravity. Reincarnation [Das 2013c] is a law of nature, even though most of us do not remember our previous lives. We will show later that items two and three of T1 are valid for reincarnation. Determinism [Das 2013b] is a law of nature. Three dimensional dynamic video of the entire universe for all time exists in the memory of the universe, is a law of nature; and obeys item three. A textbook on physics [Eddington] describes the laws of nature as – “Events do not happen, they are there, and we just come across them.” We will see that this is same as saying - effects are forever existent, as we will find later.

Soul Demonstrates - It is easy to realize that such truths are unique, universal, and eternal. We show that every object has a soul, therefore every object is conscious, and therefore such truths are neither objective nor subjective. The item three in the above definition assures us that all truths can be found by observing the nature. Thus what Galileo discovered is a truth. All souls want to demonstrate their characteristics to us, so that we can learn about them, and then emancipate. Nature is such friendly and gracious to all of us; it does not discriminate anyone.

In Bible Jesus says, nobody did any sin, neither the blind boy, nor his parents. It is only God’s miracle to show us how things happen in nature [Bible John 9:1-41]. This example also shows that Jesus and his disciples knew about reincarnation. There is a modern yogi who also gave eyesight to a born blind boy [Das 2014b]. We must not reject outliers as false data or mythical.

Money and Math - If anything violates any one of the above features of T1 then that thing cannot represent the truth. For example a real number is not an object of nature; therefore it cannot represent the truth. It cannot be observed in nature; it neither grows on trees nor can it be found underground. Similarly, money is also not an object of nature and therefore money must be false. Since money is false it must be free and abundant at its source, which is called the central bank [Das 2011b]. Of course, money is also a real number.

Violation of T1 - It must be understood that false can never become true, no matter how you manipulate it. Thus the entire mathematics must be wrong; and similarly the entire economics must be false also. This is why Keynes above statement on economics is meaningful. By false or wrong we mean that they violate T1, and cannot be used to describe nature and engineering [Das 2019].

One Percent - Since false can never become true, therefore everything that is created by money must be false. That is why Mark Twain’s statement that majority is always in the wrong must be true. Only one percent of the population knows the truth. The rest of us, including this author, must be

ignorant. The purpose of this author is to bring that truth from the people belonging to the one percent community, to the common people, to the scientists, and to the philosophers.

Pollution - Thus math, science, philosophy, history, etc., must all be wrong. But engineering is not wrong, because engineering uses objects of nature, like transistors, which are made from physical materials from earth. But since engineering also uses false math, false science, and false money, our engineering is unreliable, unsafe, and pollutes environment. Thus even if you go to the moon, you will never know that you will safely return. The same is true for medicine. Nobody knows why placebo works, and why medicine effect is not the placebo effect. As we will see destiny, or the cause and effect law, is the only guide. And only seer yogis can tell the truths.

T1 is Universal - Unique means one law will not violate another law. Uniqueness will also mean that everybody will understand T1 in only one way. Universal means the same thing, but it also means if a law is valid in USA it must be valid in China; similarly if a law is valid on earth it will be valid on any other planet in any other galaxy. Eternal means if a law was valid million years back then it must be valid now, and will remain valid million years from now. No amount of technology can change the laws of nature.

Truth Removes Suffering - The truth T1 is the most important concept that must be understood in order to liberate life from suffering. Liberation means achieving peace, physically and mentally. You will be able to feel this peace, whenever you learn some truth, in the midst of any discussions, exchanges, etc. In the extreme case, when you become a yogi, you will not suffer from any diseases. A yogi has demonstrated that he can survive even after sipping potassium cyanide. To understand true (truth), you must also understand false (falsehoods). Samkhya, a part of Vedas, states that, for liberation, understanding of truth must be free from all kinds of errors and doubts [SK.64].

Tagore - Reincarnation is not a curse, as implied by Karma theory; on the contrary it is indeed a blessing, it allows us to learn this truth T1. It takes million years to learn the nature, the universe, life, and its laws. Only because of reincarnation you can live this long and get this opportunity. Rabindranath [Tagore], a Nobel Laureate poet, is the greatest philosopher of our times. He expressed the concepts of soul theory and reincarnation in many of his poems. He did not ask for liberation by means of stopping reincarnation. Rabindranath said,

“his life will be fulfilled by knowing the unknowns; in life after life, in this universe; he knows that this will be an endless process, but he is not afraid; – he will be among us with new bodies and new names to act in all our activities and embrace our love; – his liberation will happen in the brightness of the sky, in the sand, in the grass, in the music from nature, in the minds of everyone; - and by performing the hard work under all conditions.”

Methods - We prove our assertions by one or more of the following means. (a) Observing the events as demonstrated by nature. (b) Providing rational logic, without making any assumptions. (c) Citing authentic references from Vedas: Samkhya, Gita; and also Bible.

Here authentic references, mean concepts presented by seer yogis only. Not everything in Vedas is from seer yogis. A seer yogi cannot lie, cannot have any personal motivations. Unless you acquire such characteristics, you cannot even become a seer yogi. Therefore item (c) is essentially same as item (a). As mentioned, no experiments can demonstrate any truth as defined by T1.

2.5 Analysis – Truths

Bertrand Russell - while discussing his correspondence theory of truth Bertrand Russell wrote about the simultaneity law, which he also used in connection with the cause and effect law. But he

probably did not realize the connections in all these subjects. We show that the destiny law is the highest level law and the entire universe is governed by this law. He eventually comes to the correct conclusion that mind does not do anything. Russell said [Russell 1912]:

“It will be seen that minds do not create truth or falsehood. They create beliefs, but when once the beliefs are created, the mind cannot make them true or false, except in the special case where they concern future things which are within the power of the person believing, such as catching trains. What makes a belief true is a fact, and this fact does not (except in exceptional cases) in any way involve the mind of the person who has the belief.”

Surprisingly, he is correct. Mind cannot control our life; however it controls our physical body. Mind is controlled by the soul, and the soul is controlled by the destiny. We neither have the freewill nor the choices. Truth is the destiny, so truth controls the mind, and not the other way. As we will find that the truth, destiny, memory, and the CEL are all synonyms.

Multidimensionality - We have mentioned that the truth is multidimensional. Consider a dice, when you see straight at one of its surfaces you will find the number five is written on that face. If you stop there, then you may think that the dice is a square plate only. But if you move to different angles, you will find that it has six faces. Thus if you search, more dimensions are revealed to you. This is only a simple example, in complex cases a society may take several generations to see all faces. If you search more, then you may decide to cut the dice and look at a sectional view and then you may find that it has a ball inside it. Consider an elephant, how would you know that it also reincarnates, unless you search more. More searches will reveal that animals also come with high level of yogic power, like the third eye vision [Das 2020b]. Thus the number of dimensions is almost endless for every truth. This is why USA and many other countries have a jury system, where we assemble ten-twelve people to get the multidimensional view of many court cases.

3.Assumptions Vs Approximations

Galileo phenomenon destroyed the scientific process forever, as we have mentioned before. In this section we show that both Quantum Mechanics (QM) and Special Relativity (SR) do not have any foundation based on truth.

3.1 Wrong Process

Nowadays we do not observe the nature for the search of truth, as the definition T1 requires. Instead, we start with assumptions, manipulate the assumptions. We use extensive mathematics which is full of assumptions. We perform some engineering experiments and think that we have verified the theories. But that is never possible. Like nature, engineering also cannot accept assumptions in our theories. Engineering experiments use objects of nature, therefore will automatically reject all assumptions, and thus invalidate all theories.

Examples of Assumptions - There is a difference between assumptions and approximations. If you have ten forces acting on an object, and if you consider only one of them, then it is an approximation. But if you neglect all of them, that is, consider an isolated environment, then that will be an assumption. All three of the Newton's laws of motion assume isolated environment. We have examined, in this article, how the first law failed [Das 2019]. Besides, there are other kinds of assumptions too.

For example using infinity is an assumption. A large number is never an approximation for infinity. Replacing infinity by any finite number will change the mathematical theory completely [Das 2014b]. Taking light speed as constant is also an assumption. Existence of a straight line in nature is another similar kind of assumption. We will find that the god, as the creator of the entire universe is an

assumption also. Linearity is a major assumption of all theories. But both nature and engineering is bounded [Das, 2012c]. We can see how linearity fails - in electronic circuits voltages may be limited to 5 volts. But if an algorithm gives $3+4=7$, then 7 will be chopped to 5, to protect the circuit. Such boundedness is implemented by both hardware and software. Thus engineering uses wrong mathematics, and all theories must fail.

No Way Out - Therefore no engineering experiment can verify any theory. We must observe the nature, and that is the only way to find the truths. Since all assumptions are invalid for nature, then they are all false. They cannot satisfy the definition of truth T1. Something that is false can never become true, no matter what you do with it. Thus all theories will remain false, because they are nothing but only manipulations of the initial assumptions. Thus entire modern science must be wrong or false for nature. Then why are we doing it - because we are not free, and are guided by the destiny. Destiny basically means trillions of reasons, spanned over billions of years, past, present, and future. Here is one seminal moment.

It Is Planned - As mentioned before, sending Galileo to jail, in 1633, was the turning point in the evolution of our modern society. Scientific community realized the consequences of going against the money, the money power, and discovering the truth. Carroll Quigley (1910-1977), a professor at Georgetown university and a mentor of the US President Bill Clinton (1993-2001), mentioned in his book, *Tragedy & Hope* [Quigley], that there are three negatives in our education system, and one of them is – “never to teach the truth”. After Galileo, therefore, the scientific community stopped observing the nature and decided to start with assumptions instead, to create the false theories. This way people can be kept busy and yet in ignorance. Satyajit Ray (1921-1992), an Oscar winning film director, in one of his films, *In the land of diamond king*, [Ray] said – “shutdown the schools, burn all the books, jail all the teachers. More you teach them, more they learn, and more they disobey”.

3.2 Science and Engineering

It must be understood clearly that there is a heaven and hell difference between science and engineering. Engineering is correct, because engineering uses objects of nature. However, since engineering also uses false theories and false money, engineering is full of patches and kludges, therefore very unreliable, unsafe, and pollutes environment. We give an example to illustrate the difference between the science and the engineering. We will find that the science is not the foundation of engineering. Engineering always came first and engineering is nature [Das 2017a].

3.2.1 GPS Design

We are all very familiar with the GPS technology, because most of our cell phones use GPS receivers, which receive data from the satellites rotating around the earth. In physics there is a law, called Kepler’s law, which says that a satellite will rotate around earth in an elliptical path, and then the law gives a mathematical formula to find the position of the satellite at any point in time. This formula did not work for GPS satellites. So, engineers, physicists, and mathematicians modified the law significantly but still could not make the Kepler’s law work. Eventually the GPS ground system was used to directly measure and find the positions of the satellites, upload that data to GPS transmitters, which then broadcasted that data to our hand held receivers to provide the desired accuracy. Even this did not work properly, so the ground station repeats the process every two hours or so, to maintain the accuracy requirements.

Why did Kepler’s law fail to work? The assumption ellipse is defined only on a plane of paper and around a stationary center point. But earth is moving around sun, and takes the satellite with it. Thus the path of the satellite can never be an ellipse. There are other objects, like moon, and planets of the solar system, which also influence the position of the satellite.

The sun is not stationary either, it is travelling along one of the spirals of our galaxy, that spiral is also rotating around the central core of the galaxy. Thus the path of the GPS satellite is immensely complex and beyond our imagination, and therefore cannot be translated using a simple symbolic language like mathematics. This example shows why our engineering is so full of patches and kludges. Consequently, our engineering cannot be reliable at all. This example also shows how data and information can be useless and misleading. Since science is based on assumptions, the data must be assumptions, and misleading also.

The above GPS example shows that mathematics is not valid for nature and engineering. In reality mathematics is not necessary at all for designing engineering systems. All we need is good measurement systems involving good sensors just like human body has. Using measurements, just like GPS ground system, we can design any engineering system in a much more reliable and robust way [Das 2012c].

3.2.2 Uncertainty Principle (UP) Is Wrong

Heisenberg, in his book of 1930 gives details about the proof of his uncertainty principle. In this proof he made two important assumptions: (A) he assumes that momentum and position are related by Fourier Transform (FT) pair, as shown by the integrals below, and (B) he ignores the infinity assumption of FT integrals. The following two FT expressions are exact copy from his book [Heisenberg 1930].

$$t(y) = \frac{1}{\sqrt{h}} \int s(x) e^{\frac{2\pi i}{h}xy} dx \quad (1)$$

$$s(x) = \frac{1}{\sqrt{h}} \int t(y) e^{-\frac{2\pi i}{h}xy} dy \quad (2)$$

In the above, $s(x)$ is the spectrum function and $t(y)$ is the time function representing the wave. The following expressions are used to represent the variables:

$$x = q' - \bar{q}, \quad y = p' - \bar{p} \quad s(x) = S(q') e^{\frac{2\pi i}{h}p'(q' - \bar{q})} \quad t(y) = T(p') e^{-\frac{2\pi i}{h}q'(p' - \bar{p})}$$

And finally

$$\bar{q} = \int q' |S(q')|^2 dq' \quad \bar{p} = \int p' |T(p')|^2 dp'$$

In above p' is the position of the electron and q' is the momentum; S and T are probability density functions.

Clearly there is no reason to believe that position and momentum variables be related by the FT. Thus this is a very fundamental error in the UP theory. According to [Heisenberg 1927] - "If there existed experiments which allowed simultaneously a sharper determination of p and q than the equation on uncertainty relation permits, then quantum mechanics would be impossible".

Recently, Caltech researchers have found a way to make measurements that go beyond the limits imposed by quantum physics. This experimental result was published online in [CalTech 2014]. The corresponding theoretical article was published in [Das 2013a].

3.2.3 Special Relativity Is Wrong

It is now known that the Michelson–Morley (MM) experiment can be considered as the root cause for the creation of special theory of relativity (STR). This motivated many modern researchers to examine the details of MM calculations as done by MM. Einstein said in 1922—

“While I was thinking about this problem in my student years, I came to know the strange results of Michelson’s experiment. Soon I came to the conclusion that our idea about the motion of the earth with respect to the ether is incorrect, if we admit Michelson’s null result as a fact. This was the first path which led me to the special theory of relativity. Since then I have come to believe that the motion of the earth cannot be detected by any optical experiment though the earth is revolving around the sun. [Einstein]”

Interestingly, Einstein assumed the existence of inertial reference frame, which is a frame that moves with a constant velocity in a straight line. That is, Einstein assumed Newton’s first law was correct. But there is no straight line in the universe, because all objects are continuously and simultaneously interacting and moving with respect to each other. Also because of the same reasons, no physical object, or more specifically, the location of the origin of the inertial reference frame, can move in a straight line.

Einstein also made another major assumption - that the light speed is constant, which has not been proven correct yet [Das 2014c]. This assumption came from the Michelson-Morley experiment. It should be quite obvious to realize that the hardware design of the MM experiment cannot detect any phase difference. The hardware is perfectly symmetric in both x and y directions. Therefore under the static condition of the universe, there will be no phase difference of light signals at the detector. Since linear motion or linear transformation, cannot affect the characteristics of any experiment, as postulated correctly by Einstein, the phase difference will also not appear when the universe is moving, for small distances. Thus the null result was natural.

Therefore under these special circumstances, when everything fails, we can confidently say that the cause and effect law is the only meaningful law of nature that describes all the features of the universe, when further modified by incorporating the soul theory.

4. Philosophy Vs Truth

Definition - Merriam-Webster dictionary defines philosophy as — “a search for a general understanding of values and reality by chiefly speculative rather than observational means”. Philosophy is not valid when the truth is unique and universal, where no speculation is possible. Moreover, all the laws of nature described here can be and have been observed in nature by humans, and therefore Veda is real and not a subject of any philosophical discourse.

Hawking - The Grand Design book [Hawking], written by the celebrated physicists Stephen Hawking, has a chapter on the theory of everything (TOE). There he claims philosophy is dead. That is correct in one sense, because philosophers do not have any definition for truth, and definitely do not claim that the truth is unique and universal. The souls reincarnate to search for truth; we cannot box them or compartment them. It is not possible to discover truth in an isolated environment.

Determinism - The determinism of our nature is not a philosophy or a fantasy. That is true, as shown in this article, based on pure physical laws of action and reaction. But we should not confuse it to mean that we can predict future. This cannot happen, because of the complexity law, which is hidden in N in expression (17) of the equation. The number N is very large and cannot be found, but it exists and is finite. Einstein and Newton both believed in this deterministic law of nature [Das 2012a]. The literature on the theory of relativity also talks about the predictability of future. It has been written in the physics book [Eddington, p. 46] “Events do not happen; they are just there, and we come across them”. This is the same conclusion we discover – the effect is ever existent – as a consequence of CEL.

4.1 Analysis - Philosophy

Nobel Laureate in literature Bertrand Russell (1872-1970) says –

“... those questions which are already capable of definite answers are placed in the sciences, while those only to which, at present, no definite answer can be given, remain to form the residue which is called philosophy.”

Only CEL - We have started this article with the definition of truth T1 and have shown that all of science is wrong, because they are all based on the unfounded and false assumptions. We show in this article that the cause and effect is the only valid law (CEL) of nature, nature demonstrates it, and we can observe the results. Thus we do not have any role for philosophy. Philosophy can then be considered as a dead subject. But since science is wrong, philosophy has still some role to resurrect science. But the whole earth has the same root cause, the money power, which controls the earth. Unless money power opens the door, the truth cannot be told. Bertrand Russell also had to lose his job, like Galileo.

Change Education - Our education must start with engineering. It is the engineering that gives us direct, hands-on contact with nature. Unless we learn the nature we cannot understand the nature. Our science theories have assumptions, they are therefore philosophy, speculation, and cannot give us real lessons.

5. Mathematics Is Wrong

Something is wrong means it will not work for nature and engineering. Engineering is nature, because it uses objects of nature. Engineering uses transistors, for example, which are made of materials from the earth. Mathematics violates the definition of truth T1. So mathematics must be wrong.

5.1 Real Numbers Are False.

If you write (M1): $1+2=3$, most people will understand its meaning. One orange plus two apples make three fruits. But to a mathematician M1 is a completely wrong application of mathematics. In mathematics, one, two, and three are real numbers. They are points on a real line, which is a straight line. And the numbers are at equal distances apart starting from the point zero. Thus addition is defined only for real numbers. Here only distances are added. Results of addition must be a real number, representing a distance. Thus apples and oranges cannot be added; even two apples cannot be added. The result of addition cannot be fruits; it must be a real number, representing a distance. There are many such properties for real numbers. Any textbook on real analysis will describe them [Bartle]. Thus M1 is not mathematics.

5.2 No Straight Line.

There is no straight line in nature. Since all objects in the universe are moving continuously, no three points on a straight line can remain on that straight line for more than a moment. Thus the foundation of mathematics, a straight line, is not meaningful for nature. Since engineering uses objects of nature, and also interacts with nature, mathematics cannot be applied to describe both engineering and nature. Thus the fundamentals of mathematics violate the definition of truth, item two of T1 - both real numbers and the straight line are not objects of nature. Therefore, mathematics is a false subject.

5.3 No Infinity

Infinity is a very important concept in mathematics. However, infinity is not there in both engineering and in nature. The characteristics of any mathematical theory that uses infinity will magically change completely if you replace infinity by any finite number, however small or large. We can illustrate it [Das 2011a] using the Laplace Transform (LT), a very commonly used tool in engineering and physics. Similar effects can be shown [Das 2014b] for the Fourier Transform (FT) also.

5.3.1 Infinite Laplace Transform (ILT)

Laplace Transform (LT) is defined using an integral as shown in (3):

$$F(s) = \int_0^{\infty} e^{-st} f(t) dt \quad (3)$$

In expression (3) the variable t is usually considered as time. The integral limits show that the time must be valid from zero to infinity. Thus the function $F(s)$ on the left hand side, called infinite Laplace transform (ILT), will be valid only for infinite time systems. Consider the step function defined over infinite time:

$$f(t) = 1 \text{ for all } t \geq 0 \quad (4)$$

Using the definition (3) we get the expression for the infinite Laplace transform (ILT):

$$\begin{aligned} \mathcal{L}(1) &= \int_0^{\infty} e^{-st} \cdot 1 \cdot dt \\ &= \frac{1}{s} - \frac{1}{s} e^{-sT} \end{aligned} \quad (5)$$

$$= \frac{1}{s} \quad (6)$$

The last step is obtained by using infinity for T in the previous step. We can see from (6) that the ILT has a pole at $s = 0$. This creates singularity in the engineering systems. Infinity assumption in the definition (3), did not vanish, it reappeared in the result (6) also as a pole. Employees in many corporations use ILT, without knowing that they are using infinite time theory in finite time engineering, leading to complex patches and kludges, for all engineering applications. This is obvious because we are using wrong theories. This leads to unsafe and unreliable engineering practices.

5.3.2 Finite Laplace Transform (FLT)

Let us now consider an example with finite time T to bring out the fact that the Laplace transform is based on infinite time assumptions, that is, it cannot be used for finite duration signals. The finite duration step function $f(t)$ is defined by

$$f(t) = \begin{cases} 1 & 0 \leq t \leq T \\ 0 & \text{otherwise} \end{cases} \quad (7)$$

Using the definition (7) we get the expression for the finite Laplace transform (FLT):

$$\begin{aligned} \mathcal{L}_T(1) &= \int_0^T e^{-st} \cdot 1 \cdot dt \\ &= \frac{1}{s} - \frac{1}{s} e^{-sT} \end{aligned} \quad (8)$$

$$= \frac{1 - e^{-sT}}{s} \quad (9)$$

Observe from expression (9) that the FLT does not have any poles, that is, a value of infinity for $F(s)$ at the origin. At $s=0$ the expression (9) takes $0/0$ form. The FLT completely changes the nature of LT. In this case the FLT is an analytic function with no singularity. The situation will be true for all kinds of functions, and not just for step function. Thus real engineering, which is a finite time system, does not have any poles. Ignorantly using ILT complicates engineering.

This example shows that just because something is used in engineering and engineering works, it does not mean that this something is correct. Truth T1 is multidimensional, mathematics only has a narrow view.

An entire theory of control systems, signal processing, and communication engineering has been developed using this pole-zero concepts of Laplace Transform. Transfer functions, Bode plot, root locus, are taught extensively in undergraduate classes. You can now see that they are all wrong. Finite time engineering cannot have poles.

The Laplace Transform theory must be revised and rewritten for applications in finite time engineering. For embedded engineering applications, ILT is not a correct tool and its use will make the embedded engineering software unreliable. But in practice that is what happens, engineers will have to add patches and kludges to make engineering work. Thus engineering has become complex because we are using wrong or false theories.

In reality all theories are wrong, and none of them works or can work for any engineering applications. In fact engineering can be designed completely without any theory. Human body is the best example of nature's engineering product. We do not use any theory when we walk, or when we do our daily activities. This happens because we have the best sensor technology inside our body. The same can be done for engineering also.

It should be mentioned that, since mathematics is wrong, and physics uses mathematics then physics must be wrong too. By wrong or false, we mean that the physics is not applicable for engineering and nature.

5.4 Modeling an Apple

Can you describe an apple using mathematics? Did you ever realize that different parts of the same apple have different tastes? How did that happen? This means every molecule of the same apple has different tastes. This in turn means every atom, and therefore every electron has different tastes. But physics do not recognize such properties of electrons. There are billions of electrons in an apple, and we cannot model them using any mathematical algorithm. This complexity or "taste" is there in every object of nature and therefore mathematics cannot be used to describe any object of nature. If you cannot describe one apple, then you cannot compare two apples. Thus it is wrong to say that this apple costs \$10 and that apple costs \$15. There cannot have any rationality behind such assignments. Money power is using false science in enforcing such discriminations in our societies.

You cannot even compare the shapes, colors, etc., of any two apples. It is impossible to identify the position of a point on the surface of an apple, using any algorithm. Where would you place the origin of your coordinate system on one apple? Can you locate the same point in another apple? No, you cannot, two apples are completely different. If you think this way you will realize the immense complexity of nature, which is beyond the capabilities of our mathematics. Thus mathematics is false or wrong for both engineering and nature. We have introduced an example of such failure of mathematics in the case of our handheld GPS receivers in our cell phones.

We can blame the mathematics for such failure in engineering. But we can also blame the money power for allowing such false mathematics to originate in our universities and research institutions. But we have mentioned before, money power does not want truth. Therefore we must blame destiny. And that is correct; it is the destiny that rules at the top of everything. There are definitely reasons for such deterioration of our civilizations.

6. Numbers in Nature

No Numbers - There are no two identical objects in nature. No two events in nature are also identical. Therefore two apples are not identical. For the same reasons no two virus particles are identical, no two humans are identical. There is no average man, average apple, average object, average event of any type, etc. Therefore they cannot be counted and nothing can be measured and compared. Bertrand Russell used counting as the foundation for his definition of numbers. As we see here that numbers have no role for nature. There is no need for counting. There is no need for counting money, as we have seen, money itself is false.

Outliers - We do not even try to understand the details of numbers. We use probability and statistics to eliminate and filter the data. We reject the data as outliers instead of trying to find the underlying mechanism. Every object has a soul and that soul wants to reveal its truth to us, we cannot reject them. You cannot detect a reincarnation example using statistical methods. You cannot find a yogi in our modern times by using numbers. A yogi sips potassium cyanide with no harm. If you reject such a data as outliers then you will never know why our medicine fails or works. People will also not know how to protect themselves against diseases. Philosophy professor Dr. Robert Almeder of Georgia State University says if 100 people jump from Empire State Building, and 5 of them walk away without any injuries then we should be explaining how it happened for these 5 people [Almeder].

No Objective - Every object has a soul, and that soul has different experiences in its each reincarnated life, which is different from all other souls, existing at that time. As we have discussed in Section-13, each object is composed of root material particles; each such particle has three properties: knowledge, ignorance, and energy. The Bible calls it dust, but this is not the dust of the earth. This is so because the earth is also made of dust. It maybe that in the Jewish language, which is the original language of the Bible, you will find the dust has a different and more meaningful name, for now we may call it the cosmic dust. Thus such dust particles, inside any object, are also different from each other. Thus no two objects in nature can be counted; they are like apples and oranges.

No Probability - In the article [Carroll], the research professor at CalTech, says

“An example of an objective approach to probability is frequentism, which defines probability as the frequency with which things happen over many trials, as in our coin-tossing example.”

In this article we have given an example to show that all horse race winners in one race course were exactly predicted, thus showing that probability has no role in our life. Scientists should look for predicting the truth exactly, and not take a path of approximation to mislead humanities. We have mentioned that uncertainty principle of Heisenberg is wrong [Das 2013a] and that has been experimentally verified by [CalTech 2014].

In Section-5 of this article, we have explained in some details, why mathematics is wrong, and is not applicable for nature and engineering. Mathematics has numbers, straight line, infinity, etc., which are nonexistent in nature and engineering. Probability cannot be an exception. We have also shown that no experimentation, like trials, can produce correct information about nature. The definition of truth says,

nature must be observed only. Just like robots cannot perform experiments to understand humans, the humans also cannot learn about nature in the same way. There is no science theory that does not have assumptions. Most fundamental problem of math and science is that everything in nature is both objective and subjective. Every object has a soul.

The professor says -

“Laplace’s demon was never supposed to be a practical thought experiment; the imagined intelligence would have to be essentially as vast as the universe itself.”

The above is not correct. The example demonstrated by Catherine in Section-12.2, mentioned in this article, proves the falsity of the above comment. Both Bible and Vedas are full of many such examples of yogic power [Das 2020b], which we have thrown away as myths. Yogic power is a technology that anyone, like Catherine, can acquire using yogic meditation. There are no random events; there is no need to know the data for the entire universe to predict any event exactly, as Catherine has demonstrated. Simultaneity is the law, therefore effect cannot show the cause; moreover the effect is forever existent. Catherine demonstrated that too.

The professor also says -

“We know how to handle the mathematics of probability, thanks to the work of the Russian mathematician Andrey Kolmogorov and others. “

Measure Theory - This subject of Kolmogorov is very fascinating, perfect, but only inside the domain of mathematics. It cannot be used for nature, just like any other subject of mathematics. There is nothing random in measure theory. Random variable is a measurable function which is also not random. No sample space is random. No single apple is a random object in a bag of apples. Same is true for humans also. Every object is unique. There is no mean value of a human; there is no mean human being. Every life is unique, precisely defined, and exactly predictable moment by moment. There are many examples in the published literature showing perfect predictability. If it is true for humans, it will be true for all other objects. It is souls everywhere, from the tiniest to the largest.

Random variables measure physical objects, which is meaningless. $X(w)=a$, here w is like an apple and a is like \$5. Measurable functions, like X , cannot be meaningful for nature. How do you justify that the measure of an apple is \$5, or Mr. Y is \$100/hr? Measure theory is an attempt to convert events, characteristics, objects of nature, etc., to real numbers or money value. Every human being has a unique destiny and can be precisely predicted. Same is true for every event in nature. See the examples in the yogic power literature [Das 2020b]. Numbers, data, do not define nature and its objects. There are no real numbers in nature, nothing can be measured. Mathematics is designed by money power, for business, and for discrimination. In a moneyless economy (MLE) such a science will vanish [Das 2020a].

Five senses - A human can talk; therefore can create a sound wave, which does not mean humans are waves. An antenna can vibrate and create waves, send an electromagnetic signal, which does not mean antenna is a wave. Same thing can be true for a particle, which does not mean a particle is a wave. Every particle has some material, which Bible calls dust, and also has a soul which has consciousness, according to Vedas. We have seen different apple molecules or atoms have different tastes at different locations inside the same apple, which indicates particles have both material and soul. No object can have only one property. We have five senses, therefore apples have at least five properties, they give different tastes, different colors, different feelings of touch, etc.

He says -

“The best we can do is to calculate the probability of obtaining each possible outcome, according to what’s called the Born rule: The wave function assigns an “amplitude” to each measurement outcome, and the probability of getting that result is equal to the amplitude squared.”

DSE - This wave function concept comes from the double slit experiment (DSE). This experiment assumes that a beam of single electron or photon is used. But we do not have any engineering technology to produce such a single electron beam. We do not even have a measuring instrument to measure if a beam has a single electron. Nothing in nature can be isolated. Reducing the intensity cannot guarantee generation of a single photon beam. What we can produce at best, is hundreds or thousands of simultaneous electron beams. Thus the duality of particle and wave is nothing but an assumption, based on ignorance of nature and engineering.

A laser printer’s high speed rotating mirror can be used to generate or deflect a laser light to create wave front pattern on a paper. A targeted shooting of large metallic balls at a single plate, with marked array of squares as targets, can be used to deflect and generate a wave front pattern [Das 2017b]. Thus wave front pattern does not necessarily mean it is created by waves. It is very much like Galileo’s observation; data cannot reveal the cause. Bertrand Russell, Gita, and the cause and effect law presented here confirm the same conclusion – There is no cause and effect pair, it is all about destiny law, it is the simultaneity law.

7. Newton’s Second Law

Our attempt here is to show that the every law the physicists have discovered is nothing but the conservation law or the sigma law, which essentially says that the sigma of everything is zero. Second law has the same assumption - isolated environment. If we remove the assumptions, we get out of the second law of Newton, the same concept of the conservation law. In terms of mathematical notations this second law is expressed as:

$$f = m * a \quad (10)$$

Here f is the net force acting on an object of mass m . And the resultant acceleration of the object is a . Assuming that the mass is one, and replacing the acceleration using the second derivative of position x , we can rewrite the law (10) as:

$$\frac{d^2x}{dt^2} = f \quad (11)$$

The first level of modifications that engineers have added to the right hand side is the gravitational force g . So we modify (11) by the following expression (12):

$$\frac{d^2x}{dt^2} = f + g(x) \quad (12)$$

In (12) we write g as a function of x , because the gravity depends on the position. In the original formulation (10) there was no x in the right hand side. Note that the variable x is a three dimensional vector in space, it has North, East, and Up (NEU) as coordinates. Since g is dependent on the height above the earth, g is a function of x . Actually, g is a very complex function, and depends on the NEU coordinates. The earth has been modeled as an ellipsoid, like World Geodetic System 1984, (WGS84), and then extensive formula has been developed by mathematicians, physicist, and engineers to define $g(x)$ as a function of the NEU coordinates [Chatfield].

The right hand side of (12) also depends on velocity or dx/dt of the object. Since the earth is rotating around its own axis, there is always a force, called Coriolis force, which acts on all objects near the earth space. This force has been shown to be dependent on velocity of the object. Thus the expression (12) should be modified to the following [Nylund, p.76]:

$$\frac{d^2x}{dt^2} = f - \Omega * \frac{dx}{dt} + g(x) \quad (13)$$

Where Ω is a factor related to the earth's angular velocity, which is a constant. The expression (13), as found in the public literature, is quite simple also. It has been found that even (13) cannot be used to satisfy our navigational requirements. GPS (global positioning system) has been used [Nylund] to augment (13). However, the point is quite well illustrated by (13), the nature is very complex and the simple expression like (11) is not enough to meet the requirements of our engineering products of our times. The formula (11) was good for Newton's time but is nowhere near our needs of the day.

Interestingly, the equation (13) shows that the summation of all forces is zero, which is nothing but the D'Alembert's principle. The same is evident in expression (13), and thus (13) is really a sigma law and not a new law. Thus we see that the second law of Newton is essentially a different way of representing the law of conservation, which is there in both the Vedas and the Bible.

8. Newton's Action-Reaction Law

8.1 Introduction - Cel

Newton's third law, also known as the action-reaction law, can be considered as the cause and effect law (CEL). [Bible Galatians 6:7] says "whatever one sows, that will he also reap", has the same concept. In Vedas, something similar is mentioned – 'cause and effect are similar in nature.' However, in this article we will find that the concept of soul theory reveals that effect exists forever. It is a very common philosophical statement – 'The seed of death is implanted at the time of birth.' Thus the time gap between cause and effect can be billions of years also, because some objects, like stars and galaxies, live over billion years, and they will also die.

Here we will use mathematics to convert this CEL to the global plan or the destiny law, which is the highest level law of the nature. This will justify the statement of the German philosopher Friedrich Nietzsche –'if anything moves then everything in the entire universe moves.' Thus the CEL is very profound, and governs the universe including all its details. All these details can be observed also as per definition T1.

As we have mentioned, mathematics is wrong, we will still use it as a symbolic language, to express our thoughts in a compact way, even though with many errors in details. Those who do not like mathematics, should still read this section, and will definitely gain some knowledge, about the CEL and why it happens. Hopefully, this section will remove the confusion of causality and time-asymmetry concerns from physics and philosophy. We remind again that the CEL, Destiny law, and the simultaneity law are all synonyms.

The CEL says the effect cannot determine the cause. Gita has a verse that says, "never expect that you are the cause of the result you get" [G.2.47]. In the same way it means do your work but never expect the result you want. It is the same thing as saying that you are not responsible for what happens in your involvement. Simultaneity is the reason that will explain all these consequences. Bertrand Russell talked about the simultaneity law in connection with the cause and effect and also while discussing truth using his correspondence theory. We discuss Russell's ideas [Russell 1929] in this article.

The lack of freewill and the lack of choices are also explained using this same simultaneity law. Observe that the destiny law is defined for the entire universe and for eternity. Present life is only a small fraction of our activities in this universe. We also live for eternity because of reincarnation.

8.2 Mathematical Model

This CEL has a very profound impact in both physical and social sciences. Newton's third law can be found in [Serway, p120.], and has been explained in the following way.

“The forces always occur in pairs or that a single isolated force cannot exist. Any one of these two forces can be called the action force, and the other one then can be called the reaction force. The reaction force is equal in magnitude of the action force and is of opposite in direction.”

Therefore, mathematically we can write

$$F_1 = -F_2 \quad (14)$$

Thus the sum of the two forces is always zero, and can be written as in (15):

$$F_1 + F_2 = 0 \quad (15)$$

As pointed out in this article, all three Newton's laws make the same assumption of isolated environment or absence of any interactions from other forces. In a sense they are valid only for point particles with nothing else in the neighborhood. We should recognize that nature does not make any assumptions. Therefore this assumption must be removed.

Because we are all globally connected over space, and therefore for every action there will always be more than one reaction $\{F_2, F_3, \dots F_N\}$. That is, it is not possible to create an isolated system and produce a single reaction. However the summation of all reactions must still be equal to the original action that produced all the reactions. Therefore in real life we should have (16):

$$F_1 = -(F_2 + F_3 + \dots + F_N) \quad (16)$$

The expression (16) can be written as

$$F_1 + F_2 + F_3 + \dots + F_N = 0 \quad (17)$$

We call (17) as the sigma law, sigma of everything is zero. It has been shown [Das 2012a] that all the known laws of physics can be reduced to the sigma law. We can rewrite it in more standard mathematical notation as in (18):

$$x_1 + x_2 + x_3 + \dots + x_N = 0 \quad (18)$$

To make expression (18) meaningful we multiply each variable by a conversion factor to reduce the variables from physical quantities to real numbers. Only real numbers can be added.

$$a_1x_1 + a_2x_2 + a_3x_3 + \dots + a_Nx_N = 0 \quad (19)$$

We can now separate the first variable from all other variables and write:

$$x_1 = (1 + a_1)x_1 + a_2x_2 + a_3x_3 + \dots + a_Nx_N$$

Redefining the coefficients we write the above expression in the following way:

$$x_1 = a_1x_1 + a_2x_2 + a_3x_3 + \dots + a_Nx_N \quad (20)$$

The equation (20) shows how the action x_1 depends on all action variables. It also means that every action is dependent simultaneously on all actions. Since all actions are continuously changing with time, we can represent the left hand side of (20) as the time derivative of the variable, represented by a dot as superscript. Thus (20) reduces to:

$$\dot{x}_1 = a_1x_1 + a_2x_2 + a_3x_3 + \dots + a_Nx_N \quad (21)$$

Expression (21) will be valid for all the variables, giving us a set of simultaneous equations, with each equation representing one of the variables in the left hand side. We also have to rewrite each coefficient with double subscript for the matrix representation of equation (21) in the following standard notation.

$$\dot{x} = Ax, \quad x(t_0) = x_0 \quad (22)$$

The equation (22) is a very well known expression in the theory of differential equation and also in system theory. Consequently, this has been investigated thoroughly and has solutions for many different characteristics of the A-matrix. The standard solution has the form, in matrix notation, given by (23)

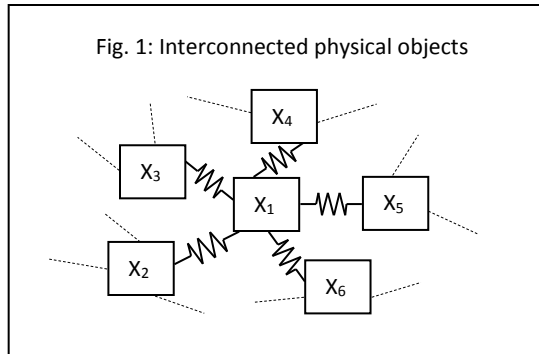
$$x(t - t_0) = e^{A(t-t_0)} x(t_0) \quad (23)$$

Here t_0 is the initial start time, and $x(t_0)$ is the corresponding initial state of the system. The solution $x(t)$ is the solution vector for each of the variables in (21).

8.3 Analysis - Cel

Nietzsche - The expression (23) can be represented in graphic form as in Figure-1. Here each box represents an object, and the variable written inside the box represents the state of the box at a specific time. This state can be called cause or effect, or according to Newton it will be action or reaction. From the figure or the equation (23) we can see that every box is in interaction with all other boxes by a spring like interface shown in the figure. This interface can be called gravity force or the force of consciousness of every object. This is the graphic representation of what Nietzsche said – “If anything moves then everything moves”. From the Figure-1 and equation (23) we see that he is exactly right.

Global - The equation (23) represents the cause and effect model for the entire universe. It contains all objects, all variables for every object, starting from the smallest particle like a virus or electron to the largest object like a galaxy or sun. The theory of differential equation says that the solution (23) is unique and is defined for all time and for eternity. Thus if you know the equation (23) then you know exactly what will happen anywhere in the universe at any time. All information of only a single person will not be enough to predict any future event for that person anywhere on earth.



Russell - The equation (23) shows that the concept of the CEL expressed as A causes B is wrong. It is quite possible that B can cause A also, or there can be another cause C which may have caused both A and B. Thus our analysis in our justice system and medicine theory can be all wrong; there is no truth in such conclusions. Bertrand Russell said “There is no cause and effect; it is only a mathematical formula [Russell 1929]”. You will know the effect, but you cannot know the causes A, B, or C.

Concept Only - Since the mathematics is wrong the above model (23) is only a translation of the English language description in a symbolic language. The mathematics cannot give any new information other than what English language gives. Thus modeling cannot give us the ability to get exact answers. But when we extend the cause and effect law using the soul theory we will find that the exact solution will be visible to us. The mathematical model (23), its graphical representation in Figure-1, and the English language development statements all give us a meaningful interpretation of the universe, but cannot give us correct or even approximate solution. Thus data, information, theory, have no means to predict any results. This is exactly the conclusion of the Galileo phenomenon – effects cannot predict the cause.

No God - Since the expression (23) represents the entire universe therefore it does not have any driving force for the model. There is nothing outside this universe. The model includes complete information therefore its solution will be unique. There is no probability, and no assumption like isolated environment. However, as mentioned before, mathematics is wrong; we cannot convert a cause or a reaction, even conceptually, to a real number. Therefore the equation (19) is wrong. Remember, an apple is \$5 cannot be justified.

Reincarnation - This model is incomplete, because it does not include the most important concept of life, the evidence of past life, that is, the reincarnations [Das 2013c]. Every person or object is born with past life experiences and a continuation of its destiny. The CEL model (23) does not have any capability to incorporate this entire trajectory of the new born baby in the existing model (23). Without such feature, the model (23) cannot become complete; and cannot predict events like Ramayan, Mahabharat, Jesus, Hitler, 9-11 event, Covid-19, central bank as the global king, etc. Or in other words the CEL (23) is not yet the destiny law. But it is telling us why it is not.

Soul Theory - When we expand the CEL model using soul theory, we will find that this CEL model becomes very precise and exact. Everything depends on the soul; it controls all of our activities. Soul theory provides complete information; and therefore can predict the future events exactly. We will find that the CEL model is not dynamic. Complete information makes it static. We will find that we are designed to have no freewill, no choices, and we are like robots. Things happen exactly the way it happens inside our corporations, in a preplanned way. Major periodic events, caused by reincarnations, cannot be captured by the present CEL (23) model.

9. Second Law of Thermodynamics

While discussing the action-reaction law, we briefly mentioned two important concepts. For every action there will be many reactions. And that these reactions will spread, over time, everywhere creating the global space time (GST) effect. Actually these two concepts are interrelated. We want to

elaborate them to show that the second law of thermodynamics is really a sigma law. Another reason that we discuss this subject is that there is no concept of chaos, entropy, and probability in the universe. Everything is precisely defined, can be exactly predicted, and this predictability has been demonstrated many times all over the world in the past centuries. We have discussed here how Catherine predicted, in section-12.2, the horse race results correctly.

9.1 The Global Reality

Everything in this nature is interconnected, in global space, and over global time. This means that any action we take now will affect our entire environment. The reactions will spread to many places and will continue to spread over time to affect more and more elements in the environment. The environmental pollution is clearly an example of such an effect. Earthquake, Tsunami, Financial Crisis, Covid-19, etc. are all very well known examples of Global Space Time (GST) environment. Thus the GST concept says that for every action there are always multiple reactions. This is a fact of nature; there is no isolated system or environment. However, the sum of all these reactions must be equal to the original action as in (19). By assuming isolated systems we may make things simpler, but we hide the real nature of things, and possibly create confusion about the reality.

Another view point of the multiple reactions theory is to recognize that you cannot produce a single reaction from a single action as in (14). This is impossible, also because we are all interconnected by GST, which prevents single reaction. You cannot create an isolated system; it goes against the laws of nature. The idea of isolation takes us away from the GST perspective.

The GST concept also says that the same action cannot produce the same result, because the first action has already impacted the environment. Second time the environment is different. Therefore the second action is not exactly the first action; the second action cannot produce similar chain of reactions, because it is working on a different environment and at different time. Both time and space has changed after the first action, the GST is different now for the second action. This essentially means that no process, micro or macro, is neither reversible nor repeatable. The environment has changed. It was square before, and now it is a circle. The reverse action is not meaningful anymore inside this circle. We should also recognize that time not only changes the environment, it also changes the ages of the objects; that is, all the objects have changed also.

Thus two of the most important assumptions of thermodynamics - isolated system and reversible process - are against the GST concept. They are against the concept that everything is working simultaneously, like in equation (23), interactively, and at the same time. And we all agree that if the assumptions are invalid then the theory will not work in engineering as well as in nature. The theory remains as an assumption also.

In many cases, we may not need to analyze all the reactions. We may need to study only one of the reactions, or some of the reactions, but not all of the reactions. But we must remember that all the reactions exist, we cannot ignore them. With this background in mind let us see the statement of the second law of thermodynamics.

9.2 The Second Law

The laws of thermodynamics are usually defined using heat and work [Serway, p.670] and in the context of an engine. The second law of thermodynamics says –

“It is impossible to construct a heat engine that produces no effect other than the input of energy by heat from a reservoir and the performance of an equal amount of work”.

That is, all the heat taken cannot be converted into work.

$$\text{Heat Input} = \text{Work Desired} \quad (\text{is impossible})$$

Some heat will be always lost. The heat input is the action, which produces two reactions, some work and some heat loss. If you analyze the two reactions carefully you will find that they both include many reactions. The work produced has, loss of work due to friction in the gear boxes, loss of work in all mechanical joints etc. Similarly the loss of heat also has many reactions, some heat was lost straight into the environment, some heat was lost in the engine body, some was lost in heat transmission pipes etc. Thus the original action, taking heat, has produced many reactions of many work types and many heat loss types and can be written as in (24).

$$\text{Heat Input} = \text{Heat Loss} + \text{Work Loss} + \text{Work Desired} \quad (24)$$

There are other reactions also like producing some sound or noise. If we sum all the reactions we will always find that it will be equal to input heat amount. Thus the second law is really the sigma law. Now the second law says we cannot prevent the losses in heat. We say that we cannot prevent the losses in the work also. That is we cannot channel all the input heat directly into usable work output. We call that as trying to isolate a system from its GST environment. That is not possible; it is against the reality of GST.

Thus taking heat and then producing some work and some heat loss, is equivalent to saying that heat input has produced two reactions. That is, the sum of the two reactions must be equal to the heat input, which is the sigma law. If you consider one of the outputs say the work, and the input, it is clear you cannot get 100% efficiency, because it will violate the sigma law. You cannot produce only one reaction or in other words you cannot have an isolated system. The two requirements – isolated system and 100% efficiency - are equivalent, and violate the concept of GST.

9.3 The Disorder

Associated with the second law of thermodynamics is the concept of entropy. The entropy theory says [Serway, p.683], “isolated systems tend toward disorder and that entropy is a measure of this disorder”. In the above statement the assumption of isolated system is not feasible. The GST theory says we are all globally connected and constantly interacting with each other. We have mentioned before, if the assumptions are wrong, then the results will be wrong also.

Over time everything in the universe will die and then reincarnate. The death period may appear a disorder, but that is not correct. Even death time for humans is precisely predictable and death events also can be predicted [Das 2014b]. There are also many well established events that happen during the death time of humans. Some animals can see the death time of humans correctly. Such incidents therefore cannot be called disordered events. Predictable and planned events should not be called disordered. Abnormal or accidental events are also not disordered; every moment is precisely predictable from the memory of the universe. Death is not bad, it means new life again.

The concept of disorder has not been defined in thermodynamics. Random motion of molecules or atoms in an isolated environment is given as an example of disorder. Since isolated is an assumption, therefore the result must be an assumption also. This motion surely can be modeled using differential equations and then we will find it as a very well defined motion. The fact that we cannot write such a set of differential equations, because of its complexity; and the fact that we have taken a statistical approach because of its simplicity; do not mean that the atomic motion is an example of disorder. If we expand the

microscopic space and if we expand the nanosecond time scale then we will find perfect order in the motion. We illustrate with one example.

9.3.1 Disorder Example

We have observed looking up in the sky that airplanes often fly along a perfect straight line at very high altitude. We see that there is a perfect order in this motion. However, the pilot sees the cockpit meters almost steady with little vibration in the needle tips; which we may interpret as a little disorder. This needle display comes from a space time filter of the navigation computer data. The computer is running at nanosecond time scale, but the data is taken for display maybe every tenth of a second, thus it uses a time scale filter. Similarly the data maybe a 32-bit number inside the computer, but the computer averages it over space scale, thus filtering data according to the space range of the cockpit meter. These space time filters thus remove almost all appearances of internal disorder inside the computer.

There are many registers inside this navigation microprocessor of the digital electronic circuit board. If you plot the values of any one of these registers, over time, you will find that the graph will look like a random process, like a white noise, and may appear like a completely disordered system. Many such graphs have been published in literature [Das 2012a]. This happens because the register is changing at nanosecond time scale. But we know that the microprocessor is doing a meaningful work, because we have programmed it, that is, there is an order inside. Thus the appearance of order and disorder are related to space and time scales. In reality there is no disorder in nature. Note that the microprocessor is part of nature too; it is created using the elements of the periodic table of chemistry.

It is difficult to believe in the concept of disorder under the frame work of GST. We are inside a global system, as discussed in this paper, defined by millions of simultaneous differential equations in millions of variables. According to this theory the universe is precisely defined and precisely predictable. That is to say, exact predictability cannot indicate disorder. We do not have any example in the universe that shows that the nature is creating disorder. Death for example, is not a disorder; it is a law of nature and precisely predictable. Everything in nature goes through a birth process, maturity process, and death process. Recognize that, they all have different space time scales, which may create an illusion of disorder. Thus the second law of thermodynamics is nothing but the sigma law. The heat input, heat loss, work loss, and work done are just some actions and reactions.

The information theory of digital communication engineering has been related to the concept of entropy. The result, the capacity theorem, has been derived also without the concept of entropy. In the paper on green modem [Das 2009] the result of [Shannon] has been extended to higher capacity, without using the entropy concept of information theory, and also without the assumption of infinite time.

9.4 Analysis - Disorder

It should be well-known to all critical researchers that disorder is not meaningful in nature. Death is not a disorder, because it is precisely predictable about when and how it will happen. There are about million palm leaf booklets on the prediction of life about people who are living now in our world. These booklets were written about ten thousand years back [Das 2014b]. Thus disorder of any kind cannot exist in the universe.

In quantum Mechanics (QM) there is a principle called uncertainty principle, which claims that perfect measurement cannot be achieved. We have mentioned about this principle before in this article. It was established that this principle is based on the assumption which does not have any meaningful foundation [Das 2013a]. Recently, Caltech has experimentally established the validity of the above assertion in [CalTech 2014]. Thus the concept of probability, disorder, outliers, etc., should be removed from scientific research.

We examine how mathematics describes a simple random walk, which is considered as disorder, or random [Zitkovic].

A stochastic process $\{X_n : n \in \mathbb{N}\}$ is called a simple random walk if

1. $X_0 = 0$,
2. the increment $X_{n+1} - X_n$ is independent of $(X_0, X_1 \dots X_n)$ for each n in \mathbb{N} , and
3. the increment $X_{n+1} - X_n$ has the coin-toss distribution, i.e. $P[X_{n+1} - X_n = 1] = P[X_{n+1} - X_n = -1] = 1/2$

Everything in the above definition violates nature and engineering, so it is very frustrating to read and explain. But in terms of mathematics and probability theory it is perfect, and there is nothing random here. It appears that the domain of a function can be a non-real number space. In that case, how do you define a sigma-algebra on a bag of apples? Two apples are not identical; therefore their intersections will be empty. A horse racecourse and a stock market are well known examples of random processes. But in section 12.2 we have given an example of exact prediction of results for the day. Thus the data cannot say that the process is random.

There are no such random processes in nature. Suppose X_n is defined over a sample space of all humans. Then X_n is an attempt to measure something about humans. Which property can you measure? Why do you want to measure? What good it will do to humans? Economy is false, because money is false, therefore any numerical value for humans, like 100\$/Hr is meaningless. If you consider the sample space is a bag of apples, then also can you find any meaningful quality to measure and then compare two apples? No, there will be no truth in that concept. Such a society cannot give peace to its people. Under a moneyless economy (MLE) such false mathematics will vanish [Das 2020a].

There is no such object X that corresponds to a natural object or a natural event. Here X is mentioned as random, yet their increments can take only two distinct values $+1$ and -1 ; which represent deterministic situations. It cannot take any arbitrary numbers like 0.3 , 0.7 , 0.1 etc. Thus this is a theoretical, hypothetical, and mathematical idea and has no relevance in nature and engineering.

10. Causality Literature

In this section we review some published articles on causality and provide some discussions in view of the cause and effect law (CEL) based on the classical physics, including QM (Quantum Mechanics) and SR (Special Relativity), and by the matrix expression (23). Causality literature is based on (14) but we have presented a vastly different concept by (23) which are not really comparable.

Asymmetry of time

The article [Tamm] says:

“On the micro-level, the laws of nature appear to be essentially time symmetric: if a process is possible in one direction of time, then the reversed process is also possible. On the macro-level, however, this is no longer true. In fact, in our world as we know it, reversible processes are very rare.”

No example is given for a reversible process even for micro-level. A natural process can never be reversible, micro or macro. Once a process has started or finished, the environment of the nature has changed. The environment is always changing, irrespective of the micro or macro level processes. This is so because all objects are continuously moving and changing in age. The reverse process therefore cannot

be performed in the original environment with the original object. The old environment and the object have changed forever. The micro particles have also changed with time. Thus asymmetry of time is not a meaningful concern for nature and therefore the causality.

Professor [Rubi], Department of Fundamental Physics, University of Barcelona, Spain, says:

“Through causality, we may come to the conclusion that something happening regularly will always happen. This principle can successfully be applied to cases in which one has complete information on the situation involved.”

The above article has not given any proof of the above statement. No example for the above situation has been given. However the Bible says correctly in [Bible Ecclesiastes 1:9] “What has happened before will happen again. What has been done before will be done again. There is nothing new in the whole world.” Vedas also say the same thing – “nonexistent cannot become existent.” This statement essentially means nothing new can happen. As we prove later that the universe is periodic, therefore everything will repeat. But the destiny law (23) says that the exact same thing cannot happen to the exact same object in the exact same way, because the environment and the age have changed. For the destiny of every individual object is unique. The destiny equation (23) also confirms that status.

“The Causality Principle states that all real events necessarily have a cause. The principle indicates the existence of a logical relationship between two events, the cause and the effect, and an order between them: the cause always precedes the effect.”

The above is Newton’s third law, the action reaction law, according to equation (14). This is invalid, because the third law has an assumption - in an isolated environment. The causality presented in this article by expression (23), the matrix equation, does not indicate any such relationship. According to the matrix equation there is no such definition of cause and effect, and there is no such relationship between them either. Expression (23) shows that a simultaneous chain of action reaction can be needed to produce an effect. Vedas say “Never think that the result that you got is the result of your own action [G.2.47].”

“An important property of the principle is that it entails predictability. Suppose that two causes give rise to two effects, respectively. It is easy to infer that if both causes are equal, the corresponding effects are also equal. Equal causes have equal effects and vice-versa. This fact implies the existence of a law of conservation under which the distinction is conserved. If two situations are distinct, they will remain distinct in all further evolutions and have been distinct during all previous evolutions as well.”

The above quote is false, because it is based on Newton’s law (14). The matrix law (23) does not say that. No two events, causes or effects, are identical in nature. This is a property of the destiny law (23) of the universe [Das 2013b]. No two events can happen in the same space-time point. This is also a law of nature. However, the predictability is a law of nature (23). Newton’s third law, when extended to (23), becomes the destiny law. Everything is theoretically predictable from (23), but never practically. However nature is perfectly predictable, and we will discuss that when we use soul theory to farther extend the cause and effect law (23).

Nobel Laureate in literature, Bertrand Russell (1872-1970) realized in 1919, that a differential equation of type (23) can represent the universe correctly, instead of equation (14). He writes:

“Certain differential equations can be found, which hold at every instant for every particle of the system, and which, given the configuration and velocities at one instant, or the configurations at two instants, render the configuration at any other earlier or later instant theoretically calculable. That is to say, the configuration at any instant is a function of that instant and the configurations at two given

instants. This statement holds throughout physics, and not only in the special case of gravitation. But there is nothing that could be properly called "cause" and nothing that could be properly called "effect" in such a system."

He is also right that nothing could be considered as cause and effect in such an integrated system. This is the essence of destiny or the simultaneity law (23). Vedas say that never think that you are the cause of the effects or results that you have received. This is called the Nishkam Karma, that is, selfless work [Das 2021].

The CEL equation (23) is also false, however, because some fundamental characteristics of nature are not included in that equation. As an example the concepts related to boundedness of all variables are not included. Reincarnation cannot be predicted and cannot be incorporated. Which soul will take birth at which place and in which family cannot be incorporated. However, equation (23) gives some idea of how nature works. It will also help to explain the soul theory and the destiny law. As explained, mathematics is always wrong, for nature and engineering.

11. Destiny Law

Destiny means life in this universe is completely determined for every space time point, for every object, and for all time, that is, for eternity. Thus all our action, reactions, desires, thoughts, dreams, etc., are all very precisely defined, long before we are even born. Where, when, and to which family you will be born or reincarnated is also already defined.

The definition of truth, T1, says that the nature always demonstrates all its laws. Therefore, according to T1, you will also be able to see the entire universe, if you can acquire the third eye vision, using yogic meditation. Such yogis are called seer yogis. Interestingly, in one of his quote, we mentioned that Bertrand Russell (1872-1970) knew about such seers. There are about one million palm leaf booklets in India, which records the destiny of that many people who live now on earth. It seems that the booklets were written at least ten thousand years back. Many people, from both east and west, have visited these sites to learn about their destinies [Das 2014b]. If you visit, you must do careful research before.

To understand why and how such a universal system has been defined and constructed, let us look at the way we have designed our own corporations on our earth.

If we look inside a corporation we find a global plan that governs all activities of all employees. When we start a new project in the company, many employees sit together in a conference and create a global plan for the project. They together decide the things to be done, assign a time schedule for each activity, assign people working on such activities, define how people will interface in implementing their individual assignments etc. Once the plan is precisely drawn everyone knows exactly what they will do in the next day for several months, until the project is completed.

During this period no one has any freedom to change their work plan, and why they would try to change, they would not, because they jointly created the plan. This corporation is also linked with other corporations in the same industry. Going farther outwards we see that the entire economy is working in a coordinated way under a global plan. Money power has also imposed a severe restriction on us, if you try to go outside the plan, your job will be terminated, and our economy is such that you will starve to death.

If anybody has the complete project document then he will be able to precisely say who will be doing what at any given time in the future. This is not a restriction of your freewill, it is your own plan, and you participated in it before starting the project. It simplifies our life, when I go to work tomorrow, I know exactly what I will be doing, and at the end of the day, I will feel happy that I have made contribution to my society. This is the same thing for the universe also. My soul has made that plan, I am

my soul, I am not my body, brain, or mind. There are many examples of prediction of destiny by seer yogis, take a look at [Das 2013b]. You can probably understand now, that the ignorance of our destiny is a blessing.

This is the best mechanism for our societies. It has also created many problems, but they happened because of incomplete information, in the cause and effect law, as equation (23) suggested. Under perfect information all of the problems will be solved eventually, and destiny will perform in a complete meaningful way. Since death is a law of nature, then death of planet earth, like death of mars, maybe, a part of the solution. However, for a short term, and a global solution take a look at moneyless economy [Das 2020a].

11.1 Analysis - Destiny Law

The destiny law, the cause and effect law as defined by the equation (23), definition of truth T1, memory in the universe, etc., are all equivalent or same thing. They are all governed by the same equation (23), which is the equation of the general system theory. They are all consequences of simultaneity law, as observed by Bertrand Russell, and described in this article.

It should be emphasized that the destiny law is not God, because destiny is precisely predictable by any high level seer yogi, but God cannot be predicted by definition. Thus God does not have any role in our lives. However, the CEL is physical; everything is done by our souls. Soul controls our mind, and the mind controls the brain, which in turn produces the physical actions by using our hands, etc. Thus destiny law is the soul theory terminology, and CEL is the corresponding physical terminology.

12. Yogic POWER

The cause and effect law (CEL) is very well known in the Vedas also, and it provides the foundation of the Vedic theories. To understand the Vedic theory, however, we must understand the yogic power [Das 2020b]. All Vedic laws are revealed by using yogic power only. The definition of truth T1 also says all laws are revealed. This revelation is the characteristic of every soul. Yogic power is a required knowledge, is necessary for understanding of all religious books, including Bible, and the books of Judaism.

Yogic power is nothing but the power of your soul. We all have this power; some have more and some have less. In this section we give one example to show that the soul exists using a reincarnation case. In another example we show how anyone can acquire the yogic power of third eye vision, which allows you to read the memory of the universe, and thus predict past, present, and future events anywhere in the universe. However, since destiny controls everything, the quality of this power will also depend on the destiny of the person. The book on Soul Theory [Das 2014b] has a section on experiments on a yogi. Not all persons can become yogis like Krishna or Shiva; who are the highest level yogis, if they exist.

12.1 Example of Creation By Soul

The following example [Pasricha] was discovered, and then presented in a scientific way, to the western world by Ian Stevenson (1918-2007), a Professor of Psychiatry, at the University of Virginia. This example shows that the nature always demonstrates all its truths, so that we can observe them and learn from them, for our own emancipation. We do not need to speculate using assumptions and create philosophies about the nature. Such examples were already known by humanity all over the world, and for long time.

A baby boy was born in a hospital, with a bullet wound marks on his chest and back. Doctors, nurses, and parents, all recognized this birth defect. When the boy learned to talk, around the age two, then over a year or so he explained how the marks happened in his body. He remembered and described his past life name, how, when, and where he died, including the name of the hospital, etc. Very soon the boy became sick and had to go through a surgery to save his life. Doctors found a straight line bullet path inside the baby's body exactly matching the autopsy record of his previous life data from the hospital where he died in his past life.

The above example shows, among other things, that the following is true. (a) The babies are not naturally grown inside the mother's womb. The soul of the baby manufactures the human body according to its own destiny. That is why every baby is different, both physically and mentally. (b) Since during the growth period, there was no brain for the baby, all intelligences and effects came from the memory of the universe and retrieved by the soul of the baby, which is the creator of that baby. The phenomenon should also indicate that mind, soul, and memory are not inside the human body. Section-13.2 gives another proof for the existence of soul. (c) Every life is periodic - we take birth, die, and reincarnate. Since summation of periodic waves will be periodic, therefore the entire universe must be periodic. Bible also says, whatever has happened will happen again; there is nothing new under the sun.

The above example proves that the CEL expression (23) can have a soul theoretic explanation. Since the memory of the universe has all information, the expression (23) has the concept for complete determinism.

12.2 Example of Third Eye Vision:

Catherine was treated by Dr. Weiss (1944-), Head of Psychiatry at the Mount Sinai Medical Center in Miami, Florida, using past life regression therapy (PLR) by hypnosis. Hypnosis is nothing but a method of an extraordinary level of mind concentration. Such concentration can generate yogic power of third eye vision that enables to examine one's own past life activities from the memory in the universe. Going through many sessions of hypnosis Catherine acquired the third eye power in other areas also. She picked winners for every race in the racetrack, to demonstrate her yogic power, to her skeptic father. Dr. Weiss also went with them. She gave away all the money to the first poor man she found on the street on her way out of the track. Dr. Weiss wrote, 'I was both shocked and fascinated by her psychic abilities, especially the episode at the racetrack. This was tangible proof. She had the winning ticket to every race. This was no coincidence [Weiss].'

The above example shows that the third eye vision is not a fantasy, or magic. Even a modern person can acquire such yogic power [Das 2020b]. With such a very strong yogic power, you will be able to see all the details about every event in nature like a 3D camera video. Yogis of Vedic period have already discovered all such results. Cause and effect law is one such truth. This example proves that CEL (23) has all information.

12.3 Manmade Material - Princeton Example

Princeton University carried out experiments [Das 2020b] on human interaction with electronic circuits. A random number generator was created using electronic devices and was hooked up to a computer system display. A human operator meditated in front of the device, but was not electronically connected to the machines. It was found that the mean value of the random generator could be controlled and increased over time, gradually, by performing meditation to increase it. In the same way, the meditator was able to influence the device to lower the mean value to below the normal mean value. The experiment shows that the material objects also have souls and they can interact with human souls. Thus every object in the entire universe has a soul.

12.4 Natural Material - Water Crystals

A Japanese scientist, Masaru Emoto, demonstrated [Das 2020b] that the physical shape of water crystals can be changed by showing our emotions to water. In his one of the experiments, he took a bottle of water and poured in two glasses, and placed two labels expressing your positive and negative emotions. Then he had frozen the water to form crystals and took photographs of them, and shown that the one with positive emotion gives better designed crystals than the other one. This experiment shows that everything around us has consciousness or soul and can be influenced by our own intentions, and with appropriate technology we can detect their effects.

12.5 Potassium Cyanide

A yogi demonstrated in an auditorium, that he can sip dangerous chemicals, including potassium cyanide, without any harm to him. Therefore in principle nothing can harm our bodies [Das 2014b]. This is called the placebo effect. Everything has a soul, souls are not supposed to harm anyone. More you know about the reality of the truth better will be your protection. Also, you cannot know what is true (truth), unless you also know what false (falsehood) is. Thus there are people, who cannot be killed by any type of viruses, and they can be called as yogis or placebo people. Humans and animals can be yogis by birth also [Das 2020b].

12.4 Exact Predictions

A yogi, who was a mathematician, wrote down the judgment of a high court and then sealed in an envelope. It had the exact same errors in coma and full stop in the sentences that the judge wrote. This shows that we do not create things, they are already there, we just reproduce them, and any one with yogic power can read that same memory exactly [Rama]. Another yogi told a woman to ask several questions. The woman did, and he then gave her a paper which had all those questions and their answers were already written. Thus the exact details are known and no randomness is possible in nature [Green]. The demonstration by Catherine, described in this article in section 12.2, is another example of such exact prediction of an apparently random incident. Thus the CEL (23) is meaningful and can be designed to have the complete soul theoretic information.

12.5 Analysis - Yogic Power

The previous subsections show that the nature demonstrates all its laws for us to observe, and understand the way nature works. We can see that the destiny is the highest level law of the universe and therefore we cannot have freewill and choices to change anything in our destiny. It is the soul that controls our life exactly the way it is written in the memory of the universe. This is a video memory; therefore it has all the action and reactions, and can be incorporated in the CEL (23), at least in principle.

12.5.1 No Freewill

An immediate consequence of the destiny law is the absence of freewill. It is very easy to understand that we do not have freewill. All our actions have reasons, without any reasons we never do anything. But since reasons come before we act, it means that our present action is controlled by our past reasons. Thus no one can have any freewill at the present moment. Therefore we are guided, moment by moment, by the destiny law.

12.5.2 No Choices

We also do not have any choices or options. This is so because we analyze every option one by one, since our mind works only sequentially. When we take any one of the options and analyze it, our

freewill does not work for that option and for that time slice, as explained before. Our things happen in the same way for the next time slice and for the next option. Thus in every moment we have only one choice with no freewill.

12.5.3 Reincarnation

It was there in the Bible, but was removed from it by money power, to control the lives in our societies, in the way the money power wants it. Some details can be found in the reincarnation chapter of the free ebook on soul theory at [Das 2014a]. There are still some statements in Bible that can be used to interpret presence of reincarnation in Bible. “One disciple of Jesus asked Jesus why this baby was born blind. Who did the sin, the boy or his parents?” Such question indicates that the boy had a previous life. Thus Jesus and his disciples were aware of reincarnation.

The reply was, nobody did any sin. It was God’s plan to show the world, how things happen, and how it can be controlled using yogic power. Jesus gave the eyesight to the born blind man. This example also illustrates the concepts like yogic power, destiny, nobody is sinner, cause and effect law determines everything, etc. The answer of Jesus verified that the definition of truth T1 is correct. A modern yogi also gave eyesight to a born-blind boy.

13. Two Causes

Consider this example, taken from the Vedas. - A potter makes a pot from the clay. In this example the pot is the effect or the object which is manufactured. Since the clay is used to make the pot, the clay is called the material cause for the pot. Similarly, the potter is called the efficient cause or the intelligent cause for the pot [SK.3]. Not anybody can make the pot. Someone who knows the process, the tools, and the material can only make the pot. Both material cause and efficient cause are necessary to create or manufacture any effect or object in the universe.

13.1 Root Material Cause

Every physical object requires multiple chains of ‘cause and effect’ activities to create that final object or the product. If we take any material from any object or effect, in any one of these chains, and ask repeatedly, what the material causes are for this material, then we will find some new materials. After a finite number of iterations, the process will stop. This search will be finite, because all objects have finite sizes. The last material where we stop is called the root material cause, root material, primordial matter, or simply matter. Bible calls it the dust and says – “All go to the same place. All came from the dust and all return to the dust [Bible Ecclesiastes 3:20].” This last material must be invisible; otherwise we will have to repeat the question. Its existence will be obvious, because we can see the effect, and therefore it must have a cause. Of course our third eye vision will be able to see it. This is how the yogic power, briefly discussed in Section-12 in this article, becomes an essential tool in finding the truths of the universe.

13.2 Root Efficient Cause

In a similar manner, you can take the efficient cause, and repeatedly ask, what the cause for this efficient cause is, then after a finite number of iterations, you will arrive at the root efficient cause. As an illustration, the hands of the potter are making the pot, the brain of the potter is making his hands to coordinate, the mind of the potter, which is outside the human body but inside the subtle body, described in subsection-14.5, is controlling the brain, and finally the mind is controlled by the soul, which is also outside the body. This soul is called the root efficient cause. Or in other words, this root efficient cause is

called the soul. Like the matter, the soul is also a tiniest invisible particle. The Bible calls it the spirit [Bible John-4:23], and says “God is spirit”. It means that every object has a soul and that soul has manufactured that object according to its destiny. Thus this finite deductive logic proves the existence of the soul. We have given another proof for the existence of the soul in subsection-12.1.

13.3 Analysis - Two Causes

13.3.1 Bible

The Bible has a version of this cause and effect law [Bible Galatians-6:7], “What you sow is what you reap.” This statement also has two causes embedded in it – “you” and “what”. It is you, the intelligent and efficient person in the activity. You are the efficient cause. What you sow is the object that you create, and that is the product, which requires material. Therefore this material or the seed is the material cause. Engineering of course, knew this approach all the time. Corporations, entrepreneurs, always looked for the correct person to make the product. Engineering also knew that every material has different characteristics, and they are not same. But scientists, including medical professionals, neglected the soul, assumed everything is made of materials, and all humans and all materials are same.

Bible says, in Ecclesiastes 3:20 – “All go to the same place. All came from the dust and all return to the dust [Bible].” The word dust does not mean the dust of the earth, because earth is also made from the dust. This statement is exactly the meaning of the root material cause. The meaning of the words does not matter; the concept does, especially when we are dealing with multiple languages like, English, Jewish, Sanskrit, Vedic, Telepathic, etc.

13.3.2 No Infinity

In this subsection we mention what Vedas and Bible say about infinity. No one has given any example or proof that infinity exists in nature, engineering, or in the universe. On the other hand modern literature [Das 2011a] has many examples to show that the infinity invariably creates problems in engineering and science. Infinity exists only in mathematics. Since mathematics violates the definition of truth T1, infinity cannot be real.

In finding the root material, we have used the statement – “After a finite number of iterations, the process will stop”. The process must stop, otherwise we will be repeating, meaninglessly, infinitely many times enquiring about different types of invisible materials.

Since all objects that we see are finite in size, and they all are created by the root material cause, called the matter, therefore the total number of matter particles must be finite also. Matter is the resource for the universe. If it were empty or infinite then we would have seen at least one object of infinite size. Note that an infinite size object will cover the entire sky. But we do not see that; more thoughts are presented later in section-17.

Also, the root material particles can be called the ultimate parents and all other objects as children, and children of children. Thus there is a hereditary relation among the objects. Therefore children must inherit the properties of parents, and finiteness is one such property. See [SK15-16] for more details. Bertrand Russell used the word hereditary to explain the method of induction [Russell, 1914].

Both Bible and Vedas say that the universe is periodic. A periodic system must vanish within its period. For complete annihilation therefore we must have a finite number of physical objects. Gita verse [G.8-19] confirms that periodicity as mentioned in subsection-16.2.

Fredrick [Nietzsche 1911] used the finiteness property of the root material particles, and concluded that the universe must be periodic. He said, only a finite number of objects can be created, using a finite combination, from a finite number of root material particles. Therefore the manifested objects must repeat periodically.

13.3.3 Invisibility

Invisibility does not mean non-existence. The pot was there inside the clay, we did not see it. It appeared only when the potter manifested it. It physically existed, just like an entire tree remains inside the seed.

If things are very far away, then also we cannot see. That does not mean the object does not exist. An object can be very subtle, or very fine and normal eyes cannot see them. But we can see it through our technology. We cannot see the light, but when we place an object in the path, the light becomes visible. Like material technology, we also have the technology of yogic power which allows us to see many things, as we have demonstrated, in the example of Catherine, who could see the winners in the horse race before the race happened.

Thus everything in the universe that happened, and will happen, which are invisible now, can be visible by our yogic power. For many examples take a look at section-12 on yogic power in this article. The Bible and Vedas are full of many such examples of yogic power.

14. Properties of Root Causes

14.1 Three Properties

The root material cause, or the matter, has three properties [SK.11], knowledge, ignorance, and energy. These are the essence of the pleasure, pain, and delusion characteristics found in all humans. The matter is not conscious, not intelligent, and does not know that it has three properties. Only a soul can control these three properties using the intelligence unit of the subtle body. Their function is very similar to the RGB color adjustments of TV screen pixels. By adjusting these three properties by the soul, all kinds of objects are created in the universe, for the enjoyment of the soul.

These properties do not have any quantum characteristics, they are not particles, and they are properties of every root material particle. They are continuously adjustable in qualities. The properties remain in equilibrium when the matter is not part of any physical object.

14.2 Soul Is Knower

On the contrary, the soul has only two properties [SK.11] – intelligence and consciousness. These are the only two properties necessary for the soul to understand that the soul is separate from the physical objects and thus can liberate itself from the pain and suffering of life. Liberation is not done by stopping the reincarnation, but by changing the three properties of its own material body, using the yogic meditation process. The soul creates the subtle body, with an intelligence unit, to communicate with its own physical objects. Soul is inactive, knower, observer, and experiencer.

14.3 Eternally Existent

Since both the matter and the soul are root causes, then by definition they are uncaused. That is, nothing created them. Therefore they must be eternally existent, as nonexistent cannot become existent. We can also see their effects, the effects have the same three properties of the matter, and therefore the

matter must exist. Similarly, they cannot be destroyed, as existent cannot become nonexistent. And for the same reasons their total number must be a constant. They are all pervading, and span the entire universe. Thus the universe must be finite also. This idea, independently confirms the same conclusion, that a periodic system must be finite.

14.4 Manifested

The matter or the root material particles are the tiniest invisible particles. They are really not invisible; they are visible to the third eye vision. They are called the un-manifested objects [SK.10], and all that are manifested are created from them by their respective souls. Just like a tree remains physically un-manifested inside its seed, a pot remains un-manifested inside the clay; similarly the entire universe remains physically un-manifested inside the root material.

It has been written in a physics textbook [Eddington] “Events do not happen; they are just there, and we come across them”. Therefore, there is a memory in the universe, which stores all past, present, and future events. These events will be visible to any seer yogi. If you acquire such yogic power [Das 2020b] then you will see the entire universe now for all past, present, and future times. Catherine, in section 12.2, has demonstrated one such example.

14.5 Subtle Body

The many examples of yogic power, destiny, reincarnation, etc., prove the existence of subtle body. Soul creates the subtle body to perform its all activities of the universe. For details of the subtle body take a look at the soul theory chapter of the free soul theory ebook [Das 2014b].

Samkhya has a verse [SK.21] that says that the soul and the matter join together, like a lame and the blind to complement each other. Without soul nothing can be created and without matter also nothing physical will happen.

Soul creates an intelligence unit inside the subtle body which remains in touch with both matter and soul as an interface. It operates like an electromagnetic induction unit. Subtle body is invisible, can float everywhere, pass through walls and mountains, etc. It is the subtle body that reincarnates. The soul is not a part of the subtle body. Subtle body has [SK.40] intelligence unit, the identity (ahankar), the mind, and subtle elements of the sense organs, among other things. Thus the mind and the soul are not inside our gross body. Bible also says similar things - "If there is a natural body, there is also a spiritual body" [Bible Corinthians 15:44].

15. *The Cause and Effect Law*

15.1 THE LAW: The Effect Is Ever Existent [SK.9].

The above is an amazing conclusion, and cannot be understood, without a thorough understanding of the yogic power. Several reasons have been given to explain this law, but only two are presented here for reasons of space and simplicity.

(a) Oil can be extracted from the sesame seed, because it exists in that seed. Thus the effect, which is the oil, exists inside the material cause, forever, independent of the application of any efficient cause, that is, a person who can extract the oil. Similarly, oil cannot be extracted from the sand, because oil is not present in the sand. No efficient cause can extract oil from the sand. Thus non-existent cannot become existent; therefore the effect must exist forever in the material cause.

(b) We see that all effects are similar to its cause. A piece of cloth, which is the effect, has the same touch, color, weight, etc., like its cause the threads, from which it is made. Therefore the effect, the cloth, must be present inside the material cause, the thread, before even the material cause is used.

We can extend this law through the entire cause and effect chain to conclude that all effects of the universe must exist forever in the root material cause. Thus all effects are existent forever even without any efficient cause. The role of the efficient cause is only to manifest the un-manifested effects from the root material.

15.2 Analysis - The Law

It should be carefully understood that the words cause, effect, manifested, unmanifested, normal vision, third eye vision etc., are not words of philosophy. They are very real, they are physical, and are objects of nature. The example of Catherine demonstrates how real they are. She saw the results, before even the race happened. Yogic power is the foundation of all books of all religions.

The memory [Das 2012b] can exist in two places (a) inside the root material cause and (b) in the memory of all the souls. My soul, like your soul, can know everything about the universe. But they cannot tell anything because of the destiny of their physical objects. It should be clear by now that without a thorough understanding of the yogic power the universe cannot be understood. And for the same reasons the Bible and the Vedas also cannot be understood. Thus any society that does not have the concepts of soul theory will be completely meaningless as Nietzsche said [Nietzsche 1910].

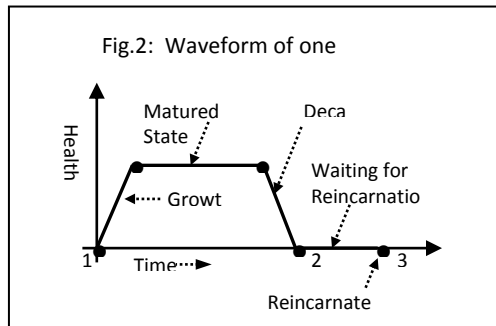
The classical CEL, defined by the expression (23), has the limitation that it cannot contain all information, like reincarnation, destiny, etc. But we can see that this Vedic CEL comes with complete information, and makes it a perfectly deterministic system for all time. The information is static, not changing, and will be visible as a 3D video by using the third eye vision. It is a 3D video because you can see all six faces of a dice not just one or two faces at a time. You can even see what is inside the dice. Complete knowledge requires understanding of periodicity and finiteness of the universe and its individual objects. It should be realized that the equation (23) or the concept behind it remains the same. The Vedic version shows how and where from all the information comes. Thus there is no randomness, chaos, or need to solve the equation (23). Like Catherine, you have the ability to see everything.

16. Periodicity and Finiteness

16.1 Waveforms

In this section we point out that every object in the universe has some universal features, which will help to justify that the universe is periodic and finite. The alternative, which is infinite, is meaningless. It is important to understand that infinity is false and therefore is the source of all problems. Real numbers has infinity, therefore mathematics is false. Money is a real number, therefore it has infinity, and so money is free and abundant at its source, which is the central bank. Everything is false in our world because they are created by false real numbers and false money. It has been shown that the only truth and MLE (moneyless economy) can bring the eternal global peace on earth [Das 2020a].

- (1) Every object has some materials and one soul. That soul has created that object using that material.
- (2) All objects take birth, die, and then reincarnate.
- (3) They all age towards death. The death time is precisely predictable and is planned by destiny.
- (4) All objects interact with all other objects, simultaneously and continuously.



Item one says that objects cannot exist only as energy, vibration, light or field, etc., as many scholars think. Nietzsche says, incorrectly [Nietzsche 1911 section-9], “The notion of space first arose from the assumption that space could be empty. But there is no such thing as empty space. Everything is energy”. It appears that he describes everything in terms of energy also, which cannot be correct. All properties are adjectives, and adjectives cannot exist without a noun. Like heat energy is a property of the sun. No sun means no energy or no light. Similarly, no strings or no antennas, mean no vibrations, etc. Item two says that every

life is periodic – it takes birth, dies, and reincarnates to repeat the life. Thus every life has four stages - (a) Birth and growth stage. (b) Maturity and work. (c) Decay of health and death. (d) Wait for some time to reincarnate to start the cycle again. This waveform is shown in Figure-2, and will be a periodic wave. Therefore the summation of all periodic waves, corresponding to all objects, will be a periodic wave also, with the same four-stage characteristics. The concept will be easier to understand if you remember the Fourier series. Thus the universe will also have a dark or night period (from 2 to 3), between the two consecutive daytime periods (from 1 to 2). It is so planned by the destiny law that the day time and night time for the universe are of equal length of some billions of years long.

16.2 Periodicity

Now we see how the existing literature, including mathematics, reveals periodicity. The matrix notation of the cause and effect law (23) indicates that the eigenvalues of the matrix can be complex numbers, indicating the periodicity of its solution. Of course, we have tacitly assumed that N in the expression (16) is a finite number. In the case of infinite dimensional mathematical theory, which is in operator theory, the eigenfunctions can be periodic also. We should always assume that mathematics is incompatible for nature and engineering. We are using it to present our thoughts in a compact form and borrow some ideas from mathematical theories.

Bible [Ecclesiastes 1:9] has an explicit statement regarding periodicity – “What has been will be again, what has been done will be done again; there is nothing new under the sun.” It indicates reincarnation also, since you are here now, you will be here again, and you were here before.

The eternal recurrence concept of Nietzsche is very well known in the western world. It says [Nietzsche 1911 section 6]

“Or there is no such thing as an endless number of changes, but a circle consisting of a definite number of them which continually recurs: activity is eternal, the number of the products and states of energy is limited.”

Gita also has a verse that says that the universe must be periodic. Just like we are born at different times, slowly grow, stay matured, and then slowly die, like in the figure-2, the same happens to the stars and galaxies of this universe, slowly and at different times, as per Samkhya. That is, the universe has a Brahma day (12 hours) and a Brahma night (12 hours), each one is several billion years long [G 8:17]. During the night the universe dies and remains empty. During the day the universe begins to grow again, the same way as it happened in the previous Brahma day. Here is another verse from Gita on rebirth of the universe:

[G 8:19] “Again and again, when Brahma’s day arrives, all living entities come into being, and with the arrival of Brahma’s night they are helplessly annihilated.”

16.3 Finiteness

A periodic system must vanish within its period. For complete annihilation, therefore periodic system must have a finite number of matter objects, thus making the universe itself finite. See Gita verse [G.8-19] as mentioned here before. It is also interesting to observe that a finite and eternally existing system must be periodic also.

Nietzsche says in [Nietzsche 1911 section 1] that the universe is finite.

“The extent of universal energy is limited; it is not "infinite": we should beware of such excesses in our concepts! Consequently the number of states, changes, combinations, and evolutions of this energy, although it may be enormous and practically incalculable, is at any rate definite and not unlimited.”

17. Infinity Applied to Nature

In this section we will explore what will happen to nature if infinity exists in nature. The concepts developed in this theory of the CEL will be required for this section. We will find that the nature will not be livable. Therefore infinity cannot exist in nature.

Infinity is a mathematical concept. We have seen that mathematics is false for nature and engineering, because it violates the definition of truth as given by T1. Mathematics creates problems whenever and wherever we use it in nature and engineering. However mathematics itself is a very precise and completely correct inside its own domain. And this domain is abstract and not a part of nature. Here are some basic problems with infinity.

17.1 Counting

Natural numbers can be used for counting things or objects of nature. But that will not be a mathematical activity. We have discussed it before, (M1): $1 + 2 = 3$; one orange plus two apples will give you three fruits. This violates mathematics, apples and oranges cannot be added, and the result cannot be fruits. Mathematics says, 1, 2, 3, are points on a straight line, located at equal distances apart. We add the distances, and only distances can be added. The result will be always a point, at some distance from the origin. So M1 as used for counting violates mathematics and M1 does not represent mathematics. Mathematics is a precise subject; it cannot be used casually to apples, oranges, or bananas. Only real numbers can be added, and addition must produce a single real number, not three fruits.

We cannot even use these numbers for counting. Only identical objects like points at distances and on a straight line can be counted. Thus one to one correspondence concept is not correct, when applied to apples and oranges, or stars and galaxies. This is so because no two objects are same or identical in the universe. You have definitely realized that two apples are not identical; they have different colors, shapes, sizes and even tastes. The same is true for any two humans, no two persons are identical. Men and women are obviously not identical. Thus counting of things in nature is not a mathematical or scientific process and cannot be meaningful.

Counting should not be used in any subject. Why do we need to count? Its only purpose is economics. But like mathematics economics is false also. Money is a real number and therefore money also violates the definition of truth T1. Money discriminates every object from all other objects. We have assigned money values to every object, and every human activity, none of which can be justified. Thus counting is a discriminatory process, because we are all different. Even every soul is different, because they have different experiences, different past lives, and different memories. Counting has the hidden

assumption - they are equal to numbers, which are points on a straight line. If you implement moneyless economy (MLE) then math and economics will vanish, but engineering and business will still remain and thrive [Das 2012d].

17.2 Compactness

Natural numbers or positive integers are infinitely many. It has a long list of numbers, you can keep counting, and it will never end. That is why this infinity is called the countable infinity. There is another kind of numbers, called real numbers, they cannot be listed, and therefore you cannot keep counting them. Between any two real numbers there are again infinitely many other real numbers. Such infinity, that is, the infinity of real numbers, is called uncountable infinity. There are many other types of infinities in mathematics.

Integers are part of real numbers. Rational numbers, which are ratio of two integers, are part of real numbers. There are irrational numbers, which cannot be expressed as ratio of integers, and they are like square root of two; e the exponential; π as used in measuring circles; etc., are all examples of them. Irrational numbers are also a part of the real numbers. There are more irrational numbers than rational numbers.

Real numbers have some kind of properties related to density, completeness, and compactness. Real numbers are compact, that is, air, water, or any fluid cannot penetrate them. A closed and bounded interval like $[0, 1]$ is a compact set of real numbers. Rational numbers are not compact, but between any two real numbers, there are infinitely many rational numbers. We normally identify integers as points on a line with space between them. This is to indicate that between two integers, there are no other integers. Thus integers do not represent a compact set. However, since integers are also infinitely many, you can pack as many of them on any interval, with infinitely small gaps between them, making the interval very much like a compact set, blocking air and water.

17.3 Objects of Nature

All the objects we see on earth and in the sky have finite sizes. Humans, animals, plants, planets, stars, galaxies, etc., all have finite sizes. What will happen if the size of an object becomes infinite? It will cover the entire space; wherever we look we will see that same object. In fact, we will be sitting on that object. Sun light will be blocked, there will be no life, there will be no air etc. The universe will be dead, lifeless, with no purpose. Therefore, we can say that there is no infinite size object in the universe. We can use the method of induction also to prove that all objects are finite and they all have the hereditary properties as mentioned by Bertrand Russell [Russell 1914].

The number of objects will be infinite only if the number of root material particles is infinite. Then we can see there are a few possible cases: (a) Universe is infinite and particles are infinite (b) Universe is infinite and particles are finite (c) Universe is finite and particles are infinite (d) Universe is finite and particles are finite.

The case (a), the universe is infinite and particles are infinite, is like the two dimensional real space in mathematics. Such space will be compact and dense. There will be no sun light; there will be no life, no air and no water. Our experience does not show such compactness characteristics of the universe.

The case (b), the universe is infinite and particles are finite, will indicate existence of lot of empty space. But there is nothing called empty space as Nietzsche mentioned. Thus this is not a possibility, because we know that the root material particles and the soul particles cover the entire space.

In the case (c), the universe is finite and particles are infinite, the particles are resources, abundance of resources will create and abundance of objects. So the universe must become infinite, which violates finiteness assumption of the universe. We have a similar situation on earth, we are polluting the earth and depleting the resources, because we have the abundance of free money, created by the central bank.

The case (d), the universe is finite and particles are finite, then seems to be the only meaningful and feasible case: a finite universe with finite size objects. That means the number of souls and the number of root material particles are both fixed and constant.

We have shown before, using the periodicity property of the life of all objects, that the universe must be periodic and therefore finite. Veda has the following verse that says the universe is finite [SK15-16]. This verse says that “every object is finite because nature is finite. The number of root material particles is a finite resource, and so all objects are finite.” Infinite number of root particles will give unlimited resources causing an infinite size object.

Conclusions

It is known that all the existing laws of physics are equivalent [Das 2012a] to the cause and effect law, and are briefly discussed here. However, this law from classical physics, which includes SR and QM, does not include reincarnation. To overcome this problem, the present article introduces the Vedic theory of two independent causes, which interact. It is the same underlying theory of all engineering. It is shown that the root efficient cause, which is the soul, has the intelligence and the consciousness property. As a consequence of this Vedic law we see that a 3D video is already stored permanently in the memory of the universe for all events, of past, present, and the future times. Also the concept of the root material cause shows that that the entire universe actually exists physically in the unmanifested form inside the root material. The efficient cause is required only to manifest them. However, we see that the cause and effect law (23) gives another meaningful explanation of the Vedic version of the law.

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