

2. THEOSOPHIC CONCEPTS RELATED TO TIME AND THEIR PHYSICAL ANALOGS

Foreword

A wide distribution of models pertaining physical time results from their close numerical correspondence to the observed physical phenomena, which makes them very useful tool for solving diverse application and scientific problems. On the contrary, these models set up the respective bounds on the spectrum of phenomena that could be dealt with. This is because the models, in themselves, cannot neither exhaustively describe the surrounding world, nor engender qualitatively new concepts; in other words, they cannot reveal the absolute, or universal truths, they may only reflect them.

For revealing new ideas it is required to get concepts from outside of the existing physical theories. Thus, the Newtonian mechanics was presenting a perfection until the Special relativity (SR) was proposed that revealed a new picture of the world. In its turn, the SR was replenished by the General relativity (GR), and the latter – by the Λ CDM of the expanding Universe. And nobody would bet this to be the last one.

In that way, more and more complicated models are still invented with the aim to “correct” the existing discrepancies in theories and observations with the use of the extra concepts. However, this path leads not so to the growth of consistency of the principal concepts, but to increase in the number of new “patches” on the original models and, thus, to the growth of the number of theories (one could hardly miss if he would estimate the number of existing theories by the number of theorists).

But what is the way out?

To find it, we must frankly admit, first of all, that the existing physical *models* are evidently *insufficient* for dealing with a series of acknowledged phenomena pertaining to time and space which cannot be formulated (and, hence, explained), nor observed with the use of existing physical models and instruments. But this does not rejects the existence of these phenomena.

On the other hand, the recently uncovered concepts of the *Ancient Wisdom* (also known as *Theosophy*, or *Esoteric Doctrine*) are practically lacking the numerical relations relative to time and space; this evidently hampers perception of these concepts by those who have used to deal with a more or less exact, but numerical concepts. Meanwhile, after having been formalized these concepts may be used for obtaining much more adequate physical models.

One may believe or disbelieve this possibility, but general consistency of this statement is supported by the fact that a significant part of the basic concepts pertaining to time and space that were revealed in *The Secret Doctrine* [2] (which includes *Cosmogenesis* and *Anthropogenesis*), although in a verbal form, later on were embodied in the physical theories in force.

The author of this work does not want to say that the modern physics “was revealed” in that Doctrine; in this place he means to pay your attention to the fact that publication of the *Theosophical concepts pertaining to space and time* (that were presented in that Doctrine and will be considered below) *do not follow the physical discoveries, but precede them*. And this is not strange because on preparing that writing H.P. Blavatsky did pay special attention to correlation of the revealed concepts with those that dominated in the physics of XIX century. Moreover, she did appeal not to take that Teaching on faith, but to check and test every statement; by following this approach we will show that it is actually so.

And although the physical concepts have changed beyond recognition since then, the Theosophical concepts presented in that Doctrine still remain in force and are realized in a small degree only. In this sense the conceptual resources The Secret Doctrine are far from exhaustion and can be used for obtaining new mathematical models which may be used both in physics and in other branches of knowledge (history, psychology, etc.) for better understanding of those “inexplicable” phenomena which Theosophy refers to *interaction* of the *physical* and *subtle planes*; (at this point of the discussion, the former may be likened to the surrounding “material” world, whereas the latter – to the sphere of consciousness).

This allows us to study these phenomena from a more broad point of view (but still on the ground of mathematical models) than from those “materialistic” positions which are still tried to hold unshakable. To this end it should be noted that Blavatsky herself was appealing to creative use of *Theosophy* and considered it as the *synthesis* of *science*, *religion* and *philosophy*.

Unluckily, only few have followed her appeal: the overwhelming majority of scientists do not adventure referencing this work as a scientific source, while the same majority of theosophists have locked themselves in the letter of the Doctrine and do not allow themselves to desecrate the Teaching by applying it to studying the phenomena on the ground of *Scientific method*.

Moreover, an astonishing ignoring of the facts and concepts presented in this Doctrine continues to take place even by those who create their own “Theories of Creation” as if it is possible for an individual to reveal the *System of mysteries* which specify the evolution of the Universe.

At the same time, it should be noted that studying the Doctrine does not present a simple reading. In particular, because an aspirant will find in it a lot of special terms and unusual concepts. For this reason a series of the required and most important esoteric concepts are explained in the subsequent section, which relate to time and space. But this description does not pretend to present a manual – it is just an overview where the necessary terms and concepts are briefly described for subsequent use; the author hopes that the supplied quotes and references will benefit to better understanding of their essence.

2.1. The Secret Doctrine

The key to true symbolism (and even to the Hinduist systems) is hidden now behind the giant peaks of Himalayas. And any other key is unable to open the crypts where the intellectual treasures collected by the primal interpreters of the Divine Wisdom turned out to be buried for millennia [“The guiding light of Unknown”, HPB]

Apart from the physical and evolution theories accepted in the official scientific circles, at present there exist many theories which describe the evolution of the Universe (Cosmogenesis) and/or Humanity (Anthropogenesis); in various combinations, they are based on the observed phenomena, authors’ hypotheses, mathematical models, religious dogmas, and ancient teachings (but actually – on their remainders).

In the long run it is the matter of private choice – which of these systems to choose, or to reject all of them. But there is one among them which describes the evolutionary processes in nature and society as a single whole and undoubtedly deserves attention just by its title page [2] motto: “**There is no Religion higher than Truth**” which appeals not to get anything on faith, but to make yourself certain of the verity of the presented statements. By the title of this book [2] the Teaching got the name **The Secret Doctrine (SD)**; as the work was not “fabricated”, but just written down by Helen Blavatsky, with respect to its actual sources it is also called **Esoteric (Eastern) Doctrine**, or **Teaching of Mahatmas**.

The former naming reflects the fact that the system of primary concepts presented in this work was revealed firstly in the observable historical retrospective; in the ancient times a disclosure of these truths gave grounds for the death penalty (the *exoteric* are those occult statements which were not considered secret). The latter naming reflects the source from which this Teaching was taken (some letters of Mahatmas are presented in [6]).

As far as the concepts of this Doctrine are further considered alongside with the physical ones, for distinctness we will call them *esoterical*. At the same time, with the aim *to exclude confusion we do not use this attributive* in a broad sense – *for referencing the terms and concepts* that are considered in *other occult or mystical works*, even if they are called esoterical.

This note is very important at our days, when only a lazy does not put forward his own theory relative to various spheres of Unknown. At that, seldom person names his theory by its actual name – a hypothesis, but affirms his opinion as the truth. And what is much more pitiful, almost nobody correlates his own theory *with the known occult and esoterical concepts relative to the subtle planes* (Astral, etc.), irrespective of whether these concepts were described by H.P. Blavatsky, [Eliphas Levi](#), or other occultist, as if these ideas revealed in XIX century became obsolete (if those “theorists” are acquainted with these concepts at all).

The Ancient Teaching on *Cosmogenesis* (evolution of Cosmos) and *Anthropogenesis* (evolution of Humanity) in its general aspects was firstly presented in 1877 via Helen P. Blavatsky (HPB) in the “**Tsis Unveiled**” [1] and in a series of her articles [14]. After then, Mahatmas decided to reveal more details pertaining to the Teaching; on the ground of their letters [6, 7] A. P. Sinnett presented [4] its basic ideas in 1883. In 1888 Blavatsky issues **The Secret Doctrine** [2] which presents the most complete disclosure of those parts of the Teaching of Mahatmas that were allowed for publication in XIX century. The third volume [3] of the Doctrine was published after passing of HPB to the better world.

Further on, in the XX century Mahatmas disclose new aspects of the Doctrine under the name of Agni Yoga [8]; this time – via Helen I. Roerich. Some other concepts and important facts which they have passed on are presented in her letters [9, 10], notes [11, 12], and works of her husband and fellow-fighter – Nicholas Roerich [13]. In these revelations the meaning of the Doctrine for the New Era was described with references to the current processes on the Earth. In these works and letters the esoteric motives were explained relative to the most important events of the XX century.

There are other authors being worth mentioning as well. However, as far as this work is not aimed to provide comparative analysis of esoteric studies, we do not consider them (the more so since a lot of authors take their concepts from a doubtful sources).

For these reasons, in the below considerations we consider just those esoteric concepts that were presented by the indicated authors, mainly – in [1 – 14].

Within a *system approach*, the Secret Doctrine describes the creation and evolution of the Earth within the Solar System (and partly – the outer Space) and how it is associated with the creation and evolution of Humanity. Alongside, it explains how these processes are reflected in the world religions and artefacts, and how they are correlated with the scientific concepts of XIX century.

Within the frame of existing historical data the publication of the Doctrine is unexampled, since its main ideas were kept secret (viz. remained esoteric) by the Initiates for millennia, and only small part of them was made public (viz. became exoteric) in religious texts, but in a simplified and symbolic presentation (therefore, in a distorted way) – with respect to the level of the this or that nation. Therefore, with a different completeness, but principally the same ancient truths can now be found throughout the world – in Vedas, Buddhist treatises, Torah, Bible, Gospels, Codices of American Indians, etc.

Paradoxically, but the primal symbols and artefacts in different religions and continents are still the same (See, for instance [23, 25 - 27]) regardless that these simplifications were necessary for presenting the primary complicated ideas, none of the Great Teachers of humanity (Gautama Buddha, Krishna, Christ, et al) was writing His Teaching Himself, almost all the manuscripts were subject to distorting corrections [2, 27]. Therefore, it is not easy, if possible at all, to retrace the source concepts – that is to restore the *system* of primary Doctrine concepts – by their modern reflections.

That is why the publication of Mahatmas' inspired works is so important for restoring the *system* of primary Doctrine concepts pertaining to time and space, or rather a *subsystem*, since a series of concepts, cycles and their terms is still kept secret since knowing these data may allow the evil to cause a catastrophe.

Being notified, this knowledge, formally, cease to be esoteric (viz. secret) and becomes exoteric (viz. disclosed). However, the fact that it is conceived (as a system of concepts) but just by a limited number of persons allows us to use the attributive “esoteric” for relating the Doctrine concepts; the more so since far from all its aspects are revealed and understood, and not all terms are disclosed.

The attempts to spurn this Teaching, both in the form of the Secret Doctrine and Agni Yoga, come from the both flanks: both from the church and materialistic (viz. based on measurements) science. By having no forcible arguments, they either ignore the Doctrine, or reject it by using scholastic demagogy, or even do not disgust to defame it by disseminating lies and slander about those through whom the Doctrine was passed. Thus, more than a century has passed since Helen Blavatsky had come to the better world, but the old lies remain the only arguments against the Secret Doctrine. Nevertheless, the validity of the Doctrine is acknowledged, again and again, by new discoveries in science and realizations of predictions.

As well, many people who are neither clericals, nor scientists are out of sympathy with this Teaching; first of all, as I may suggest, since it appeals to the concept of Karma which rejects the absolution in all its forms and requires the people to be honest-minded.

But those who wish to understand the Doctrine must remember that they have to apply great efforts while studying the books in which it is presented since they are not written as conventional manuals; not only the text is important, but the context the perception of which requires an aspirant to tune his intuition to the subtle planes.

Besides, he must understand that Mahatmas are obliged to follow the principle of concealment of definite esoteric truths; it tells that each of them is to be announced at appropriate time for these truths not to be distorted (e.g. by simplifications) or used for evil purposes (intentionally or accidentally); in particular, these may refer to concepts, terms and numerical data. Aversion of this principle engendered sharp criticism in the address to the Teaching and even rejection of it as the whole by some aspirants. But they should remember that the same idea is stated in the Gospel:

Do not give what is holy to the dogs; nor cast your pearls before swine, lest they trample them under their feet, and turn and tear you in pieces. [Matthew 7:6]

This way, everybody follows the path of his own choice, and this choice is not simple at the culmination of Cali Yuga.

2.2. Cyclic Evolution in Rounds and Races. Overview of the basic concepts

The fount of life being inexhaustible, for it is the true Arachnea {spider} doomed to spin out its web eternally – save the periods of *pralaya* [6/13]

2.2.1. The essence of the human being

By their “density” (varying from “spirit” to “matter”), 7 main *planes* of the matter are distinguished in the Space; each of them is divided into 7 *subplanes*. They are not separated in the space but fill every region as the electromagnetic fields imbue the area occupied by a human body.

The *physical plane* is the lowest; we perceive it as the surrounding world. Collectively, the higher ones (*astral*, *mental*, etc.) are called *subtle*; they are not directly “seen” by a man, but conceived, since in a normal condition a man presents the unity of 7 *principles* which *present his bodies in the respective planes*.

The esoteric number of these principles and their names were masked for millennia. For this reason in the exoteric division they are divided into three parts – *Spirit*, *Soul*, and *Body*. As far as the disclosed names of these principles bear the Eastern names and depend on the language, both their correlatives and Eastern names are used in the Doctrine [SD1-153]:

Principle*	Esoteric Buddhism and others	Names reflecting the Western analogs
7 (1)	Atma	Spirit
6 (2)	Buddhi (Spiritual, or Divine Soul)	Soul (Vehicle of Spirit)
5 (3)	Manas (Human Soul)	Mind
4 (4)	Kama Rupa (Vehicle of Desires and Passions)	Animal Soul
3 (5)	Linga Sarira	Life
2 (6)	Prana	Astral Body
1 (7)	Sthula Sarira	Physical Body

* The inverse *numbering* of the principles is also used (as shown in brackets), but Atma is always the highest

The “**MONAD**” is the combination of the last two “principles” in man, the 6th and the 7th, and, properly speaking, the term “human monad” applies only to the dual soul (*Atma-Buddhi*), not to its highest spiritual vivifying Principle, Atma, alone. But since the Spiritual Soul, if divorced from the latter (Atma) could have no existence, no being, it has thus been called. [SD1-178]

Since in the evolution of the monad the positive experience is accumulated in Manas, the upper part of the latter containing these indestructible experiences is also considered as belonging to the monad.

“*Pilgrim*” is the appellation given to our Monad (the two in one) during its cycle of incarnations. It is the only immortal and eternal principle in us, being an indivisible part of the integral whole – the Universal Spirit, from which it emanates, and into which it is absorbed at the end of the cycle. [SD1-16]

The *two higher principles can have no individuality on Earth*, cannot be man, *unless* there is (a) the *Mind*, the *Manas-Ego*, to cognize itself, and (b) the terrestrial *false personality*, or the body of egotistical desires and personal Will, to cement the whole, as if round a pivot (which it is, truly), to the physical form of man. It is the Fifth and the Fourth principles – *Manas* and *Kama rupa* – that *contain the dual personality*:

- the *real immortal Ego* {or **INDIVIDUALITY**, the *Higher Ego*, impersonal **SELF**, *incarnating principle*}, if it assimilates itself to the two higher {viz. Atma + Buddhi +Manas}; and

- the **false and transitory PERSONALITY** (*personal EGO*), the *mayavi* or *astral body*, so-called, or the **animal-human Soul** – the two having to be closely blended for purposes of a full terrestrial existence. Incarnate the Spiritual Monad of a Newton grafted on that of the greatest saint on earth – in a physical body the most perfect you can think of – i.e., in a two or even a three-principled body composed of its Sthula Sarira, prana (life principle), and linga sarira – and, if it lacks its middle and fifth principles, you will have created an idiot – at best a beautiful, soul-less, empty and unconscious appearance. "Cogito – ergo sum" – can find no room in the brain of such a creature, not on this plane, at any rate. [SD2-241]

As far as **on the plane of personality Manas** is the first and defines the ability for abstract thinking, it is also called the “**Dragon of Wisdom**”, the **Intelligent principle**, the **re-incarnating principle**, the **permanent EGO** [SD1-219].

The **personality** includes three lower principles (viz. the 4th, 3rd and 2nd), whereas the lowest – 1st principle corresponds to the **physical body** which we can see.

In exoteric religions these three combinations of principles are called the **Spirit, Soul and Body**.

Those who have been called **Lipikas**, the Recorders of the **Karmic ledger**, make an impassible barrier between the personal EGO and the impersonal SELF. [SD1-229]

In the chain of incarnations the number and contents of the principles composing a man differ.

The unity of 7 principles presents a living man, as we know him, in a normal situation. But in some cases (in one's old age and in case of depraved way of life) the Higher Ego may leave a living man; he remains alive and capable of functioning (physically and mentally) but lacks the ability for abstract thinking and spiritual activity – he becomes an empty shell that lives with the use of the experience accumulated in the lower spheres of mind, mainly – by instincts and habits.

On the contrary, some evolutionary advanced human beings may live consciously in the subtle planes without physical bodies, but are able to become visible for us owing to thickening their astral bodies.

However, if we digress from such variations, in the chain of incarnations a typical evolutionary situation with principles is as follows.

Namely, this is the **Higher Ego** (or monad with the Manasic accumulations) which **performs the chain of incarnations**. It accumulates positive aims, intensions and skills; negative deeds and thoughts cause definite problems in unconditionally final after-death period and form a negative Karma for the subsequent incarnations. The aim of the Karmic consequences is to put the Ego in the situations where it should teach itself to do and to think properly. The individual balance between the “positive” and “negative” Karma is, in fact, explains the difference in living conditions after the birth. In general, this is the way how and why the Higher Egos evolve. Thus, the Secret Doctrine states

... the fundamental identity of all Souls with the Universal Over-Soul, the latter being itself an aspect of the Unknown Root; and the obligatory pilgrimage for every Soul – a spark of the former – through the **Cycle of Incarnation** (or “**Necessity**”) in accordance with **Cyclic** and **Karmic law**, during the whole term. [SD1-16]

The **Higher Ego** (Monad, or individuality) **becomes** a **personal ego** when it incarnates; and something remains of that personality through Manas, when the latter is perfect enough to assimilate Buddhi.

The **personality defines** the **features and desires** of a man (his emotions, rational mind, memory, etc.) which characterize him as a unique person **with respect to the current Karma**; with the except of the Highest Spirits this personality will never come again as a person with the same properties pertaining to the 1st – 4th principles.

After the physical death, firstly the physical body and, then, the 2nd, 3rd and 4th principles are sequentially separated and dissolved in the respective planes, but not the Higher Ego which waits until the next incarnation. Meanwhile, the empty (relative to the 3 upper principles) shells composed of the bodies pertaining to the 2 – 4 principles may exist in the respective planes from weeks to dozens of years; after then, these bodies dissolve in these planes. Namely these ***empty shells*** which may retain the remains of memory and thoughts of the former personalities ***may come*** to the ***living beings*** in night ***dreams*** and at ***mediumistic séances***, but ***not the Higher Egos***.

With a new incarnation the Higher Ego “descends” into more dense planes for “covering” into bodies of new principles that form new personality with respect to the Karma of the preceding incarnations. At that ***a body of more subtle plane monitors forming of the denser one***; thus, on carrying of a pregnancy, the principles are “condensed” sequentially around the Ego so that the physical body is formed the last.

Therefore, the ***actual life of monad*** (or Higher Ego) ***endures continuously***, and the ***physical death*** means ***just a birth in a new plane of existence***.

As far as the human being is allotted with the consciousness, the ***law of Karma presumes a free will***.

The former, as the law of Cosmic Justice, to any cause prescribes a reaction with the aim not to “punish”, but to monitor the evolution in the prescribed direction; in particular, by creating the conditions in which the free will must be applied so that the man attains a stable adequate reaction. Figuratively it may be put so that Karma may be “positive” and “negative”; the former creates favorable conditions for evolution of the person, whereas the latter – forces him to correct his shortcomings by putting the man in the same situation again and again, until the aim is achieved; if the man persists and does not change his reaction, he suffers from more frequent and more difficult incarnations. However, in contrast to a wide spread opinion it must be said that a ***human monad does not incarnate*** in the ***animal*** world; but those who persist in evil could be sent to the Eight Sphere for “recycling”: they would start their evolution in a more complicated conditions and from the very beginning.

The Cosmic status of the Law of Karma is so high that only the utterly High Spiritual Beings and in special cases may have the right and ability to change the prescribed by this Law. That is why it is very doubtful that any priest or sorcerer can grant absolution from the sins: a ***magical or religious ritual may postpone***, and thus weigh down, ***but not abolish the decision of Karma***. But ***the free will may***, if at the moments of choice being granted by Karma the man changes his thoughts and reaction intentionally.

Therefore, under the control of Karma (personal, planetary, etc.) the higher plane (principle, or body) monitors the manifestation of the lower one. In much the same fashion, before any event appears on the physical plane, it must be formed on the astral plane; as well, before appearing on the astral plane – it must be formed in the mental plane, etc.

Namely this law makes the basis of fortune-telling and ***prophecies*** by those who are able to ***perceive information from the subtle planes***: the thinner the plane, the more reliable the forecast.

As well, it allows to ***change the future*** on the ground of ***exerting influence*** on the development of the respective events (or rather projects of events) ***on the subtle planes***. Such changes ***do not cancel the Law of Karma, but bring in a confusion***: a Karmic feedback will re-arrange the consequences with respect to the intrusion and, additionally, will prepare the consequences for the intruder; but since this requires some time, all these consequences might be not immediate.

Development of events and evolution in mineral, vegetable and animal kingdoms

In a similar way, the ***evolution*** takes place in the ***mineral, vegetable and animal kingdoms*** with the exception that their ***higher principles are in embryo***; the mineral forms evolve in vegetable ones, then – in animals, and the animals – in humans. The evolution in each kingdom requires myriads years. In these periods the monads evolves in cycles of manifestation and dissolution; the former corresponds to what we used to call “life” (viz. the phase of development, or namely evolution in physical incarnation), the latter – to “death” (viz. the phase of “rest”, when monad remains in the subtle planes till the next incarnation).

2.2.2. The cycles of synchronous evolution of planet and kingdoms

2.2.2.1. The greater cycles of evolutionary activity and rest

The Eternity of the Universe in toto as a boundless plane; periodically “the playground of numberless Universes incessantly manifesting and disappearing”, called “the manifesting stars”, and the “sparks of Eternity”. “The Eternity of the Pilgrim” is like a wink [SD1-16]

Matter or Substance is septenary within our World, as it is so beyond it. Moreover, each of its states or principles is graduated into seven degrees of density [SD1-289].

At that, losing or obtaining physical and some other principles (or “bodies”) explains the background of the concept of recurring incarnations and what, in essence, reincarnate.

Evolution of monads takes place in *separate incarnations*, within *one kingdom*, and in the *rising sequence of kingdoms*. As a rule, with the beginning of each new cycle of evolution (on the same or another planet) the basic part of monads of each kingdom, that completed their evolution on some planet, transfers to the next kingdom, but not at once. Thus, the basic part of the *animal kingdom* monads that evolved *on the Moon* had *started to evolve* on the *Earth* as *humans*; millions years ago this inflow of animal monads had stopped and till the end of the current manvantara no new human monad would appear from the animal kingdom. However, new “human” monads may still come from other planets, and some monads that currently evolve on the Earth may leave it to continue their evolution on other planets.

The evolution of all kingdoms proceeds synchronously relative to each other and to the evolution of the planet where they reside. As the monads, the planets and the Solar system have their own periods of “activity” (collectively called *manvantaras*) and “rest” (*pralayas*) of different types; *the duration of pralaya and manvantara of the same type are the same*, as a *night of Brahma* is equal to the *day of Brahma*.

It thus becomes apparent how perfect is the *analogy* between the processes of Nature in the *Kosmos* and in the *individual man*. The latter lives through his life-cycle, and dies. His “*higher principles*,” corresponding in the development of a planetary chain to the cycling Monads, pass into *Devachan*, which corresponds to the “*Nirvana*” and states of rest intervening between two chains. The Man's *lower “principles”* are disintegrated in time and are used by Nature again for the formation of new human principles, and *the same process takes place in the disintegration and formation of Worlds*. Analogy is thus the surest guide to the comprehension of the Occult teachings. [SD1-173]

For the Earth (Solar System – SS) these periods are called **MANVANTARA** (Maxamanvantara) and **PRALAYA** (Mahapralaya, respectively); one referring to the active periods of the Earth (SS)}, the other to its times of relative (*Obscuration*) and complete rest (*Dissolution*) – according to whether they occur at the end of a “Day,” or an “Age” (a life) of Brahma. These periods, which follow each other in regular succession, are also called *Kalpas*, small and great, the minor and the Maha Kalpa; though, properly speaking, the Maha Kalpa is never a “day,” but a whole life or age of Brahma [1-368]

In brief, the structure of these periods of activity and rest (without the details) is as follows.

*** AGE OF BRAHMA (Maxamanvantara)** and the subsequent **UNIVERSAL PRALAYA**

Within this age the galaxies become apparent (“created”, relative to a physical understanding of matter) and evolve; during Pralaya they are dissolved (“dead”, but just to a physical perception).

*** MAHAMANVANTARA** and subsequent **SOLAR PRALAYA**

Within these periods the same takes place, but with the star systems (e.g. with the Solar system including the Earth). During the former the planets become apparent (“created”, or caught as a passer-by) and evolve; in Pralaya they are dissolved (“dead”).

* **MANVANTARA** and subsequent **PLANETARY PRALAYA**

During the former period *each kingdom starts and completes its cycle of evolution on a definite planet*; with coming of *planetary Pralaya* they dissolve (“die”), but after the Pralaya they start the evolution one level higher (the vegetables – as animals, animals – as humans, etc.) – on the same, other or new planet. A *manvantara* presents a succession of **7 cycles**, each consisting of a **Round** and (**Minor**) **Pralaya**.

* **ROUND** and subsequent **Minor PRALAYA**

Within a Round a planet develops its **Globes** (or **Spheres**) pertaining to respective principle in an ascending order. However, *during* the (intermediate) **Minor Pralayas** the planet *do not dissolve*, but transfer to **Obscuration** (remains visible physically, but the “Life” of four kingdoms transfers to the upper planes; this is the current state of **Mars**).

Each **Round** also consists of **7 cycles – rings** and subsequent (**inter-Ring**, or **inter-race**) **PRALAYAS**

* **RING** and subsequent (**inter-Ring**) **PRALAYA** (in a form of Cataclysms, as with Atlantis)

The **Rings** present the *basic cycles of evolution of the 7 Root Races*; a transfer to evolutionary domination of the next Race takes place after a global cataclysm presenting an after-ring pralaya, although the new races appear long before the end of the ring, and the older races continue to co-exist with the new one.

Thus, at present the Earth is in the 5th Ring of the IVth Round; in this Ring the current Root Race is **Arian**; the preceding one was **Atlanteans** that had superseded the **Lemurians**.

In each Root Race seven subraces are to appear. The peoples of Europe and North America in their majority belong to the 5th subrace of the 5th Root Race. The 1st subrace of the 5th Root Race appeared in Central Asia (modern India and other countries) and its representatives are still alive. The successors of the 4th (Atlantean) Root Race dominate in Latin America and Africa, while those of the 3rd (Lemurians) – in Oceania and among the aborigines of Australia. Meanwhile, there are some prompts as to appearing of the representatives of the 6th and even 7th subraces of the 5th Root Race.

Note to this end, that each monad must have at least one incarnation in each subdivision of each subrace of each Root Race; so, every “Arian” once was “Atlantean”, as well as “Lemurean”.

2.2.2.2. Pralayas and Manvantaras

Pralayas

There will be, as there ever were in time and eternity, **periodical dissolutions of the manifested Universe**, but (a) a partial pralaya after every “Day of Brahma;” and (b) an Universal pralaya – the MAHA-PRALAYA – only after the lapse of every Brahma's age. But the scientific causes for such **dissolution**, as brought forward by exact Science, have nothing to do with the true causes [SD1-552]

However, **Pralaya** – is not a term that applies only to every “Night of Brahma,” or the **world's dissolution** [SD1-53] following every Manvantara, equal to 71 Maha-yugas. It applies also to each “**obscuration**” as well, and even to every **Cataclysm** that puts an end, by Fire or by Water in turn, to each Root-Race. [SD2-307]

Namely, Occultism divides the periods of Rest (Pralaya) into three basic types [SD1-172] (there are many other minor ones, but with these we are not concerned at present):

* The three chief pralayas as the periods of “**dissolution**” (“**total destruction**”) of the respective object are: the **Universal Pralaya (Maha-Pralaya, or Brahma – Pralaya)** at the close of the “Age of Brahma”; the **Solar Pralaya**, when the whole system is at an end; the **planetary Pralaya**, when seven Rounds are completed.

This **dissolution** is **for things visible, not for the Arupa**, formless, world. [SD2-69]

* The period of “**obscuration**”, when the waves of life left their physical forms:

the *Minor Pralaya* that follows the Rounds – a pause of rest which creates an impassable gulf between two Rounds until the time came for a renewed cycle of life [SD1-161].

Meanwhile, **obscuration** (after an intermediate Round) **leaves the worlds in status quo**:

It is not the physical organisms that remain in statu quo, least of all their psychical principles, during the great Cosmic or even Solar pralayas, but only their *Akasic or astral “photographs”*. But *during the minor pralayas*, once over-taken by the “Night”, *the planets remain intact, though dead*, as a huge animal, caught and embedded in the polar ice, remains the same for ages. [SD1-18]

* The period of abrupt **geophysical and climatic changes** that do not stop physical life in the whole: the *inter-Ring cataclysm* at culmination of each Root Race that causes mass extinction of people and animals.

Manvantaras

The Cosmogogenesis of the SD describes (up to the 4th Sloka of Stanza VI) general aspects of the process of coming of the whole Universe to manifestation after the last Mahapralaya or *Universal destruction*, which, when it comes, *sweeps out of Space every differentiated thing, Gods as atoms*, like so many dry leaves. From this verse onwards, the Stanzas are concerned only with our Solar System in general, with the planetary chains therein, inferentially, and with the history of our globe (the 4th and its chain) especially. [SD1-151]

So, the “Creation” is not “producing of nothing”, neither a “producing from unknown” (as, for instance in the hypothesis of the Big Bang), but rather a coming of the formerly existed into new physical manifestation, as developing in photography:

The Initial Existence in the first twilight of the Maha-Manwantara (after the MAHA-PRALAYA that follows every age of Brahma) is a CONSCIOUS SPIRITUAL QUALITY. In the manifested WORLDS (solar systems) it is, in its OBJECTIVE SUBJECTIVITY, like the film from a Divine Breath to the gaze of the entranced seer. It *spreads* as it issues from LAYA *throughout infinity* as a colorless spiritual fluid. It is on the SEVENTH PLANE, and in its SEVENTH STATE in our planetary world. [SD1-289]

In more detail we consider this very intimate process below. Here, we would like to premise the subsequent examples by the following quote:

Mind is a name given to the sum of the states of Consciousness grouped under Thought, Will, and Feeling. During deep sleep, ideation ceases on the physical plane, and memory is in abeyance; thus for the time-being "Mind is not," because the organ, through which the Ego manifests ideation and memory on the material plane, has temporarily ceased to function. A noumenon can become a phenomenon on any plane of existence only by manifesting on that plane through an appropriate basis or vehicle; and during the long night of rest called Pralaya, when all the existences are dissolved, the "UNIVERSAL MIND" remains as a permanent possibility of mental action, or as that abstract absolute thought, of which mind is the concrete relative manifestation. The AH-HI (*Dhyan-Chohans*) are the collective hosts of spiritual beings – the Angelic Hosts of Christianity, the Elohim and "Messengers" of the Jews – who are the vehicle for the manifestation of the divine or universal thought and will. They are the Intelligent Forces that give to and enact in Nature her "laws," while themselves acting according to laws imposed upon them in a similar manner by still higher Powers; but they are not "the personifications" of the powers of Nature, as erroneously thought. This hierarchy of spiritual Beings, through which the Universal Mind comes into action, is like an army – a "Host," truly – by means of which the fighting power of a nation manifests itself, and which is composed of army corps, divisions, brigades, regiments, and so forth, each with its separate individuality or life, and its limited freedom of action and limited responsibilities; each contained in a larger individuality, to which its own interests are subservient, and each containing lesser individualities in itself. [SD1-38]

2.2.2.3. Examples

Of course, very seldom planet in the Universe would be adapted for human life such as exists on earth (re to temperature, air contents, etc.), for even a volcano eruption or extremal temperatures put the life out of norm. “But this fact and the considerations to which it gives rise, have reference only to the possibility of the existence on these planets of human life *as known on earth*” [SD2-707].

In the 19th century the Doctrine told that almost all planets are inhabited, but their forms of life are quite different. In particular, it tells that at present **Mars** is in a state of *obscuration*, and **Mercury** just beginning to get out of it [SD1-165] – that is why we cannot find the remnants of *physical* life on Mars.

What is the most important, the Secret Doctrine states that there are no orphan civilizations in the Universe: not only a care is taken for any evolution by the higher civilization(s), but an intense teaching; from this point of view a spontaneous appearing of intellectualized race is nothing more than a fable of ambitious materialists.

But where do these Teachers live? Little was said in the 19th century:

Every world has its parent star and sister planet. Thus **Earth** is the adopted child and younger brother of **Venus**, but its inhabitants are of their own kind. ... All sentient complete beings (full septenary men or higher beings) are furnished, in their beginnings, with forms and organisms in full harmony with the nature and state of the sphere they inhabit. [SD2-33]

But in the 20th century much more were added relative to the evolution on the planets of the Solar System. To this end the following overview of the Mahatmas’ letters to Helen Roerich [11] may be given.

There is one chain of the Hierarchy of Light, which continues into Infinity, and all the true Carriers of Light who appear and who are still on our Earth are links of it. Certainly, the Sons of Light, who came from the higher worlds (Venus and Jupiter) to our planet at the end of the Third Race of our Round for the hastening of the evolution of humanity, are the Greatest Spirits, who are at the head of the Hierarchy of Light that is the nearest and most accessible to us, owing to karma. They are the progenitors of our consciousness; to them, we owe our mental development. And, of course, They belong to the Chain of the Builders of the Cosmos. Each such Builder must pass through human evolution in order that later He may rise as the head of this or that planet. [9]

Verily, compared to us Earth-dwellers, Christ and Buddha are indeed far-off stars of the Spirit. Let us remember that They, and also the Lord Maitreya, came from Venus at the dawn of the formation of physical man, therefore They are our Divine Forefathers and Masters. [9]

At present, the *humanity of Venus* is in the **7th Root Race of the 5th Round** and thus is not aggravated with the first principle, viz. Physical Body. The evolution on this planet, in nuances, goes in other way than on Earth. The level of general and, especially – spiritual (Buddhi, the 6th principle) development of Venusians is incommensurably higher than that of the Terrestrials:

Human evolution is regarded as the crown of the Universe, but we know that the earthly man is still very crude in his form and tissues when compared with, let us say, the dwellers of Jupiter and Venus. [9]

However, the level of intellect (Manas, the 5th principle) of the latter in definite sense is more developed. This is so because the advantages and disadvantages of each planet reflect both the evolutionary level of its inhabitants and the peculiarities of the elements composing its core and the bodies of their principles.

In **Earth**, the development of mentality is highly stimulated by overcoming the difficulties that originate from variations of the states of matter, from Karmic consequences of evolutionary crimes of the 3rd and 4th Root Races, and, mainly, from confrontation of the fallen angel (responsible for the Earth) to the Hierarchy of **Dhyan-Chohans** of this and other planets, that engenders and stimulates distribution of evil influence (especially during the last century) which threatens the existence of the Planet itself since this influence propagates throughout the worlds of the Solar system (the World wars and humanitarian cataclysms of the 20th century are *the reflection* of the Armageddon that took place in the middle of the 20th

century in the subtle planes): the planets are gradually “die”, or fall to pieces – depending on the behaviour of the humanity of the planet which but itself may burn its home to fire.

If the evil influence will be defeated, the Terrestrials would also leave their current “animalistic” *physical* bodies and continue the evolution in the compacted astral bodies [10].

The spheres of various density are developed in the Space (including the vicinity of the Earth) incessantly, whereas the spheres corresponding to the higher principles (or planes) are designed and created just by the highest Spirits (Dhyan-Chohans); in these spheres the thought-designs are firstly fixed, and only after this forming they are transferred to a more dense sphere for realization. These spheres, which form the globes of this planet, are formed during billions of years; namely in these spheres the bulk of monads exist between the incarnations.

The *humanity of Jupiter* is in the **6th Root Race of the 5th Round** and thus Jovians are almost as high in their evolutionary development relative to the Terrestrials as Venusians, and do not require physical bodies.

This means that seldom Terrestrial monad could be accepted on Venus or Jupiter – only that the Spiritual level of which more than one Round higher than ours. This means that in case of explosion of our planet the overwhelming majority of Terrestrials would probably start new manvantara on **Mars** (the life was present on this planet before the current obscurity) which is now *awakening to a new wave of life*.

The evolutionary level of **Mercury** exceeds that of Earth: it is in the **5th Round** and a disintegration does not threaten this planet. At present, Mercury is in obscurity. Due to its closeness to Sun the conditions on this planet are very difficult and the evolution, in peculiarities, differs from the terrestrial one.

On **Saturn** the state is unconscious.

Uranus is the most ancient planet of the Solar system, and it will survive the remaining planets. Uranus is provided with a specific crystal structure that requires more time for evolution. Its forms of life are also closer to the subtle planes. A high type of humanity evolves on this planet.

Uranus is the most sacred planet among the manifested ones. It is under a triple attraction since it is influenced by the **Sun**, by **Sirius**, and by the huge *sun of the nearest system*, still invisible, which attracts it so that Uranus slowly moves away from our system. This attributes special meaning to this planet.

Uranus is the *extinct sun*: it *was the central star of our system* (around which the planets were revolving) billions of years before the new, *current Sun* appeared as an utterly magnetized comet that stabilized in this system and started to accrete new comets, small planets and other celestial bodies. As a result, this huge agglomerate of matter and energies became the Sun. When that comet appeared the sun-Uranus just started to extinct. But this so-called “extinction” does not mean weakening of the living forces; on the contrary, that caused a development of new life in it that was energized by the magnetism of the Sun of the adjacent system.

Our solar system is composed of a *greater number of planets* than is now known to science. It is true, several of them are still in the process of formation. Although **Uranus** and **Neptune** belong to the higher attractions, yet one should regard them as members of our solar system; and these two planets have tremendous influence upon our planet and, indeed, upon the entire solar system. The *influence of Uranus* will be manifested with particular vividness in the coming era. [9]

Namely, it contains **14 planets**, *some* of which are still *invisible*. The *most ancient* among them are **Saturn, Uranus, Jupiter, Neptune, Venus, Mercury, Mars**. The **Earth** is *much younger*; a part of the modern humanity (viz. the monads) has come from the planet that does not exist no more.

Out of the range of attraction of our Sun, but not very far from our system the planets exist the state of which is closer to the subtle planes; in that region a *new solar system is formed*.

Comment. The existence of different forms of life and objects in the subtle planes and the possibility of astral forms to condense into a state of so-called “compacted astral” which may be luminous and visible to human eye gives a natural explanation to the phenomena of **UFO** the most of which give no sign of “physical” matter (metals, etc.). At any rate, a series of such phenomena is registered with the astral bodies of human beings.

2.2.3. The correlation between the evolutions of humanity and planet

“A *planetary chain*, with all its globes, or spheres, or principles (call them as you wish) presents a single whole. Namely, all the globes are concentrically superposed, one within the other, and present the respective planes of conscience or being. [9]

With sphere A, begins the mineral kingdom and runs the round of mineral evolution. By the time it is completed sphere B comes into objectivity and draws to itself the life which has completed its round on sphere A, and has become a surplus Then comes vegetable life on sphere A, and the same process takes place. On its downward course "life" becomes with every state coarser, more material; on its upward more shadowy. [6/13]

Just as a human being is composed of seven principles, differentiated matter in the Solar System exists in seven different conditions – Seven Principles, like everything else in this Universe, and they evolve synchronously. So does **Fohat**. He is One and Seven, and on the Cosmic plane is behind all such manifestations as light, heat, sound, adhesion, etc., etc., and is the “spirit” of ELECTRICITY, which is the LIFE of the Universe.

The doctrine of the septenary chains of worlds in the Solar Kosmos, is brief, is as follows [SD1-158].

1. Everything in the metaphysical as in the physical Universe is septenary. Hence every sidereal body, every planet, whether visible or invisible, is credited with six companion globes... The evolution of life proceeds on these seven globes or bodies from the 1st to the 7th in Seven ROUNDS or Seven Cycles.
2. These **globes** are formed by a process which the Occultists call the “rebirth of **planetary chains (or rings)**”. When the seventh and last Round of one of such rings has been entered upon, the highest or first globe “A”, followed by all the others down to the last, instead of entering upon a certain time of rest – or “**obscuration**,” as in their previous Rounds – begins to die out. The “**planetary**” **dissolution** (pralaya) is at hand, and its hour has struck; each globe has to transfer its life and energy to another planet.
3. **Our Earth**, as the visible representative of its invisible superior fellow globes, its “lords” or “principles”, has to live, as have the others, through seven Rounds. **During the first three**, it **forms** and consolidates; **during the fourth** it **settles** and **hardens**; **during the last three** it gradually **returns** to its first **ethereal form**: it is **spiritualised**, so to say.
4. **Its Humanity develops fully only in the Fourth – our present Round**. Up to this fourth Life-Cycle, it is referred to as “humanity” only for lack of a more appropriate term. Like the grub which becomes chrysalis and butterfly, Man, or rather that which becomes man, passes through all the forms and kingdoms during the first Round and through all the human shapes during the two following Rounds. Arrived on our Earth at the commencement of the Fourth in the present series of life-cycles and races, MAN is the first form that appears thereon, being preceded only by the mineral and vegetable kingdoms – even the latter having to develop and continue its further evolution through man. This will be explained in Book II. During the three Rounds to come, Humanity, like the globe on which it lives, will be ever tending to reassume its primeval form, that of a Dhyān Chohanīc Host. Man tends to become a God and then – GOD, like every other atom in the Universe.

“Beginning so early as with the 2nd round, Evolution proceeds already on quite a different plan. It is only during the 1st round that (heavenly) man becomes a human being on globe A (rebecomes) a mineral, a plant, an animal, on globe B and C, etc. The process changes entirely from the second round – but you have learned prudence ... and I advise you to say nothing before the time for saying it has come ...” (Extract from the Teacher's letters on various topics.)

Moreover, the one eternal LAW unfolds everything in the (to be) manifested Nature on a sevenfold principle; among the rest, the countless circular chains of worlds, composed of *seven globes*, graduated on the four lower planes of the world of formation (the three others belonging to the Archetypal Universe). Out of these seven only one, *the lowest and the most material* of those globes, *is within our plane or means of perception*, the six others lying outside of it and being therefore invisible to the terrestrial eye. Every such chain of worlds is the progeny and creation of another, lower, and dead chain – its reincarnation, so to say. [SD1-152]

For instance, all such planets as Mercury, Venus, Mars, Jupiter, Saturn, etc., etc., or our Earth, are as visible to us as our globe, probably, is to the inhabitants of the other planets, if any, because they are all on the same plane; while the superior fellow-globes of these planets are on other planes quite outside that of our terrestrial senses [SD1-153]

5. Every life-cycle on Globe D (our Earth) is composed of seven root-races. They commence with the Ethereal and end with the spiritual on the double line of physical and moral evolution – from the beginning of the terrestrial round to its close. (One is a “planetary round” from Globe A to Globe G, the seventh; the other, the “globe round”, or the terrestrial).

This is very well described in [4] and needs no further elucidation for the time being.

6. The first root-race, i.e., the first “men” on earth (irrespective of form) were the progeny of the "celestial men," called rightly in Indian philosophy the “Lunar Ancestors” or the Pitris, of which there are seven classes or Hierarchies. As all this will be sufficiently explained in the following sections and in Book II., no more need be said of it here.

But the two works already mentioned, both of which treat of subjects from the occult doctrine, need particular notice. “Esoteric Buddhism” [4] is too well known in Theosophical circles, and even to the outside world, for it to be necessary to enter at length upon its merits here. It is an excellent book, and has done still more excellent work. But this does not alter the fact that it contains some mistaken notions, and that it has led many Theosophists and lay-readers to form an erroneous conception of the Secret Eastern Doctrines. Moreover it seems, perhaps, a little too materialistic.

“MAN”, which came later, was an attempt to present the archaic doctrine from a more ideal standpoint, to translate some visions in and from the Astral Light, to render some teachings partly gathered from a Master's thoughts, but unfortunately misunderstood. This work also speaks of the evolution of the early Races of men on Earth, and contains some excellent pages of a philosophical character. But so far it is only an interesting little mystical romance. It has failed in its mission, because the conditions required for a correct translation of these visions were not present. Hence the reader must not wonder if our Volumes contradict these earlier descriptions in several particulars.

It is said that the planetary chains having their “Days” and their “Nights” – i.e., periods of activity or life, and of inertia or death – and behave in heaven as do men on Earth: they generate their likes, get old, and become personally extinct, their spiritual principles only living in their progeny as a survival of themselves.

When a planetary chain is in its last Round, its Globe 1 or A, before finally dying out, sends all its energy and “principles” into a neutral centre of latent force, a “laya centre”, and thereby informs a new nucleus of undifferentiated substance or matter, i.e., calls it into activity or gives it life. [SD1-155]

It must be noted that, though the astral and physical planes of matter ran parallel with one another even in the earliest geological ages, yet they were not in the same phases of manifestation in which they are now. The Earth did not reach its present grade of density till 18,000,000 years ago. Since then both the physical and astral planes have become grosser [SD2-157]

2.2.4. Spirit and matter

2.2.4.1. Evolutional transformation of matter

The Secret Doctrine affirms [SD1-16] the *Eternity of the Universe* in toto as a boundless plane; **periodically** “the playground of *numberless Universes* incessantly **manifesting** and **disappearing**”.

This second assertion of the Secret Doctrine is *the absolute universality of that law of periodicity*, of flux and reflux, ebb and flow, which physical science has observed and recorded in all departments of nature.

Call it motion, cosmic matter, duration or space, for it is all these and yet one, this the *Universe manifested and unmanifested and there is nothing else in the Universe*. But the moment it passes out of passivity (or non-being) into activity (or being), it begins to change its state and differentiate, from contact with what had formerly changed, and so the eternal wheel rolls on, the effect of to-day becoming the cause of tomorrow for ever and ever. But it must ever be remembered that the non-being – the passive, is the eternal, the real; the being – the active, the transitory and the unreal. For longer or shorter as its career may be according to the impulses it receives, sooner or later the manifested disintegrates into the unmanifested, and being fades into non-being. [7]

After a pralaya (of planet, Solar system, or galaxy) the wave of evolution starts to “descend” all the objects in the lower principles in a sense of creating their images in the lower *planes*.

Like every other orb of space our Earth has before obtaining its ultimate materiality – and nothing now in this world can give you an idea of what this state of matter is -- to pass through a gamut of seven stages of density. [6/15]

"The astral prototypes of the mineral, vegetable and animal kingdoms up to man have taken that time (300 million years) to evolve, re-forming out of the cast-off materials of the preceding Round, which, though very dense and physical in their own cycle, are relatively ethereal as compared with the materiality of our present middle Round. At the expiration of these 300 million years, Nature, on the way to the physical and material, down the arc of descent, begins with mankind and works downwards, hardening or materializing forms as it proceeds. Thus the fossils found in strata, to which an antiquity, not of eighteen, but of many hundreds of millions of years, must be ascribed, belong in reality to forms of the preceding Round, which, while living, were far more ethereal than physical, as we know the physical. That we perceive and disinter them as tangible forms, is due to the process of materialization or crystallization referred to, which took place subsequently, at the beginning of the Fourth Round, and reached its maximum after the appearance of man, proceeding parallel with his physical evolution. This alone illustrates the fact that the degree of materiality of the Earth changes *pari passu* with that of its inhabitants. And thus man now finds, as tangible fossils, what were once the (to his present senses) ethereal forms of the lower kingdoms. The above Brahmanical figures refer to evolution beginning on Globe A, and in the First Round. In this Volume we speak only of this, the Fourth Round." [SD2-68]

...The Earth was in a comparatively ethereal condition before it reached its last consolidated state; the archaic teachings, moreover, telling us that, during the middle period of the Lemuro-Atlantean Race, three and a half Races after the Genesis of man {viz. in the middle of the Round}, the Earth, man, and everything on the Globe was of a still grosser and more material nature, while such things as corals and some shells were still in a semi-gelatinous, astral state. The cycles that intervened since then, have already carried us onward, on the opposite ascending arc, some steps toward our dematerialization, as the spiritualists would say. The Earth, ourselves, and all things have softened since then -- aye, even our brains. [SD2-250]

It must be noted that, though the astral and physical planes of matter ran parallel with one another even in the earliest geological ages, yet they were not in the same phases of manifestation in which they are now. The Earth did not reach its present grade of density till *18,000,000 years ago*. *Since then* both *the physical and astral planes have become grosser*. [SD2-157]

The succession of primary aspects of Nature with which the succession of Rounds is concerned, has to do, as already indicated, with the development of the "Elements" (in the Occult sense) – Fire, Air, Water,* Earth.

* The order in which these Elements are placed above is the correct one for esoteric purposes and in the Secret Teachings. Milton was right when he spoke of the “Powers of Fire, Air, Water, Earth”; the Earth, such as we know it now, had no existence before the 4th Round, hundreds of million years ago, the commencement of our geological Earth. The globe was “fiery, cool and radiant as its ethereal men and animals during the first Round”, says the Commentary, uttering a contradiction or paradox in the opinion of our present Science; “luminous and more dense and heavy during the second Round; watery during the Third!” Thus are the elements reversed.

We are only in the fourth Round, and our catalogue so far stops short. The centres of consciousness (destined to develop into humanity as we know it) of the third Round arrived at a perception of the third Element Water. Those of the fourth Round have added earth as a state of matter to their stock as well as the three other elements in their present transformation. In short, none of the so-called elements were, in the three preceding Rounds, as they are now. For all we know, FIRE may have been pure AKASA, the first Matter of the Magnum Opus of the Creators and “Builders”, ... [SD1-252]

The elements now known, have arrived at their state of permanency in this 4th Round and 5th Race. They have a short period of rest before they are propelled once more on their upward spiritual evolution; when the “living fire of Orcus” will dissociate the most irresolvable and scatter them into the primordial ONE – again. [SD1-543]

... What modern Science seems to fail to perceive is that, differentiated as may have been those simple chemical atoms – which archaic philosophy called “the creators of their respective Parents”, fathers, brothers, husbands of their mothers, and those mothers the daughters of their own sons, like Aditi and Daksha, for example – differentiated as these elements were in the beginning, still, they were not the compound bodies known to science, as they are now. Neither Water, Air, Earth (synonym for solids generally) existed in their present form, representing the three states of matter alone recognized by Science; for all these are the productions already recombined by the atmospheres of globes completely formed – even to fire – so that in the first periods of the earth's formation they were something quite sui generis.

Now that the conditions and laws ruling our solar system are fully developed; and that the atmosphere of our earth, as of every other globe, has become, so to say, a crucible of its own, Occult Science teaches that there is a perpetual exchange taking place in space of molecules, or of *atoms* rather, correlating, and thus *changing their combining equivalents on every planet*.

Some men of Science, and those among the greatest physicists and chemists, begin to suspect this fact, which has been known for ages to the Occultists. The spectroscope only shows the probable similarity (on external evidence) of terrestrial and sidereal substance; it is unable to go any farther, or to show whether atoms gravitate towards one another in the same way and under the same conditions as they are supposed to do on our planet, physically and chemically. The scale of temperature, from the highest degree to the lowest that can be conceived of, may be imagined to be one and the same in and for the whole Universe; nevertheless, its properties, other than those of dissociation and reassociation, differ on every planet; and thus atoms enter into new forms of existence, undreamt of, and incognizable to, physical Science.

As already expressed in “Five Years of Theosophy”, the essence of *Cometary matter*, for instance, “is totally different from any of the chemical or physical characteristics with which the greatest chemists and physicists of the earth are acquainted”. And even that matter, during rapid passage through our atmosphere, undergoes a certain change in its nature:

It is homogeneous in its primitive form beyond the Solar Systems, and differentiates entirely once it crosses the boundaries of our Earth's region, vitiated by the atmospheres of the planets and the already compound matter of the interplanetary stuff, heterogeneous only in our manifested world. [SD1-101]

Thus not alone the *elements of our planets*, but even those of all its *sisters* in the *Solar System*, differ as widely from each other in their combinations, as from the Cosmic elements beyond our Solar limits. Therefore, they cannot be taken as a standard for comparison with the same in other worlds. *)

*) Each world has its Fohat, who is omnipresent in his own sphere of action. But there are as many Fohats as there are worlds, each varying in power and degree of manifestations. The individual Fohats make one Universal, Collective Fohat – the aspect-Entity of the one absolute Non-Entity, which is absolute Be-Ness, 'SAT.' “Millions and billions of worlds are produced at every Manvantara” – it is said. Therefore there must be many Fohats, whom we consider as conscious and intelligent Forces. This, no doubt, to the disgust of scientific minds. Nevertheless the Occultists, who have good reasons for it, consider all the forces of Nature as veritable, though supersensuous, states of Matter; and as possible objects of perception to Beings endowed with the requisite senses. [SD1-142]

Therefore:

Neither stars nor the sun can be said to be constituted of those terrestrial elements with which the chemist is familiar, though they are all present in the sun's outward robes – and a host more of elements so far unknown to science. [SD1-142]

Our globe has its own special laboratory on the far-away outskirts of its atmosphere, crossing which, every atom and molecule change and differentiate from their primordial nature. [SD1-583]

Comment. As far as the “density” of matter changes in time, it is natural to presume that the physical properties of the physical matter just condensed from the astral plane differ from those which characterize the physical matter at the stage of maximal grade of density. In particular, we may presume that the stability of atoms is the greatest at the maximal density of physical matter, and decreases with its dissolving into the astral state; as a consequence, the *half-value period* of radiocarbon, which is used in dating of the prolonged epochs, should be *greater* in the former case, and *lesser* in the latter case, since the weaker the ties the easier for an atom to split. This explains why the *dating* of the remote *geological epochs* (dozens of million years and more) in the *Secret Doctrine are significantly lesser than* the values obtained by *radiocarbon dating*.

2.2.4.2. Transformation of Spirit into matter after Pralaya (viz. Dissolution) and vice versa

The Doctrine teaches that these transformations of matter reflect the evolutionary correlation between the *Spirit* and *Matter* which present the *aspects of the One Unity* in which they are synthesized; from this point of view, we may consider the *seven principles as all matter and all spirit – one thing, with spirit as it were at one pole, and matter at the other* [7].

From this point of view *Matter is Spirit, and vice versa* [SD1-179]; by drawing an analogy we may say that: *Matter is the crystallized Spirit* [10]; a higher principle is “condensed” or “reflected” in the lower one: the events and processes that take place on the higher plane are reflected in the lower plane.

And, on the contrary: *Matter may dissolve into Spirit*; a lower principle “evaporates” so that the objects, that were visible on the plane corresponding to this principle, become invisible in this plane.

The first process dominates in the first part of a Round, the second – in the second part. Besides, the former explains that the phenomena, before they could appear on the physical plane, must be formed on the astral plane, and further upwards. **In this sense *physical matter***, as a periodic manifestation of Spirit, is “Maya” – a reflection, or illusion – an element which enters into all finite things:

The *Astral Light*, or the Aether, of the ancient pagans (for the name of Astral Light is quite modern) is *Spirit-Matter*. Beginning with the pure spiritual plane, it becomes grosser as it descends until it becomes the Maya or the tempting and *deceitful serpent on our plane*. [SD1-74] ... these are *ONE in reality*, and but a *Maya when divided* [SD1-635]

Esoteric philosophy... regards the *objective Universe* and all in it as *Maya*, temporary illusion [SD1-631]... the same for the *Sun*, whose *visible* body is called a *Maya*, a *reflection*, just as man's body is. [SD1-179]

Therefore, the Esoteric Doctrine says that:

the "*Matter is eternal*". But the matter the Occultists conceive of in its laya, or *zero state*, is not the matter of modern science; not even in its most rarefied gaseous state. ...Therefore, when the adept or alchemist adds that, though matter is eternal, for it is PRADHANA, *yet atoms are born at every new manvantara, or reconstruction of the universe*, it is no such contradiction as a materialist, who believes in nothing beyond the atom, might think. There is a *difference* between *manifested* and *unmanifested matter*, between pradhana, the beginningless and endless cause, and prakriti, or the manifested effect. [SD1-554]

The distribution of matter:

The original Greek conception of *Chaos* is that of the Secret Wisdom Religion. In Hesiod, therefore, Chaos is infinite, boundless, endless and beginningless in duration, an abstraction at the same time as a visible presence. *SPACE filled with* darkness, which is *primordial matter in its precosmic state*. For in its etymological sense, Chaos is Space, according to Aristotle, and *Space* is the ever Unseen and Unknowable Deity in our philosophy. [SD1-336]

SPACE filled with darkness, which is *primordial matter in its precosmic state*. [SD1-336]

The original Greek conception of *Chaos* is that of the Secret Wisdom Religion ... – *infinite, boundless, endless and beginningless in duration, an abstraction* at the same time as a *visible presence*. ... *Chaos* is *Space*...and *Space* is the ever Unseen and Unknowable Deity in our philosophy. [SD1-336]

An axiom of the Occult philosophy states [SD1-542] that *there is neither Spirit nor matter, in reality, but only numberless aspects of the One ever-hidden IS* (or Sat).

During a "Night of Brahma" the *eternal matter relapses* periodically into its *primary undifferentiated state {dissociated matter}*:

The homogeneous *primordial Element* is simple and single only on the terrestrial plane of consciousness and sensation, since *matter*, after all, is nothing else than the sequence of our own states of consciousness, and *Spirit* an idea of psychic intuition. Even on the next higher plane, that single element which is defined on our earth by current science, as the ultimate undecomposable constituent of some kind of matter, would be pronounced in the world of a higher spiritual perception as something very complex indeed. Our purest water would be found to yield, instead of its two declared simple elements of oxygen and hydrogen, many other constituents, undreamt of by our terrestrial modern chemistry.[SD1-103]

So, the *primordial matter* differentiated from Chaos containing crude undifferentiated Cosmic matter.

During a "Day of Brahma" the *primordial matter is transformed into differentiated matter (descent of Spirit into matter)*

The *first primordial matter*, eternal and coeval with Space, "which has neither a beginning nor an end," is "neither hot nor cold, but is of its own special nature," says the Commentary. [SD1-82]

"Fohat hardens the atoms"; i.e., by infusing energy into them: he *scatters the atoms or primordial matter*. "He scatters himself while scattering matter into atoms" (MSS. Commentaries.) [SD1-85]

"Wheels," as already explained, are the centres of force, around which *primordial Cosmic matter expands*, and, passing through all the six stages of consolidation, becomes spheroidal and ends by being transformed into globes or spheres. It is one of the fundamental dogmas of Esoteric Cosmogony, that during the Kalpas (or aeons) of life, *MOTION*, which, during the periods of Rest "pulsates and thrills through every slumbering atom", assumes an evergrowing tendency, from the first awakening of Kosmos to a new "Day," to *circular movement*. The "Deity becomes a WHIRLWIND." They are also called Rotae – the moving wheels of the celestial orbs participating in the world's creation – when the meaning refers to the animating principle of the stars and planets; for in the Kabala, they are represented by the Ophanim, the Angels of the Spheres and stars, of which they are the informing Souls. [SD1-116]

This *LAW* of *vortical movement in primordial matter*, is one of the oldest conceptions of Greek philosophy, whose first historical Sages were nearly all Initiates of the Mysteries. [SD 1-116]

So, in the manifested Universe, there is "that" which links spirit to matter, subject to object:

This something, at present unknown to Western speculation, is called by the occultists **Fohat**. It is the "bridge" by which the "Ideas" existing in the "Divine Thought" are impressed on Cosmic substance as the "laws of Nature." **Fohat** is thus the dynamic energy of Cosmic Ideation; or, regarded from the other side, it is the intelligent medium, the guiding power of all manifestation, the "Thought Divine" transmitted and made manifest through the **Dhyan Chohans** [Called by Christian theology: Archangels, Seraphs, etc., etc.], the Architects of the visible World. Thus from Spirit, or Cosmic Ideation, comes our consciousness; from Cosmic Substance the several vehicles in which that consciousness is individualized and attains to self -- or reflective -- consciousness; while Fohat, in its various manifestations, is the mysterious link between Mind and Matter, the animating principle electrifying every atom into life. [SD1-16]

Just as a human being is composed of seven principles, *differentiated matter* in the Solar System exists in *seven* different *conditions*. So does **Fohat**. [SD1-139]

2.2.4.3. Resume

Thus, tolerating just the physical matter and presuming its homogeneity throughout the Universe and immutability in time (at least after the transient processes that took place after the hypothetical Big Bang) is absolutely inconsistent with the principal concepts of the Secret Doctrine. This contradiction inevitably leads us to making the decision: whether we accept these concepts, or not.

The modern physics adopts the negative answer and still tries to explain the phenomena of evolution of the Universe by correcting the existing models with new and new patches on the cloth of Big Bang model.

But we see no contradiction between these concepts and physical theories as models approximating the *observed* reality with the given precision, and therefore we accept them for further consideration. The more so since they are also applicable to other branches of knowledge.

2.2.5. Some features of evolution of humanity at the 5th ring of the 4th Round

Enough was said to show that evolution in general, events, mankind, and everything else in Nature proceed in cycles. [SD2-443]

KRONOS is "Time", whose first law is that the order of the successive and harmonious phases in the process of evolution during cyclic development should be strictly preserved – under the severe penalty of abnormal growth with all its ensuing results [SD2-420]

A next Root Race appears during the dominance of the preceding one, survives its apotheosis and destruction of the core of its civilization: soon after a culmination of the 7th subrace of the dominating Root Race a global cataclysm takes place that wipes (with water, as Atlantis), or burns (with quakes and volcano eruptions, as Lemuria) its basic territory, in turn – by water and fire; so, the dominant territories of the currently dominating 5th Root Race will be destroyed, dominantly, by fire.

It is said that the representatives of the 6th Root Race have started to appear; after the global cataclysm at the culmination and decay of the 5th Root Race and some delay they will define the evolution of humanity in the 6th Ring, as after the basic cataclysms with Atlantis that took place **850 000** and **200 000** years ago the evolutionary domination of the Arian race had started in Central Asia and, after then, in Europe.

These cataclysms result in disappearing of the continents of the former Root Race and appearing of new continents. At that, the *continents descend and ascend over the oceans*. Although the continents drift with the lithospheric plates, they were not separated from a single "prehistoric" continent; in particular, the continent of **Atlantis** was disposed *in the modern Atlantic*, between the contemporary Americas, Africa and Europe [2]. So, definite modern territories of the 5th Root Race, after destruction by quakes and volcano eruptions, will sink, and a new continent will gradually appear for the 6th Root Race.

Within these greater cycles there is a sequence of lesser ones with a durations of up to years. But the most important among them those which are defined by the cosmological periods of the Earth (periods of apses, equinoxes, etc. [2, 17, 28, 29]) and their harmonic and Golden section subperiods [2, 16].

But *what is important*, the *evolution* in Rounds and Rings *does not develop with the same periods*: in a Round the objects of *all kingdoms evolve*, but with *different rates* and starting with their *own epochs*; in particular, the *rings* corresponding to the *Root Races* are *decreasing in duration* which follows from the terms given in [2]. Thus, the Lemurean Ring was several times longer than that of Atlantean, and the evident culmination of Arian Race is reached in several times lesser period, than that of Atlantean.

Moreover, it is **DIRECTLY STATED** that *evolution develops*, in general, *exponentially*:

They are simply *Builders*, or *Masons* {viz. *Dhyan-Chohans*}, working under the impulse given them by the ever-to-be-unknown (on our plane) Master Mason – the ONE LIFE and Law. Belonging to this sphere, they have no hand in, or possibility of working on any other, during the present Manvantara, at any rate. ... *they work in cycles* and on a **STRICTLY GEOMETRICAL AND MATHEMATICAL SCALE OF PROGRESSION** ... [SD2-732]

A clear evidence for these statements is given by the obvious *acceleration of the modern civilization* during the last several centuries, and especially – during the last decades. Moreover, it has turned out that *numerically* this trend is traced to the far past – long before the start of the Mayan calendar and birth of Krishna [18, 19], and namely in the form of *exponential acceleration*.

This way, the *evolutional acceleration* causes both the *temporal, and the spatial changes in this planet*. Moreover, these changes were *predicted* and *described* for our epoch *explicitly* and, as in the case with Atlantis, *with relation to the dissolution of moral*.

Apart from *Dhyan-Chohans* who provide the Laws of the Cosmos within the Hierarchy of White Brotherhood with its stronghold in sacred *Shambalah*, in the evolution of the Earth it has developed a specific left-hand (or black magic) hierarchy which includes powerful apologists in the subtle planes. In order to increase their might, this hierarchy provokes in the humanity the worst desires and passions pertaining to the lowers principles to the prejudice of mental and spiritual development. The activity of this left-hand hierarchy and the Karma of humanity had to be resolved in the 20th century, by the end of the first sub-cycle of Cali Yuga as this was notified by Helen Blavatsky:

If Theosophy prevailing in the struggle, its all-embracing philosophy strikes deep root into the minds and hearts of men, if its doctrines of Reincarnation and Karma, in other words, of Hope and Responsibility, find a home in the lives of the new generations, then, indeed, will dawn the day of joy and gladness for all who now suffer and are outcast. For real Theosophy IS ALTRUISM, and we cannot repeat it too often. It is brotherly love, mutual help, unswerving devotion to Truth. If once men do but realize that in these alone can true happiness be found, and never in wealth, possessions, or any selfish gratification, then the dark clouds will roll away, and a new humanity will be born upon earth. Then, the GOLDEN AGE will be there, indeed.

But if not, then the storm will burst, and our boasted western civilization and enlightenment will sink in such a sea of horror that its parallel History has never yet recorded. [[Our Cycle and the Next](#)]

We are in 1887 and the 19th century is close to its death. The 20th century has strange developments in store for humanity, and may even be the last of its name. [[The Esoteric Character of the Gospels](#)]

Later on, Mahatmas passed this warning to Helen Roerich as well; in her letters [10] she explains that as Armageddon that took place in the subtle planes in 30-ies – 40-ies of the 20th century and was reflected on the physical plane by unexampled brutality with many dozens of million victims. That time the master of the Earth was defeated by the Hierarchy of Dhyan-Chohans.

2.3. Cause and effect from esoterical and physical points of view

2.3.1. Past, Present, and Future

Time is that what is used by everybody, many times a day, but remains a mystery with respect, for example, to predestination of the Future and free will.

The *main property* which is generally associated with *Time* is probably that which allows us to specify the *order of precedence of events*. A *measurability* of Time is a consequence of this property. Although we may consider the latter as the primal property, in reality the Time, or flow of Time is perceived as a sequence of events (or states) of some system; namely the *order of these events* allows us to specify a *numerical parameter* defining a *metrization* of these events that corresponds to this order and chosen *scale* which is called time (or rather – time count system, TCS). This TCS is not unique – neither in general, nor for the considered set of events.

In this generally accepted approach we deal with an intuitively clear concept of precedence in terms of *past, present* and *future*. Although these terms have no universal (or general) meaning in physics due to relativity of simultaneity in the theory of relativity, they are very important as collective terms since they exactly reflect the situation in non-relativistic world we actually live in; as well, they can easily be defined mathematically by the points on the numerical axis. That is why these concepts are convenient for practical use and still widely used both in physics and in technical applications where the relativistic corrections are insignificant.

In the most part of applications and in all everyday deeds where these corrections are negligible, these terms are generally understood so that to the *Past we refer those events that has taken place*, and to the *Future – all those events that will take place*, although we may be unaware of them in advance (that is before the “future” would become the past). The *Present, as a moment of transfer from past to future*, has no duration from both esoterical and physical viewpoints.

In *a narrow sense* it is considered as a mathematical *point* on the *axis of time* (arrow of time) which separates the Past and the Future at the moment associated with the ‘Present’:

The *present* is only a *mathematical line* which *divides* that part of eternal duration which we call the *future*, from that part which we call the *past*. *Nothing* on earth has *real duration*, for *nothing remains without change* – or the same – for the billionth part of a second [SD1-37]

Meanwhile, as far as any real event presents a process with a definite duration, at any moment there are the events that have started, but not yet finished. For this reason it is convenient to define the *Present in a broad sense* – as an *interval* on the *axis of Time*, within which the considered process has not changed its status to a fixed limit. The length of this interval is defined by the nature of the process; thus, when we ask time during a long travel, or outdoor temperature – “the present” may last dozens of minutes or hours; in a scientific review – a year or several years, in geology – millennia. In the same sense “the present” is to be understood when considering “returning” from a “travel to the future” (See Sec. 4.1) since from both relativistic and esoterical points of view it is impossible to return to the starting moment of time, but just more or less later.

These general understanding of Past, Present and Future may be improved, but the heart of the problem lies in another matter – from the esoterical point of view these concepts are inconsistent if considered in a single plane of reality [SD1-43]:

The three periods – the *Present*, the *Past*, and the *Future* – are in the esoteric philosophy a compound time; for the three are a composite number only in relation to the phenomenal {viz. physical – SS} plane, but *in the realm of noumena* {viz. higher planes – SS} *have no abstract validity*. As said in the Scriptures:

“The Past time is the Present time, as also the Future, which, though it has not come into existence, still is.”

... *Our ideas*, in short, on *duration* and *time* are all *derived from our sensations* according to the laws of Association. Inextricably bound up with the relativity of human knowledge, they nevertheless *can have no existence except in the experience of the individual ego*, and perish when its evolutionary march dispels the Maya of phenomenal existence. What is *Time*, for instance, but the *panoramic succession of our states of consciousness*? In the words of a Master:

“I feel irritated at having to use these *three clumsy words* – *Past, Present, and Future* – *miserable concepts of the objective phases of the subjective whole*, they are about as ill-adapted for the purpose as an axe for fine carving.”

Therefore, although it is possible to define correctly the concepts of Past, Present and Future (or the order of precedence of physical events) in physics, at least for a fixed point, both in relativity and classical mechanics, a general physical concept of Time still remains undefined, as in other sciences, and Theosophy tells that this could not be differently: a general concept of Time that may suit physicists and psychologists, geologists and historians must explain, in particular, a series of still not understood, but well-documented phenomena associated with predestination and free will.

From esoteric point of view neither these, nor many other phenomena can be correctly explained if just the physical aspect is taken into consideration in isolation from the processes that develop in other planes of existence (astral, mental, etc.). And therefore a physical understanding of time is considered as illusion because it does not take into consideration the influence exerted from the subtle planes; as far as this influence is based on the laws of *Karma*, it is rare in physical experiments, but very pronounced there where a human factor is presented.

2.3.2. Karma and free will

In a broad sense, *any motion is monitored by Karma* (the Universal Cosmic Law, “Court”, and “Officer of the Court”, as well as the Law of the cause and effect): “*the effect of to-day becoming the cause of tomorrow for ever and ever*” [7]. (In this sense the physical laws may also be considered as such that define the laws of Karma for physical matter).

This motion from the cause to the effect is what presents an evolution, and this *evolution is developing in seven planes* so that its “rate” is described at each of this planes in its own way.

Elucidate this process by an example of a separate person; with the respective generalization it is also applicable to a group of people.

Suppose that by proving his free will a man commits an action (steals something) *C*; this cause engenders in the subtle planes an effect *B* – a scheduled situation that should force him to stop realizing the actions of type *C* (e.g. he may be brought to trial, or get into trouble caused by *C* – viz. be thieved himself).

The realization of the event *B* in the physical plane is generally inevitable (*predestination*). By getting into the mess, he reacts some way (provides his *free will*): either he is remorseful and decides not to steal any more, or escapes from the punishment (with a bribe, deception or other way). His reaction (*free will*) engenders new cause – either *B1* or *B2*, respectively, with appropriate effects (*predestination*).

To this end it should be noted that not only actions (in the physical plane), but the “thoughts” (viz. intentional or involuntary *concentration of psychic energy* in astral, mental or higher planes) – and even in a greater degree *create Karma*, both positive and negative.

The inevitability of the effect B scheduled in the subtle planes means that the circumstances and moment for appearing of the effect *B* in the physical plane are *predetermined, but not obligatory*. For example, the effect could be *postponed* (as other effect *B*), if other event occurs which pertains to Karma of his family or country, or *softened* and even *canceled* in case of *profound repentance* (but *not due to a simple prayer*, since, in general, even the High Spiritual Beings have no right to intrude into somebody else's Karma): *the law of Karma requires each human being to evolve by his/her own efforts* in developing his/her mental and spiritual bodies.

As well, definite *magic operations* (including some devotions) *may postpone, but not cancel the effects*; *any forced intrusion in the flow of Karma may only worsen the resulting effect* (before an effect has occurred in a physical plane, it could be influenced just in the subtle planes, that is with magic operations).

Comment. The above explains some aspects of astrology: the critical points in a definite person's chart (commonly known as "horoscope") show what and when may occur with him as a realization of effect. Meanwhile, the chart shows what are the possible "weak spots" in his nature. If the person knows his weak spots and tries to behave adequately, a critical point, when its moment comes, manifest itself accordingly: it gives a "good" effect, if the critical point denotes "success", or diminishes or cancels a "bad" effect if a critical point denotes "misfortune"; on the contrary, if a person ignores his faults, a "good" effect is diminished and a "bad" effect is intensified. As far as the most people are passionately fond of themselves and their disadvantages, their charts "work" as a clock.

Thus, the Theosophical approach through the concept of Karma gives quite clear solution to the *problem of free will and predestination*. In brief, it is as follows: when a person is put before the inevitable (*predestination*), he must take a decision (*free will*) which will define his way (next cycle of inevitable) till the next effect reflecting his own decision, etc. Of course, in reality the causes and effects are mixed, both in one and several incarnations, as the personal Karma is combined with the Karma of family and society. But these peculiarities may embarrass just a man, not Those High Beings – Lipics – Who take into account all thoughts and deeds of human beings and estimate how they meet the requirements of the respective stage of evolution.

Resume 1: *The "Future" of a person and humanity is firstly scheduled in the subtle planes, and before it has realized in physical plane it may be changed, both in terms and in quality, by spiritual, mental and physical activity – both for worse and for better, depending on the orientation of this activity. But the higher the plane of activity, the more its influence is efficient.*

2.3.3. Development of events in the subtle planes

Consider now, how the above situation with the events C and B is developed is developed in several planes of existence. For an example, consider the main three principles within which a human being acts: the mental (M), astral (A) and physical (F) planes; for correlating the events we use a physical time scale T . In these planes the event B (viz. the effect) manifests itself in three forms: B_M , B_A , B_F .

Since the effects are firstly formed at the higher planes, and then – "descend" into lower planes by forming the respective reflections being more and more closely tied to the peculiarities of the lower planes, a time diagram of forming of these events may be presented as shown in Fig. 2.1. For the sake of clarity, we ignore other events and influence that may change the development of the effect B .

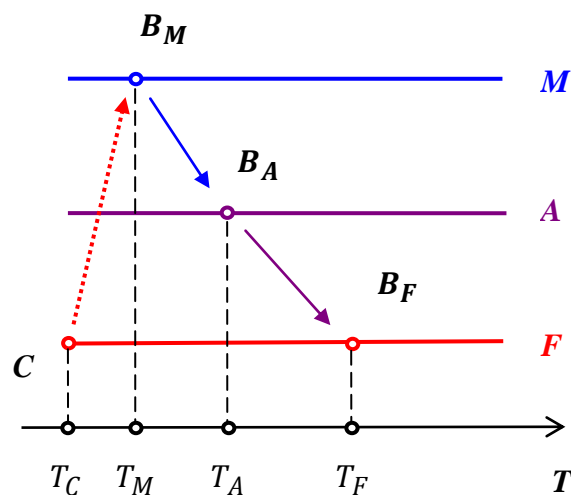


Fig. 2.1. The cause C and the stages of development of the physical effect B_F

In this example the precedence of events $C \prec B_M \prec B_A \prec B_F$ denotes that in physical time they occur at the moments satisfying the inequalities $T_C < T_M < T_A < T_F$. This means that before the effect B_F takes place in a physical plane, it could be perceived by a sensitive in the astral plane as a situation B_A and, before this, – in the mental plane as a situation B_M ; the lower the plane, the more details pertaining to the final physical situation are brightened up.

This scheme may also be illustrated by a process of construction a building. In this case the event B_M may be likened to a forethought of an architect, B_A – to a construction engineer’s design, and B_F – to a built edifice. The corrections made in the accepted design concept (B_M), if any, result in correction of the respective construction project (B_A) and building (B_F); corrections in construction project (B_A) result just in building (B_F).

This principle of sequential development of events in different planes makes the basis for clairvoyance and magic influence upon the future. The higher the plane from which a sensitive takes information – the more exact the forecast in general trend, but the less exact could be the details; in particular, this explains why the long-term predictions are rarely associated with specific dates or names. Thus, if the prophets “see” the future in spiritual and mental planes (Buddhi and Manas), the conventional clairvoyants take information from the lower, astral plane:

... the times during which one has the experience of straight-knowledge were called by the Egyptians Sacred Sleep, by the Hellenes Divine Visitation, and by the Babylonians The Touch of the Unseen Visitor. Each nation in its own way wanted to note the special and unusual nature of such experiences of insight, when earthly man makes contact with the supermundane realms.[8: Supermundane-3, 576]

But the exact physical time of the “maturing” event may remain undefined until the required obstacles occur:

... in the Supermundane World, time, in its earthly meaning, does not exist, although there are dates that relate to inevitable consequences of certain events. Valid prophecies never offer indications of earthly time. You already know that foreseen supermundane dates are given indirectly through descriptions of their related events. This shows that the supermundane worlds foresee the flow of events, without attention to so-called time. A sensitive consciousness will be able to remember the details of a future event, and accordingly discern the rest. [8: Supermundane-3, 575]

Hence, in general case the event B is, in essence, a compound event, or rather a “sum” of coexistent and dependent events B_M , B_A , and B_F . This means that for any moment t , $T_M < t < T_F$, specifying the “present” for the compound event B the “past” (event B_M , that predetermines the event B_F , has taken place) *and* the “future” (the event B_F has not yet occurred in physical plane) *coexist*.

Resume 2. *The “Past”, “Present” and “Future” may coexist at the same physical time in the sense that for a physical event that is to appear in the Future its subtle plane prototype could have been already defined (in the physical Past), or is being formed (in the physical Present).*

Consider now two physical causes, $C1$ and $C2$, which are corresponded by the physical effects $B1$ and $B2$. Then, a situation presented in Fig. 2.2 is possible where the order of effects is inverse to the order of causes. This unexceptional situation presents an illustration to the following passage:

We strive to be in harmony with the Supermundane World. *We do not value time in its earthly sense. The essence of events, their flow, and their correlation are of utmost significance.* We reveal the meaning of events in an accessible form. In everything the essence must be felt. The Thinker taught: *“Strive to the essence of things, in it is revealed the justice of the Universe.”* [8:Supermund.-3, 575]

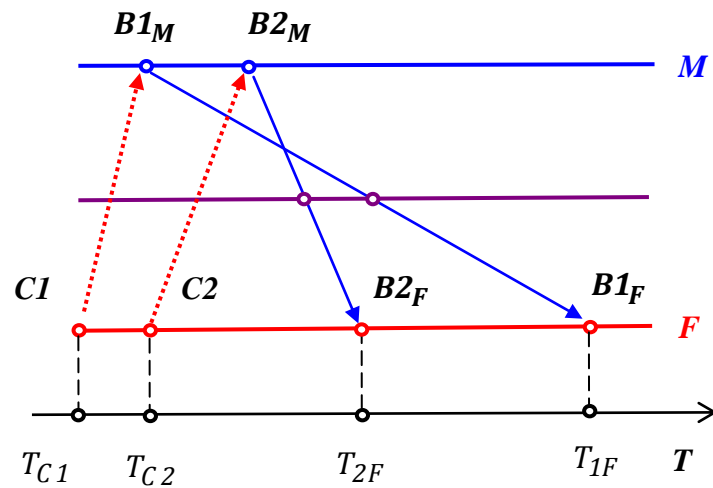


Fig. 2.2. The order of effects may be inverse to the order of causes

Resume 3. *In physical time the sequence of causes may not follow the sequence of effects; this may look like a violation of cause-and-effect relations*

This situation may explain possible “unfairness” of private or historical events if only physical chronology of deeds is taken into consideration without paying attention to the actual causes of the effects that are developing in the subtle planes. By this reason we frequently observe “inexplicable” miseries of separate human beings and peoples – years, centuries, or millennia after commitment of improper actions which nobody associates with the current date; this is called an “suspended” Karma.

2.4. General features of Space and Time in Theosophical concepts

No secret was so well preserved and so sacred with the ancients, as that of their cycles and computations. From the Egyptians down to the Jews it was held as the highest sin to divulge anything pertaining to the correct measure of time. [SD2-396]

2.4.1. Conceptual models in the Secret Doctrine, physics, and private opinions

In the Secret Doctrine the numerical data are provided for the least part of the conceptually described models. Although this does not allow us to refer it formally to physics, this neither denies the validity of its models – the more so since its numerical models pertaining to astronomy, history and other branches of knowledge are verified. A good example to this end is the concept of 7-fold structure of the human being. With the physical instruments it is reliably acknowledged, but not explained, that some people may exert thermal and electromagnetic influence on different objects, see definite figures over the impermeable barrier, etc.; moreover, even a photo of energy body (Aura) may be obtained for several dollars.

The scientific wealth of the Theosophy consists in that it presents a wide spectrum of interconnected concepts that provides us with an integral and system description of Cosmogogenesis which includes those aspects of evolution of the Space and Time which became familiar to physics just in the 20th century, and many those which still are not understood.

Of course, not every esoteric concept being presented in a verbal form presents a model that can be readily expressed in a formal way (viz. mathematically), and some data that are required for this are kept secret. But many great scientific discoveries and historical events are described in it correctly, and whatever statement is proved to be incorrect.

Moreover, on preparing the manuscript of the Secret Doctrine and in her articles Helen Blavatsky paid great attention to presenting scientific acknowledgements to the concepts of this work. As well, she appealed not to belief, but to criticism – both while studying the Secret Doctrine, and on applying its concepts to physics, anthropology, history and other sciences.

Therefore, on studying the concept of Time being as actual for physics as for other branches of knowledge, it is useful to correlate the approaches proposed in physics and esotery, since establishing that on the level of general ideas they have no contradictions and give qualitatively the same consequences would provide us with more evidences in favor of the both.

Comment. In contrast to a common opinion that modern science “denies” any mystic and asserts “objective” model of the Universe it must be noted that neither physics, nor any other branch of knowledge (history, psychology, medicine, etc.) can either “deny”, or “affirm” Theosophical concepts: while not dealing with the mathematical models describing the esoteric concepts it simply has no instrument for making conclusion on this subject. In fact, physics is not asked to do this, and the private opinion of an individual (whether he relates himself to science, church, or politics) who denies Theosophy on the ground of his personal views (viz. personal belief) remains the matter of his own belief or disbelief, which has nothing common with physics, except of use of scientific affiliations.

2.4.2. Theosophy and revolution in physics

As a matter of fact, publication of the Secret Doctrine was followed by a series of discoveries in physics that cardinally changed the physical understanding of Time and Space.

Special relativity (SR). An inconsistency of generally accepted concept of “absolute” time, the unity of Space and Time, the equivalence of matter (mass in particular) and energy, and some other verbally expressed concepts of the Secret Doctrine had started to obtain scientific presentation after the [Michelson–Morley experiment](#) (1887) and contributions of [Hendrik Lorentz](#), [Henri Poincare](#) that took the form of **Special relativity** proposed by [Albert Einstein](#) in 1905. In particular, this theory maintains the following:

- (1) indissoluble connection between Time and Space in a form of **spacetime continuum**.
- (2) Lack of an absolute reference frame; specifically, this means that *in different reference frames the same clock may tick at different rates*.
- (3) Lack of universality in the concepts of Simultaneity, Past and Future which *retain their sense* just for a *fixed spatial point*, or “slowly” moving objects.

General relativity (GR) and Λ CDM model. The SD predictions relative to inconsistency of Newtonian theory of gravitation as of universal law being based just on attraction, as well as affirmation of other, more “subtle” forms of matter were acknowledged by the **General relativity** and **Λ CDM model of expanding Universe**. Thus, in general relativity the universality of the Newtonian law is substituted by Einstein's differential equations that describe the properties of spacetime locally (viz. pointwise), whereas the existence of the opposite effects of attraction and repulsion instead of unitary attraction follows from the accepted standard **Λ CDM model of expanding Universe** in a form of gravitation and [dark energy](#) which become apparent in attraction and repulsion of matter, respectively. Meanwhile, the borderline **states of subtle matter** are seemingly presented in [Dark matter](#), cold and hot plasma.

Equally, this concerns a series of other predictions pertaining to physics (e.g. discovery of nuclear energy – as the predicted “radiant” energy being further discovered by Becquerel), evolution of humanity (e.g. cataclysms of the 20th century) and other fields of knowledge.

This means that to a significant degree the concepts of the Secret Doctrine had predetermined the way of development of physics in the 20th century; in particular – relative to Time and Space, matter and gravity, expansion of the Universe, etc. Just by this cause a mere negation of this Teaching is insensible, whereas making use of its concepts with the aim to widen our understanding of the Universe could be constructive; in particular – for studying the phenomenon of Time. For this, consider the main ideas of the Secret Doctrine pertaining to Time and their correspondence to the respective physical concepts.

2.4.3. Space and Time

2.4.3.1. Space and Time constitute a single whole

The mystery of phenomenon of Time is most brightly apparent in a contrast between the practical use of time count systems in all spheres of life and insolvency of all attempts to define Time as a universal abstract concept, that hampers dissemination of this concept onto non-physical applications in a way like a TCS being defined for some physical process is propagated on other physical phenomena.

In the last years of the 19th century in the beginning of the 20th century the publication of new experimental and theoretical discoveries in physics that were summed up in the *special relativity* for the first time in this historical era had put the end to comprehension of Time as an independent quantity that allowed to sequence any events of arbitrary nature. The *SR* has not “explained” the phenomenon of Time, but extended its attributes with the mathematical definitions that *correlate the spatial and time coordinates* (parameters) and affirm a *conditional nature of simultaneity*. But “*for the first time*” – *just in physics*, since the Secret Doctrine being imparted to the humanity in 70-ies – 80-ies of 19th century stated (although verbally, but quite definitely):

Space and Time are one. Space and Time are nameless, for they are the incognizable THAT, *which can be sensed only through its seven rays* – which are the Seven Creations, the *Seven Worlds*, the Seven Laws, etc., etc., etc. [SD2-612]

2.4.3.2. The problems with defining the concept of Time

The Secret Doctrine does not deny the “*phenomenon of Time*”, but states that it presents just a *reflection* of some primary concepts:

Time is not a predicate conception and can, therefore, *neither be proved nor analyzed, according to the methods of superficial philosophy*. [6/25] {by the latter a philosophical system is assumed which does not take account of the 7 planes of the Universe, etc. – SS}

Therefore, the Secret Doctrine does not consider Time as a primary, or universal concept, and there is neither a possibility, nor a necessity to define it in a sense being close to our everyday intuition. In *esotery* “*Time*” is a *collective concept* that *reflects the universal property of duration*. And *physics* acts *in the same way*: by *accepting a model* of spacetime over an *abstract spatial and time coordinates* it *obtains the properties* of *time* that *reflect* the peculiarities of *that model* (Newtonian time, SR, GR, or some other).

However, this approach being accepted both in physics and in esotery does not prevent us from defining the concept of Time as a collective one, but such that reflects the Theosophical concepts and is applicable not only to physical processes, but to phenomena of other nature as well; applicable in a sense that it allows us to constructively define the time for these processes as in the TCSs – by taking into account their own states (processes), not simply correlating them with the physical time. In a sense, it is a problem of creating a unified *Time Count Methodology* for the phenomena of various nature.

For creating such a methodology (viz. for presenting a general definition of time) it is required to correlate the esoterical and physical concepts pertaining to Time.

However, on this path we must realize that although the primary concepts could not defined, neither in physics, nor in esotery, they could be outlined with the use of their attributes. And although we are not provided with their definitions, by knowing the descriptive paradigms of the primary concepts and their basic attributes we can use them at least as the guidelines in modeling the reality, as the primary concept of space is defined and used in mathematics and physics in a variety of ways.

2.4.3.3. Physical Time-Space vs. Space, Motion and Duration

So, Time is considered in unity with Space both in physics, and in esotery.

But if *Time* does not present a universal property, what is its analog? The Secret Doctrine says:

The appearance and disappearance of the Universe are pictured as an outbreathing and inbreathing of “the Great Breath”, which is eternal, and which, being **Motion**, is *one* of *the three aspects* of the Absolute – **Abstract Space** and **Duration** being the other two.

When the “Great Breath” is projected, it is called the Divine Breath, and is regarded as the breathing of the Unknowable Deity – the One Existence – which *breathes out a thought*, as it were, which *becomes the Kosmos* (See “Isis Unveiled”). So also is it when the *Divine Breath is inspired* again the **Universe disappears** into the bosom of “the Great Mother”, who then sleeps “wrapped in her invisible robes”. [SD1-43]

In addition to *physical Space* and *matter*, the Secret Doctrine considers these objects in **7 planes** and assumes the existence of form and measure for the lower of them, but denies that the physical properties of spacetime and matter describe those of the higher planes adequately.

“**Motion**” – is *change of the states* of the **Space**; in general, it is considered in the same sense as a process in the physical plane with the exception that the events (or states of the system which define them) the appearing of which indicates the motion are developing in 7 planes. In this sense a motion may take place both in a plane, and from plane to a plane (e.g. on dissolving a physical matter).

Accordingly, “**Duration**” is understood as a *special property of Motion* that reflects an “*intensity*” or “*rate*” of *change of states*. So, if the states of the space are described mathematically, we may define a function (that in Part 1 was called **time function**) which maps these states on a scale, as in case of operational definition of TCS or in relativity where the properties of time are defined not by a time coordinate in itself, but by the reference frame (**SR**) or system of differential equations (**GR**). However, as in the case of physical TCSs, in general this mapping is not unique due to a randomness in choice of function and possible incompleteness in the accepted model of states. In other words, as the physical time count systems differ in scales and synchronicity, so the **Duration exists, but cannot be defined uniquely for all planes at once**, since any accepted definition reflects the preferred model of states and mapping.

Therefore, apart from Time in physical plane, that is described by physical models and TCSs, at least in the lower planes (say, astral and mental ones) we may consider the processes, the states (or events) of which, if described, may be used for defining a quantity being analogous to time in physical plane.

The fact that these concepts are not defined formally should not be considered as an impediment: the same situation takes place in physics; besides, this does not chain us to any model thus giving an opportunity to develop our understanding of the Universe on the ground of extending our knowledge.

Pay attention that these three concept are mathematically grounded and mutually correlated logically. Indeed, specifying some space (in a mathematical sense) means, first of all, that its elements (or states) are defined in some way. In order to specify a motion in this space it is insufficient to define a trajectory as a sequence of elements or states (a road, by itself, does not specify a motion – but the geometrical line, along which both a car and a bike move): it is required to parameterize it somehow, that is to define some time function on this set of states (See example in Sec. 1.4) that would define the measure of “time”. But it is impossible to define a measure (Duration) or trajectory (Motion) without states (Space); as well, without parameterizing (Duration) even the physical Motions are indistinguishable. Without Motion the Space is stationary, that is dead, but Theosophy denies this possibility for “*nothing remains without change* – or the same – for the billionth part of a second” [SD1-37]. Hence, all **these three concepts are mutually conditioned**, and the Motion in the 7-plane Space continues without a break, but we perceive it differently – with respect to what events (or states) defining this motion we prefer to observe or to trace.

Resume 4. *The contemporary physical models and time count systems in their essence are equivalent to the esoteric triplicity Space-Motion-Duration, but their capabilities as to description of time are limited just to the objects the properties of which are defined by these models. Thus, they are inapplicable for description of motion in the subtle planes – neither as a measure of duration, nor as a criterion of precedence of events. In particular, physical time may become inapplicable or give improper description of the essence of a process pertaining to evolution or psychology.*

2.5. General attributes of Time

2.5.1. Arrow of time and information

* The *Secret Doctrine* says [SD2-612] that:

1. Time *carries* (us) *forward*, a steed, with *seven rays*, a thousand eyes, *undecaying*, full of fecundity. On him intelligent sages mount; *his wheels* are *all the worlds*.
2. Thus Time moves on *seven wheels*; he has seven naves; *immortality is his axle*. He is *at present all these worlds*. Time hastens onward the first God.
3. A *full jar* is contained *in Time*. We behold him existing *in many forms*. He is all these worlds in the future. They call him “Time in the highest Heaven” ...

Now add to this the following verse from the Esoteric volumes:

“Space and Time are one. Space and Time are nameless, for they are the *incognizable THAT*, which can be sensed only through its *seven rays* – which are the Seven Creations, the Seven Worlds, ...
... the whole *Cosmos is a gigantic chronometer* in one sense [6/25].

These and the above statements allow us to conclude that the *Time* (as a *substitute* for *Duration*) *is*:

1. *unidirectional* and, thus, *nonreversible*;
2. *eternal* and, thus, *has neither origin, nor halt*. From this point of view:
3. *no grounds exist for losing of information relative to the preceding states*;
4. *manifesting itself in a variety of ways*, in particular, because the *forms of motion depend on the plane*.
5. At present, the *Earth* and its *kingdoms* are manifested *in every of seven planes*. However:
6. *There are worlds* (e.g. planets) in Solar System and Universe which *are not manifested in lower planes*.
7. Everything in the *Universe exists in Time*, and *its own motion defines the Time*.

* *Physics*.

Re to: **1, 2**. In thermodynamics, cosmology, relativity (world lines) and other physical theories the *time*, as parameter, is either *unidirectional*, or there are no grounds to consider it bidirectional (except of Newtonian mechanics provided that friction is neglected); this way, *Time* is defined as one-dimensional mathematical object – *arrow (axis) of time* which is physically irreversible – that is directed from “Past” to “Future” (See conclusions of Sec.1). As well, *physics* also does not imply any principal restriction as to *infinity of time axis* (in both directions). A conditional origin of time axis is considered just in *cosmology of Big Bang* which, however, says nothing as to the state of the *Universe* before the *singularity*.

Re to: **3**. It is also presumed that *information is preserved*, although with some models (e.g. *black holes*) this problem remains overt.

Re to: **4**. Over the last century physics has revealed a series of new forms of matter which are close to subtle planes or probably belong to them. The nature of some of these forms (hot and cold plasma, etc.) is more or less described in respective models, while very little is known relative to *dark matter* and *dark energy* which manifest themselves by gravity and so to say “anti-gravity” (that pulls the Universe apart) and amount to *22 %* and *74 %* of mass-energy of the observable Universe, respectively. This means that the “*conventional*” *physical* (or *baryonic*) *matter makes only about 4%* of the *Universe*. This distribution of matter may seemingly be considered as an indirect evidence of the 7-plane structure of the Universe.

Re to: **5**. The physical plane (in esoteria) is that what presents the object of physical studies.

Re to: **6**. The Solar system objects being physically invisible may be composed of dark matter being detectable just by gravitation effects; this is a suggestion, and we do not know how the mass-gravity changes during a plane-to plane transformation of matter. Anyhow, the gravitational *Pioneer anomaly* remains unexplained.

Re to: **7**. The same situation takes place in physics and other branches of knowledge which study the environment as a system *processes*, each presenting a *development of some quantity in time*. As well, namely the *motions*, and only the *physical* motions (from atomic oscillations in TIA, to expansion of the Universe in cosmological time) *define time* in various Time count systems.

* Informational attributes of Space-Time

As the **Motion** in the Universe *do never stop*, the **information** pertaining to its evolution *augments*, although it is natural to suggest that the **informational models differ from plane to plane** since the motions in these plane follow different laws.

So, as far as the Motion continues (at least in the subtle planes) even during Pralayas, the **volume of information increases** with the development of Motion and, therefore, it *may be used*, as the Duration, for a **measure of Time**.

2.5.2. Past, Present and Future. Simultaneity

Inasmuch as in esotery for an **arbitrary pair of events** the relation of **precedence** (whether the first event precedes, coincides or follows the second one) is *not defined* (See Sec. 2.3), the relation of **simultaneity** in general case *also* becomes *indeterminate*.

* Conceptually the same situation takes place in Physics – in **special relativity**, since the relation of **precedence does not generally present an invariant**: for some events the order of precedence may change after replacement of the reference frame.

2.5.3. Continuity of a time scale

The **present is only a mathematical line** which *divides* that part of eternal duration which we call the **future, from** that part which we call the **past. Nothing on earth has real duration**, for **nothing remains without change** – or the same – **for the billionth part of a second** [SD1-37]

Reasoning from this direct indication we have to consider **Time** as a **continuous quantity**, or rather – **Duration**, since Time, for simplification, is intentionally considered in some models as a discrete value. Besides, allowing a discreteness of time requires a synchronous halting of all processes at all planes which is impossible due to inconsistency of simultaneity and contradicts to the basic principle of nonterminating of Motion.

* Physics resides, in principle, on the same conclusion (See Sec. 1); with the exception of a *hypothesis* of existence of minimal quant of time – **Planck time**, $t_p = 10^{-44}$ s – being dozens of orders less than the minimal time interval physics is able to measure.

2.5.4. Hierarchy of rotation cycles in Cosmos

Evolution proceeds in cycles [SD2-180]

Practically all objects in the Space rotate (around their own axes), and, within the clusters, **revolve** around the respective barycenters where much more massive objects such as **black holes** may be disposed: planes – around central star, star systems – around centre of galaxy, etc.

Collectively, these processes (for short, call them **rotations**) define a natural **Hierarchy of rotation cycles, both in physical and subtle planes**, and, thus – the **Hierarchal time count system**.

From centre to circumference, from the imperceptible vesicle to the uttermost conceivable bounds of the Kosmos, those glorious thinkers, the **Occultists, trace cycle merging into cycle**, containing and contained **in an endless series**. The embryo evolving in its pre-natal sphere, the individual in his family, the family in the state, the state in mankind, the Earth in our system, that system in its central universe, the universe in the Kosmos, and the Kosmos in the ONE CAUSE . . . thus runs their philosophy of evolution [SD2-189]

But this **system of nested cycles** manifests itself not only in Space and Time: these cycles **may exert physical influence** onto inserted objects as well [16, 17, 29].

From *physical view point* this makes them more important than simply a kinematical basis for time count. From *esoterical point of view* these *rotations* present not only an effective factor of *interaction* between the objects, but an *important instrument of forming the worlds* (from comets to star systems), which is widely presented in the artifacts all over the world [23 - 29].

... whether Fohat or the famous FORCE of Science, nameless, and as difficult of definition as our *Fohat* himself, that Something “*caused the Universe to move with circular motion*”, as Plato has it; or, as the Occult teaching expresses it:

“The *Central Sun* causes *Fohat to collect primordial dust* in the form of *balls*, to impel them to *move in converging lines* and finally to approach each other and *aggregate*.” (Book of Dzyan) ... “Being scattered in Space, without order or system, the world-germs come into frequent collision until their *final aggregation*, after which they become wanderers (*Comets*). *Then* the battles and *struggles begin*. The older (bodies) attract the younger, while others repel them. Many perish, devoured by their stronger companions. Those that escape *become worlds*.” [SD1-201]

... *Fohat sets in motion the* primordial *World-germs*, or the *aggregation of Cosmic atoms and matter, some one way, some another, in the opposite direction*. ...

Fohat turns with his two hands *in contrary directions* the “seed” and “the curds”, or *Cosmic matter*; is turning, in clearer language, particles *in a highly attenuated condition, and nebulae*.

Outside the boundaries of the *solar system*, it is *other Suns*, and especially the *mysterious* “*Central Sun*” (the “*Abode of the invisible deity*” as some reverend gentlemen have called it) that *determines the motion of bodies and their direction*. That motion serves also to *differentiate the homogeneous matter*, round and between the several bodies, *into elements* and sub-elements unknown to our earth, which are regarded by modern Science as distinct individual elements, whereas they are merely temporary appearances, *changing with every small cycle within the Manvantara*, some Esoteric works calling them “*Kalpik Masks*”. [SD1-672]

Some other aspects of rotation in physical and subtle planes are given in [9]:

All over the Space a *vortical rotation* is observed, which is always spiral...

The *kernel* starts to manifest an *increased rotation: the greater the mass – the faster*...

A *rotation* may appear just *on concentration of energy*...

Periphery rotates faster than the centre... *Such kernels* make the foundations of *comets*...

Buttermilking gives the best illustration of nucleation of the worlds.

* However, the *source of these mass rotations* is still *unknown to physics* and presents a great puzzle to scientists with respect to the conservation laws.

Comment. Note that in no sense the Secret Doctrine describes a “physical creation” as originating “from a point”, as in the hypothesis of Big Bang, but as coming into physical existence in some regions, like developing in photography, or during rising of a mist. In addition to the previous sections, the above paragraph emphasizes the importance of rotation and spiraling in this process.

2.5.5. Cosmic chronometer: Hierarchal structure of time scales

From esoterical point of view the Universe is organized hierarchically: each “inhabited” space object has its own conscience Ruler who is in charge of the world being entrusted to Him for guiding the evolution (for the Earth – These are Dhyana-Chohans); the Hierarchy of Rulers acts in coordination and, in general, corresponds to the structure of Hierarchy of rotation cycles (Earth – Sun – Galaxy – etc.). That is why the astronomical cycles are so important [2] for the evolution of the Earth:

Evolution in general, *events, mankind, and everything else* in Nature *proceed in cycles*. [SD2-443]

At that, the lower cycles reiterate in the greater ones, and the most part of esoteric (or evolutionary) cycles are defined by astronomical ones (e.g. by planetary revolution, precession of equinoxes and apses, etc.) during which both the physical and occult (viz. subtle -plane) influence changes [17, 23, 28, 29].

Asuramaya ... determined the duration of all the past geological and cosmical periods, and the length of the all the cycles to come, till the end of this life-cycle, or the end of the seventh Race... There is a work among the Secret Books, called the “*Mirror of Futurity*”, wherein *all the Kalpas within Kalpas and cycles within the bosom of Sesha, or infinite Time, are recorded...*

There is *another old work* which is attributed to various *Atlanteans*. It is these two Records which furnish us with the *figures of our cycles*. [SD2-49]

The Cosmic rhythm of breathing has been established but only one for the whole period of Mahamanvantara, or otherwise the Universe would have collapsed [9].

Therefore, within the infinite, for our perception, time there exists the general plan and corresponding rhythm. However, the Secret Doctrine concentrates, mainly, on the Solar system and, basically, on the Earth. For this and some other reasons this rhythm is unknown to us, as the Hierarchy that is above the Earth’s one. But even what we know, as a result of comparison of astronomical cycles with the terrestrial processes, confirms this concept and supports the idea that the greater cycles modulates the lesser ones. In particular, the 11-year solar activity cycles being synchronous with the planetary revolution periods also modulate both the physical and the biological processes, including the intensity of human activity [16, 20, 21].

This *Hierarchy of cycles*, together with their durations, in essence presents the *Hierarchy of time scales* (or rather – time count systems), or what was called “*the Cosmic Chronometer*” which specifies the integral rhythm through which the upper cycles provide their influence via the lower ones so that the greater the period, the greater its dominating long-term influence, although it is not “perceptible” at a short time span; it is like the climate and the weather: the former changes, but we used to live in the same climate and perceive just the weather changes.

Comment. Note to this end, that a *unitary rhythm* in the *Solar system* does actually *exists*, but *not as some base period with natural harmonics* (viz. periods presenting integer quotients of the base period) – as it is usual to consider in physics, *but as a system or coordinated discrete periods*.

Namely, it is established [16, 20] that the *infinite* (to both ends) *geometric series* I with the factor equal to the *Golden section* number $\Phi = 1.618 \dots$, the unity of which presents the average duration $T_o = 11.07$ yr of *the Solar cycle*, presents a discrete set of periods (*Auric Time Scale, ATS* [15]) *which coincide*, along with its harmonic complement, with the most Solar system *planetary periods*, as well as with a broad spectrum of *periods pertaining to terrestrial, biological and social phenomena*. It is evident that the cycles of this scale modulate the greater terrestrial cycles.

Moreover, the same physically-nonuniform series defines the *critical epochs of the Mayan calendar* which manifest themselves as the *bifurcation points* in *earth phenomena* and *social processes* [18].

And this influence of the Solar activity cycles was also explained in the Secret Doctrine.

* Although there are no reliable models which can answer the question whether or not the Universe is evolving cyclically, the remaining objects are generally evolving cyclically – from gas and dust nebulae to stars and planets, which, after the lapse of definite period, explode or seized by other objects.

2.5.6. Acceleration of Time

So, in evolution of the Earth the processes in various kingdoms develop actively during the periods of greater and lesser Manvantaras (including the Rings corresponding to Root Races), and are suspended during the respective periods of Pralayas in various degrees: from dissolution to after-cataclysmic depression.

Meanwhile, during Manvantaras the *processes* in *different kingdoms* and even in *Races* and *subraces develop* with their *own rates*. Thus, in the beginning and before the end of the Rounds the evolution of humanity may be suspended to give the other kingdoms a time for attaining the required level of development.

This means that time t_A being operationally defined by one process (viz. by its states) may flow at other rate than time t_B being defined by some other process. In this sense the time t_B may be both uniform, and nonuniform with respect to time t_A (as in example in Sec.1.4) – depending on the nature of these processes.

But what is *much more important this is not just a local fluctuation*: during the phases of activity, within the Rounds and Rings, the **EVOLUTION is developing with ACCELERATION**:

The Secret Doctrine teaches us that everything in the universe, as well as the universe itself, is formed (created) during its periodical manifestations – by **accelerated MOTION** set into activity by the BREATH of the ever-to-be-unknown power (unknown to present mankind, at any rate) within the phenomenal world.[SD2-551]

In other words, *in astronomical time* the *evolution of humanity* precedes *by steps* – in an alteration of *accelerated development* and “*rest*” (from prolonged after-Ring depression to after-round dissolution). To this end *it is very important* that the *Secret Doctrine gives the explicit indication to the mathematical law* which describes this *acceleration*:

... *they* {Dhyān-Chohans or Dhyāni-Buddhas – SS} *work* in cycles and on a **STRICTLY GEOMETRICAL AND MATHEMATICAL SCALE OF PROGRESSION** [SD2-732]

Notice to this end, that a **geometrical progression** ($c, c \cdot q, c \cdot q^2, \dots, c \cdot q^n, \dots$) defines a discrete set of numbers (which may present cycle durations), whereas its *analog for the continuous axis* presents the **exponential law** ($y = a \cdot e^{b \cdot x}$). They are interchangeable: the former is used, for instance, in study of the Golden section periods of the Mayan calendar [18, 19]. The latter is more convenient in the below considerations – for dealing with functions of time.

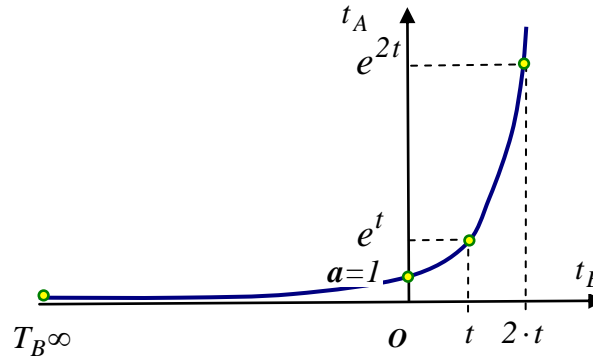
Resume. Therefore, *in its active phase the evolution of mankind develops EXPONENTIALLY* (in astronomical time). But this *acceleration may remain unnoticeable during the main interval of manvantara* where the increments of this function are negligible – until it comes to a region of explosive growth.

Example of exponential acceleration. As in case of uniformity, it is senseless to consider acceleration of a process **A** relative to itself. Therefore, we have to compare it with some other process **B**.

Assume that some time count systems are defined for these processes that specify the **time functions** t_A and t_B , respectively (remind, that the time function maps the states of the base process to a segment called time scale – See sec. 1.4). For the latter it is natural to take an astronomical time t_B , say – years.

Then, the acceleration of process **A** means that during the equal periods of astronomical time its states are changing faster and faster, and namely this means that time t_A accelerates relative to time t_B .

For numerical study of this acceleration it is natural to consider a **reference time function** $t_A = f(t_B)$. If time t_A grows exponentially with time t_B , in Cartesian coordinates this dependence is specified by exponential function $y = a \cdot e^{b \cdot x}$ where argument x stands for astronomical time t_B , and the function y – presents time t_A ; the graph of this function is as follows:



At the time interval $(T_B^\infty, 0)$ of t_B the time t_A flows very slowly, but after the moment $t_B = 0$ it “explodes”. The parameters a and b define where this curve intersects the axis $O t_A$ and its steepness; for simplicity, imply that $a = b = 1$. Then, for the equal intervals of time t_B having the duration t :

$$(0, t), (t, 2t), (2t, 3t), \dots$$

the values of time t_A make

$$e^t - e^0 = (e^t - 1), \quad e^{2t} - e^t = e^t(e^t - 1), \quad e^{3t} - e^{2t} = e^{2t}(e^t - 1), \dots$$

or form a geometrical progression

$$c, qc, q^2c, \dots$$

where $c = (e^t - 1)$ and $q = e^t$.

This means that during the same equal intervals of astronomical time the number of events pertaining to the process A grows in geometrical progression; in other words, during a long period of patriarchal life seldom evolutionary events take place, but after then these events are starting to appear as an avalanche.

Hence, if t_B gives the civil time which we intuitively perceive as “uniform”, a **significantly accelerated** (relative to t_B) **time** t_A **may appear “unnatural”** due to our habit to use the TCSs being more or less synchronized; in reality, almost all TCSs are mutually nonuniform, simply their discrepancies are small enough.

As we see from the above figure, a pronounced acceleration may be noticeable, but at the last and *very short* (in terms of time t_B) phase of acceleration; at the preceding period (from T_B^∞ to 0) it remains practically unnoticeable.

2.5.7. Spiral of time

The connection between the time functions, t_A and t_B , becomes more pithy, if the **reference function**

$$t_A = f(t_B) \tag{2.1}$$

is **considered in polar coordinate system** with the centre in point O and polar axis Ox . Thus, let the unity of time T_B defining the duration of period of the base process B correspond to the angle 2π (viz. 360°). Then the time t_B is corresponded by the angle $\omega(t_B) = (t_B / T_B) \cdot 2\pi$, counterclockwise from the axis Ox .

To any moment of time t_B (or angle $\omega(t_B)$) put into correspondence a *radius-vector* with the *length*

$$\rho(t_B, t_A) = \lim_{\Delta t \rightarrow 0} \frac{\Delta t}{\Delta \tau}, \tag{2.2}$$

where: Δt – time increment for process **B** in the vicinity of moment t_B , and
 $\Delta \tau$ – time increment for process **A** in the vicinity of moment $t_A = f(t_B)$.

Then, the vector-function

$$F(t_A, t_B) = (\rho(t_B, t_A), \omega(t_B)), \tag{2.3}$$

that maps the coordinated pairs of time values (t_A, t_B) on the plane, but in the coordinates (ρ, ω) call the **PHASE PORTRAIT** of time t_A *relative to* t_B . From this point of view the function (2.1) may be called a **LINEAR PORTRAIT** of time t_A *relative to* t_B ; *linear* – *in the sense* of its presentation in *axes* of *Cartesian coordinate system*.

The *graph* of the *function* $F(t_A, t_B)$, or *phase portrait of time* t_A *relative to* t_B , call the **SPIRAL OF TIME**.

In this sense the **Spiral of time** is a *mathematical object* with a *descriptive geometric presentation*.

Three qualitatively different types of reference functions are presented in Fig. 2.3. For each of them a linear and phase portraits are given in (a) and (b). However, the graph of the phase portrait, in contrast to linear one, may lack uniqueness: for *any time* t_A a monotonous *linear portrait* gives the *unique value of time* t_B , and vice versa, whereas in the *phase portrait* the *time* t_A may be *defined* with an *uncertainty of integer number* n of *basic periods*, or angle $n \cdot 2\pi$. Thus, the points **C'** and **D** are defined uniquely: the former belongs to the first turn of the outward spiral and therefore $t_B = (\alpha / 2\pi) \times T_B$, whereas the latter – to the second turn of the inward spiral, and therefore $t_B = [(\beta + 2\pi) / 2\pi] \times T_B$. But we cannot say definitely to what turn the point **C** belongs since the green circle presents overlapping of several periods of time t_B .

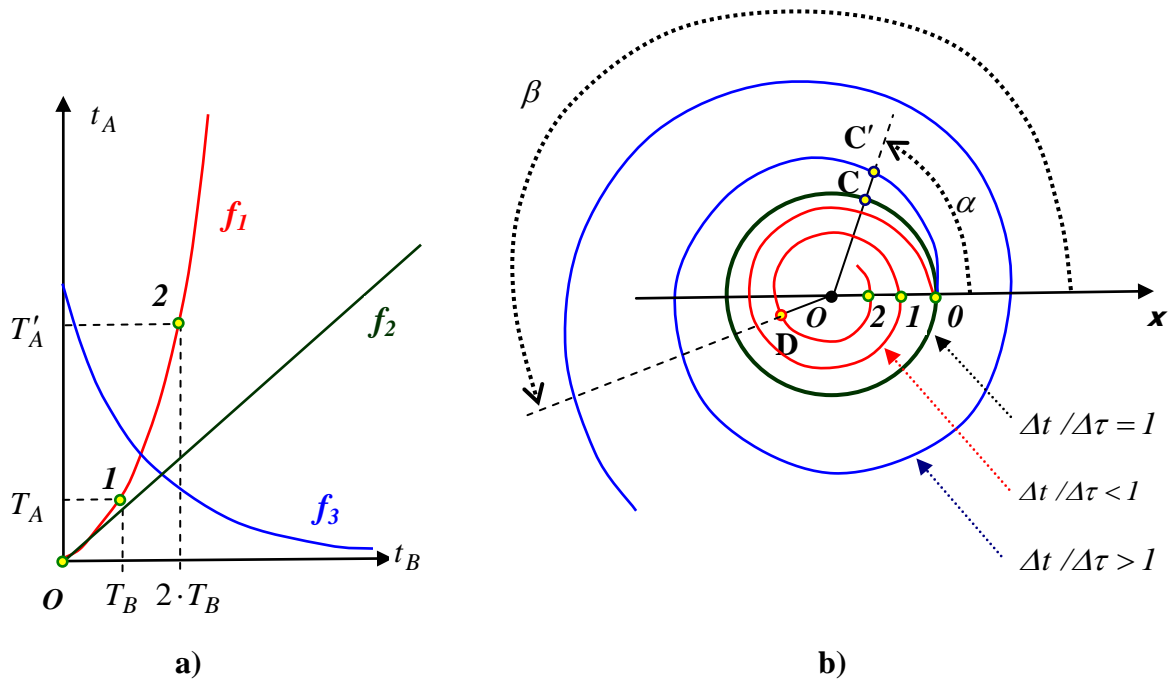


Fig. 2.3. Acceleration and deceleration of time t_A relative to time t_B

- a) – functional dependence of time t_A on time t_B (reference time function): $t_A = f(t_B)$;
- b) – Spiral of time: *acceleration*, *deceleration* and *uniformity* of time t_A relative to time t_B .

Let the time count systems t_B and t_A be **linearly dependent**, viz. $\Delta t = k \Delta \tau$, where Δt and $\Delta \tau$ present time spans between the same two events, but measured in systems t_B and t_A , respectively (**function f_2** in Fig. 2.3.a). This is the case when the **time t_A is uniform relative to time t_B** : these systems differ just in the scale factor k , like on measuring time in hours and minutes, and with respect to (2.2) the **radius ρ** is a **constant** equal to k . This means that the **phase portrait** has the form of **circle of radius ρ** : when time t_B changes from 0 to T_B , the end of radius-vector sweeps the **circle** (Fig. 2.3.b) for the first time; when time t_B changes from T_B to $2T_B$, it circumscribes *geometrically the same circle* for the second time, etc.

However, if with the growth of time t_B the **radius ρ** of (2.2) **decreases** (or, inversely – **increases**), the end of radius-vector circumscribes an **inward** spiral (**outward** spiral, respectively). In this case the **time t_A is nonuniform relative to time t_B** , and vice versa.

These situations are illustrated in Fig. 2.3, where the linear portraits (a) for three types of functions of type (2.1) and their phase portraits – two spirals and the circle are presented. In these examples the origin $t_A = t_B = 0$ is chosen for convenience.

For a **linear relation f_2** : $t_A = k \cdot t_B$ the phase portrait – is the **circle** with radius $\rho = 1/k$ (Fig. 2.3.b).

As it follows from the **chart f_1** (Fig. 2.3.a), presenting an analog of **exponential function**, the time t_A is accelerated relative to time t_B (greater and greater intervals of time t_A correspond to the same intervals of time t_B). Hence, the **radius ρ** of (2.2) **decreases** and the **spiral** makes **inward turns** with the **lesser and lesser radii**; for exponential function it **converges to the Origin** – to point O (**red spiral** in Fig. 2.3.b). During several cycles of the process B with base period T_B the points $0, 1$ and 2 lying on the **function f_1** (Fig. 2.3.a) correspond to the points $0, 1$ and 2 lying on the phase portrait (**red spiral** in Fig. 2.3.a).

In a similar way, from the **chart f_3** (Fig. 2.3.a) follows that the time t_A is slowed with acceleration relative to time t_B and, thus, on the phase portrait the spiral whirls outwards (**blue spiral** in Fig. 2.3.b).

So, if the **ratio $\Delta t / \Delta \tau$ retains immutable**, so does the length of radius-vector $r(\mathbf{C}) = \rho(t_B, t_A)$ (**green circle** in Fig. 2.3.b), and the **time t_A is defined** from the equation $r(\mathbf{C}) = t_B / t_A$, viz. $t_A = t_B / r(\mathbf{C})$.

However, if the **ratio $\Delta t / \Delta \tau$ changes in time** (e.g. as blue or red spirals), for obtaining the value of time t_A by t_B it is required to integrate the following equation arising from (2.2) as a limit specifying how these values are connected locally:

$$d\tau = dt / r(\mathbf{E}). \quad (2.4)$$

where \mathbf{E} – is a point on the spiral that corresponds to time t_B ; its angle is $\varepsilon = (t_B / T_B) \cdot 2\pi$. In this case **time t_A is defined** as follows

$$t_A = \int_0^{t_B} r^{-1}(\mathbf{E}) \cdot dt. \quad (2.5)$$

Comments.

1. Instead of ratio $\Delta t / \Delta \tau$ in (2.2) one may consider the inverse value, $\Delta \tau / \Delta t$; in this case acceleration of time t_A corresponds to turning of the spiral outwards, and inwards – for deceleration of time.
2. For small time intervals Δt и $\Delta \tau$ instead of (2.4) one may use the following approximate equation

$$\Delta \tau \approx \Delta t / r(\mathbf{E}). \quad (2.6)$$

2.5.8. Points of Bifurcation

Suppose now that at a base interval T_B of process **B** the process **A** accelerates to infinity. In this case the phase portrait takes the form of *G-shaped spiral* presented in Fig. 2.5.A, since the limit radius $\rho_* = \rho(t_B, t_A)$ converges to 0 as the polar angle approaches 360° (at this $t_B \rightarrow T_B$).

If *the same scenario* repeats *at the next period* T_B of process **B**, the *moment* $t_B = T_B$ defines a *break point*; by taking into account its meaning for applications, call it the **Point of Bifurcation**. For this situation the graphs of linear and phase portraits of the function $t_A = f(t_B)$ for interval $2 \cdot T_B$ are given in Fig. 2.4.

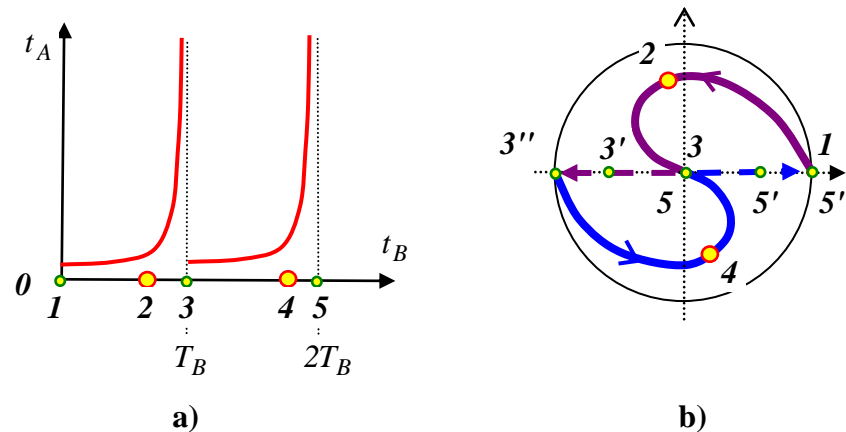


Fig. 2.4. Points of Bifurcation in Cartesian (a) and Polar (b) coordinates

Break point 3 at (a) is corresponded by points 3, 3' and 3'' at (b); similarly, point 5 at (a) is corresponded by points 5 (coincides with 3), 5' and 5'' (coincides with 1) at (b). Therefore, the graphs at (a) are corresponded by two solid lines 1-2-3 and 3''-4-5, and the break points at 3 and 5 – by fragments 3-3'-3'' and 5-5'-5'' . Meanwhile, the points 3' and 5' bear no mathematical meaning: they are presented just for illustrating the order of passing the curves.

The graphs similar to presented in Fig. 2.4.b also arise in the cases when the base cycle of process **A** reiterates integer times k during a base cycle of process **B** with duration T_B ; for the cases $k = 1, 2, 4$, and 5 the respective graphs are presented in Figs. 2.5.A, B, C, and D, respectively.

Comment. *From practical point of view* the *phase portraits* **C – D** of Fig. 2.5 are *very important* since the period T_A of the cycle which engenders these “arms” present the exact *k-harmonic of period* T_B , viz. $T_A = T_B / k$. As a rule, such harmonics of planetary and other periods cause physical resonances and exert esoteric influence [16, 17, 23, 26, 28].

Other values of k are also possible. The values **2** and **4** are especially important as such that specify the main harmonics (or subcycles) pertaining to rotation and revolution of the Celestial bodies. The value **5** pertains to Mayan calendar and some other effects that are considered below.

The *critical radius* $\rho_* = 0$ allows us to approximate the *limiting behaviour* of *reference function* for the case of “*explosive*” *acceleration of time*. The situation that takes place for a *relatively small acceleration* is presented in Fig. 2.6.E, where the minimal radius ρ_* defining the *maximal acceleration* (2.2) makes a *approximately* $\frac{1}{4}$ (at the origin the both time system are approximately uniform, so $\rho \approx 1$) . In this case the break points appear as well, but the “break” is finite: the transfers 3-3'-3'' and 5-5'-5'' (as they are shown in Fig. 2.4) take place not from the center (this denotes an “infinite break” of reference function), but from the circle of radius $\rho_* = \frac{1}{4}$ (the reference function changes its rate, but only 4 times).

It is clear, that the spirals with 4 and 5 arms presented in Fig. 2.5, but for the case of limited acceleration can also be modified to a form similar to Fig. 2.6.E, although with 4 and 5 spiral arms, respectively, that start at the internal circle instead of central point as in Fig. 2.5.

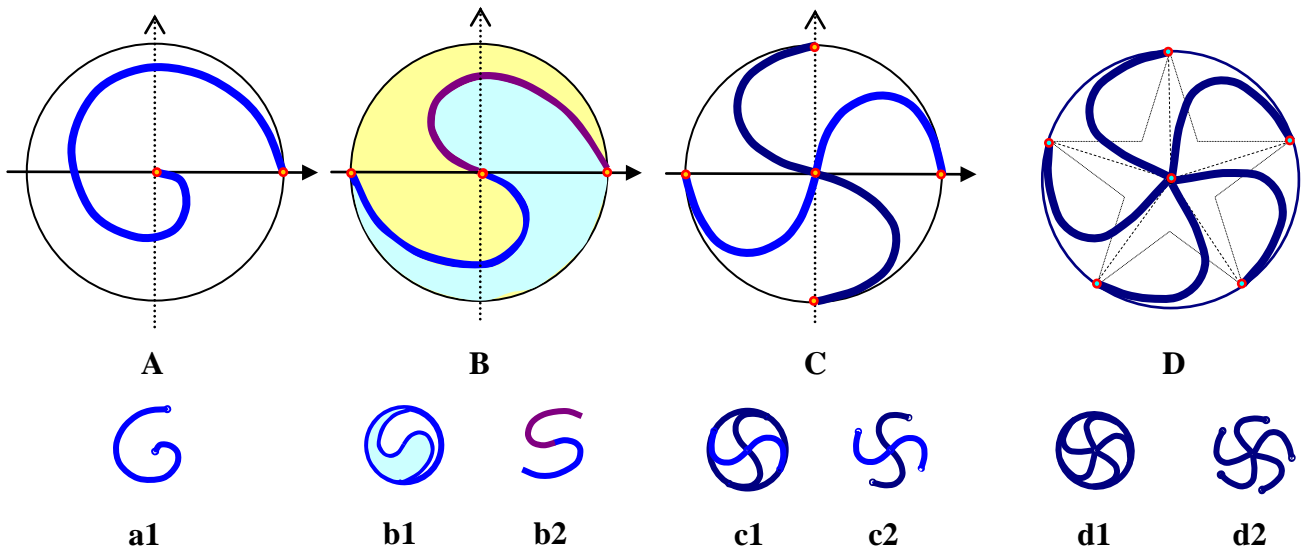


Fig. 2.5. Time spirals (A-D) for a time t_A that periodically accelerates at the intervals making $1/k$ of the basic period T_B of time t_B ($k = 1, 2, 4, 5$, respectively) for the limiting radius $\rho_* = 0$.

The points indicate the beginning and the end of time spirals. In the second row the graphs of these spirals are shown with and without the circle presenting the base period T_B .

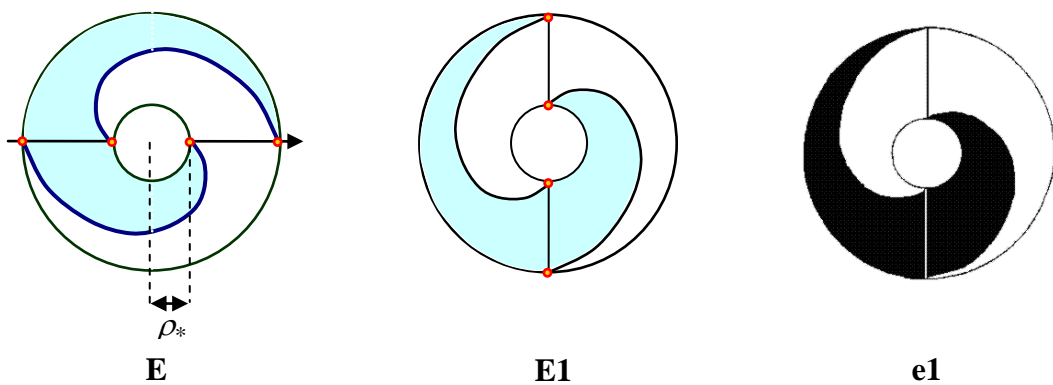


Fig. 2.6. Time spiral (E) for a time that periodically accelerates at the intervals making $\frac{1}{2}$ of the basic period T_B for the limiting radius $\rho_* > 0$

Comment. It is noticeable that turning of the diagram **E** by 90° gives the diagram **E1** which *identically coincides* with the historical image (e1) of the *Ancient form* of the Taijitu – a symbol for yin and yang which is more known at present in its later form (See Sec. 3, below)

2.5.9. An example of phase portrait for Solar time

The **apparent** (or **true**) **solar day** – is a time interval τ between two sequential culminations of the Sun (viz. from true noon to the next true noon). During a year this value **varies**: such day is shorter in Summer and longer in Winter with the maximal difference of up to 51 s. This effect is caused by nonuniformity of solar motion along the Ecliptic and inclination of the latter to Equator.

The true solar time is inconvenient for practical purposes for its nonuniformity; for this reason a **mean Sun** is defined which moves uniformly along the Equator; it defines the **mean solar time**. At this, the time interval t_* between two sequential culminations of the mean Sun is called a **mean solar day** (at present, this day is considered to start at midnight). This time at Greenwich Meridian is called Universal Time (See UTC, Sec. 1.3.)

The difference between the true and apparent time is called the **equation of time**:

$$\eta = t_{\text{e}\ddot{n}\delta} - t_{\ddot{n}\delta}. \quad (2.7)$$

As a function of date, its yearly graph presents two sine-like curves corresponding to half-year subperiods.

Consider a phase portrait of the apparent solar time t_{ap} relative to the mean time t_{av} ; in the above terms the former corresponds to t_A , and the latter – to t_B .

Take the moment $t_{ap} = t_{av} = 0$ as the origin (e.g. December, 24). For an elementary time increment (for days with numbers n and $n+1$) consider the lengths of day Δt and $\Delta\tau$ in time t_B and t_A , respectively:

$$\Delta t_n = t_{B,n+1} - t_{B,n}; \quad \Delta\tau_n = t_{A,n+1} - t_{A,n}. \quad (2.8)$$

From the definition of mean time it follows that $\Delta t_n = t_*$, while making use of (2.7) gives

$$\Delta\tau_n = t_{A,n+1} - t_{A,n} = (\eta + t_B)_{n+1} - (\eta + t_B)_n = (\eta_{n+1} - \eta_n) + (t_{B,n+1} - t_{B,n}) = \Delta\eta_n + t_*,$$

where $\Delta\eta_n$ – is a daily increment of equation of time.

Hence, in finite differences the equation (2.2) takes the form

$$\rho_n = \frac{\Delta t_n}{\Delta\tau_n} = \frac{t_*}{t_* + \Delta\eta_n}. \quad (2.9)$$

It follows from this equation that:

– in those days when the parameter η increases (viz. $\Delta\eta_n > 0$) the radius satisfies the inequality $\rho_n < 1$; this means that the time t_{ap} accelerates relative to t_{av} , and inversely:

– in those days when $\Delta\eta_n < 0$, the radius satisfies the inequality $\rho_n > 1$, that is the time t_{ap} decelerates relative to t_{av} .

A phase portrait of the **apparent time** is presented by **blue** and **red** lines in Fig. 2.7; for comparison a circle is given (in **green**) which presents the phase portrait for the Big Ben ($\rho_n = 1$ so far as its time presents the **mean solar time** t_{av}).

Notice, that in this case the *phase portrait* presents a *closed graph*, not a spiral, since the mean time is selected so that by the end of the year the values t_{ap} and t_{av} coincide. Namely, each of them presents the time accumulated since the origin (viz. 1st day of the year) till the n -th day of the year:

t_{av} (as analog of t_B) by definition equals to $n \times t_*$,

t_{ap} (as analog of t_A) owing to its alternative acceleration and deceleration relative to the mean time is defined by summing the daily values $\Delta\tau_n$ according to (2.5).

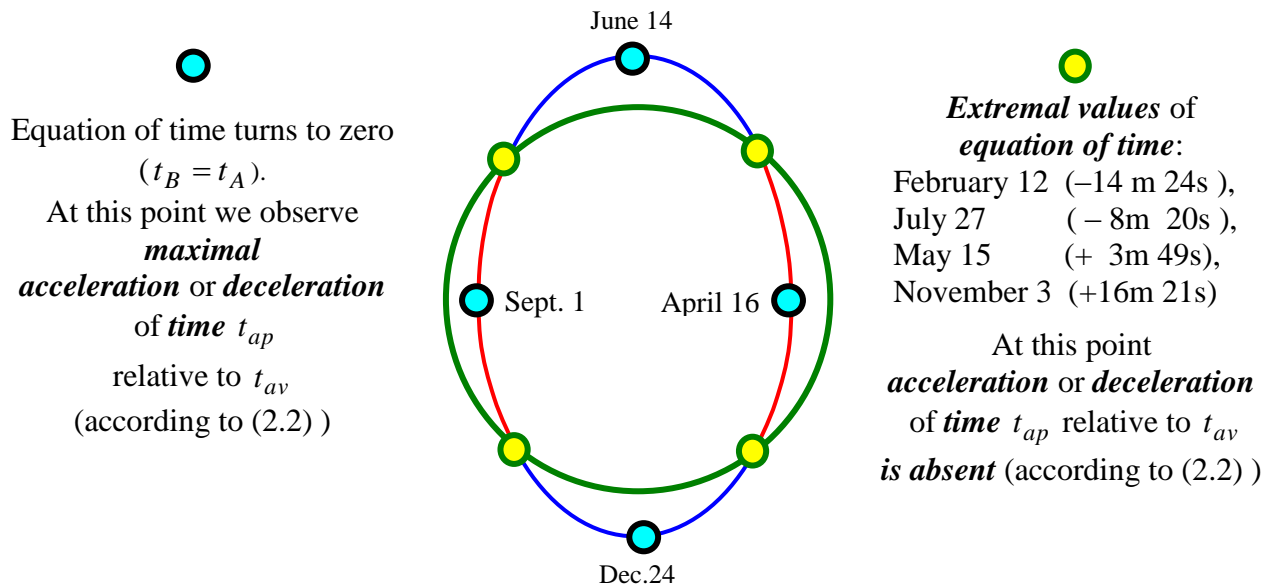


Fig. 2.7. Phase portrait of the apparent solar time t_{ap} relative to the mean solar time t_{av}

The fragments where t_{ap} **accelerates** relative to t_{av} are given in red, **decelerates** – in blue

Comments.

1. The diagram is presented out of scale: the actual deviations of the phase graph from the circle make parts of a percent. Besides, the specified dates may vary.

2. Maximal duration of apparent solar day makes $24h\ 0m\ 30s$ of mean solar time (on December 23 – 24), minimal – $23h\ 59m\ 39s$ (September 15 – 16).

3. The **mean solar time** (presented by **green circle**) in reality is **also nonuniform** (e.g. relative to atomic time); for example, **due to gravitational time dilation**: when the Earth passes its perihelion (approximately on January 4 – 7) all clocks on the Earth run slowly, **slowing of Earth rotation**, and **other causes**.

2.5.10. Time travel

Time travel is usually understood as (1) “relocation” in a physical body in the Past or to the Future with retaining an ability of mental and physical activity. As a rule it is also assumed that there exists a possibility (2) “to return” in the present being understood as a relatively short time interval after the departure.

Sometimes such a journey is confined to (3) “mental, or informational” travel – that is to ability to receive or to send information in the Past or to the Future; for instance, “to see” past or future.

Esoteric aspects of Time travel

As it was said above, the Past and the Future have no universal meaning: for various planes of existence they are different. A “project” of a “future” event is formed in a more subtle plane and then obtains more specific details in the lower plane, and so on – until it is realized in the physical plane. In this sense the past and the future of this event coexist, and this may continue for a long time interval. Meanwhile, there is a difference between the accessibility of the Past and Future.

Past. The *occurred event is written in the chronicles of Akasa* and is *accessible for perceiving, but could not be changed* (as in a cinema: visible, but not changeable). An ability for reading this information from the subtle planes is determined by the personal ability to “penetrate” in these planes with his “higher conscience”, that is by the level of development of the respective human’s subtle bodies.

Comment: Akasa.

Ether, this hypothetical Proteus, one of the "representative Fictions" of modern Science – which, nevertheless, was so long accepted – is one of the lower “principles” of what we call **PRIMORDIAL SUBSTANCE** (*Akasa*, in Sanskrit), one of the dreams of old, and which has now become again the dream of modern science. It is the greatest, just as it is the boldest, of the surviving speculations of ancient philosophers. For the Occultists, however, both ETHER and the Primordial Substance are a reality. To put it plainly, **ETHER** is the *Astral Light*, and the **Primordial Substance** is *AKASA*, the Upadhi of DIVINE THOUGHT. [SD1-326]

“*Waters*” and “water” stand as the *symbol* for *Akasa*, the "*primordial Ocean of Space*," *on which Narayana*, the self-born Spirit, *moves*: reclining on that which is its progeny (See Manu). [SD1-458]

Aditi, unless the contrary is proven to us, Aditi, we say, or *Akasa* in her highest form, is the *Egyptian seven-fold heaven*. [SD2-613]

Future may also be perceived to the extent of degree of formation of the respective event and of abilities of a person to concentrate his attention in the appropriate plane. However, it is said that a prediction may be correct (for definite moment of physical time), but it could have not taken place (if some new obstacle would change the situation). Moreover, with respect to the law of Karma the future events, that are already ripening in the subtle planes, could be changed so to say from the physical plane – since Karma takes into account all the deeds, both mental and physical (for more detail – see para. 2.3.2).

Thus, with his subtle bodies (what we call “intuition”) a human being is potentially able to perceive the Past, but do not change it, and to foresee the Future (which, however, in some cases may not come into reality) and, to some extent, to exert influence to the forming of events to come in the future.

Space. As well, if his abilities allow him, a human being may relocate his *subtle body* almost immediately and wherever he likes on this planet, whereas the most evolved beings may even travel to other planets of the Solar system. This subtle body may be even visible (as a compacted astral), while the physical body remains in other place, motionless.

Materialization, as producing a copy of any existing (existed) object is also possible by condensing it from a subtle plane. Reasoning from difference in rates of development of various processes there are no objections to physical relocation in the future. However, physical relocation in the past disturbs the principle of immutability of the Past. Meanwhile, the author of this work has not found in the references any indication relative to a possibility of “instant” or remote relocation of a human being in a physical body.

Physical aspects of Time travel

With respect to the physical plane, a similar situation takes place in physics.

Thus, in relativity neither the Past, nor the Future has absolute (or universal) meaning. But when the *future* is defined (See Sec. 4.1), *one may reach it physically* and even act “there”, but it is *unknown even theoretically* – *how to come back* to physical present (viz. to the close vicinity of the moment of start of time travel), if such possibility exists at all.

This is apart from using mathematical models for predicting how the respective processes would develop, or had developed in the past (See Secs. 4.2, 4.3).

Distinctions

The principal distinction of esoteric prediction (forecasting, etc.) in contrast to a physical one is that it does not require any hypothesis or model; this allows to obtain qualitatively new information; however, the consistency of this information depends on the qualification of the person who receives it. Luckily, or unluckily – but the most part of persons claiming to have such ability who live in the modern society are unable to “read” information from the higher planes where the most authentic knowledge is contained.

Besides, as a physical prediction is invariably based on some model, being always incomplete by definition, it may miss a new situation which was not taken into account. For an example it is sufficient to consider a climate, or even weather forecast.

Time machine

Any technological device, whether fictional or hypothetical, that is used for accomplishing time travel in the past or to the future is commonly known as a time machine. By taking into account the aforesaid, we may conclude that from both physical and esoterical points of view:

- there is no ground to assume that there exists a possibility of physical travel to the Past;
- there is a possibility of physical travel to the Future, and at a relocation speed exceeding the velocity of light (See Sec. 4.1), but afterwards it would be impossible for the physical body to return back – to the close vicinity of time of start of the travel: for the traveler it becomes an unreachable past which becomes the more distant from the traveler the faster he moved and the farther in time he got.

Alongside, the higher Ego of a human being, comprising his higher bodies, is able, to a definite degree, to see the Past, as well as to see and exert influence to the Future – but in the subtle planes; after then, he can return to the present (shortly after the time of “departure”).

Therefore, we cannot exclude that a physical device could be invented that would be able to read the chronicles of Akasa as now the radio sets receive the signals of already nonexistent stars and galaxies. As to the travels to a far future, apart from technology a conceptual problem exists: whom the traveler would meet on coming back, and whether his report would present any interest to then inhabitants (if they would be)?

Conclusions

Thus we see that *the concept of Time* relative to its manifestations in the *physical world* is generally the *same* both in *physics* and in *esotery*. In *physics* the time, as a concept, is not defined; instead it is defined as a parameter of some model; in particular – via an operational definition – as a time function which correlates the states of the chosen process with some scale, that is as a measure on the set of states of the respective process. In *esotery* it is stated explicitly that Time, as a concept reflecting our intuitive experience, does not present an absolute or universal notion, but is used as a collective term for the universal concept of duration of motion, that is as a special feature of motion which characterizes the sequencing of the states of the respectively defined space.

In both approaches it is pointed out directly that Time cannot be considered in separation from the Space.

The properties of Time from both *esoterical* and *physical* points of view are *generally the same* until the *physical plane* is considered. The physical models are limited by this plane of existence, whereas the *esotery* studies the manifestations of Time (or Duration) *in other planes as well*, which provides it with much *more profound understanding* of this phenomenon and its aspects pertaining to Past and Future, Cause-and-Effect, etc. In more detail these considerations are presented in the foregoing resumes.

Therefore, starting from the Theosophical understanding of the Space as of system of “combined” planes (as they are not inserted into something, but fill the Universe and compose it), we may conclude that a concept of Time that grounds just on the physical considerations may (and in physics – does) reflect the general concepts of Duration and Motion more or less adequately, but just relative to the properties pertaining to the physical plane; however, it cannot be neither universal, nor consistent for other planes. From this point of view we may sum up that if we consider a motion in a space for which physics proposes no model, and the states of the process describing this motion may also be measured – we would obtain a new model of time (TCS) pertaining to this type of motion and therefore need not be conditioned by physical concepts.

The fact that we neither realize, nor differentiate the subtle planes explicitly does not mean that they are nonexistent or do not present a form of matter. The Secret Doctrine considers them as other forms of matter (and motion) a part of which had sequentially crystallized into physical plane which we consider as the “only” existent one. The matter and life of each subtle plane follow the laws of that plane, as physical matter and life (as we know it) follow the laws of physics and biology. This means that the matter and life in astral, mental and other planes differ from ours, and the beings of these planes exist and travel in Space with respect to other laws (where it is possibly to “fly” without technical appliances).

The above notes are important not only in study of Time, but for saving time of those who are seeking the physical evidences there where, in the most cases, they could not be found. In particular, the most people are convinced that the *UFOs* and *extraterrestrials* are to be made of “physical” matter and, on this ground, are *seeking the physical remnants* or *evidences*, but in the most cases – *vainly*; not because they were searching poorly, but because in the most cases they were seemingly observing simply the luminous astral forms.

Of course, we cannot exclude a possibility of coming a physical UFO full of aliens in their physical bodies; but taking into account the foresaid relative to the phases of evolution we may say that a civilization provided with physical bodies is very far from being advanced. (Remind to this end that at present we are near the middle of the 4th Round out of the Seven; in subsequent rings of this Round we will lose the physical bodies as the current humanities of Venus and Jupiter live without them). So, a *physical* flying object and a physical extraterrestrial – are rather the samples of a behindhand civilization; but those who are flying to another planets are hardly to be accused in backwardness.

In reality, with the use of brain, which acts as receiver, transmitter and adaptor, we interact with the subtle planes continuously (our desires belong to astral plane, whereas thoughts – to mental one), and sometimes see the astral forms being compacted to a state of visibility (ghosts, mediumistic phenomena, Photography of human’s aura, etc.). But as we normally do not distinguish between these planes knowingly, we use a general term “consciousness” for all these interactions and perceptions presuming them to be a play of *physical* matter in *sequentially developing* time. And we still will be bounded with these blinders until we would understand that the “Time is only an *illusion produced* by the *succession of our states of consciousness*...” [SD1-37].