

3. TIME IN ANIMATE NATURE, SUBJECTIVE PERCEPTION AND SOCIETY

A wide distribution of the models of 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.

At the same time a motion may have other forms – biological, social and other ones, apart from motion in the subtle planes. But if there is a motion, there is a change in the states whatever they are; and if we have some information relative to the states of some process, we may define time for this process in a similar way as it is done in physics – with the use of operational definition. This *approach* may be called *informational*.

It has the same right to existence as the physical one since in both cases they present, in essence, the same: in physics we also deal with information by associating time with “invisible” processes (electromagnetic or atomic processes) with the use of their models. This means that for defining a time pertaining to a motion of arbitrary nature we must (1) describe the states specifying the process of this motion and (2) metrize them by mapping these states to the numerical axis; in other words, in order to define a time that flows “uniformly” with some process (thus defining time in terms of this motion) we have to define the space modeling the considered type of motion and the time function which maps the states (or events) on the chosen scale.

3.1. Biological time

For a plant or animal a *biological time* may be specified with the use of the states that reflect the phases of living cycle. In general, a time of this type is quite stable relative to physical time, although an external influence or a disease may affect it.

However, much greater interest presents defining time for those types of motion which pertain to human’s conscience and evolution of humanity.

3.2. Psychological time

Time is only an *illusion produced* by the *succession of our states of consciousness* as we travel through eternal duration, and *it does not exist where no consciousness* exists in which the illusion can be produced; but “lies asleep”. [SD1-37]

It is widely known that time, as it perceived by a man, in its rate of flow differs substantially from physical time; although he usually “feels” the flow of physical time, in critical situations and in a long term perspective the situation changes:

... *time* is something created entirely by ourselves; that while one short *second* of intense agony may appear, even on earth, as an *eternity* to one man, to another, more fortunate, *hours*, *days*, and sometimes whole *years* may seem to *flit like one brief moment*; and that finally, of all the sentient and conscious beings on earth, man is the only animal that takes any cognizance of time, although it makes him neither happier nor wiser. [6/25]

Even during his earthly life *man can learn that time does not exist*. For example, he *loses* his own *sense of time* when his *aspirations are strong*. This tension exists in the same way in the Supermundane World. When we become engrossed in our labor we do not think about time. Not without reason is it said that *concentrated labor, full of striving, aids longevity*. From it, harmony is born. Because of it, the perception of supermundane knowledge becomes possible, and events are understood in their full logical and chemical significance. It must always be remembered that chemism is part of every manifestation. [8: SUPERMUNDANE-3-575]

Therefore, **Psychological time** in a broad sense may be understood as a *measure of duration* which is defined by *human's subjective perception*. In order to obtaining an operational definition for this concept it is firstly required to describe the states of conscience.

For this, within an informational approach we imply that the conscience is described by discrete set of states; a transfer from a state to a state call the event. In this model an event indicates merely the fact of transfer, it may present both a cause and an effect since a transfer may be caused both by activity of the conscience itself, and by an external influence. By taking into account that the processes in the subtle planes develop incommensurably faster than in the physical plane, we imply that a transfer occurs during a negligibly small time span.

In this model a conscience most time resides in definite states, and only from time to time (by an internal impulse or external cause) quickly changes its state to a new one. In this case the motion of conscience presents a discrete process of change of stable states, or stream of quite seldom events. The events are such things which a human being can register (change in mood, appearing of new thought, etc.) and estimate its worth. In this case we may estimate (with tests and/or expert evaluation) the number of events of definite nature that took place during a specified time interval; it is clear that this value is equal to the number of states that changed during that period.

Therefore, a *stream of events* of definite nature, as a distribution of points on time axis, or the *sequence of states*, as a sequence of intervals (between the events) on time axis, is considered to present, as a first approximation, the process of **psychological motion**, that may “*accelerate*” and “*decelerate*” relative to the physical time. Thus,

- in a short-term perspective the physical time may as if “stop” when a man can perceive an enormous volume of information during a relatively short span of time, or “run” when a man does not *notice* events during a long enough time interval;
- in a long-term perspective it is admitted that time moves slowly in childhood and flies faster and faster with the age. This phenomenon may seemingly be associated with that how conscience processes the information: the same information that was important (or new) in childhood and thus caused interest would become ordinary (or known) for an elderly man and cause no emotion. In other words, even if they were put in the same stream of information, a child would receive more new data than an elderly man.

Therefore, we may assume that only that **information** causes an event in the conscience of a person which in some sense is “*new*” or “*disturbing*”, that is adds something to his mental or astral planes. On the contrary, a routine information, even if it is important for the person, may not cause an event if it repeats several times. In other words, “*new*” is that information pertaining to a specified sphere of events which leaves a bright mark on the person’s conscience and can as such be recognized by this person.

Hence, this general understanding of “*new information*” allows us to identify and to count the events relevant to a specified sphere of analysis that took place in the conscience of definite person during a specified period of time. These data can generally be acquired and, if required, processed statistically for obtaining higher consistency.

Note. For excluding confusions *the term* “*time*” stands below for a *physical time* (e.g. for civil time). *Other kinds of time* are specified by the respective attributives.

3.3. Psychological time: long-term models

3.3.1. Informational approach to modeling of perception

In every day life a man perceives the world through the spheres of instincts, desires and commonsense reasoning (to be distinguished from the abstract thinking), and in the planes corresponding to these spheres his attention is turned, dominantly, to obtaining of respective “incomes”.

The former corresponds to the lower principles (or planes), whereas the latter two – to activity of conscience in **Kama** (astral plane, as a sphere of desires, and mental plane, as the lower subplanes of Manas) **where the personal EGO** (or personality) **resides**.

It is known, and many people have experienced this, that the Kamic, and especially – the Manasic images, that we used to call thoughts, ideas, etc. appear and disappear in the conscience much faster than a man even able to describe or memorize them exhaustively.

An ordinary state of each man is characterized by an average intensity of these images pertaining to his person and his reaction to them which is perceived by others as a mental and emotional state of this person. However, if he is deeply submerged in the sphere of Kama, his conscience becomes capable in a relatively short span of time to perceive a waterfall of “recognizable” thoughts or feelings. Namely in this sense the physical time is decelerated during an intense perception of Kama. But such states are seldom and take place, as a rule, in extreme situations (death threat, etc.), though they may also be caused artificially – by drags, alcohol, or other stimulants.

In the sphere where the Higher Ego (or individuality) resides – in **Buddhi-Manas** (lower subplanes of the former and higher subplanes of the latter) – a man perceives the world via the spiritual and higher forms of creative work (arts, science, etc.). In this sphere the information flow increases to even a greater degree: as the astral images more rich in details and intensive than physical ones, so the mental images exceed the astral ones. Not in vain they say in Russian “a thought has flown off as a lightning”: a human brain just with a great effort and after a long training becomes capable to follow the objects of mental plane (remind that it also presents matter, but of other form) and he must quickly fix his finding since the 4th Round human brain is not well suited for retaining the objects of that plane the intensity of motion of which several orders exceed the rate of brain’s operation – the fact that is well known to those who are engaged in creative work. This situation explains the necessity of profound internal tuning to a creative work, that is to communicating with the world of Manas; this tuning may also be explained as “search of inspiration”. Qualitatively the same takes place with spiritual practices. Meanwhile, a systematic engagement in communicating with the planes close to Manas or Buddhi makes the creators and spiritual persons the people “not of this world” in the opinion of those who cannot understand their state during these communications with the worlds the objects of which – in contrast to appealing to Kama – neither become boring, nor require stimulants for attaining the desired states of perception.

This prelude is provided for explanation a complicity of perception of information from higher planes (and especially – from Buddhi-Manas) by an ordinary human being (it's not meant as a reproach, but as a matter of fact) and thus – sparsity of such states of conscience. As well, it illustrates that ***while perceiving an information from a subtle plane the physical time is slowing down*** in the sense that the volume of information being received from that plane in seconds of physical time is roughly equivalent to that which, in a conventional state of mind, requires hours of reading. Besides, for “decoding” of that information (in a sense of presenting the perceived images or ideas in a conventional scientific or artistic form) one may need days and weeks provided his physical brain is able to retain those ideas or images in the state of conscious awareness.

In this state a human being’s mind stays dominantly in those subplanes which correspond to the mood of his personality and individuality. Therefore, if we exclude the extremal situations, the process of receiving new information to a first approximation may be considered more or less homogeneous (or uniform) during a respective time span, that is this process retains its average properties in time relative to the type and intensity of information flow.

By not losing generality, imply that *information* comes in *separate events*: some of them are perceived as *new*, the remaining are *ignored*. In this sense the flow of information presents an *event stream*. This discretization is typical for operations research; it allows to improve an obviousness of the model and to facilitate numerical analysis of the studied process.

However, if there are doubts relative to the discreteness of receiving the information, a respective continuous analog may be defined. But this may require much more complicated technique without giving new qualitative results; to this end it is much easier to approximate a continuous flow by a high intensity event stream. On the contrary, if the separate events, by themselves, are of no interest for us, it may be more illustrative to use continuous approximation of event stream – especially where the exponential law is pertinent. For these reasons we will not pay special attention to the details of such transfers unless they present interest to the essence of the subject.

Therefore, with the use of the known concepts the considered information flow in a *long-term* perspective may be considered as *event stream* having the properties of *ordinariness* (the events appear one by one) and *stationarity* (temporal homogeneity of mean values). In this case at a relatively short time span an event may appear but one at a time, and the events appear with average intensity that reflects the individual rate of perception of new information. This assumptions allow us to model this process as a *single-channel queuing system* where the incoming information (all what appears before a human being and could be perceived) presents the input flow of requests for servicing; in this sense coming of a request presents an event. The channel (a system that is servicing the requests) processes the request one at a time, without a queue. The discipline of servicing defines what to do with the request in procession if a new request has come, whether to process a new request or to omit it (in this case the request is rejected and do not come for processing once again), whether to process a request till the completion or to abort it (as in the preceding case the request is rejected), etc.

As a result, some of the requests from the input flow are serviced (these units of information are perceived by a man), while the remaining are rejected (these units are not perceived due to their insignificance, abundance or other reason).

However, practical application of this mathematical model demands us to specify all the functions which describe these possibilities; this posts a separate and quite complicated problem. Much more important is an uncertainty with the *absence of aftereffects*: since in reality the intensities of coming and servicing of the requests are not independent and subject to the *prehistory* (what was perceived earlier), the input stream *does not present a simplest flow*. For this reason it becomes impossible to use analytical models and leads to numerical simulation. But what is more important – the *absence of aftereffects* more than could not be ignored; namely this feature present *the main problem* in modeling of the considered application problem.

3.3.2. Concepts of perception regarding the aftereffects

Thus we see that the concept of aftereffect presents the keystone in developing the models of long-term perception. By keeping this in view, and with the aim to obtain quantitative models of perception consider the basic types of dependencies that relate the intensity of perception with the volume of information being accumulated by a human at a specific moment of time. Notice that we consider just the perceivable information, since a man perceives not all what comes to him.

For this, consider *three basic concepts* of *perception* which *allow for* the *aftereffects* that correlate the intensity of perception with the volume of both perceived (and memorized) information and that information which potentially presents interest for a person and/or could be perceived.

* *Concept of “Conservative”*: a person perceives only that information which belongs to a *definite sphere of practical importance*.

* *Concept of “Entrepreneur”*: a person perceives that information which allows him to *widen the sphere of practical importance*.

* *Concept of “Creator”*: a person perceives the more information the more he knows in a *definite sphere of abstract importance*.

We are interested in the process of *receiving just “new” information* which, after receiving, ceases to be new (as a subject of perception); by bearing this in mind, we omit the word “new” wherever this does not cause misunderstanding. To this end we also assume that having been perceived the information remains in the memory of the person (at least – the bulk of it, or otherwise the model would require additional complications that do not significantly change the essence of the issue). Remind also that the *volume of information* we measure *in number of events*, each presenting a sensible and complete unit of knowledge pertaining to the considered sphere of interests.

By granting this, define the following *basic quantities*:

- the *total volume* of information perceived up to the moment t denote I ;
- the *maximal volume* of information that could be perceived theoretically denote V .

Let ΔI be the *volume* of information perceived *during a time span* Δt . By the definition of “new” information, the larger the value ΔI , the greater the number of “important” events as marks in the conscience of the person is correlated with the time span Δt .

Definition of psychological time

Namely the events, as “milestones”, allow us to define the psychological time in the same way as it is done in operational definitions in physics: as there the time is defined as a correlation between the states of the selected process and chosen time scale, so in this case the time may be defined as a correlation between the states and time unit (or time scale); for distinctness, imply that:

The states $S = \{s_i\}_{i=1,2,\dots}$ of the process of perception are defined by the accumulated number of perceived events; this number may present separate events or groups of events. For general case we imply that each group contains N events except the last which is being formed; it is clear, that as these groups present a sequence, they may be numbered. Then, the process of perception:

- **resides in the state** s_m , $m \geq 1$, if the m -th group is being formed; the number of events in this group M is less than N , the total number of perceived events is $(m-1) \cdot N + M$. Until the first event has appeared, the process resides in the initial state s_0 .

- **transfers to the next state** s_{m+1} when the N -th event has appeared in the current state s_m . Transfer to the state s_1 from the initial state s_0 occurs with the first event of the stream; this event is attributed to the state s_1 .

The unit of psychological time corresponds to transfer of this process by one state (viz. to appearing a new group of N events); so, this time takes the values on the integer grid $T_P = 0, 1, 2, \dots$

The time function defined by this correspondence $S \rightarrow T_P$ call the **psychological time**

Comment. Notice that the *SI second* is defined *in the same way* with the exception that *instead of events the oscillations are taken*. This fact also illustrates that *making use of integer scale T_P does not imply significant restriction as to approximating it with a continuous scale*, as with the *SI second*.

Being so defined, the psychological time may and evidently actually flows at different rates if different persons are compared. But in physics the different TCSs are also asynchronous.

For correlating the psychological time with a civil time to which we are accustomed, we have to find the distribution of events (viz. those mental “milestones”) in physical time for each of three models pertaining to the above specified concepts. In other words, we have to find **reference time functions** for the **specified models of perception** which **relate** the **psychological time functions** with the **physical one**.

3.3.3. The model of uniform perception

The *model of uniform perception* (MUP) corresponds to the concept of “**Conservative**”: the volume of perceived information ΔI within the factor c is proportional to perception time span Δt .

In this case the *number of new events, perceived* by a person in *different ages* is, *in average, the same*, whereas *the volume* of the perceived information for the moment T *makes*

$$I = c \cdot T. \quad (3.0)$$

With this model the *psychological time* being marked by the “milestones” of new events is *linearly dependent* on the *physical time*, that is, in principle, *coincides* with it to *within a scale factor*.

During a life span this model may seemingly remain effectual just in a society with a very stable political and social way of life, where anything “new” appears, dominantly, in connection with a natural flow of social and domestic processes; for example – in a rural life with its cycle of deeds and holidays.

As well, it may evidently approximate definite phases of a life span.

3.3.4. The model of decelerated perception

The *model of decelerated perception* (MDP) corresponds to the concept of “**Entrepreneur**”: the volume of perceived information ΔI at a time span Δt within the factor a is proportional to the volume of potentially new information $(V - I)$ and to the perception time span Δt .

With the aim to obtain the analytical expression for the volume of perceived information as a function of time (viz. the reference time function), assume the information to present a continuous flow (this gives small error if the number of events is large enough). In this case the model may be presented by the following differential equation

$$dI = a \cdot (V - I) \cdot dt. \quad (3.1)$$

Integration of this equation on the time span $(0, T)$ gives the relation

$$\ln(V - i) \Big|_0^I = -at \Big|_0^T, \quad (3.2)$$

from which we obtain the *reference time function* defining the volume of perceived information at the age T

$$I = V(1 - e^{-aT}), \quad (3.3)$$

and the inverse dependence defining the age as a function of the totally perceived information (it presents the *reference time function for physical time relative to the psychological time*):

$$T = -\frac{1}{a} \ln \frac{V - I}{V}, \quad (3.4)$$

where factor a reflects the personal ability to perception.

The graphs of these functions are presented in Fig. 3.1 where the length of an interval lying on the continuous axis I presenting the volume of information is proportional to the number of events.

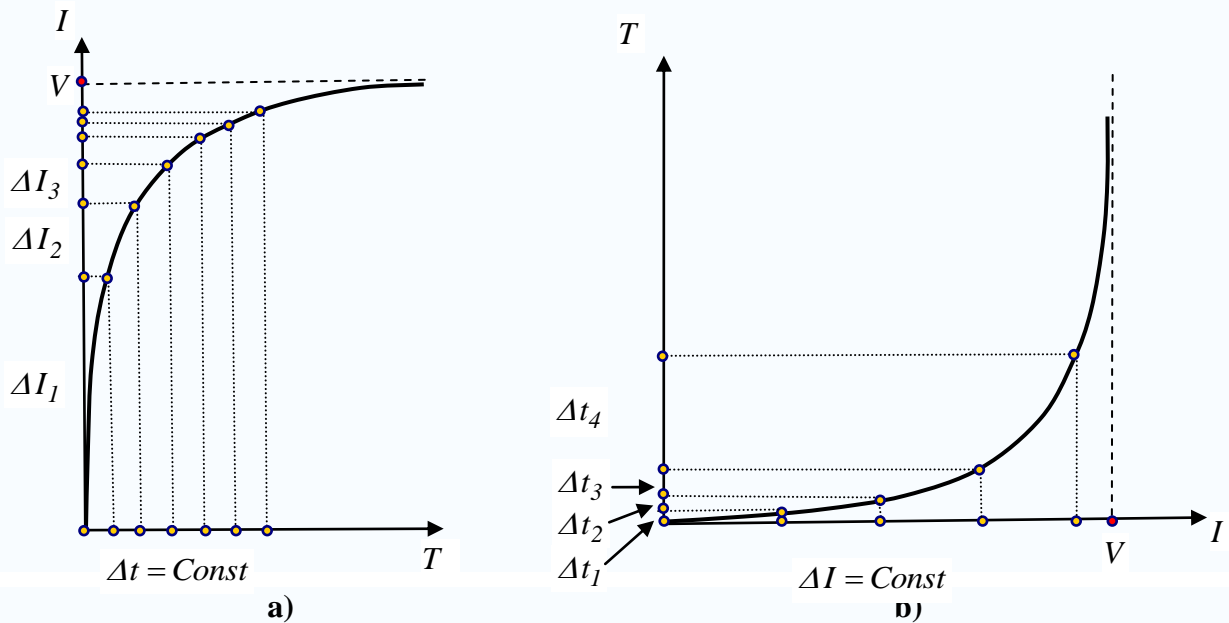


Fig. 3.1. Nonuniformity of psychological time in the model of decelerated perception

As a man ages, the civil time T accelerates more and more; in other words, it becomes less capacious in a sense of more and more rare appearing of new events as “milestones”

Nonuniformity denotes that equal spans of physical time are corresponded by non-equal (in this case – decreasing) intervals of psychological time. In contrast to the linear model (3.0), this reference time function is **nonlinear** relative to time T , and vice versa:

- nonlinearity of psychological time I relative to physical time T : equal intervals of Δt are corresponded by *diminishing* intervals ΔI_i (Fig. 3.1.a);
- nonlinearity of physical time T relative to psychological time I : equal intervals of ΔI (“number of new events”) are corresponded by *increasing* intervals Δt_i (Fig. 3.1.b).

From these graphs it follows that **within the model of decelerated perception** in childhood the *physical* time is perceived as “crawling”, as over a single interval of civil time Δt (say, a year) the number of important events ΔI_i significantly exceeds the values for the greater ages, whereas in one's old age the *physical* time is perceived as “tearing at full speed” (Fig. 3.1.a).

This means that if we estimate the time from the internal perception (Fig. 3.1.b), when we measure the time by reminiscences, the equal numbers of events correspond to intervals of civil time periods which are perceived “equal”: although each subsequent interval of physical time increases its length, it remains filled with the same psychological contents (in terms of events).

So, in the scale of psychological time the civil time is accelerated, and vice versa - in the scale of civil time the psychological time is decelerated.

Discussion. The obtained reference time function (3.3) and its properties may be considered quite natural: since being internal to a human the psychological time (as the sequence of events that are stored in memory) presents the only system of benchmarks in the conscience, and these are the only internal “milestones” that could be intuitively associated with the concept of time as uniform sequencing of events; by relating them with the civil time he notes that the equal civil time intervals (say years) are perceived in his mind as having various duration.

Indeed, everything is new *in childhood*, and thus the number of “milestones” is large and the (civil) *time is crawling*; in middle-age the amount of new information that a person receives during the same period of civil time decreases; *in declining years* the intensity of new information decreases even more, thus decreasing the number of “milestones” to a minimum: *the years are flying away* and the person just keeping pace with counting his anniversaries.

Pay attention that this situation also corresponds to that which we have encountered in physics: no scale could be uniform in itself since the uniformity is a binary relation, or a kind of correlation for *two* objects. One may presume that this model is typical for the most inhabitants of the modern countries.

3.3.5. The model of accelerated perception

The *model of accelerated perception (MAP)* corresponds to the concept of “*Creator*”: the volume of perceived information ΔI at a time span Δt within the factor k is proportional to the volume of perceived information I and to perception time span Δt .

The paradigm of this model reflect the fact that both in science and in some other branches of knowledge an obtaining of new information cannot be resembled to watching a TV news; for perceiving a new concept it is not enough to see it: one needs to acquire preliminary the respective foundation. As a result, the structure of the perceived information (thus actually presenting a knowledge) resembles a tree: the more the branches it has (viz. the received concepts) – the more the buds for appearing of new branches (viz. keys which allow to perceive new information). On the other hand, when one deals with the mental plane the volume of new data is infinite relative to our level of knowledge.

With the aim to obtain the analytical expression for the volume of perceived information as a function of time, as in the previous case assume the information to present a continuous flow. Then, the model may be presented by the following differential equation

$$dI = k \cdot I \cdot dt, \quad (3.5)$$

Integration of this equation on the time span (T_o, T) , where T_o is the starting moment which is corresponded by the perceived volume of information I_o , gives the relation

$$\ln I \Big|_{I_o}^I = k \cdot t \Big|_{T_o}^T, \quad (3.6)$$

from which we obtain the *reference time function* defining the volume of perceived information at time T

$$I = I_o \cdot e^{k(T-T_o)} \quad (3.7)$$

or

$$I = b \cdot e^{kT}, \quad \text{где } b = \frac{I_o}{e^{kT_o}}, \quad (3.7')$$

and the inverse dependence defining the (physical) time as a function of the totally perceived information (it presents the *reference time function for physical time relative to the psychological time*):

$$T = T_o + \frac{1}{k} \ln \frac{I}{I_o}, \quad (3.8)$$

or

$$T = T_* + \frac{1}{k} \ln I, \quad \text{где } T_* = T_o - \frac{1}{k} \cdot \ln I_o, \quad (3.8')$$

where factor k reflects the personal ability to perception.

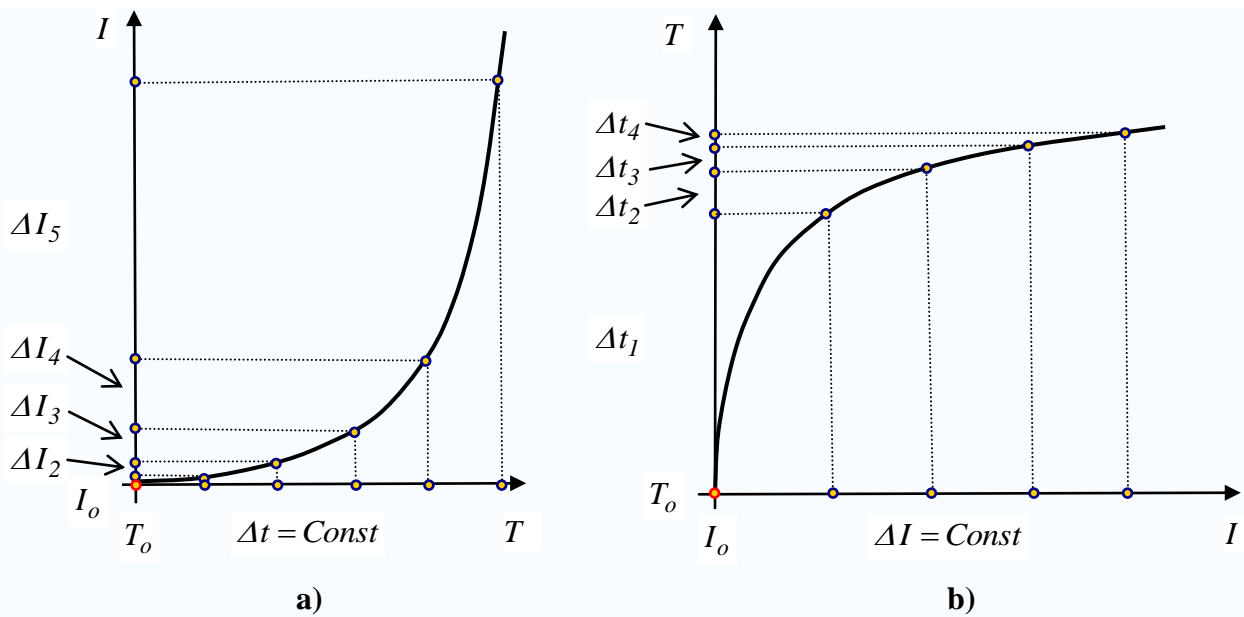


Fig. 3.2. Nonuniformity of psychological time in the model of accelerated perception

As a person ages, the civil time decelerates more and more; in other words, it becomes more capacious in a sense of more and more frequent appearing of new events as “milestones”:

- nonlinearity of psychological time I relative to physical time T : equal intervals of Δt are corresponded by *increasing* intervals ΔI_i ;
- nonlinearity of physical time T relative to psychological time I : equal intervals of ΔI (“number of new events”) are corresponded by *decreasing* intervals Δt_i .

Discussion. As far as the abilities of a brain as to perceiving of new information are limited, the exponential growth (3.3) for a large enough value of factor k is possible, but just at a limited interval of physical time. At shorter time interval (say, a decade) the effect of acceleration or deceleration may not be admitted as the behavior of the exponent may be close to a linear function, but until the area of swift growth is reached.

Resume. Of course, a variety of other perception models may be proposed. To this end it is important that:

- * The presented verbal paradigms embrace seemingly the main types of long-term processes of perception of information which define the respective types of psychological time; meanwhile, the reference time functions which relate the latter with physical time are expressed in relatively simple analytical formulas.
- * In spite of the difference in their paradigms the proposed models come to an agreement with each other since when the factors k and a are approaching 0 the reference functions (3.3) and (3.7) for the decelerated and accelerated perception, respectively, converge to that for the uniform perception (3.0). In experiments and possible practical applications this allows us to adjust the model to a personal features.

3.4. Psychological time: short-term model

The perception of time specified by the long-term models may change cardinally in special circumstances when *locally*, during a *relatively short time span* (from seconds to minutes, rarely – hours), the *conscience* gets into *intense perception* of a *subtle planes*:

The confluence {with the higher planes – SS} *for a terrestrial conscience* is *only possible for a short moment* – seconds, not minutes. But for a subtle body the duration is estimated by other measures. [10]

Such well known accidental states are perceived as an abrupt halt, or otherwise – acceleration of physical time. In the former case a man perceives much more information than it is possible for him in a “normal” state; in the latter case – he does not remember how a time span has passed. The latter may be attributed to forgetting of the perceived information, or to a state of prostration (caused by physiological or other reason) when the conscience “turns off” thus causing an “event vacuum”: absence of events results in absence of event “milestones” for coordination with the physical time. In these states a person may be immersed under the action of causes from different planes: from physical (under a grave threat), astral (intense emotions), mental (intense mentation), and even higher planes – during meditation or offering a prayer.

In this case a keen state of conscience dominates and the person starts to perceive information from the respective plane more efficiently than usually. As far as the information circulates in the higher planes much more intensely than we used to accept it (in Kama – orders faster than in physical plane, in Manas – orders faster than in Kama), the flow of time pertaining to this plane is also intensified proportionally.

By this reason the physical brain through which the information from the higher planes is perceived (viz. “received” and “transformed” into comprehensible for us linguistic and graphical symbols) cannot, as a rule, provide the adequate velocity of processing of information from those planes.

Therefore, if after returning to a “normal” state the person retains his reminiscences, it seems to him that the time, as it is perceived internally, has “stretched” (in this case it is required to put down the perceived information immediately, if it is considered to be important, as after a dream, or otherwise it will be forgotten; afterwards, the written notes may serve as the keys for “remembering” the “forgotten” parts of the perceived information); if not – the information as if becomes forgotten, and the time – “compressed”.

Thus, by drawing an analogy between the *long-term models* and situations associated with *short-term tuning* of the conscience to the respective planes we come to the following conclusions.

A short-term “stretching” of time may be resembled to extending of time in childhood: in extremal situation a brain perceives such a great volume of information which, in normal conditions, it perceives during much longer time interval.

In this relation that *person* who *devotes himself to creative or spiritual aspiration* the *more “stretches” his life* (as it is perceived internally, and in many cases – physically) *the more he concentrates* his *conscience* in the *higher planes* – in *Manas-Buddhi* (in a definite sense this is the long-searched “*elixir of life*”, or “*elixir-stone*” that favors *longevity*, but it principally cannot be bought!). The *state of the conscience* concentrated in these planes *corresponds* to the *model of accelerated perception*: although those planes may provide us with everything we could only imagine, for obtaining something *we must have the keys* – the *preliminary knowledge*, and *the more keys we have the greater the volume of information we can perceive*. Like in mathematics: without knowing the primary axioms and definitions you cannot go further.

But those *people* who *concentrate their conscience* in the spheres of *Kama* are *in another status*. The desires, or emotionally-tinged states, are closer to those which are easily perceived and retained by a physical brain. Therefore, for obtaining “emotionally new” events a person is required either to look for new and new experiences (which, as a rule, are connected with material, moral, and other limitations), or *to increase the intensity of the known states*, which might be embarrassing or require powerful stimulants. This way engenders the *vicious circle*: if a person is interested in material goals, such as power, money, emotional pleasures, etc., then, for his life to fit these requirements, that is for it not to be “empty”, the new events of that kind should continue to come in more and more abundance. (Who knows! Might be this is a cause of early passing away of some poets and artists who became unable to further increase the emotional intensity of their lives and thus they became filled with emptiness that “halted” their psychological time). On this point there is a proverb: fear your desires, as they are realized. Buddhism also tells that a person is suffering until he kills his desires.

That is why those who are looking for new feelings of success and joy in emotions and even in mental activity, if it is devoted to material prosperity, cannot exceed definite limit of new emotions. Therefore these *states of conscience* are corresponded by the *model of decelerated perception*, and a person who pursues these goals the more “compresses” his life (as it is perceived psychologically, and in most cases – physically), the more he concentrates his conscience in searching new experiences in Kama.

3.5. Spiral of psychological time: life cycle model

The considered three models of time perception reflect the main trends in manifestation of psychological time, but remain “ideal” as seldom person can behave so steadily; each person has a periods of ascension and decline. Nevertheless, by reflecting the main trends they may be used for describing the sequential phases of a life cycle. For this, making use of the phase portrait (See §2.5.7) allows us to present the trends in psychological time, as well as their changes, quite clearly.

Thus, for the proposed perception models the spirals of time are give in Fig. 3.3.a where the phase angle presents the calendar years (360° corresponds to 10 years), while the radius-vector shows the number of times the unit of calendar time exceeds the unit of psychological time (for the local time interval).

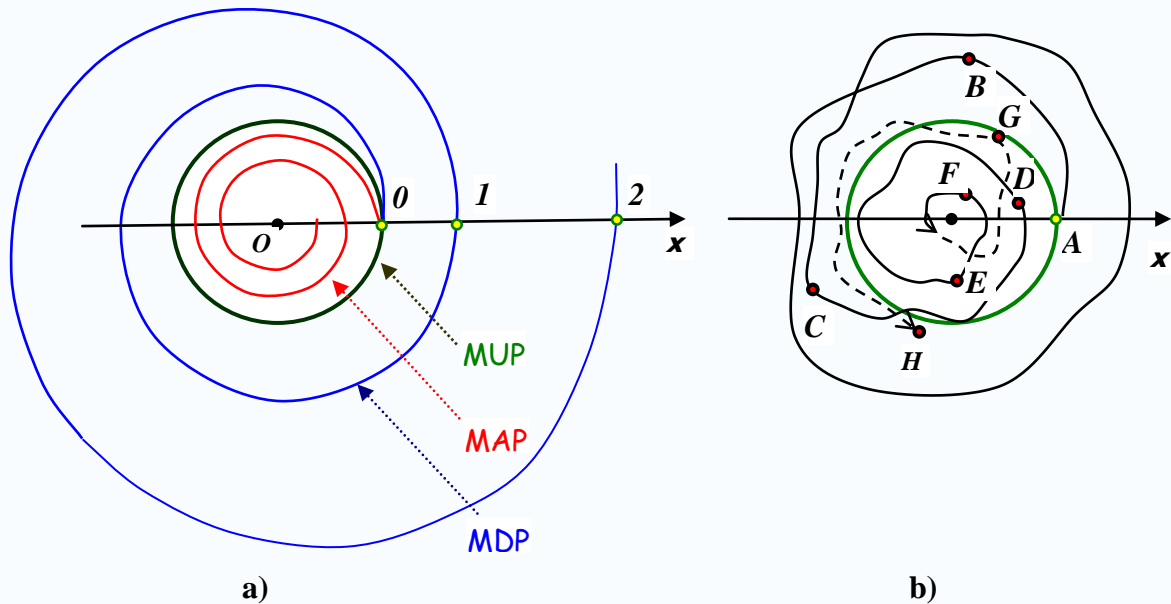


Fig. 3.3. Ideal (a) and a variant of real (b) phase portraits of psychological time

(a) The **green circle** presents the model of uniform perception, the **red convolving spiral** – the model of accelerated perception, and the **blue untwining spiral** – the model of decelerated perception. The **radius of the green circle** is the scale factor for the physical and psychological time scales: the lesser its value, the higher the intensity of perception; to within this factor the MUP time is equivalent to the civil time.

(b) **Example.** Let a phase portrait of psychological time for a man present a curve given in Fig. 3.3.b. Then, the life of this man may be broken down into constituent parts – the phases where one of these three models dominate. For this, divide the curve $L = \text{ABCEFGH}$ into fragments which with the required accuracy may be approximated by true types of circles or spirals (convolving or untwining); it is a geometrical approximation problem. For illustrative purpose this expansion of the source curve into spirals is made by eye; it defines the following phases of the person’s life (Table 3.1):

Table 3.1. Interpretation of the phase portrait of psychological time relative to Fig. 3.3.b

Life cycle phase number	Start and end points of curve L	Perception model	Life cycle phase
1	A – B	MDP	childhood
2	B – C	MUP	youth
3	C – D	MAP	university
4	D – E	MUP	professional job
5	E – F	MAP	post-graduate study
6	F – G	MDP	chief
7	G – H	MUP	professional job

Discussion.

MDP may be considered typical for most of the people whose conscience concentrates in Kama – that is in material goals and emotions (including fleshly desires). The intensity of deceleration is defined by the factor a in (3.1). Geometrically, this factor specifies the curvature of the spiral: the faster grows the radius of untwining spiral, the lower the flow of psychological time: from internal point of view the life flies quickly, without great amount of significant events.

For these reason this spiral may be called “**Kamic**”, as the *phase of life cycle* where it *dominates*.

MAP may be considered typical for those people who concentrate their mind on a spiritual and/or creative work, but do not fall under substantial influence of Kama, that is for whom the material results in these spheres do not present the main stimulus. In particular, it is hardly to refer to this category those “devotional” leaders who use spiritual activity (sects, healing, etc.) for profiteering. Concentration of conscience in Kama simply hampers perception of Manas.

For these reason this spiral may be called “**Manasic**”, as the *phase of life cycle* where it *dominates*, that is when a person systematically concentrates his mind in the spheres of Manas-Buddhi. And those rare people who concentrate their conscience in Buddhi – are the real “governors” of time, both in this sense and in time traveling.

Moving along this spiral may actually be confined with the abilities of physical brain and living obstacles. For example, due to ageing the trajectory of phase portrait may change as shown in Fig. 3.3.b: at a moment F it may alter into Kamic due to inability of the brain to continue intensive mentation.

MUP may be relevant to people with a bad memory or not well-developed mentation, to those who have frozen in their development (both mental and emotional), to those who live in a routine environment. It may also specify both the type of a person, and a phase of life cycle; e.g. as a *transitory phase* between the **MAP** and **MDP**.

Comment.

Pay attention that although the **MAP** and **MDP** are *described* by the *exponential function*, this *does not mean* that it *grows at any point* as *avalanche*.

Its *growth becomes noticeable* when the *argument comes* to a *region of explosive growth* (a kind of *point of bifurcation*).

Before this interval, for an incomparably greater period of time, its growth may remain unnoticed and be *locally approximated by a linear dependence*. In a phase portrait this period is reflected by a spiral being close to a circle, viz. by a **MUP**.

Hence, in understanding of phenomenon of Time the concept of short-term psychological time for both the current states (accidental, or attained intentionally) and phases of life cycle is as important as the long-term models, and the former may be described by the same models as the latter – viz. by MAP, MDP, and MUP.

3.6. Evolutional Time

They {Dhyān-Chohans – SS} work in cycles and on a strictly geometrical and mathematical scale of progression [SD2-732]

3.6.1. Esoteric understanding of evolutional cycles

* Esoterism states the *cyclic nature of evolution*:

The *Cycles of Matter* will be *succeeded by Cycles of Spirituality* and a fully developed mind.[SD2-446]
Evolution in general, *events, mankind*, and *everything else* in Nature *proceed in cycles*. [SD2-443]
 As every *sub-race* and *nation* have their *cycles* and *stages* of developmental *evolution* repeated on a smaller scale, it must be the more so in the case of a *Root-Race*. [SD2-301]

* To a full degree this relates to *cyclic evolution and fall of civilizations* [6/23b]:

We hold ... that *far greater civilizations* than *our own have risen and decayed* ... We affirm that a *series* of civilizations existed *before*, as well as *after* the *Glacial Period*, that they existed upon various points, of the globe, *reached the apex of glory* and – *died* ...
Your sub-races are *now* running *toward* the *apex of their respective cycles*.

* These *cycles* explicitly *associate Space and Time* and synchronize the *changes in nature and society*
Time (in Space) proceeds in *Cycles*. [SD2-447]

As all such *Cataclysms* are *periodical* and *cyclical* [SD2-145]

* Moreover, it asserts the *spiral* nature of cyclic *evolution*, since with each new turn it *accelerates*:

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]

By the existing data [2, 6] the *duration of Root Race Cycles decreases* with approximately a *factor of 5*; that is each subsequent cycle is 5 times shorter (in years) than the preceding one.

* Meanwhile, *the cycles of Sub-Races are neither synchronous, nor develop in exclusive succession* :

The Dvapara Yuga differs for each Race. *All races have* their *own cycles*, which fact causes a great difference. For instance, the Fourth Sub-Race of the Atlanteans was in its Kali-Yuga, when destroyed, whereas the Fifth was in its Satya or Krita Yuga. The Aryan Race is now in its Kali Yuga ... while various “family Races”, called the Semitic, Hamitic, etc., are in their own special cycles. The forthcoming *6th Sub Race* – which *may begin very soon* – will be in its Satya (golden) age while we reap the fruit of our iniquity in our Kali Yuga. [SD2-147]

Consider these aspects of Evolution in more details relative to the Root Races.

3.6.1.1. The Third Root Race

Nor have we many details about the submersion of the continent inhabited by the Second Root Race. But the history of the Third, “*Lemuria*,” is given, as is that of *Atlantis*, the others being only alluded to. Lemuria is said to have perished about 700,000 years before the commencement of what is now called the Tertiary age (the Eocene), and it is during this Deluge also – an actual geological deluge this time – that Vaivasvata Manu is again shown as saving mankind (allegorically it is mankind, or a portion of it, *the Fourth Race*, which *is saved*); so *also he saves* the *Fifth Race* during the *destruction of the last Atlanteans*, the remnants that perished *850,000 years ago*, after which there was no great submersion until *the day of Plato's Atlantis*, or *Poseidonis*, known to the Egyptians only because it happened in such relatively recent times. [SD2-314]

But if one believes in the *final submersion of Atlantis 850,000 years ago*, as taught in “Esoteric Buddhism” (the gradual first sinking having begun during the Eocene age), one has to accept the statement for the so-called *Lemuria, the continent of the Third Root Race, first* nearly destroyed by

combustion, and *then submerged*. This is what the Commentary says: "The first earth having been purified by the forty-nine fires, her people, born of Fire and Water, could not die . . . etc.; the **Second Earth** (with its race) disappeared as vapour vanishes in the air . . . the **Third Earth** had everything consumed on it after the separation, and *went down into the lower Deep* (the **Ocean**). *This was twice eighty-two cyclic years ago*." Now a cyclic year is what we call a sidereal year, and is founded on the precession of the equinoxes, or 25,868 years each, and this is equal, therefore, in all to **4,242,352 years**. [SD1-439]

3.6.1.2. The Fourth Root Race

{The Secret Doctrine} assigns from **four** to **five million years** between the *incipient* and the *final evolution* of the **Fourth Root-Race, on the Lemuro-Atlantean Continents**; **one million years** for the **Fifth**, or **Aryan Race**, to the present date; and about **850,000** since the submersion of the last large peninsula of the great Atlantis. [SD2-10]

This event, the destruction of the famous island of **Ruta** and the smaller one **Daitya**, which occurred **850,000 years ago** in the later Pliocene times, must **not be confounded** with the submersion of the **main continent of Atlantis** during the Miocene period. Geologists cannot place the Miocene only so short a way back as 850,000 years; whatever they do, it is **several million years ago** that the **main Atlantis perished**. [SD2-314]

For **1,000,000 of years** are allowed for our **present Root-race** (the **Fifth**), and about **850,000** years since the submersion of the **last large island (part of the Continent)**, the **Ruta** of the Fourth Race, or the Atlanteans; while **Daitya**, a **small island** inhabited by a mixed race, was **destroyed** about **270,000** years ago, during the glacial period or thereabouts [SD1-651]

Note. The names **Ruta** and **Daitya** were used relative to both the original Islands-continents, and their remnants, essentially islands.

... the *Mahabharata* refers simply to the **geological cataclysm** which *swept away nearly all the Fourth Race to make room for the Fifth*. ... The very commencement of the latter {viz. **Fifth Race**} *witnesses*, during the Dvapara Yuga, **the destruction of the accursed sorcerers**; "of that island (Plato speaking only of its last island – **Poseidonis**) beyond the Pillars of Hercules, in the Atlantic Ocean, from which there was an easy transition to other islands in the neighbourhood of another large Continent" (**America**). *It is this "Atlantic" land* which was **connected** with the "**White Island**," and this White Island was **Ruta** [SD2-147]

It is the **submersion of the great Atlantis** which is the most interesting. It is of this cataclysm that the old records (See the "**Book of Enoch**") say that "the ends of the Earth got loose;" and upon which the legends and allegories of Vaivasvata, Xisuthrus, Noah, Deukalion and all the tutti quanti of the Elect saved, have been built. Tradition, taking into no account the difference between sidereal and geological phenomena, calls both indifferently "**deluges**." Yet there is **a great difference**.

The **cataclysm** which destroyed the **huge continent** of which **Australia is the largest relic**, was due to a **series of subterranean convulsions** and the **breaking asunder of the ocean floors**.

That which **put an end to** its successor – the **fourth continent** – was brought on by **successive disturbances** in the **axial rotation**. It began during the earliest tertiary periods, and, continuing for long ages, carried away successively the last vestige of **Atlantis**, with the exception, perhaps, of **Ceylon** and a small portion of what is **now Africa**. It changed the face of the globe, and no memory of its flourishing continents and isles, of its civilizations and sciences, remained in the annals of history, save in the Sacred records of the East.

Hence, Modern Science denies Atlantis and its existence. It even denies any violent shiftings of the Earth's axis, and would attribute the reason for the change of climates to other causes. But this question is still an open one ... [SD2-314]

3.6.1.3. Esoteric cause of the catastrophe and changes in geography [13]

When the perversion of evolutionary laws has reached its culmination and the capital – The City of Gold Gates – became a true hell by its brutality, the first huge catastrophe has shaken the entire continent. The Capital was wiped off by the ocean waves, millions died, although both the Emperor and the priests that fallen away from the Highest Hierarchy were alerted more than once.

Under the influence of the Powers of Light that foreseen the catastrophe, the best part of the population had emigrated from that territory in advance. Those were the most evolved representatives of the Race who obeyed the laws of Karma, retained proper understanding and control over the psychic powers and, thus, had defied common madness.

So, although ... the *new America was forming* the ancient *Atlantis was sinking*, and *gradually washing away* [6/23b], this first catastrophe took place around 850 000 years ago and caused a significant redistribution of land on the Globe. The great Atlantean continent had lost its polar regions, and its central part – diminished and smashed to pieces; *island Ruta was basically destroyed*. In those times the American continent separated with a strait from Atlantis that “engendered” it; the latter was still extending in Atlantic Ocean from 50° North Latitude to several degrees to the South from Equator.

Significant sinking and raising of continents in other parts of the globe also took place. Thus, out of the separated N-E part of Atlantean Continent a great island had formed that included the modern Britain Islands, Scandinavia, Northern France and surrounding seas. The remains of Lemuria had diminished still more, whereas the territories of the modern Europe, America and Africa had extended significantly.

Daitya, a *small island* inhabited by a mixed race, was mainly *destroyed* about 270,000 years ago [SD1-651]. In those times the island Scandinavia joined the pro-European continent, *Egypt was flooded*.

After this less substantial catastrophe the efforts of Powers of Light that were acting under the leadership of Hierarchy were beneficial and refrained the saved population from exercising *black magic*, but the preceding glory the Sub-Race of Toltecs had never reached. The distribution of black magic had led to a Karmically-inevitable catastrophe that cleared the world for subsequent evolution.

Around 80 000 years ago *the third catastrophe* took place, even more severe than the preceding two. *Daitya* had almost disappeared, whereas only a small part of *Ruta* had remained – the island *Poseidonis*, the sinking of which was described by Plato.

In that era and until the disappearing of *Poseidonis* in some part of the continent still an emperor of Dynasty of Light was always reigning. He was ruling under the leadership of the Hierarchy, opposed to distribution of dark powers, guided the minority that obeyed the pure and spiritual life.

Before the catastrophes the emigration of the best minority was always taken place. These emigrations were guided the spiritual leaders who fore saw the disasters that threatened the country. The initiate kings and Masters who followed the Higher Law were preliminary informed as to coming of the catastrophes. They were as if the centers of prophetic warnings and saved faithful, peculiar tribes. Such emigrations took place secretly, under cover of night.

The third catastrophe of *Atlantis* (80 thousand years ago) caused the *second flooding of Egypt*. When the waters had rushed back, the *Third “Divine Dynasty” was established* which was *mentioned by Manetho*. During the reigning of the first kings of this dynasty the *great temple* of *Karnak* was built, and many other majestic edifices...

In 9564 BC a series of powerful earthquakes destroyed *Poseidonis* and the island had immersed in the ocean; this created a *huge wave that flooded the lowlands* and *stamped in the memory of peoples* as a *huge destroying flood*... Thus the last remains of Atlantis – island *Poseidonis* – had perished with waters from below and fire from above.

Immersing of *Poseidonis* *caused one more flooding of Egypt*. It was quite short, but *put the end* to the “*Divine Dynasty*” since the Lodge of Initiates transferred its residence in another country. The human dy-

nasty of the ancient Egyptians that started from *Menes*, was aware of the complete knowledge of Atlanteans, although the Atlantean blood did not run in them any more.

In *time of immersing of Poseidonis* the desert *Sahara* was still *presenting the ocean floor*, as the *desert Gobi* presented the *floor of closed sea* in Central Asia. The *Britain islands* were still *connected* with *European continent*, and *Baltic sea* was *absent*. Starting *from that time* the *contours of continents* had started to *take the form in which they exist today*.

3.6.1.4. The Fifth Root Race

The evolution goal that is imposed on the present, *Fifth (Arian) Root Race* of the Fourth Round consists in *development of mental abilities* (viz. Fifth principle), as the Atlanteans' goal was to develop the Fourth, and for the Sixth Root Race – the Sixth principle (viz. spirituality). As we may see, the mankind has succeed in solving it, but too often – at the expense of spirituality.

Now our *Fifth Root-Race* has already been in existence – as a race sui generis and quite free from its parent stem – about *1,000,000 years*; therefore it must be inferred that each of the four preceding Sub-Races has lived approximately 210,000 years; thus each Family-Race has an average existence of about 30,000 years. Thus the European "Family Race" has still a good many thousand years to run, although the *nations or the innumerable spines upon it, vary with each succeeding "season" of three or four thousand years*. It is somewhat curious to mark the *comparative approximation of duration* between the lives of a "*Family-Race*" and a "*Sidereal year*." [SD2-435]

The *approach* of every *new "obscuration"* is always *signaled by cataclysms* – of either *fire* or *water*. But, apart from this, every "Ring" or Root Race has to be cut in two, so to say, by either one or the other. Thus, having reached the apex of its development and glory the fourth Race – the *Atlanteans* were destroyed *by water*; you find now but their degenerated, fallen remnants, whose sub-races, nevertheless, aye – each of them, had its palmy days of glory and relative greatness. *What they are now – you will be some day* the law of cycles being one and immutable. *When your race – the fifth – will have reached at its zenith of physical intellectuality, and developed the highest civilization* (remember the difference we make between *material* and *spiritual* civilizations); *unable to go any higher in its own cycle – its progress towards absolute evil will be arrested* (as its predecessors the *Lemurians* and *Atlanteans*, the men of the third and fourth races were arrested in their progress toward the same) by one of such cataclysmic changes; its great civilization destroyed, and all the sub-races of *that race* will be found going down their respective cycles, *after a short period of glory and learning*. See the remnants of the Atlanteans, -- the old Greeks and Romans (the modern belong all to the fifth Race); see how great and *how short*, how evanescent *were their days of fame and glory!* For, they were but sub-races of the seven off-shoots of the "root race"... [6/23b]

3.6.1.5. The Sixth Root Race [SD2-445]

"The Cycles of Matter will be succeeded by Cycles of Spirituality"

There are "Cycles of matter" and there are "Cycles of Spiritual evolution". Racial, national, and individual cycles. May not esoteric speculation allow us a still deeper insight into the workings of these? [SD1-638]

This process of *preparation for the Sixth great Race* must last *throughout* the whole *sixth* and *seventh sub-races* (vide supra, the diagram of the Genealogical Tree of the Fifth Race). But the last *remnants of the Fifth Continent* will not disappear until some time after the birth of the new Race; when another and *new* dwelling, the *sixth continent, will have appeared above the new waters* on the face of the globe, so as to receive the new stranger. To it also will emigrate and settle all those who shall be fortunate enough to escape the general disaster. When this shall be – as just said – it is not for the writer to know. Only, as nature no more proceeds by sudden jumps and

starts, than man changes suddenly from a child into a mature man, *the final cataclysm will be preceded by many smaller submersions and destructions both by wave and volcanic fires*. The exultant pulse will beat high in the heart of the race now in the American zone, but there will be no more Americans when the Sixth Race commences; no more, in fact, than Europeans; for they will have now become a new race, and many new nations. Yet the *Fifth will not die, but survive for a while*: overlapping the new Race for many hundred thousands of years to come, it will become transformed with it – slower than its new successor – still getting *entirely altered in mentality, general physique, and stature*. Mankind *will not grow again into giant bodies as in the case of the Lemurians and the Atlanteans*; because while the evolution of the Fourth race led the latter down to the very bottom of materiality in its physical development, the present Race is on its ascending arc; and *the Sixth will be rapidly growing out of its bonds of matter, and even of flesh*.

Thus it is the mankind of the New world – one by far the senior of our Old one, a fact men had also forgotten – of Patala (the Antipodes, or the Nether World, as America is called in India), whose mission and Karma it is, to sow the seeds for a forthcoming, grander, and far more glorious Race than any of those we know of at present. *The Cycles of Matter will be succeeded by Cycles of Spirituality* and a fully developed mind. On the law of parallel history and races, the majority of the *future mankind will be composed of glorious Adepts*. Humanity is the child of cyclic Destiny, and not one of its Units can escape its unconscious mission, or get rid of the burden of its co-operative work with nature. *Thus will mankind, race after race, perform its appointed cycle-pilgrimage. Climates will, and have already begun, to change*, each tropical year after the other dropping one sub-race, but only to beget another higher race on the ascending cycle; while a series of other less favoured groups – the failures of nature – will, like some individual men, vanish from the human family without even leaving a trace behind.

Such is the course of Nature under the sway of KARMIC LAW: of the ever present and the ever-becoming Nature. For, in the words of a Sage, known only to a few Occultists:

“THE PRESENT IS THE CHILD OF THE PAST; THE FUTURE, THE BEGOTTEN OF THE PRESENT. AND YET, O PRESENT MOMENT! KNOWEST THOU NOT THAT THOU HAST NO PARENT, NOR CANST THOU HAVE A CHILD; THAT THOU ART EVER BEGETTING BUT THYSELF? BEFORE THOU HAST EVEN BEGUN TO SAY 'I AM THE PROGENY OF THE DEPARTED MOMENT, THE CHILD OF THE PAST,' THOU HAST BECOME THAT PAST ITSELF. BEFORE THOU UTTEREST THE LAST SYLLABLE, BEHOLD! THOU ART NO MORE THE PRESENT BUT VERILY THAT FUTURE. THUS, ARE THE PAST, THE PRESENT, AND THE FUTURE, THE EVER-LIVING TRINITY IN ONE -- THE MAHA-MAYA OF THE ABSOLUTE IS.”

Resume

Therefore, we should consider *not a “single” cycle of evolution, but a hierarchical system of sequences of cycles* that are *concluded* by *culmination* (as a one being seen at present) and – soon afterwards –by *cataclysm*, the *scale* of which corresponds to the hierarchical *level of the considered cycle* (Root Race, Sub-Race, Family-Race, etc.) and *level of digression from the goals* of evolution.

But if there is a sequence of cycles, there *must be the separation points*, and as far as these cycles are terminated by a culmination and subsequent cataclysm, the latter may be considered as the explicit signs of coming of new cycles.

3.6.2. Fractality of evolutionary time: cycles and their phase portraits

The evolution of all kingdoms of the Earth would also accelerate [10]

The history of civilization, in its Western comprehension, counts several millennia; it is meant the World history as documented chronology and civilization as more or less organized social life (social institutes, literacy, science etc.). From this point of view the human civilization develops, in general, within a frame of a single evolutionary process; at falls and risings of separate cultures the mankind, on the whole, moves in the direction of growth of physical and technological knowledge and increase in population. It is clear, that since the Renaissance this trend has started to accelerate and embraced the Globe via the stable inter-continental economical and cultural communications.

In the 20th century, and especially during the last decades we may observe an avalanching growth of practically all *parameters characterizing the population and material level* of consumption, most of which show even more than *exponential growth* (e^t), but a *hyperbolic “explosion”* ($1/(t-t_0)$, at $t \rightarrow t_0$) in the sense of approximating these trends with mathematical functions of time. The observed trends correspond to the esoteric predictions as well:

... This is, again, no “special creation,” nor is there any “Design,” except in the general “ground-plan” worked out by the universal law. But *there are certainly “designers”*, though these are neither omnipotent nor omniscient in the absolute sense of the term. They are simply *Builders, or Masons, 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. *That they work in cycles and on a strictly geometrical and mathematical scale of progression*, is what the extinct animal species amply demonstrate ... it is the “designers” *who direct the new evolution* by adding to, or depriving the species of certain appendages, either needed or becoming useless in the new environments. [SD2-732]

This situation was further detailed in the middle of the 20th century:

Upon an indescribable *acceleration of Cosmic influence* of new ray combinations *all processes* acquire *absolutely other rate*. [10]

At present, all *Cosmic processes and events are accelerated. In a Cosmic perspective all possibilities are widening and become more accessible*. [10]

So, the *Theosophy* provides us with the *direct evidence* in favor of the *acceleration of time*; moreover, it even *explicitly indicates* its character – *geometrical progression*, which, in a continuous presentation, leads us once *again to the exponential law*. In reality, we observe this acceleration in intensification of all spheres of life as well [18].

In this relation we come, once again, to the situation that took place with psychological time, since the time, if defined in terms of historical events, would be non-linearly connected with the physical time.

Therefore, *by analogy with physical and psychological time, define the Evolutional Time exactly as it was done for the psychological time* with the only *exception* that instead of “personal” events the *events of evolutionary importance are considered*.

In other words the *evolutional time* presents a *measure of duration of evolutionary process* (or motion) by the *number of events* being important for social life and changes in Nature.

To this end the *physical time* is *just the most convenient media for referencing different time scales*.

The analysis [18] covering a period of several millennia shows that the intensification of a series of types of world-significant events, including quakes, is actually observed and exponentially converges to the current epoch. This denotes that the evolutionary time is exponentially accelerates relative to the physical time (inversely, the physical time is decelerated relative to the evolutionary one); mathematically, this means that the reference time function for evolutionary time presents the exponent of physical time; amazingly, but this exponent is based on the Golden Section!

Meanwhile, at a shorter time interval the observed trend may better be approximated by a function of some other class; thus, a hyperbolic growth $1/(t-t_o)$, at $t \rightarrow t_o$ is observed for some parameters, where t_o presents the break point. This means that as the physical time t approaches the point t_o , the physical time as if “stops” or “freezes” due to an “*explosion*” of events (growth of information, population, etc. A similar spatial “freezing” is considered in the next Section). Of course, an infinite growth of these quantities is impossible, but one must remember that we consider a trend. From practical point of view this means that on approaching the break point t_o the evolution passes the point of bifurcation (as when shares are uncontrollably going up and up) after which the practical consequences are unpredictable, at least for the material science since it is not provided neither with models, nor with analogs for making such predictions.

The *exponential* and *hyperbolic* functions are also appropriate because for a *long time interval preceding the bifurcation point* they are well *approximated by linear functions* thus giving good concordance with the *linear correspondence between the evolutionary and physical time*: a noticeable increase in number of important historical and natural events during the preceding millennia was not observed since it took place at a relatively long time interval being comparable with centuries or more.

So we see, that Theosophy denies the evolution of Earth and kingdoms (from human to mineral) as some continuous accumulation; instead, it considers the Evolution of all these elements as a whole that develops in cycles within cycles, and in each of these cycles the development proceeds with acceleration and completes by an epoch of transformation, the scale of which is defined by the level of the cycle. And this is supported by observations.

These laws are immutable; but the motion of all the bodies, which motion is diverse and alters with every minor Kalpa – is regulated by the Movers, the Intelligences within the Cosmic Soul. [SD1-530]

In other words, during any cycle the evolution does not develop “linearly” in physical time, but roughly presents two phases – a slow and long linear development that is followed by a short exponential “explosion” before the bifurcation point. The effect of this explosion relates with the type of the cycle: the longer the cycle (and thus the higher the level of the concerned community: family race, Sub-Race, Root Race) - the more devastating the manifestation of this point, and the more energetic are the associated natural cataclysms since they have to touch all the members of the community.

So, a cycle of root Race includes a sequence of cycles of Sub-Races, etc. A cycle of each of these sequences may be described integrally and differentially. For example, it was known that the [11-year Solar activity cycle](#) modulates a series of phenomena in nature and society. But it was Alexander [Tchijevsky](#) [21] who had revealed the influence of *the phases of 11-year solar cycle* on the intensity of social processes; it presented the *first attempt* of introducing a *measure for historical process* to be engendered *internally, by the process itself*: “The science concerned with investigating the historical phenomena from the above point of view I have named [historiometria](#)”. In this case the 11-year cycle and its phases specify the cycle and sub-cycles; a description of the former relative to some subject gives an integral description, whereas the a description of the latter – a differential one. At the same time, the 11-year cycle itself may be considered as a sub-cycle of a greater cycle of Solar activity. In this relation we observe [fractal structure](#) [16, 20] which is also presented in Solar cycles in many respects.

Thus, a cycle of any level follows the same model: a prolonged phase of slow changes which quickly transfers in the phase of impetuous culmination that is followed by not less rapid fall and transformation at the point of bifurcation. But the swing of culmination and transformation the lesser, the lower the level of cycle: if a Round terminates by obscurity, a Root Race cycle – by catastrophe, a branch of Sub Race may complete its cycle by prosperity and unexplained decay. In this we also see a natural *fractal structure*.

It is important that these cycles also correlate with astronomical cycles pertaining to various types of Earth motions [17, 29], and with a series of periods [16] whose nature is either known, or remain unclear.

So, a *cycle* may be called *evolutional* if its integral spiral of time is manifested pronouncedly, that is the evolutionary time differs noticeably from the physical time. Although this criterion of discrimination is not quite exact from numerical point of view, and a discrepancy between these two time systems may not be

evident during the most part of the cycle, at the phase of intense acceleration the processes develop so quickly that no problem arises with identification of such a cycle; at least for the Root Races and Sub Races. Besides, apart from Racial cycles some other ones also follow this model, even if we do not know what are their causes; for example, an interval of **5125 years** presenting the duration of **Mayan long count**, commonly known as **Mayan calendar**, defines, *as a matter of fact*, an **integral evolutionary cycle**, within which the sequence of **sub-cycles** with the durations decreasing in the Golden section present the **differential cycles**: at the end of the former we observe a world-wide acceleration of evolutionary time, whereas by the end of each sub-cycle an intensification of social events and natural disasters take place [18]. In more detail these cycles are considered below; here they are mentioned for illustrating the subsequent consideration.

In relation to acceleration of time the **fractality of evolutionary process** is illustrated by Fig. 3.4, where the curve (a) present the integral description of evolutionary cycle, and (b) – its differential behavior by the sub-cycles. In particular, these **curves illustrate the Golden section structure of the Mayan calendar**.

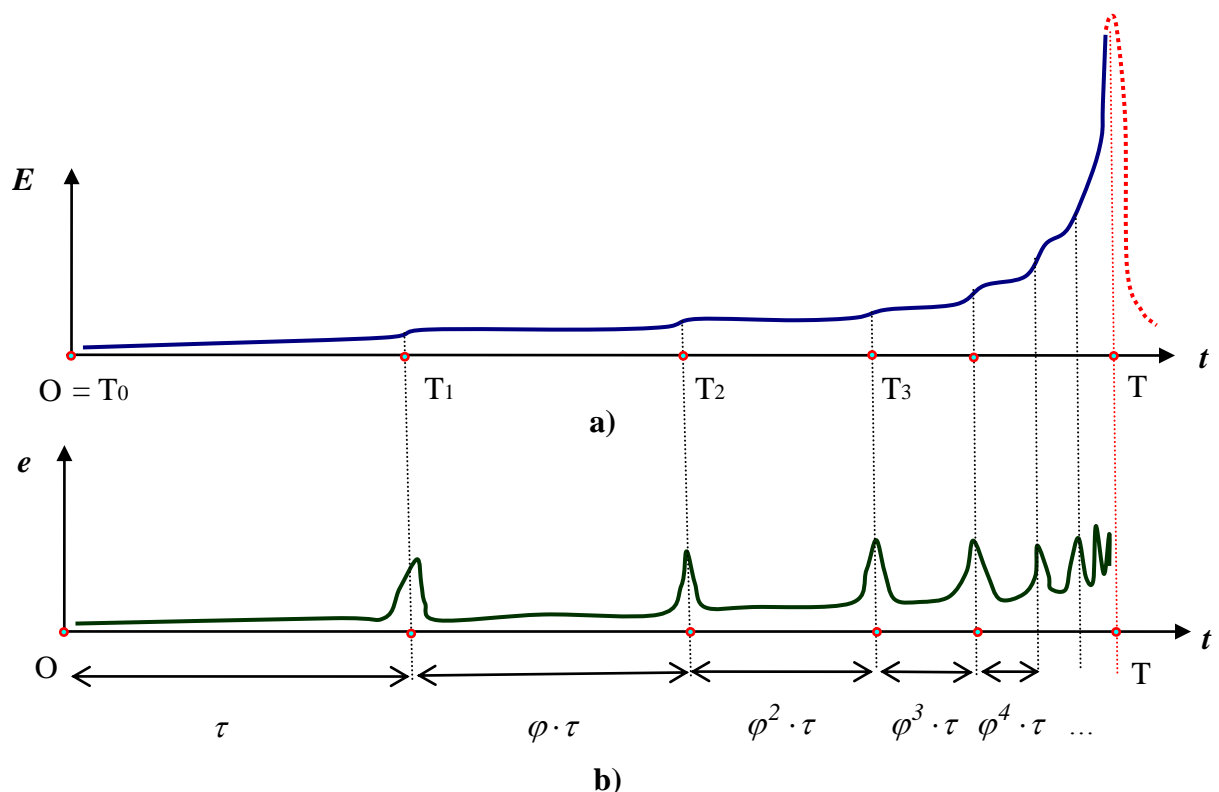


Fig. 3.4. Integral and differential models of evolutionary time (applicable to the Mayan calendar)
 a) (*integral*) evolutionary time E as a function of physical time t at the interval of cycle duration (O, T) ; the dotted line presents a flow of evolutionary time after the bifurcation point T .

b) (*differential*) evolutionary time e as a function of physical time t at sub-cycle intervals $(T_0, T_1), (T_1, T_2), \dots$.

For the **Mayan calendar** the duration of these evolutionary intervals (in b) decreases in **geometrical progression** with the **ratio** equal to the **Golden section** $\varphi = 0.618\dots$ ($\Phi = 1/\varphi = 1.618\dots$) – in contrast to commonly known intervals of equal length (Baktuns, Tuns, etc) and short-term calendars Haab, Tzolkin which are appropriate for shorter cycles in which periodic changes are manifested, but not evolutionary ones. The method of calculation of the bound points T_0, T_1, T_2, \dots and the events in their vicinities that specify the surges of these curves are given in [18].

Besides, if the general trend of the reference functions in (a) and (b) is described by **bounded exponential growth, on immediate approaching** the bifurcation **point T** in (a) some processes attain a character of **hyperbolic “explosion”**. In contrast to exponent which demonstrates a rapid, but finite growth at a finite interval, in the point T the hyperbola has an infinite break: in a short period it increases its value up to infin-

ity. *As it is practically impossible, this growth must somehow be stopped.* Since this positive feedback cannot be stopped by the system itself, *this “somehow” occurs regardless of the interests of the system.*

It is obvious that the evolutionary cycles with such a bifurcation point are especially important for the mankind and thus may be called the **cycles of civilization**. According to several models [18], the current epoch of Great Celestial Conjunction [25, 26] coinciding with the termination of the fifth cycle of the Mayan calendar (viz. 5th Long count) may present namely such a point of bifurcation for Nature and mankind (the details follow).

The same fractality, by the Anthropogenesis of the Secret Doctrine, characterizes the Race cycles; there were many civilizations that disappeared without leaving a trace (except for the esoteric chronicles). This means that not only the material remains vanish after the civilization cycle bifurcation point, but the information as well; notice that the latter corresponds to the fall of the dotted line describing the evolutionary time; after the bifurcation point a new evolution starts with its own evolutionary time as a part of the enclosing cycle.

Comment. A **cycle** is a part of some process that characterizes more or less typical reiterations of this process. If the time distribution of the states of the process repeats at each cycle, the **process** is called **periodical** and the duration of the cycle is called **period**. When we consider a cycle we have to define its **origin**. The described behavior of evolutionary process makes it natural to consider the **bifurcation point** as the **end of a cycle** since it presents the most distinguished and, at the same time, quite narrow time interval. As the end of one cycle presents the **origin** of the next cycle, a **bifurcation point can also be considered the origin of a cycle**.

However, although these narrow intervals surrounding the bifurcation points can be more or less easily distinguished, by the *observation* data it may be difficult to define the “exact” moment of bifurcation. On the contrary, by knowing or suggesting these bifurcation points we should not expect that the “decisive” event would take place at this moment exactly.

This means that if the cycles of evolutionary process are defined correctly, *the bound points between them should manifest themselves in intensification of important evolutionary events.*

Resumes

1. In racial and some other long-term cycles the **evolutional time accelerates** relative to the physical one, although this phenomenon *may not be perceived during the greater length of the cycle*, when the influence of the **cycles with equal periods is much more evident** since they are observable, shorter, and reflect the current variations in the influence of Space objects [17, 28] and Solar activity [22, 24, 30].

2. But on **approaching the bifurcation point** the situation changes, and during the last and **very short phase of the cycle** the **evolutional time accelerates quickly and noticeably**, and, after **then**, is **discarded**, together **with the decaying of other social attributes**. The greater the cycle – the more pronounced are these effects. For this reason it is natural to consider the bifurcation points as the origins of the evolutionary cycles (as and the ends of the preceding cycles). If a process does not manifest itself with such bifurcation points, it should not be considered as an evolutionary one.

In other words, **for a process to be evolutionary the bound points of its cycles should manifest themselves in intensification of important evolutionary events. Namely this situation we observe in the Auric Time Scale partitioning of the Mayan cycle with the duration of 5125 years [18, 19] into a series of sub-cycles the durations of which decrease in the Golden section.**

As it will be shown below (Secs. 3.6, 3.7 etc.), the grounds exist to consider the **sequence of Long Count periods** (“New Worlds”, or “New Suns” in Mayan terminology) as **evolutional process** that “embraces” the Mayan calendar periods as sub-cycles.

3. For the communities of the same hierarchical level these cycles may be independent. But the higher the level of community – the more efficient is a manifestation of the bifurcation point, both in the society and in Nature. Therefore, for **various cycle levels we may consider several scales of evolutionary time** (a scale per level), as we use the astronomical time in several scales: year, month, time of day.

4. The *analogy* between the *psychological time* and *evolutional time* is traced in various aspects. The Rounds and subsequent obscurations may be likened to incarnations and intermediate states of monad in the subtle planes, the Rings (Root Races) and subsequent decays – to days and nights. As well, *as the human memory is blocked relative to the preceding incarnations*, so the *historical memory is blocked relative to the preceding Races*. So a new time scale is started from “zero” both the races, and for individual persons; and as a human reminiscences relative to the former incarnations are exclusively seldom, so the modern history is officially unaware of races and civilizations that precede ours by more than dozen of millennia (although as the depth of the memory of the former, so and those of the latter could be called into being).

5. By direct analogy with the definition of psychological time, we obtain the following.

The *linear sweep* (or phase portrait) of *evolutional time* E relative the physical time t in Cartesian coordinate system (axis E vs. axis t) takes form of a *saw* (Fig. 3.5.a) where *cogs* (b) correspond to separate cycles with long *flat fragments* (0–1) that after a *fast growing* (1–2) have not less *abrupt fall* (2–3). Thus, a Manvantara is followed by dissolution, a Round – by obscurity, a Ring (Root Race) – by global cataclysm; a change of a leading Sub-race – by local cataclysm that may cause cardinal changes in nature and social life, but in a separate region(s)..

The *phase portraits* of k ($k = 1, 2, 4, 5$) *evolution cycles* within one period of physical time (which may present an evolutionary cycle of higher order as well) behave (Fig. 3.5.c) as the k -armed spirals of psychological time: one cycle a period (A, $k=1$), two cycles a period (B, $k=2$), four (C, $k=4$) and five (D, $k=5$) cycles a period.

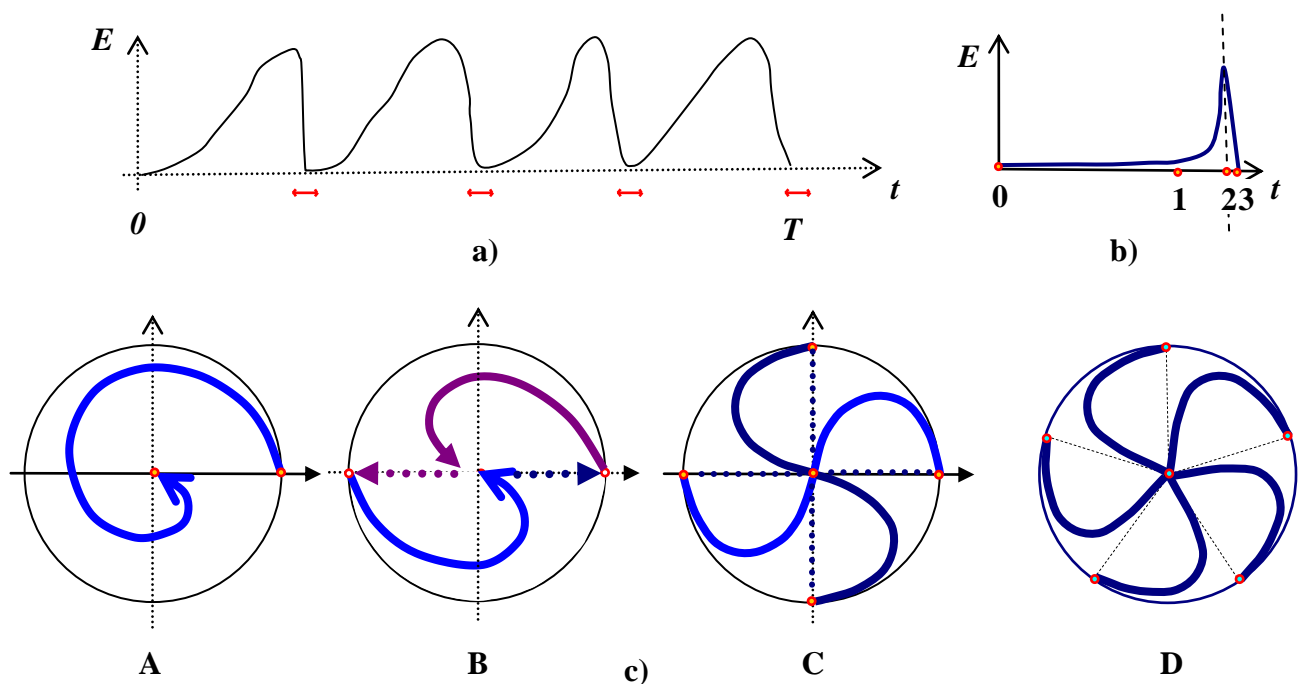


Fig. 3.5. Linear sweeps (a, b) and phase portraits (c) of evolutional time

- a) An arrow \leftrightarrow marks the period of rapid decay (in physical time t) of culture being described by the respective cycle, after which a new count of evolutional time is started (due to ceasing of most processes).
- b) The qualitative phases of an evolutional cycle.
- c) The spirals of evolutional time **A** – **D** are corresponded by the values $k = 1, 2, 4, 5$. Time interval $(0, T)$ in (a) is corresponded by 4-armed spiral **C**.

It is clear that due to the influence of other cycles the behavior of the spirals of time differs from these models and in reality presents a composition of spirals (something like that given in Fig. 3.3.b)

3.6.3. The precession of equinoxes (Sidereal year) as the basic evolutionary cycle and its meaning for the Ancient civilizations

Due to the aforesaid causes the durations and terms of cycles of evolutionary importance are rarely indicated in the Secret Doctrine. Nevertheless, it is explicitly pointed that the most part of them are connected with the periods of Earth motion and were known long ago. Among them the most known and important is the cycle of **precession of equinoxes**. Its period slightly changes in time and, by the existing astronomical observations, in average [28] makes

$$T_p = 25\,772 \text{ years}, \quad (3.9)$$

and varies in the range

$$I_p = (25\,767; 25\,777). \quad (3.10)$$

This cycle is frequently assigned other values; for instance: a rounded value of **26 000** years, or the value **25920** being convenient for factorization: $25\,920 = 64 \times 81 \times 5 = 2^6 \times 3^4 \times 5$.

It is also known under other names: **Sidereal** and **Plato's year**.

The **Sidereal year**, as a **cycle** and **unit of time**, and its sub-partitions are **widely reflected in esoteric Teachings of various ancient peoples** – from Americas to China, including Egypt and India, and in a coordinated systems: in **concepts, symbols** and **numbers**. The most prominent and well-known examples are the **Great Pyramid of Giza** and the **Mayan heritage**. Physically, this cycle is also associated with climate change. In this sense it may be considered as a **basic** (of known) **evolutional cycle**.

However, seemingly just from the end of the 19th century the Western science (anthropology, history, etc.) had started to acknowledge, although had not yet acknowledged totally that the respective artifacts present not only a twist of fate or poetic fantasies. Meanwhile, these sciences are still full of concepts which contradict to reasonable arguments, but still are supported. From this point of view an unwillingness to change the previously accepted hypotheses may hardly have found explanation other than ambitions, funding and pressure from those circles for whom Theosophy, as well as its analogs in America and Asia, hampers to allege the ideology which feeds them.

The Great Pyramid of Giza

One of the most glaring examples of distorting the meaning of artifacts presents the officially accepted affirmation that **The Great Pyramid of Giza AS IF** was built as a **tomb for pharaoh Cheops** (or **Khufu**) in about **20 years**, approximately **in 2560 BC**; that is why it is widely known by these names.

To begin with, that was a little known pharaoh **the only record of whom in connection with this unique structure was found in a secluded corner of this structure; it was a solely record applied on the wall with a red paint**. Later it has turned out that the record presents the forgery (there exists a reasonable belief that it was the “discoverer” himself who had written that name).

But much more important are the following facts.

Nothing was found in **the Great Pyramid** that could give any grounds for **considering it a place of burying** except of **font** which, however, presented **not a sarcophagus** (although it bears this name at present) but namely the font for the initiation ceremonies. The Secret Doctrine definitely states that that **this pyramid** was primordially built and used just as a **Temple**. Herodotus, “the father of history” wrote [2] that it was **not used for Cheops; he was buried in another place**.

As well, it is evidently shown in different sources [24] that **it was absolutely impossible to erect such an edifice at such a short interval of time with those primitive instruments that were at disposal in those times**; impossible, if we take into consideration that gigantic amount of limestone and granite that should be quarried, transported, formed and polished to a precision that astonishes modern builders – including the granite blocks that weighted up to 50 ton – in an amount of 850 tons a day! Moreover, to lift them at the height of up to 150 m and to level them there. **Until now, there is no any reasonable explanation how that could be done in 20 years**, or even in a comparable period.

The amazing is also that volume of mathematical, astronomical and geographical information, including the **cycle of precession**, that is integrated in the design of this pyramid [24].

Moreover, there is the following up-to-date physical [evidence](#):

“Still further evidence that the dynastic Egyptians did not construct the Great Pyramid may be found in sediments surrounding the base of the monument, in legends regarding watermarks on the stones halfway up its sides, and in salt incrustations found within. ***Silt sediments rising to fourteen feet around the base of the pyramid contain many seashells and fossils that have been radiocarbon-dated to be nearly twelve thousand years old.*** These sediments could have been deposited in such great quantities ***only by major sea flooding, an event the dynastic Egyptians could never have recorded because they were not living in the area until eight thousand years after the flood.*** This evidence alone suggests that the **three main Giza pyramids are at least twelve thousand years old**”.

Notice, that ***this dating corresponds*** to the epoch of the ***flood*** that took place, according to the ***esoteric sources***, when the Pyramid was already built.



Note. Namely in our time in Asia Minor a [temple complex](#) is found the ***age*** of which makes about **11 500 years**. It is noticeable, that a significant place in it belongs to a large T-cross Tau (See the photo) – the ***astronomical and esoteric symbol of primal importance*** both to the Ancient ***Egypt*** and ***Maya*** [2, 24, 26, 27]. This godsend is also important as the evidence of existence of other developed civilizations in region close to Egypt long before the epoch of “official” origination of civilization in Egypt.

But the modern historical sciences still affirm its age as 4.5 millennia. I can hardly believe that they are unaware of these and other facts. I am rather inclined to think that the matter is not in Cheops: if not he, and the history of the ancient world is correct – a principal question arises: who was that unknown civilization that had built those Pyramids?

The successors of Atlanteans [13]

Nearly **400** millennia ago the Great Lodge of Initiates was transferred from Atlantis to Egypt. The golden age of Toltecs had ended long ago, and a moral decline and practicing black magic were propagating more and more widely. The existence of White Lodge required more pure environment and therefore it was transferred in Egypt – at that time it was deserted, uninhabited area. In that region the Great Lodge of Initiates has obtained a possibility for 200 millennia to continue its work without difficulty.

Nearly **200** millennia ago the White Lodge had established an empire in which the first Egyptian “Divine Dynasty” was reigning and started to enlighten the people. At that time the first groups of emigrants from Atlantis appeared in Egypt.

For **ten thousand years** that remained till the second catastrophe the **two Great Pyramids of Giza** were **built**. In their halls the rites of initiation of aspirants took place and in which the powerful talismans were to be preserved during the cosmic catastrophes which they foresaw.

During the second catastrophe (more than **200** millennia ago) and the first flooding of Egypt, its population emigrated in the mountains of Abyssinia (in that time – an island). When the flooded territories had appeared above sea-level once again, they were populated partly by the issue of former inhabitants, partly by Atlantean migrants – mainly by Akkadians. A mixture of these and other groups engendered the type of Egyptians. To that time relates the reigning of the second “Divine Dynasty” when the Initiate Adepts were still ruling over the country.

The third catastrophe with Atlantis that took place about **80** millennia ago had caused the second flooding of Egypt. After the waters rushed back, the third “Divine Dynasty” was established that was mentioned by Manetho. During the reigning of the first kings of this dynasty the great temple of Karnak was built, and many other majestic edifices.

Immersing of **Poseidonis** (In **9564 BC**) *caused one more flooding of Egypt*. It was quite short, but *put the end* to the “Divine Dynasty” since the Lodge of Initiates transferred its residence in another country. The human dynasty of the ancient Egyptians that started from **Menes**, was aware of the complete knowledge of Atlanteans, although the Atlantean blood did not run in them any more.

Cosmogenesis and esotery of Maya

Not less “remarkable” *arguments are also drawn to a scientific use* relative to the **Mayan culture**; this time – from *the reports of Catholic monks [27] who, as we have to believe, had studied the local culture in depth and started to disseminate its knowledge by scrupulously translating or editing their codices*. But what for had *they annihilated all the original codices* (except several ones that were censored) and a lot of *artifacts* in this case, apart from local priests? This massacre relative to the local culture is just a relapse of large-scale destruction of ancient documents and images in the Middle East and Egypt [1, 2] in the first centuries of establishing of the church that took the Name of That Who appealed to entirely other things. As in Egypt, so in America one of the goals was to annihilate any mentioning of a cross or myth that resembled the Gospel texts.

The examples may be continued, but not the criticism itself presents the aim of these considerations. The point is that, that inexperienced reader may be misled by official statements which are based on such “evidences”. This is one of the causes why the Secret Doctrine is denied – since it reveals those stages of evolution which do not “fit” the officially accepted history.

Meanwhile, the evolutionary cycles and the associate symbols, concepts and astronomical objects (first of all – the Milky Way, as the *plane of the Galaxy*, and the *cycle of precession*) which are affirmed in the Secret Doctrine can be easily found in the most important *artifacts of Maya* [14, 18, 27].

3.6.4. The cycle of precession of equinoxes and its subcycles

Apart from the very cycle of precession, several of its subcycles are also present importance as such that specify *evolutional changes*. Among the most known are the *Zodiacal eras* (Pisces, Aquarius, etc.) of equal duration – 1/12 of Sidereal year.

However, although it is commonly accepted that at present the era of Pisces is terminating and the era of Aquarius is to come, there is no more or less accepted term defining when this transfer took or should take place. In principle, this uncertainty with the term of new era results from vagueness in the origin of the Sidereal Zodiac which, in contrast to the Tropical Zodiac, is considered “fixed” to stars; but the stars also move! In analysis of this situation it was ascertained the following [25, 26, 29].

3.6.4.1. The Great Celestial Conjunction (GCC)

The plane of Earth’s revolution around the Sun and its orientation in the Space define the plane of Ecliptic E and axis of rotation R , respectively, whereas the Equatorial plane Q is perpendicular to this axis.

The intersection of the planes E and Q gives the line (axis) of Equinoxes L_E , while the projection of the axis R on the Ecliptic plane – the line (axis) of Solstices L_S being perpendicular to L_E . Fig. 3.6.a shows that intersections of these lines with Ecliptic E presenting a circle on the Celestial sphere define the **cardinal points: Spring** (γ), and **Autumn** (ω) **Equinoxes** and **Winter** (**WS**) and **Summer** (**SS**) **Solstices**. The segments that connect these points form:

– from the one hand, a **right-angled equilateral cross** C_{SE} (in (a) it is shown **in blue**) which, due to precession of Equinoxes, **rotates** within the plane of Ecliptic (as shown by **red arrows**) at the rate of precession thus making a turn (relative to stars) during a Sidereal year. This cross \oplus , as its combination with the circle of Ecliptic \ominus (See Fig. 3.6.b) and **cross Tau** \top or ♀ (See the above Photo) present the most ancient esoteric symbols [2, 26] which are associated both with Cosmos, and with evolution of humanity (remind, that in esoterism each symbol has several meanings – for different spheres). Notice, that ancient esoteric name of symbol \oplus is “**Astronomical cross**”;

– from the other hand – a square inscribed in a circle \square (See Fig. 3.6.c); it presents one of the most sacred symbols of Maya as it is associated with **Cosmos** and **The Highest Being (Hunab ku)** [14, 26,27].

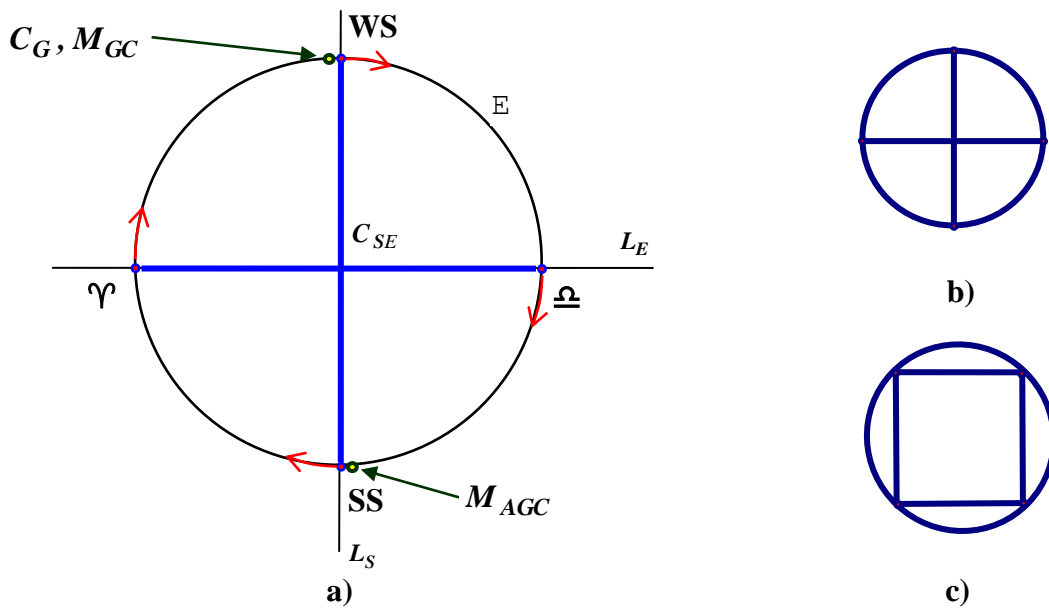


Fig. 3.6. The Great Celestial Conjunction: its astronomical model and esoteric symbols

In astronomy the point of Spring Equinox γ defines the origin of Ecliptic and Equatorial coordinates. So, if the stars were fixed on the Celestial sphere they would synchronously increase their Ecliptic longitude with the same rate – approximately by 1° in 71 years. But due to their proper motion all stars move at different rates and in different directions; although their velocities are small relative to precession, they are meaningful and cannot be neglected for a long time intervals comparable with the Sidereal year. In particular, this results in changing of allocation of stars in constellations. For this reason the concept of “Fixed” Zodiac is consistent, but just for a limited time interval.

In astrology the same point is chosen for the origin of the Tropical Zodiac in which the Signs (not the constellations with the same names) present the equal arcs (30°) along the Ecliptic. To put it simply, the Tropical Zodiac presents the Ecliptic coordinate system in which the coordinates, for convenience, are considered not in absolute values (0 to 360°) but – as hours and minutes – by specifying the Sign and degree within the Signs; as in astronomy, high emphasis is placed on the lines L_S and L_E which are called the cardinal axes.

Therefore, although the Tropical Zodiac “rotates”, this structure is mathematically defined for any moment of time; besides, its planes and axes specify the geometry of Earth’s physical interaction with the Space objects as well as esoteric influence which the Space exert to the Earth [29].

The (equatorial) **plane of Galaxy intersects** the **Ecliptic** in **two points** M_{GC} and M_{AGC} which, in comparison with the rate of precession, may be considered fixed relative to the Ecliptic, whereas the **Centre of Galaxy** projection on the Ecliptic C_G is **close to the former one**. So, in the Ecliptic coordinate system (or in Tropical

Zodiac) the Longitudes of these two points increase synchronously and make a turn over the same Sidereal year (in reality, this is the coordinate system that moves, as we say that the Sun moves along the Ecliptic).

At present, these points have just left the exact conjunction with the Solstice points; thus, in Fig. 6.3.a – it is seen that the Winter Solstice point **WS** departs from the point of intersection of Galactic plane and Ecliptic M_{GC} . However, it is not quite correctly to consider the “exact” conjunction due to small oscillations of Ecliptic and imperfectness of the concept of the “plane of the Galaxy”, because the latter must take into account both the “conventional” and the *dark matter* allocation in the Galaxy; the respective data are known just with some error. For this reason a calculation of the moment of exact conjunction with the use of existing astronomical data makes no sense; we may consider just an interval value for this moment. Some estimates show, that it hardly makes less than several years.

Therefore, *by allowing for incompleteness of our knowledge relative to distribution of matter in the Galaxy*, we *may imply that the Solstice line is still remains in conjunction with the plane of the Galaxy* and the *Centre of Galaxy* is thus *projected* to the point of *Winter Solstice*.

In more details the numerical values of parameters defining these processes and the illustrations are presented in [26]. In [29, 28, 17] it is shown that the aforesaid points, lines and planes specify the critical directions through which the Space exerts influence to the Earth.

Resume

1. From the above consideration we obtain [26, 27] that *four times a Sidereal year* the conjunction of Solstice or Equinox axis with the Galactic Equator creates the peculiar situations within a cycle of precession when for a definite period the Earth gets into a state in which it is prone to powerful physical and occult exposure. These situations were called the *Great Celestial conjunctions (GCC)*.
2. By allowing for the models of evolutionary time and uncertainty in Galactic parameters we may assume that the GCC manifests itself not abruptly, but as an acceleration and decay (to put it mildly) around the point of bifurcation an approximate term of which may be obtained as described above.
3. By comparing the geometrical and physical properties of these conjunctions with the symbols and verbal concepts of Theosophy and Ancient Teachings from America and Asia we may conclude that their Initiates were aware not only of the Sidereal year, but of evolutionary importance of these peculiar conjunctions as well.

3.6.4.2. Calendar and esoteric aspects of Mayan culture

Special emphasis Mayan culture pays to the considered cardinal points, Galaxy and its Centre. So far as its concepts are known, the esotery of Maya describes the Cosmogenesis and Anthropogenesis at lesser length than it is done in the Secret Doctrine, but principally they correspond to the latter [2]; meanwhile, it pays more attention to influence which Galactic exerts to the Earth.

For various reasons including those which are given above the esoteric Teaching of Maya is not widely covered in the literature in contrast to established [Mayan calendar](#) (5125-year Long count). But even that what is known allows us to see the commonness of their symbols and basic concepts [2, 14, 18, 27]. Meanwhile one must remember that we are speaking about the *esoteric concepts, not about the popular beliefs and exoteric teaching*; as the Egyptian, Biblical and Hindu texts are exoteric, viz. cover the esoteric meaning under the exoteric myths so the Mayan ones are.

The Mayan cosmological concepts are closely connected with their time count systems, the most known of them is the *Long Count* *being commonly called “The Mayan calendar”*: but *it is not in the air* by having started in **3114 BC** and terminating in **2012 AD** thus *marking the end of the world* (although it does not exclude the extraordinary events).

* **Long Count cycles.** The Mayas not at all limit the existence of the Earth by 5125 years. The extended Mayan time count system makes provision for much greater number positions than it is required for presenting the last Long Count date **5.0.0.0.0.0.** corresponding to **December 21, 2012** within a 5125 year period. This means that before the current Long Count period it was the preceding Long Count period, and the current one would be followed by the next 5125 year period which starts on December 21, 2012 (at the moment, when the current period expires). Namely, *the present Long Count cycle completes the era of the Fifth Sun, or Fifth World* which also may conceal the *Fifth Root Race* since in the context of creation myths the term *Five Suns* describes the doctrine in which the present world was preceded by four other cycles of creation and destruction.

So, the end of the 13th Baktun is very important for Maya as it symbolizes **new beginning, or time of re-birth.** They believed that the Fifth World would finish by a catastrophe; after then, the Sixth, the last World will be created in which the mankind would complete its existence. This concept exactly corresponds to the Secret Doctrine relative to Root Races (current is the Fifth), after-Ring catastrophes, and getting free of the future Race from a physical bodies.

* Especial interest presents the fact that the *duration of the Mayan calendar* almost exactly makes *1/5* of a *Sidereal year*, that is *the Fifth World completes the Sidereal year.* Moreover, the forthcoming *last date of this cycle coincides with the Winter Solstice at the epoch of GCC.*

To the solemnity of this epoch also points the converging spiral of evolutionary cycles [18] being illustrated in Fig. 3.4. which reflects the acceleration of both in mankind, and in nature. At present, the latter manifests itself by an intensification of the climate anomalies [30].

The synchronism of bifurcation points defined by esoteric systems belonging to different cultures is to be considered as one more acknowledgement of co-ordination and consistency of these systems, as well as one more evidence of the importance of forthcoming changes defining a turning-point in the evolution.

It worth mentioning that as early as in the 19th century Helen Blavatsky foretold not only a large-scale degradation of moral, but also the growth of natural cataclysms and, in particular, the growing contrast in natural phenomena. And this is what we actually see at present; it is important that these anomalies manifest themselves not so due to an increase of average global temperature (which is relatively small and sometimes even denied), but due to unprecedented *local* variations in temperature and precipitations.

As an average temperature for a hospital: on a global scale, it is almost in a norm, but, as in Summer of 2010, the Central and Eastern Europe is systematically flooded, whereas Russia is roasted due to the unprecedented high temperatures; meanwhile, in the Southern hemisphere are the unprecedented frosts and snowfalls.

To this end we may also add that for the 14th year the surges of natural and social anomalies not only become more frequent, but show a trend to concentrate around the *Foci of the comet Hale-Bopp* [30] *and Auric Spiral of Time* [19].

* **Sun and Galaxy.** The Mayan cosmology, as the Secret Doctrine, affirms the Hierarchy of Space influence and approves that the physical and Spiritual energies are transferred from the Centre of Galaxy to the Sun, and from the Sun – to the Earth and other planets; from this point of view the peculiarity of the current GCC is that the Galactic energies so to say obtain a possibility to exert influence to the Earth directly as well – since the Earth’s “antennas” (viz. Tropical Zodiac axes) are tuned up to the Centre of the Galaxy. In this, the Mayan cosmology affirming the growing influence of the Galactic Centre by the end of the Long Count corresponds to the paradigm of the GCC – per se, in form – relative to geometrical objects describing transfer of this influence, and in algebraic models of evolutionary time which are almost exactly reflected in the main Mayan sacred symbols (See Sec. 3.8, [26, 27]).

3.6.4.3. Basic sub-cycles of the Sidereal year

In esoteria, the cycle of precession is of primary importance – in Vedas, Cabbala, Maya tradition, Egypt pyramids [2, 3]. At the same time, a question arises – where is its origin? With respect to a series of esoteric and physical considerations [17, 23, 25, 26, 28, 29] it should seemingly be one of the GCCs. We imply that among them the current GCC is the most important since *the point of Winter Solstice points to the Galactic Centre*. For this reason it *should be taken for the origin of the Sidereal year*.

The Winter Solstice as the day when the Sun passes the respective point in the Ecliptic is of primary importance for many religions and cults of past and present; in particular, this day defines the main holiday of Christianity – the Christmas, as the holiday of birth of Sun in other cultures. Moreover, in Mayan cosmology the conjunction of Winter Solstice with the Centre of Galaxy by the end of the Long Count presents the most important event.

The Galactic Centre – is our principal leading light, both literally (viz. physically) and esoterically. It is the physical and Spiritual Centre of our Galaxy from where the Central (Spiritual) Sun transfers its vitality to stars, including our Sun which transforms it and transfers further on – to the planets [22]; physically – it is the centre of masses of the Galaxy where the central *black hole* is supposedly allocated, and the Solar System is allocated close to the Equatorial plane of the Galaxy (which we perceive as the Milky Way).

And to all appearance the Ancient Maya not only understood the physical nature of these astronomical objects, but adored them, first of all – as the sources of Divine influence [14]. Below we will see how their symbols relevant to these objects correlate with the concepts of GCC and evolutionary time.

Thus from different points of view the cycle of Precession of Equinoxes and its cardinal points are of great evolutionary importance for the Earth. Therefore, apart from this cycle itself, with the *period of Sidereal year* equal to $T_I = T_P = 25\,772$ Earth's years and the origin defined by the conjunction of the Winter Solstice point with the Galactic Centre (more exactly – with the point of M_{GC}), these are also important its *proper sub-cycles* with the periods defined by the frequency of the Great Celestial Conjunctions:

$$T_k = T_P / k, \text{ for } k = 2 \text{ и } k = 4. \quad (3.11)$$

For distinctness, call them as follows:

1. *Plato's cycle* with the period of Sidereal year $T_P = 25\,772 \approx 26\,000$ yr; its origin is defined by conjunction of the points M_{GC} and WS.
2. *Solstice cycle* with the period $T_2 = T_P / 2 = 12\,890 \approx 13\,000$ yr; the origins of these two sub-cycles is defined by conjunction of the Solstice axis with the plane of Galactic Equator, viz. by conjunction of point M_{GC} with either WS, or SS.
3. *Solstice and Equinox cycle* with the period $T_4 = T_P / 4 = 6\,430 \approx 6\,500$ yr; the origins of these cycles are defined by conjunction of either Solstice, or Equinox axis with the plane of Galactic Equator, viz. by conjunction of one of the cardinal points with M_{GC} . It may also be called the *cycle of GCC* since each time when one of the four cardinal points presenting on the Ecliptic the ends of the rotating cross C_{SE} of Solstice and Equinox axes passes the point M_{GC} , one of the Great Celestial Conjunctions takes place.

Besides, consider the

4. *Mayan cycle* with the period $T_5 = T_P / 5 = 5\,154 \approx 5\,150$ yr.

We may only guess what had triggered the Maya to composey that what is currently known as the *Mayan Calendar*, the fifth turn of which would end in 2012. But their intimate knowledge of astronomy [18] and esotery, and that amazing attention they paid and still pay to count of time make it reasonable to consider it within a cycle of precession; even more so since its *striking synchronism* with the *Sidereal year* relative both to its *length*, and to *starting points*.

Indeed, by existing data the Plato's year ends in 1998, while the Mayan calendar – in 2012. So, the error in the origin makes $\Delta_{MO} = 14$ yr, or less than $\delta_{MO} = 0.3\%$ of the calendar length. Meanwhile, the length of the Mayan calendar differs from the length T_5 presenting the 1/5-th of Sidereal year by $\Delta_{MP} = 25$ yr, or about $\delta_{MP} = 0.5\%$ of its total duration.

Of course, the relative errors are small enough. Moreover, we must take into account the following. As it was explained above, the duration of the precession cycle as of other cycles describing the Earth's motions vary in time [28]:

An error for the duration of the Sidereal year by order of magnitude makes 5 yr, probably greater [28, 29], since it is based on the retrospective estimates for its velocity.

The estimate for the date of the current GCC – the year of 1998 [26] – is also based on approximate values defining the parameters of Ecliptic, Galactic Centre and Galactic plane. For making them more precise it is required to know much more relative to matter distribution in the Galaxy (both “conventional” or baryonic, and dark matter – for more detail See Part 4).

For these reasons the errors δ_{MO} and δ_{MP} may practically be neglected when we compare the duration of these cycles, that is *the Mayan cycle may well be considered as an integral sub-cycle of the Sidereal year*.

On the other hand, it was explained that the events took place as a result of coordination of various obstacles including cyclic processes. As a result, an attempt to calculate the “exact” moment of some event defined by a long cycles is *inconsistent* (although this is frequently done by those who do not take into account the accuracy of source data; what is much worse – they make conclusion on the ground of dealing with the obtained *insignificant* orders of mantissa). For improving the accuracy it is required to take into consideration the cycles of much lesser duration.

In this sense the *Mayan calendar may present such a “correcting” instrument* (who knows!) – all the more it is coordinated with the observed acceleration of time converging to its end.

Resume

The Cycle of Precession of Equinoxes with the period (Sidereal year) $T_P = 25\,772 \approx 26\,000$ yr presents a cycle of evolutionary importance. It may be related to the set of basic cycles, since it presents a complete process and its proper periods T_k ($k = 2, 4, 5$) also present the cycles of evolutionary importance, thus forming a system of proper sub-cycles of the former.

Namely, these sub-cycles are the cycles of Great Celestial Conjunction with the periods $T_2 = T_P/2 \approx 13\,000$ yr and $T_4 = T_P/4 \approx 6\,500$ yr, and the Mayan cycle with the period $T_5 = T_P/5 \approx 5\,150$ yr which practically coincides with the 5125-yr interval of Mayan Long Count (Mayan calendar).

The origins of all these cycles coincide with the *epoch* defined by the *conjunction* of the respective *cardinal point of the tropical Zodiac* with the *Galactic Equator* (at that where the Galactic Centre resides).

Another basic cycle is presented by the Cycle of Precession of *apsides* [2, 28] but its influence is not yet clearly revealed except in climatology ([Milankovich cycles](#)).

3.7. Correlation of Plato's cycle and sub-cycles with prominent evolutionary events

The Plato's cycle and its potential correlatives. In order to estimate the significance and coordination of the defined evolutionary cycles it is required to relate their origins with the prominent evolutionary events. And although the official history does not describe so distant events, the epochs of several of them are known:

The origin of the recurrent *cycle of Mayan Long Count* (calendar) in **3114 BC**, that ends in **2012 AD**.

The origin of era of *Kali Yuga* associated with the *passing away of Krishna* in **3102 BC**.

Destruction of island *Poseidonis* in **9564 BC** – the last remains of Atlantean continent, that caused the last flooding of the Great Pyramid (the fact being supported by physical observations).

Within several Sidereal years such an event is described in esoterical source [13]:

Destruction of the *remains of Atlantis (Daitya and Ruta)* nearly **80 000 BC**; only *Poseidonis* remained.

For convenience of subsequent analysis, for the reference point take the year of 2012 and consider these terms in years Before Present (**BP**). Then by rounding the terms to decades we obtain:

End of Mayan calendar	E1	=	0	(BP)
(3.12)				
Origin of Kali Yuga	E2	≈	5 110	(BP)
Origin of Mayan calendar	E3	≈	5 120	(BP)
Destruction of Poseidonis	E4	≈	11 580	(BP)
Destruction of Daitya and Ruta	E5	≈	82 000	(BP)

Plot the origins of the defined evolutionary cycles on the circle of physical time, one turn of which corresponds to a Sidereal year (time flows clockwise), and the epochs of these five events as shown in Fig. 3.7.

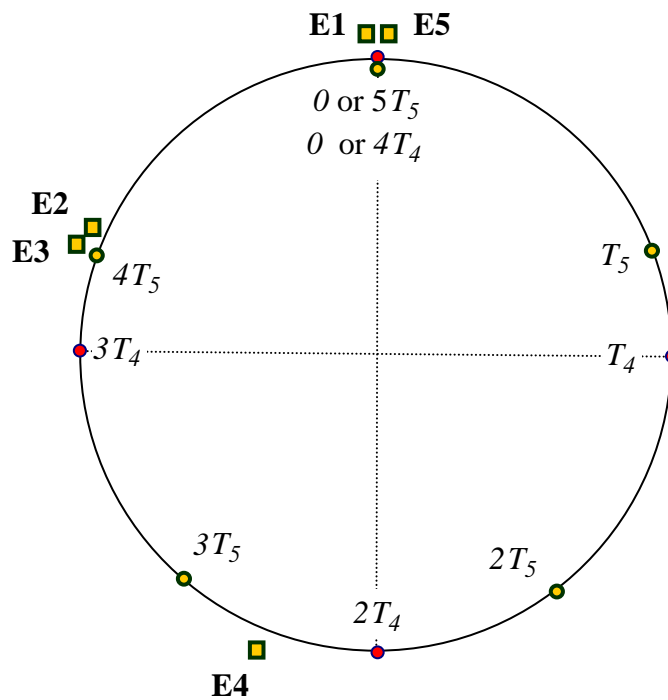


Fig. 3.7. Great Celestial Conjunction and Mayan calendar cycles within the embracing Plato's cycle

Within a Plato's year ($T_P = 25\,772 \text{ r.}$) the 5125-year Mayan calendar is reiterated 5 times; in the bound **points** ● a new *Long Count is started*. Red circles ● denote the origins of the GCCs. The terms of the considered events are marked by rectangles ■. Notice that the event **E5** took place 3 Plato cycles ago; that is why it coincides with the event **E1** presenting the most important GCC – the origin of the Plato's cycle that is defined by conjunction of the **WS** point with the Galactic Centre.

Thus, in spite of existence of only few correlative terms we obtain the following remarkable correlations:

1. Five cycles of Mayan Long Count almost exactly make one Plato's cycle and are synchronous with it.
2. The end of the current cycle of Mayan calendar ● (**E 1**) practically coincides with the most important of the GCCs ● – with passing of the (Elliptical) Winter Solstice point by the Galactic Equator on the background of the Galactic Centre.
3. The starting epoch of the current cycle of Mayan calendar ● (**E 3**) practically coincides with the origin of the new evolutionary era of Kali Yuga (**E 2**) and with the passing away of Krishna.
4. Destruction of Poseidonis (**E 4**) took place exactly in midpoint (mean point) of the origins of the third cycle of GCC ● ($2T_4$) and fourth cycle of Mayan calendar ● ($3T_5$); at this,
5. The time interval from **E 4** to ● ($3T_4$) makes 5137 years, that is only by 0.2 % differs from the duration of the Mayan calendar $T_M = 5125$, and by 0.2 % – from T_5 .
6. The interval from **E 4** to ● **E 3** ($4T_5$) makes 6455 years, that is only by 0.2 % differs from $T_4 = 6443$ yr.
7. Destruction of Daitya and Ruta (**E 5**) took place practically synchronously (as the year is given approximately) with the epoch of the most important of GCCs ● – with passing of the (Elliptical) Winter Solstice point by the Galactic Equator on the background of the Galactic Centre.

Resume

Therefore, the **peculiarity of the present epoch** is defined by the fact that it presents the **re-sonance** of culminations of **three** types of **Sidereal year cycles** at its **Origin**: the proper 26000-year **Plato's cycles**, and the sub-cycles defined by the **Great Celestial Conjunctions** and **Mayan Long Count**. This resonance means that **the peaks of acceleration of evolutionary time** pertaining to each of these cycles **concentrate in the same short-term interval of physical time** that **we survive now**, thus giving a **maximal total for the whole Plato's year**. And this “theoretical” conclusion is supported by the statistics of the respective historical and natural events[18, 30].

3.8. The Spirals of time of Plato's cycle and sub-cycles and their reflection in world-famed artifacts

“Each esoterical symbol ... has seven keys,
and each of them must be turned seven times”

It is shown that the cycles of Great Celestial Conjunctions were not only known to the Ancient cultures of America and Asia, but reflected in their artifacts [26, 27].

But whether these cycles including the Mayan Long Count were considered, like in this work, as the evolutionary ones in which the accelerating time was reflected by a spiral? Most probably – yes, they were.

For producing the evidences show that the above specified **analytical models** – the **reference functions that correlate the evolutionary time with the physical one**, or rather their **phase portrait graphs** – are identically reflected in **practically all the most important symbols** of Ancient cultures – from **America** to **Egypt, India** and **Far East** – **which are more or less associated with Time**.

For this, return to Figs.2.5 and 2.6 of Part 2; for convenience, they are reproduced below. In these Figures we imply that the physical time on the interval 2π corresponds to the Plato's cycle (as in Fig.3.7) with the duration $T_P = T_I$, whereas its sub-cycles – with the considered above evolutionary periods T_i , $i = 2, 4, 5$.

3.8.1. One evolutionary cycle a Sidereal year (Plato's cycle)

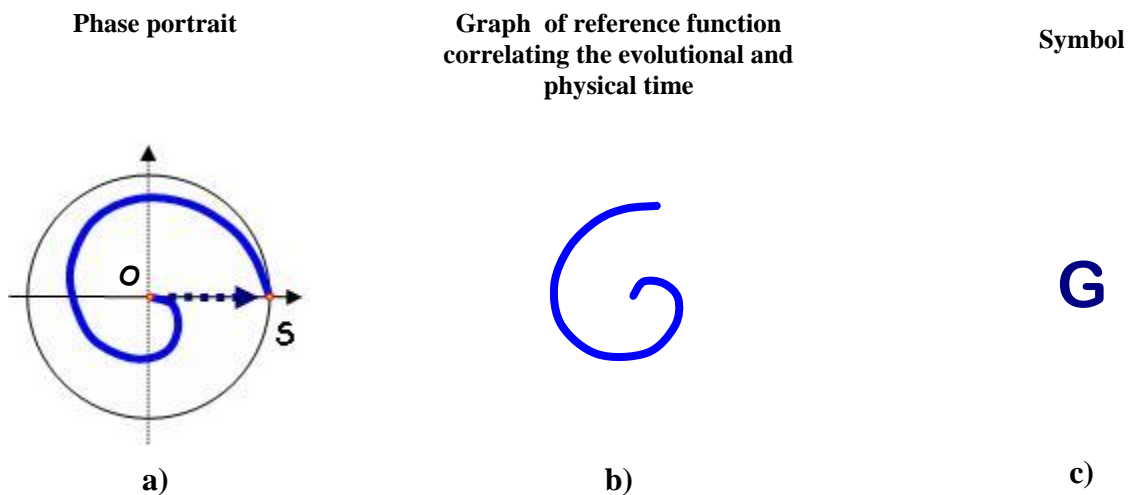


Fig. 3.8. One evolutionary cycle a Sidereal year with a period $T_1 = T_P$ (Plato's cycle)
(Phase portrait A in Fig. 2.5)

a) **Graph of reference function that correlates the evolutionary time with the physical time.** At this phase portrait the period (in physical time) of evolutionary cycle coincides with the period of Sidereal year. Acceleration of evolutionary time starts from the point **S** and, as the angle approaches 2π (at that the physical time approaches T_P), the graph converges to the centre **O**: this means that the evolutionary time is accelerated infinitely (mathematically) and in the moment $t = T_P$ we obtain an infinite break; for this reason this point of the graph presents the **point of bifurcation** in which the process “explodes” and then returns to the initial state (point **S**): the closer the moment $t < T_P$ of physical time to T_P , the greater the acceleration of evolutionary time, but for the initial points of the *next* cycle ($t > T_P$) an acceleration is absent since the process starts, once again (on a phase portrait), from the point **S**. As far as in the bifurcation point the transfer $O \rightarrow S$ is physically impossible, it is denoted by dotted line.

b) **Spiral of evolutionary time** that presents:

- the graph of reference function for evolutionary time **in polar coordinate system, or phase portrait**;
- **G-shaped curve** denoting the **Time Spiral** and **Milky Way influence** in esoterical Teaching of Maya [14]

c) **Letter (and symbol)** with the phonation **ge**. One of the **main sacral symbols** of Maya [14].

3.8.2. Two evolutionary cycles a Sidereal year

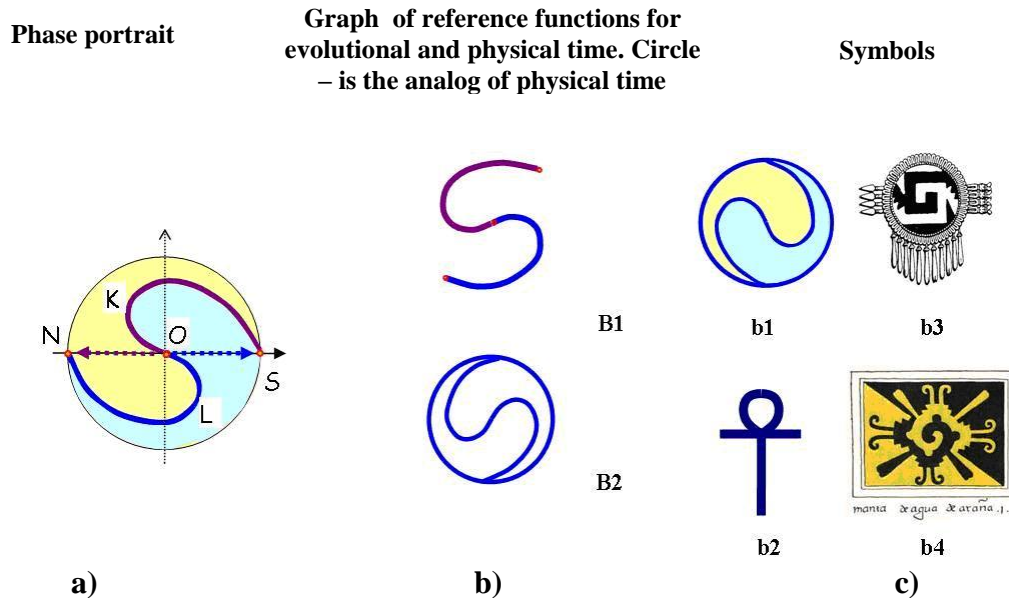


Fig. 3.9. Two evolutionary cycles a Sidereal year (Phase portrait B in Fig. 2.5)

a) Graph of two reference functions; *each function correlates the evolutionary time with the physical time, but within the sub-cycle with the period T_2 , ($2 \cdot T_2 = T_P$)*. In the first sub-cycle, the acceleration of evolutionary time starts at the point S; when the physical point approaches T_2 , the evolutionary time accelerates infinitely – as in the previous case except that instead of G-shaped curve the function looks as the curve SKO since the cycle duration is $T_P / 2$, that is the angle changes from 0 to π ; after this, the bifurcation transfer the function to the point N (in contrast to origin S as in the previous case); for more detail See Fig. 2.4. At the second sub-cycle the process repeats along the curve NLO and then – “jumps” from O to S; at this, the embracing cycle with the duration T_P completes as well.

b) Double Spiral of evolutionary time:

B1 – the graph of reference functions for evolutionary time (phase portrait);

B2 – the graph of reference functions for evolutionary time (S-shaped curve) *with the reference circle of physical time*

c) Symbols:

(b1) Yin and yang. One of the main symbols of the *Far East* and *China* that is associated with time, duality in motion, development and periodic changes.

(b2) Ankh, or Tau (*with a handle*) [2, 5, 26, 24]. It transforms from b2 to B2 as shown in Fig. 3.10; (as to geometrical origination of Ankh and its connection with the Golden section See [24]).

(b3, b4) This is also *one of the most sacred symbols*; this time – of *Maya*. It consists of two G-shaped spirals (or *two symbols G*); in connection to the Great Celestial Conjunction these symbols are considered in [27].

The symbol G, as any esoteric concept, has several meanings, but the most important of them are associated with the Milky Way and the way how it engenders and keeps the life in our Galaxy [Appendix 2].

Directly, it presents the *Milky Way*, as well as *its spiral form*; it is also the *spiral symbol of time* and the *symbol* presenting the *spiral of life* and the *cyclical terrestrial changes*.

Indirectly, it presents *Supreme as Hunab K'u, the Only Giver of Movement and Measure*, which is represented by a *square superimposed on a circle* (See Fig. 3.12); it exerts influence from the Galactic Centre in a form of *seven forces* (as the seven principles described in the SD) and thus, as the *source of life and vital energies, feeds the worlds in the Galaxy: “we are all products of the Great Spirit found in the essence of the Milky Way”*. [14]

Resume

By its form and symbolic meaning the sacred “G” describes the spiral of evolutionary motion by correlating its time and space aspects, as well as the energetic influence, which are intensified on the same cardinal points that are also considered as the primal ones in the GCCs. Moreover, “the indigenous peoples of the entire New World used the symbol in the same way as the Maya” [14].

Notice also, that the drawing (a) of Fig. 3.9 comprises the same sacred elements that form the Ankh – one of the most sacred symbols that was used in Egypt and India, by Mayas; almost exclusively it belongs to adepts.



Fig. 3.10. The phases of relocation of sacred elements forming the Ankh into the symbol Yin-yang, or double spiral of evolutionary time (at the last phase the axes are omitted)

It is the *symbol of Eternal life, salvation and Initiation*. It is also considered as “*the Mother of cycles who gives birth to Time*”; to this end it is associated with the cycle periods and origins, finishing and re-birthing. It is also associated with the astronomical cross and swastika (See §3.8.3). The below quotes also show that the *Winter Solstice*, that corresponds to North, actually *dominates* among the cardinal points.

The most sacred cross of Egypt that was carried in the hands of the gods, the Pharaohs, and the mummied dead, is the *Ankh* the *sign of life, the living, an oath, the covenant*... The top of this is the hieroglyphic Ru set upright on the Tau-Cross {viz. the same elements that were used by Mayas – O and T}. The Ru is the *door, gate, mouth, the place of outlet*. This denotes *the birth-place* in the *northern quarter of the heavens, from which the Sun is reborn*. Hence the Ru of the Ankh sign is the feminine type of the birth-place, representing the north. It was in the **NORTHERN QUARTER** that the **GODDESS OF THE SEVEN STARS**, called the “*Mother of the Revolutions*,” *gave birth to time in the earliest cycle* of the year. The first sign of this primordial circle and *cycle made in heaven* is the earliest shape of the *Ankh-cross*, a mere loop which contains both a circle and the cross in one image. This loop or noose is carried in front of the oldest genitrix, Typhon of the great Bear, as her Ark, the *ideograph of a period, an ending, a time*, shown to mean *one revolution*. [SD2-547]

Tau, and the *astronomical cross* of Egypt are conspicuous in several apertures of the remains of *Palenque*. In one of the basso-relievos of the Palace of Palenque, on the west side, sculptured as a hieroglyphic right under the seated figure, is a *Tau*. The standing figure, which leans over the first one, is in the act of covering its head with the left hand with the veil of initiation; while it extends its right with the index and middle finger pointing to heaven. The position is precisely that of a Christian bishop giving his blessing, or the one in which Jesus is often represented while at the Last Supper. ...The *perfect Tau*, formed of the perpendicular (descending male ray), and a horizontal line (matter, female principle), and the mundane circle was an attribute of Isis, and it is but at death that the Egyptian cross was laid on the breast of the mummy." These square hats are worn unto this day by the Armenian priests.

Verily may the Cross be traced back into the very depths of the unfathomable Archaic Ages! Its Mystery deepens rather than clears, as we find it on the statues of *Easter Island* – in *old Egypt*, in *Central Asia*, engraved on rocks as *Tau* and *Swastica*, in *pre-Christian Scandinavia*... [SD2-557]

... the ansated Egyptian cross {viz. *Ankh*}, or *Tau*, the *Jaina cross*, or *Swastica*, and the *Christian cross have all the same meaning*. [SD1-657]

All the above spirals of time present an “ideal” or purely mathematical situation with the infinite break which cannot be realized in reality. Probably there was no need for complication of these symbols which bear at least seven meanings; who knows! But **there exists one ancient symbol which describes** the same situation, but with a **finite break** and **exactly – from mathematical point of view!** This situation is presented in Fig. 3.11.

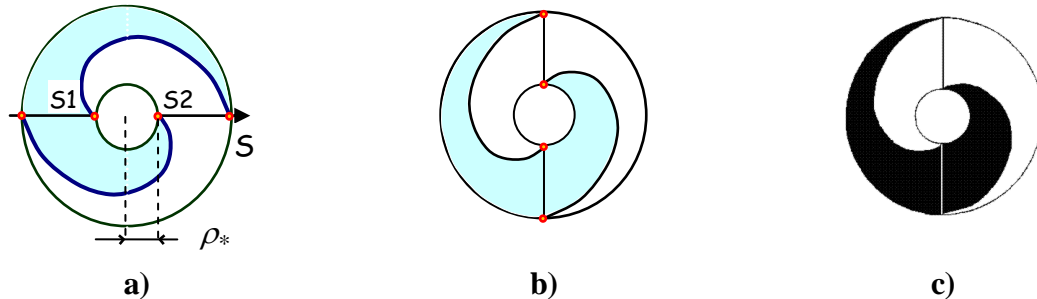


Fig. 3.11. Two evolutionary cycles a Sidereal year; the case with a finite acceleration (Ref. to Fig.2.6)

a) Graph of two reference functions; *each function correlates the evolutionary time with the physical time, but within the sub-cycle with the period T_2 , ($2 \cdot T_2 = T_p$)*. In the first sub-cycle, the acceleration of evolutionary time starts at the point S; when the physical point approaches T_2 , the evolutionary time accelerates, but *not infinitely* – just to a value specified by the radius ρ_* of internal circle so, that the internal circle reflects the maximal ratio of physical to evolutionary time. In other aspects the process flows as in Fig 3.9. In this case there are also the breaks in bifurcation points S1 and S2, but finite: we may say that *not* the “catastrophes”, but “cardinal changes” take place.

b) Double Spiral, or phase portrait of evolutionary time with finite acceleration:

the graph of reference functions (in polar coordinate system) for evolutionary time presents two curves and connecting segments; the correlation with physical time is reflected by two circles – outer (for the starting moments) and inner (for the moment of bifurcation).

c) Symbol Taijitu – ancient form of the symbol of Yin and yang, as used by Lai Zhide who was a Ming period Neo-Confucian philosopher. He introduced into Chinese philosophy the well-known “Yin and Yang symbol”, the taijitu (a “*diagram of the great ultimate*” – The Highest Cause, the Origin of origins). Lai Zhide is the author of an I Ching commentary, the *Explanation of the Classic of Change*. But it is not just an Eastern artifact – symbols of this type are also found as Celtic art forms and coat of arms for several Western Roman army units in Late Antiquity.

The image is designed to give the appearance of movement in interaction of two polar origins presenting the *main Cosmic causes of motion*; we may well consider this concept as the acceleration and deceleration (or decay) which culminate in the bifurcation point.

It is obvious that the Double Spiral (b), or the Phase portrait of the two evolutionary cycles within a Plato’s year, in which the acceleration is bounded (thus reflecting the reality) is geometrically identical to the Taijitu, or simply presents exactly the same drawing! As if the Chinese philosopher had “run the blockade” and “disclosed” the nature of the preceding concealment of the final nature of evolutionary break in a bifurcation point.

Resume

The double Spirals of Time presented in Figs. 3.9, 3.11 are geometrically identical to the *most important symbols of Old and New Worlds*; and these are those symbols that reflect the concepts of evolutionary motion, time and cyclic development under the Cosmic influence. Moreover, one of them even presents the Phase portrait with a physically realizable bifurcation point of evolutionary time.

3.8.3. Four evolutionary cycles a Sidereal year

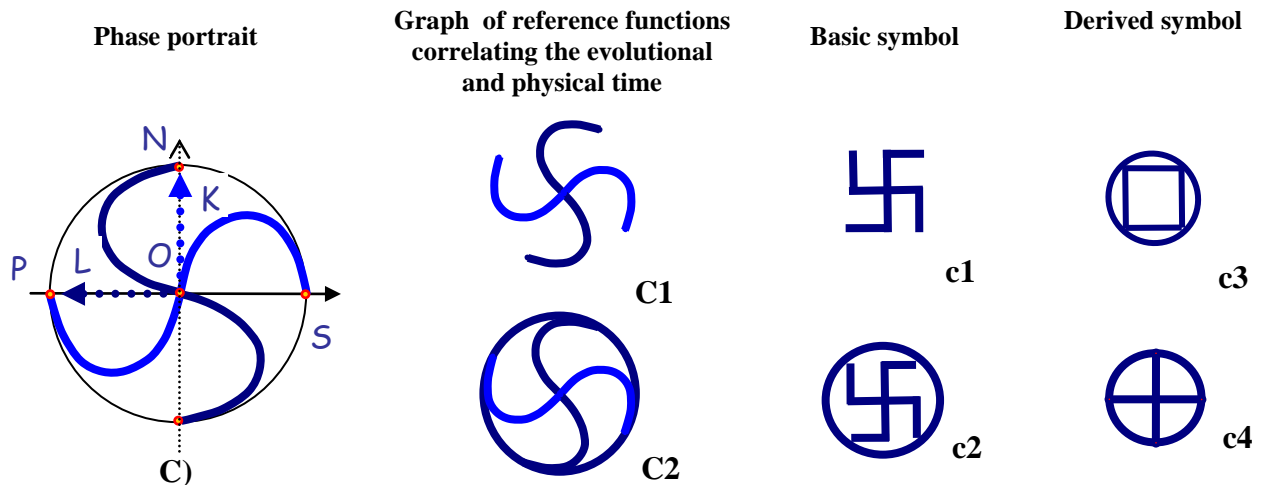


Fig. 3.12. Four evolutionary cycles a Sidereal year (Phase portrait C in Fig. 2.5)

* Graph of four reference functions (C): at this phase portrait *each function correlates the evolutionary time with the physical time, but within the sub-cycle with the period T_4 , ($4 \cdot T_4 = T_P$)*. In the first sub-cycle, the acceleration of evolutionary time starts at the point S; when the physical point approaches T_4 , the evolutionary time accelerates infinitely – as in the previous case except the function looks as the curve SKO since the cycle duration is $T_P / 4$, that is the angle changes from 0 to $\pi/2$; after this, the bifurcation transfer the function to the point N. At the second sub-cycle the process repeats along the curve NLO and then – “jumps” from O to P; an so on, until the completion of the embracing cycle with the duration T_P .

* Quadruple spiral of evolutionary time:

- C1 – the graph of reference function for evolutionary time (the phase portrait without coordinate system)
- C2 – the graph of reference function for evolutionary time (the phase portrait with physical time represented by the circle)

* Symbols:

The *direct equivalents* are obtained simply by straightening of the spiral arms:

c1, c2 – Swastika and encircled Swastika.

The Derived equivalents:

c3 – *symbol of Hunab Ku* – *the most sacred symbol of Mayan esoteric Teaching* [14, Appendix 2]. It results from connecting the cardinal points (viz. the points of bifurcation) as they are passed in physical time; the latter is presented by the circle.

c4 – *Astronomical Cross* (See §3.6.4.1). It results from pairwise connection of cardinal points: this yields the cross of Equinox and Solstice axes within the circle of astronomical time.

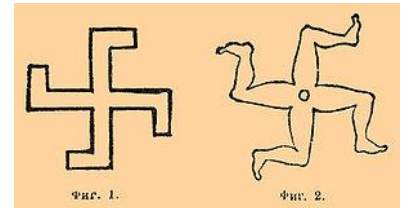
But whether this coincidence of Swastika (either in curved, or rectangular form) or other symbols with the phase portraits of Fig. 3.12 is accidental, or a direct analogy? To answer this question, consider how this symbol can correspond esoterically to the concept of evolutionary time.

3.8.3.1. Swastika

Swastika in world symbolism

* As it is shown in Wikipedia, the symbol of [Swastika](#) appears *throughout the World* – practically in all regions of *Asia* and *Europe*, in *Central, North* and *South Americas*, even on the *Easter Island*; the *earliest consistent use* of swastika motifs in the archaeological record date to the Neolithic. The symbol appears in the *6th – 5th millennium BC*. Since the ancient times it is used both as a *religious symbol* and as a *decorative element* which *brings luck*, *except of* its use by *Nazi*.

* The *Sanskrit* term “*Swastika*” means any lucky or auspicious object, and in particular a mark made on persons and things to denote good luck. It has been in use in English since 1871, replacing *gammadion* (or *tetr-gammadion, cross gammadion*) – from Greek $\gamma \alpha \mu \mu \acute{\alpha} \delta \iota \omicron \nu$, viz. *four letters* Γ . The resembling names are *fylfot* (as derived from Anglo-Saxon *fower fot* meaning “four feet”) or *tetraskelion* – literally meaning “four legged”, especially when composed of four *conjoined legs*.



Other names for the shape are: *crooked* (or *hook*) *cross*; *sun wheel* or *sun cross*.

* So, the swastika is mainly an *equilateral* (“rotating”) *cross* with its arms bent at right angles, in either right-facing ($\卍$) form or its mirrored left-facing ($\卐$) form.

Besides, in its ancient forms it appears both *separately* and *in a circle*.

* Its arms are dominantly *rectangular* (in a form of Greek letter Γ), but sometimes are *orbed* as in Fig. 3.12. – which is more typical for the artifacts pertaining to the native *American traditions*. The Swastika shape was widely used by many *southwestern tribes*, most notably the *Navajo, Hopi*. Among various tribes, the swastika carried different meanings. Thus, in tradition of the *Kuna* people, *Panama*, it symbolizes the *octopus* that *created the world*. Not less important it to *Maya* and *Aztec*.



Fig. 3.13. The Native American Swastikas with the orb-ed arms

a) *Illustration* of *Uktenas* by the artist Herb Roe, based on a *shell engraving* from *Spiro*, Oklahoma.
 b) *The Whirling Rainbow* – sand pattern by *Navajo* artist (from private collection of Nelson J. Cambridge; photography: Stephen Clarke, 2006). It depicts a *sun dog* or *full circle rainbow around the sun*. This reference was kindly sent me by Red Color.

Pay attention, that the centre of the symbol (a) is occupied by the *Astronomical Cross*, and the black triangles (bells?) as if show four cardinal directions; the symbol (b) is *encircled*, and in the both symbols it is *not a dot in the centre, but a circle* – as in the *Taijitu* (Fig. 3.11).

* Although in different continents Swastika is still considered as a symbol of good luck, it has much more attributes; in general, **Swastika** is *associated* with *eternal (rotational or spiraling) motion* and *evolutional development*. In particular, it presents one of the most ancient Solar signs which symbolizes the yearly *motion of Sun* and division of the year onto four parts by the *Solstices* and *Equinoxes* (which are still celebrated both as church holidays and in pagan rites).

* Swastika also *retains its holy meaning for many peoples*: it is still a sacred symbol in Hinduism, Buddhism, Jainism, Mithraism, Shamanism and other religions and states including China and Japan, as it was in Troy and Egypt, pre-Christian America and Europe (e.g. Slavic and Anglo-Saxon paganism). Even Some Christian churches built in the Romanesque and Gothic eras are decorated with swastikas, as [some](#) ancient synagogues in Palestine.

* So, if Swastika since the ancient times is used throughout the world and, generally, in the same meaning – there must be the cause for such common use of this symbol. And although there is no scientific (viz. *exoterical*) explanation to this fact, Theosophy explains this phenomenon, but from *esoterical* point of view.

Swastika in Theosophy

The *Secret Doctrine* explains the much more *profound meaning* of this symbol that *was kept secret* by Initiates since olden times, until the publication of that work. It is shown that “the ansated Egyptian cross, or *tau*, the Jaina cross, or *Swastica*, and the *Christian cross* have all the same meaning” [SD1-657] in the sense that they reflect, but with different attributes, the main ideas of Cosmo- and Anthropogenesis.

Verily may the Cross {including Swastika and the Tau} be traced back into the very depths of the unfathomable Archaic Ages! Its Mystery deepens rather than clears, as we find it on the statues of *Easter Island* – in *old Egypt*, in *Central Asia*, engraved on rocks as Tau and Swastica, in pre-Christian *Scandinavia, everywhere!* [SD2-557]

There was a time, when the Eastern symbol of the Cross and Circle, the *Swastica, was universally adopted*. With the esoteric (and, for the matter of that, exoteric) Buddhist, the Chinaman and the Mongolian, it means “the *10,000 truths*”. These truths, they say, *belong to the mysteries of the unseen Universe* and *primordial Cosmogony and Theogony*. “Since Fohat crossed the Circle like two lines of flame (*horizontally* and *vertically*), the hosts of the Blessed Ones have never failed to send their representatives upon the planets they are made to watch over from the beginning”. This is why the Swastica is always placed – as the ansated Cross was in Egypt – on the breasts of the defunct mystics. It is found on the heart of the images and statues of Buddha, in Tibet and Mongolia. It is the seal placed also on the hearts of the living Initiates, burnt into the flesh, for ever, with some. This, because *they have to keep those truths inviolate and intact, in eternal silence and secrecy to the day these are perceived and read by their chosen successors – new Initiates* – “worthy of being entrusted with the ten thousand perfections.” ... Throw a retrospective glance, and see it used alike by the Initiates and Seers, as by the priests of *Troy* (found by Schliemann on the site of that old city). One finds it with the old *Peruvians*, the *Assyrians*, *Chaldeans*, as well as on the walls of the old-world cyclopean buildings; in the catacombs of the *New world*, and in those of the Old (?), at *Rome*, where, because the first Christians are supposed to have concealed themselves and their religion, it is called *Crux Dissimulata*. According to de Rossi, the *Swastica* from an early period was *a favourite form of the cross employed with an occult signification*, which shows the secret was not that of the Christian cross. [SD2-585]

Few world-symbols are more pregnant with real occult meaning than the Swastica ... it points in its concrete imagery, as the ideograph of the number does, to the *Zenith* and the *Nadir*, to *North*, *South*, *West*, and *East*; one finds the unit everywhere, and that unit reflected in all and every unit. It is the *emblem of the activity of Fohat*, of the *continual revolution of the "wheels"*, and of the *Four Elements*, the "Sacred Four", in their mystical, and not alone in their cosmical meaning; further, its *four arms*, bent at right angles, are intimately *related*, as shown elsewhere, to the *Pythagorean and Hermetic scales*. One initiated into the mysteries of the meaning of the *Swastica*, say the Commentaries, "*can trace on it, with mathematical precision, the evolution of Kosmos and the whole period of Sandhya*". Also "*the relation of the Seen to the Unseen*", and "*the first procreation of man and species*". [SDS2-587]

In more detail the attributes of Swastika and its connections with other crosses are considered in [23, 26].

Swastika as a symbol of spiral of evolutionary time

Apart from other meanings, the Swastika, along with its sibling forms of crosses, presents probably the main, ancient and most *wide-spread symbol of evolution, apart from the Sun and Sun-associated processes*; among them, the yearly motion of Sun and its cardinal points are the most simple and obvious.

Swastika is allotted by much more profound esoterical meanings; it expresses the alchemical (viz. esoterical) ideas of transforming the elements and may represent philosophical concepts. In particular, Swastika is considered as a sign of mystical cart associated with *evolutional motion*, or *motion of life* (the wheel emblem *unites* the *cross and circle* in one [SD2-546]).

In the East the Swastika is associated with Space and form of Motion which was reflected Hermetically like the *graphs of evolutional time: motion of four legs issued from the common centre* (viz. Fylfot – a form of the four-footed cross – *Swastika* [SD2-546]) – *as four trajectories of evolutional time within a system of cardinal points* (Solar cross).

Therefore, *Swastika* may well be considered as a *symbol* of the *Great Celestial Conjunctions* as well, since it reflects the connection between the centre of Ecliptic (viz. the Earth) with the motion of Sun relative to cardinal points (viz. Solstices and Equinoxes) and to the Centre of Galaxy by correlating the four cardinal directions with the respective Space objects [26, 27].

Swastika is also *associated* with the *spiral motion*, and the latter is always proceeds in time and describes the process of evolution [2] in a broad sense as a cyclic alteration in dominance of Spiritual and material in evolutional cycles; in particular, in getting the matter to manifestation in more dense planes.

The same idea is supported by the *Swastika* in a *form* of *two truncated bent spirals*; In marine civilizations a double spiral also meant the *process of formation of life*. Thus, one of the most *ancient* forms of *Swastika* is that with the *rounded arms* (Asia Minor, 7th century BC); its *curls* were the *symbols of cyclic motion*.

Therefore, the *mechanics* of *evolutional spiral of time* is quite *exactly reflected by the statement that Swastika combines rotational motion with its derivative – forward movement*. And in this the *duality of Swastika* is exhibited: *in rotation of the spiral* (viz. *Swastika*) *the evolutional time develops sequentially*.

3.8.3.2. Kabbalistic Swastika

From a new side the concept of spiral of evolutionary time is supported by Kabbalistic considerations.

An unusual *swastika* {Fig. 3.13}, composed of the Hebrew letters *Aleph* א and *Resh* ר, appears in the 18th century Kabbalistic work "Parashat Eliezer" by Rabbi Eliezer Fischl of Strizhov, a commentary on the obscure ancient eschatological book "Karnayim", ascribed to Rabbi Aharon of Kardina. The *symbol* is *enclosed by a circle* and surrounded by a cyclic *hymn* in Aramaic. The hymn, which refers explicitly *to the power of the Sun*, as well as the *shape of the symbol*, shows strong *solar symbolism*. According to the book, *this mandala-like symbol is meant to help a mystic to contemplate on the cyclic nature and structure of the Universe*. The letters are the initial and final characters of the Hebrew word, , or "light" [Swastika].



Fig. 3.14. Kabbalistic mandala with Swastika in the circle for contemplating on the cyclic nature and structure of the Universe

3.8.3.3. Kabbalistic Swastika and evolutionary time

Even more interesting information pertaining to evolutionary time may be obtained from Kabbalistic interpretation of this mandala composed of 5 letters, circle and rays – with the use of Major Arcana and Gematria.

* *In the centre of mandala*, symbolizing the basic source and cause of its influence the letter *Aleph* א (with numerical value 1) is disposed which denotes Absolute as universal engendering creative origin, the initial point of any creation.

In the first Arcane (the respective Tarot card is given on the right) every thing proclaims an energetic and reasoned cause. The person sees “the Higher Being” face to face and talks with Seven Geniuses who rule the Celestial warriors. This means that the action is developing with respect to the plans of the higher Powers, and the sign of infinity adds that the process has no definite start or end point, but may have bifurcation points. In other words – this is not the “first creation”, neither a stationary, nor a final process.



The former, in particular, follows from the alchemic aphorism: “in order to make gold, one must be provided with gold”. This is a law which pertains to the overwhelming majority of the processes; in the most cases it is not required to invent an absolutely “new” things: it is suffice to find a correct analog. So the evolution after pralayas starts not from a “zero”, but from the final stage of the preceding Manvantara.

The latter is presumed by four enigmatic objects as if anticipating appearing of four letters Resh (being the symbols of bifurcation – See below) and relating with a cubic table symbolizing *four directions* (*axis*) which *repeat in infinite cycles of Time* (symbol ∞). The arms in opposite directions indicates the *Biner* which (due to the energetic nature of Magician) requires solving, thus engendering the active element – *motion* which manifests itself through the four Resh surrounding the Aleph and thus obtain an incitement in a bifurcation point, or in progressive condensation of ideas.

The position of Magician’s arms certifies the unambiguous connection between the Earthy processes with

their Celestial analogs. At that, the *Sun* is shown as an intermediary of “giving” nature which transfers the Spiritual and physical energies to the Earth. *Two circles* (the necklace and belt), one under another, may be associated with the two principal “circles” – the *Ecliptic* and *Galactic Equator* (along which the Solar system moves), since the Equator, as a matter of fact, does not present a trajectory.

Thus we see that the Aleph, as the centre of the core of this mandala, and its Tarot interpretation correspond to the general idea of evolutionary time, including the concepts of acceleration and bifurcation. Meanwhile, Aleph is so-to-say does not manifest its creative origin by itself; for this it is required an *instrument*, and it is provided with the *rays around the Aleph*.

* Along the perimeter of the core of the Mandala four letters *Resh* \aleph (with numerical values 20 and 2) are allocated rotationally. Appearing of this letter (the respective *Tarot card* of Arcane XX is given on the right), as the call of the horn, indicate an emergency, or in our terms – *appearing of point of bifurcation*, which requires a profound and overall (viz. at all planes) transformation. To this end the name of this Arcane: “Resurrectio mortuum” (*resurrection of dead*) speaks for itself. These people who arose from their coffins symbolize the second name of this Arcane: “Trasformatio Astralis” (viz. *transformation in subtle planes*) – total and abrupt change in the order of events in which they were residing. As to the concept of bifurcation, the third name of this Arcane is: “Mutationes in Tempore” (*changes in Time*).



So, the *fourfold* use of letter *Resh* tells that the *Influence of Aleph* is transferred on a *regular basis*, but in the *specific four bifurcation points*, and that the *evolution does not stop at any of them*, even if they appear to be mortally dangerous, and continue under the influence of the higher Powers.

Each time the Resh acts, the peoples are to conceive their goals with the requirement of this Arcane: to subdue their passions and hate (viz. to subdue their Kamic desires to the Higher Ego).

So we see, that the influence of the central Aleph through the regular sequence of *fourfold* Resh adds new important details to the general idea of accelerated evolutionary time being “interrupted” by the bifurcation points, and corresponds to the Theosophical paradigm of alteration of Manwantaras and Pralayas.

Besides, a Gematrian *expansions of number 20* (viz. Arcane XX, Resh)

$$4 \{ \textit{adaptation} \} + 16 \{ \textit{destruction} \} = 20 \{ \textit{Changes in Nature} \};$$

within the sphere of evolutionary time may have the following interpretation:

$$\textit{gradual variations} + \textit{bifurcation} = \textit{phases of evolution (in Nature and society)}$$

as it is illustrated by Fig. 3.5.a, c.

Note also, that *Saturn* which personifies *Time* and *cycles* is the astrological *patron of this Arcane*.

* The *fourfold reiteration* of the letter *Resh* in a form of *rays from the centre of the core of mandala* certifies, in itself, the *regularity in appearing of the points of bifurcation* and what kind of *influence* (as described above) *they transfer from the centre - Aleph*.

Besides, the sum of these letters gives 80, or 8 which means:

Eight parts of the world – as indication to *cardinal points* at which the *bifurcation take place* (In GCC two crosses are considered, their 8 ends lies in Ecliptic);

The number associated with the *law of transformation*, a *possibility to get out of unidirectional development* – as indication to *nonlinearity of evolutionary time* relative to the physical one;

Powerful pulse associated with liberation, as 2 in the third power ($2^{*3} = 8$) – as indication to the *scale of manifestation of the points of bifurcation*;

Structure and magic: *Space* structure, *mathematics* (as science pertaining to abstract structures) and math *models*, *cycles* – in common, these are *the principal elements which describe mathematically the evolution in Space and Time as a cyclic process*.

Besides, this number describes *the aim of the evolutionary process as it is understood in esotery*: “The purport of Eight consists in getting of unearthly perfection in Earthy deeds” (See also §4.5.2).

* *The sum of all letters* within the circle of mandala equals to 9 ($1+20+20+20+20 = 81$, or 9) indicating to:

– flow of Time;

– the *cause of cyclic motion*; it is a number of reflection, and as the latter always distort the reality, a hidden antagonism arises. Hence, it denotes *origination and development of internal crisis* that inevitably must transform into explicit form. In other words, it presumes *inevitability of the forthcoming crisis and qualitative leap before the termination*;

– *source of the influence*: the Zoroastrians associated this number with the *Milky Way*;

* *The number of all letters* within the circle of mandala equals to 5 indicating to:

– the first visible manifestation of the Spirit in the physical matter ($5 = 1 + 4$) – indicates to a *recommencement of the evolutionary process after a crisis*;

– the number of law: it requires the *evolution to follow the Supreme law*

* *Number of outer rays* equals to 24.

If the core defines the essence of mandala relative to its paradigm and Supreme law, the rays describe how the former are realized in the physical world, in Nature and society. In this sphere *24 defines the Cosmicity of evolution* – the evolution depends on Karma, viz. on previous results in all planes. Thus, $24 = 12 + 12$ – assimilates the nature of the physical plane to that of the higher planes with respect to the general paradigm of evolution.

3.8.4. Five evolutionary cycles a Sidereal year

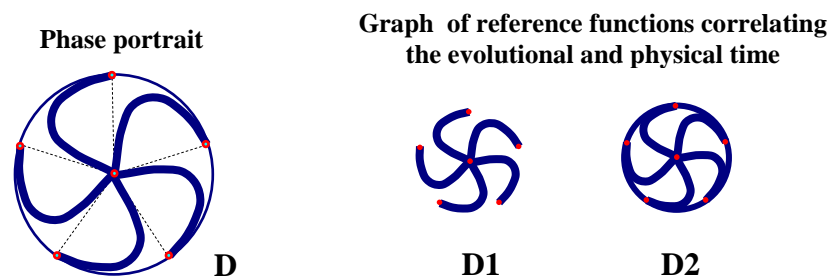


Fig. 3.15. Five evolutionary cycles a Sidereal year (phase portrait D in Fig. 2.5)

After obtaining the graphs given in Figs. 3.8, 3.9 it became quite clear to me that they presented the well-known world symbols, except the five armed spiral (Fig. 3.15). However, as far as the Mayan Long Count makes the fifth part of a Sidereal year and this fact was known to them I was almost sure that the five-armed spiral must also exist somewhere among the Mayan artefacts. I asked Mike and he kindly attached my question to the [Mayan Majix](http://www.mayanmajix.com/) [www.mayanmajix.com/] Announcements: whether somebody ever saw this symbol among the ancient cultures, *without specifying its mathematical origin*. And although I haven't received an indication to any definite object of this kind that could be associated with Time, this search was successful in revealing a new class of artifacts pertaining to the mystery of spirals of time.

3.8.4.1. An experience of extrasensory perceiving of five-armed spiral

In particular, in response to my Web request I obtained the following remarkable letter which I present with the permission of its author. As you can see, it directly associates this symbol (Fig. 3.15) with the physical and mathematical background of its origin.

As soon as I saw the Ancient Symbol being studied, I was immediately reminded of a very powerful Vision that came to me some 20 years ago now. A vision that left me profoundly moved and sobered. Indeed, in touch with the very Ground of my Eternal Being. It went like this:

I was at home alone at the time, standing at my kitchen sink doing dishes in my quiet house. (Sometimes performing a mindless chore like doing dishes has a way of putting me into a meditative state.) Anyway, there I was contemplating my image in the plates and cups floating in dishwater when suddenly I felt I was witnessing the end of time as we know it. That is to say, I saw in my Mind's Eye a Vision of the whole World coming to a close. It seemed I was seeing the Earth spiraling around and around, looking just like the Ancient Symbol in question. And included within this spiraling symbol of time/earth/world as it was closing its 'circle of life' so to speak, were all these people I knew at the time...going with it. A few of those people were close relatives of mine. I felt as though I was witnessing the end of one world, and at the same time perhaps the ending of *my own* world as I knew it (and those in the spiral) up to that point.

But more than that, in the marrow of my bones it felt like I was being given a vision of the future to come. Needless to say, I was left stunned, shaken and saddened to the core of my being as though I had already witnessed the passing away of so many people in my life that I loved, though they were very much still alive at the time. At the same time it felt as though I was suddenly transported to some future Self, which left me feeling profoundly grounded in my Eternal All Knowing Higher Wisdom Self. That is to say, I remember moving from the sink to the refrigerator to put something away feeling as though I was in slow motion, aware of being in a profound space of transcendence while feeling in touch with my Boundless and Eternal Sovereignty at the core of my Being. And, in that holy moment of feeling my God-Self within me I felt profoundly alone yet not lonely, realizing I was serving as witness to the end cycle of human evolution as if it had just come full circle in my mind's eye. It left me so profoundly clear, still and moved that I've never forgotten the experience, though I have only shared it with one, maybe two people besides yourself.

In the wake of this moving transparent vision that I experienced decades ago, I have since become more aware of how reality happens simultaneously on multidimensional levels of consciousness. Which has left me with a greater appreciation for the awareness that since the world is actually IN us as much as if not more than "we are in the world", ("as within, so without" etc.), then what my vision may have been showing me at one level was that as my own consciousness matures over time certain aspects of my own world and the people in it would also change or possibly end. (And indeed, a few close relatives of mine have recently passed on.) This happens for everyone of course, as changes make their mark on a person's unfolding life. As one grows and changes, so goes their relationships and lives with consequent endings and new beginnings. Hence, from a collective level of critical mass shift in global consciousness and relationship with the cosmos, why then should this change / death process be any different? Whether it happens literally or metaphorically, or some variation thereof, i.e., based on the level of individual conscious awareness, I think that as we collectively wake up to the simultaneity occurring between our multiple layers of existence, i.e., physically, mentally, emotionally and hence spiritually, that given our physical world is ultimately an energetic byproduct of what is within each of us through our thoughts, feelings and emotions, hence perceptions, then there are bound to be continued birth pains on all of these levels of existence within and outside of ourselves simultaneously. And that it is our beliefs held at subconscious levels to a large extent that determine what will be energetically manifested, which for many is still very much insidiously driven by the ultimate Fear – FEAR of the UNKNOWN.

Hence, as so many awakened spiritual teachers are pointing out right now, it is imperative to know who we really are and how we are being challenged to consciously co-create our collective birth process happening right now. Though it felt like it at the time, I don't feel this vision of mine some 20 years ago now portends that come 2012 the world is completely over and we all simply recycle back through the God Head. But that being said, since the world is ultimately within each of us, as consciousness is challenged

to awaken within (and whether this process is embraced or resisted) perhaps the symbol/vision portends a returning to Source. And because this invariably is also a multidimensional happening energetically speaking, depending on each individual's soul timing this return may be the result of literal physical death for some, while for other souls who are ready...death of the old self to a deeper wiser more awakened Self. For many souls perhaps their role of serving to provide a container from which the new paradigm consciousness is now emerging, may indeed mean physical death for some, as I'm guessing your findings point to. Certainly, as we all witness the profound effects of climate change and our own energetic and physical impact on the outer world as a result of former unconscious choices leaving their aftermath to deal with, this death process (whether literal or symbolically) may only intensify for the next few years at least. For others it may mean greater integration and embodiment of their Divine Self within, that then puts them in positions of service for others choosing to live to see the Golden Age ushered in.

So, I guess I view the movement of the symbol going around and around as a birth portal, womb or canal that can literally lead to new life, i.e., for those ready to vibrate at that more conscious holographic, spiritual level of existence.

And because you mention that the Symbol was based on the number 5 vibration as being very important to Maya time count, I should perhaps also mention that this may explain for me why my energy field/vibration may somehow be serving as a vessel, portal or gateway for what's to come as seen in the above mentioned vision, as well as for certain Earth shifts that have already occurred over the last few decades. Let me explain as this may further support evidence of my vision of this symbol and your findings: You see, while this may not be that relevant on the one hand, as I am but one humble individual on my own path of healing from head to heart in this lifetime, I happen to know that from a numerological perspective (since we ARE ALL unified by ENERGY and resonate to certain numerical, color and sound frequencies each in our own unique way through our essence being) I personally happen to know that I have an over abundance of the number 5 frequency in my energy field. Again, that may not mean anything respective to your findings, however intuitively as I read your email it struck me that perhaps I personally am more energetically aligned with the symbol you are studying because of the number 5 frequency vibration important to the Maya time count, which may explain in part why I experienced the vision I had.

Likewise, because I know that my own soul vibrates to the number 9 (the number for completion) in this lifetime, it is no surprise therefore to me of what I have always intuitively felt, which is that I too am personally completing a cycle of human evolution. Tying up some karmic loose ends as it were, in preparation for a whole other dharmic level of service and soul evolution. One that does not currently exist here on Earth yet. Hence, it would seem my own subjective and objective experience serving as barometer of sorts and this vision and certain other phenomenal and predictive experiences I've had relative to other major events years before they'd come to pass, and speaking to me over the past decade - Some of those being, 9/11; the Tsunami of 2004; and later Katrina here in the U.S. before they actually occurred. With 9/11 I felt a sense of urgency I simply couldn't dismiss a good ten years prior to the event. I remember telling someone when visiting the World Trade Center Towers one time in the early 90's, I said, "I don't know why I'm saying this, but I'm getting a strong image of these towers as becoming one big black hole."

As it grew closer I kept getting different messages, like "Roshashana" which is the Jewish Holiday it happened on. I also heard, "Gaza is a War Zone" month's prior to this happening. - With the Tsunami of '04', I simply remember going to bed the night before the news broke. And, laying my head down on my pillow I closed my eyes, though I was still wide awake. There I laid like any other night waiting to drift off to sleep when suddenly I felt I was drowning in a deep body of water. It felt incredibly peaceful however as I was seeing in my mind's eye what seemed like hundreds and hundreds of ethereal bodies/souls of light swirling and lifting up out of the water. This experience went on for several minutes as I was left in awe and wonder at what I was seeing before finally drifting off to sleep. The next morning I awoke, turned on the T.V. and hearing the news my jaw dropped open as it explained my experience.

In a sense, one could say we are all Midwives helping to birth our new world into being. For me it's been at least since the mid to late eighties and early 90's that I've consciously been aware of anyway, where I've had unexplainable, serendipitous events occur simultaneous to cosmic movement and Earth events that have lead me to feel in my bones that I was somehow serving as a channel or vessel, helping Mama Earth through Her planetary shifts as they impacted Her. Events for which I've have felt I've have likewise served as a portal or gateway for others as well, whether I've wanted to or not. (It's all so humbling to realize you are nothing in the bigger scheme of things.)...

That being said, it has felt to me that there is a real need to prepare for a critical mass shift coming which is I feel already escalating, but which I sense will pick up speed and intensity within these next few years and continue through the next decade. (Obviously no surprises there for someone like yourself.) Shifts which may indeed mean the breakdown of unsustainable ways of being that have become too complex and convoluted for our own good, and that may indeed only further the breakdown that has already been set into motion. At the same time I also feel a blossoming of equal proportion moving inward yet upward as new ways of being flower all around our world through enlightened souls.

In any case, as with all births there are labor pains to move through, and perhaps this Symbol is the vehicle to take us through. I feel this intensification of labor pains may result in ever polarizing forces that may actually result in an ultimate and unavoidable split in our world, whereby the symbol as portal resembles metaphorically speaking, a snake spiraling and shedding its transparent skin thus creating the sensation of TWO Earths in a sense. (In many respects those of us "walking between two worlds" already understand and feel this happening.) One, more dense and in a devolving state (no thanks to our overly mechanized, exploitive, commodified way of living, which lacks the emotional heart maturity to manage it properly). The other Earth, more evolving and made up of increasing frequencies of Light, Sound and Color resonating at higher octaves. Indeed, one could say that we are living ever more in a time *Conscious* Choosing in terms of which TRUTH each is willing to stand in...Heaven or Hell...or some grey area in between? Greater help will still be available. It may simply come at ever more conscious spiritual levels with the veils thinning as souls embody and merge with the spiritual overtone of Higher Beings who are capable of lifting us all to higher spiritual ground so that what we call "Spiritual" is simply part of our evolving emerging Self. Similarly, as for those choosing to remain in darkness, there may be continued intensity of aligning with darker forces not of the Light.

Since words are mere energetic pointers they ultimately fail wherever deeper truth/s unfold in the NOW. That said, since many are already in the process of awakening from what has been a dualistic reality in human history, and for some time now have already been shifting into more holographic multidimensional awareness, then... just like dreams, interpretations of our reality therefore can be multiple and largely subjective. Left to individual discovery perhaps, with the concept of Faith in that which cannot be seen or proven but rather founded on personal experience and the willingness to stay open to the Mystery, being the one ultimate key to survival into and through this birth canal.

Whatever happens, may it happen globally through the blending of Head and Heart as a portal for Heart / Christ Consciousness.

I'm sorry, I haven't shared this Vision with many, and I've never tried to actually write about it, as it is very difficult to put into words and still be able to properly capture the fullness of the experience, though it only lasted for a few timeless moments. All I can say is that my vision looked very much like this Symbol, but it was in motion going around and around and around, with the sensation of coming to a close. AND it very much seemed to have a quality of time travel with it for me.

I tend to have these kind of Medium like experiences from time to time, most of which I tend not to share. However this was one I thought I should share with you given your research. And though I have not actually ever seen this exact Ancient Symbol anywhere, all the same, it seems my intuition was voicing to me what it might possibly mean, i.e., given my vision of long ago.

I hope this may help your work in some way.

Kathryn Maysen, MI

March 12, 2010

3.8.4.2. An experience with rotating a spiral in a subtle plane

For more than twenty years I know Anatoliy Perepelko, extrasensory individual and healer, as a person who is capable to perceive information from the subtle planes. For example, from time to time I asked him to define the time of birth (for compiling astrological charts when a person did not know his birth time) and he did this with the accuracy to a minute: after rectification I verified the charts with the use of conventional astrological techniques and each time his estimate was correct. His replies are sufficiently definitive: he either perceives the reply quite exactly, or does not perceive a reply at all.

So, I asked him how did he perceive the spiral D2 of Fig. 3.15 without preliminary explaining its origin. By having concentrated his internal vision on this spiral he resumed that it may be used as a **mandala for tuning the internal perception to perceiving how they events would develop** in the subtle plane (viz. before they had taken place in the physical plane – for more detail See §2.3.3). Namely:

* If an operator concentrates his attention on the **spiral** presented in Fig. 3.16.b and imagines that it rotates **clockwise** (as shown in Fig. 3.16.a), then in his perception **the time**, putting this figuratively, **concentrates in the centre of the figure** and **accelerates** (with respect to the aforesaid relative to the perception of time this may be understood as tuning of the conscience to the respective subtle plane); at that, the **subject of analysis is perceived** by his internal vision **more distinctly** than without such tuning to the spiral.

On the contrary, if he concentrates his attention on the spiral presented in Fig. 3.16.b and imagines that it rotates **counterclockwise** (as shown in Fig. 3.16.c), then in his perception **the time**, putting this figuratively, **deconcentrates or disperses along the periphery of the mandala**. In this case the **perception of space is intensified** in the sense that his internal vision **more exactly perceives the circumstances and consequences** of the **event** which he has seen in the first case for the subject of analysis, and also **more distinctly** than without such tuning to the spiral.

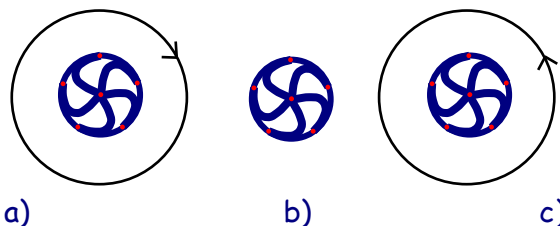


Fig. 3.16. Pentactinal spiral as a Spiral mandala

After then, I showed him the above letter and he developed the previous experience as follows.

* A similar effect of reading the information pertaining to some object or process may be obtained if you use a **jar with water** instead of a drawn spiral. Thus, keeping the jar in your hands and rotating the water **clockwise** gives the analog of the former thought rotation (Fig. 3.16.a), whereas **counterclockwise** rotation – the analog of the latter one (Fig. 3.16.c).

In the **former case** the information comes that pertain more to the **current state of affairs** (that is how the situation develops in the subtle planes being more close to the physical plane; e.g. in astral plane). In the **latter case** the information comes that pertain more to a **long-term perspective** (that is how the situation develops in more subtle plane; e.g. in mental one).

So, we may suggest that this effect had intensified the vision described in the previous paragraph.

* The described effect remains if the number of arms is changed, whereas an increase in this number seemingly intensifies it.

3.8.4.3. Resume

The **spirals** presented in Fig. 2.5 and those with **other numbers** of **spiral arms** present **not only mathematical models of time and graphic structure** of the world-famous **esoteric symbols**, but also the **instruments for penetration in the Space-Time of the subtle planes**, or rather as the “amplifiers” of operator’s conscience, since without the internal ability of concentration no device would help (as a book is useless for that who cannot read). Besides, we may suggest that for the **specific operator** the **number of spiral arms** should **correspond** to the **number** which **reflects his individuality**, or is **meaningful for the situation**.

3.9. Time spiral stone artifacts

Apart from the considered symbols and decorative objects the ancient stone spiral structures to all appearance present the instruments for invoking the subtle planes including the effects with time and space.

3.9.1. Medicine wheels (Sacred Hoops) of North America

Medicine wheels, or Sacred hoops, were constructed by laying stones in a particular pattern on the ground. Most medicine wheels follow the *basic pattern* that often looks like a *wagon wheel lying on its side*. The wheels could be large, reaching *diameters of 75 feet*. John Brumley, an archaeologist from Medicine Hat, has provided a very exacting definition of what constitutes a medicine wheel. He notes that a medicine wheel *consists of at least two of the following three traits*: (1) a *central stone cairn*, (2) one or more concentric *stone circles*, and/or (3) two or more *stone lines radiating outward from a central point*; an example is presented in Fig. 3.17.



Fig. 3.17. A photo of Medicine wheel

(© www.uwsp.edu/geo/projects/geoweb/participants/dutch/VTrips/MedWheel.HTM)

The historical, archeological medicine wheels and sacred hoops have been *built* and *engaged ritually for millennia*. One of *the older wheels* has been dated to over *4,500 years old*. Like Stone Henge, it had been *built up by successive generations* who would add new features to the circle.

The [Royal Alberta Museum](http://www.royalalbertamuseum.ca) hold that *the term* “*medicine wheel*” was first applied to the Big Horn medicine wheel in Wyoming, the most southern archeological wheel still extant. The term “*medicine*” was not applied because of any healing that was associated with the medicine wheel, but denotes that the *sacred site* and rock formations were of central importance and attributed with *religious, hallowed, and spiritual significance*. The revisionist and culturally congruent English nomenclature “*sacred hoop*”.

Although *archeologists* are not definite on the purpose of each medicine wheel, it is thought that they probably had *ceremonial* or *astronomical significance*. *Astronomer* John Eddy put forth the theory that some of the wheels had *astronomical significance*, where spokes on a wheel could be pointing to certain *stars*, as

well as [sunrise](#) or [sunset](#), at a certain time of the year, suggesting that the wheels were a way to mark certain days of the year. Other scientists have shown that some of the wheels mark the [Summer Solstice](#).

Originally, and still today, [medicine wheels](#) are *stone structures* constructed by certain indigenous peoples of North America *for various astronomical, ritual, healing, and teaching purposes*. Medicine wheels are still “opened” or [inaugurated](#) in [Native American spirituality](#) where they are more often referred to as “sacred hoops”, which is the favoured English rendering by some. There are various native words to describe the ancient forms and types of rock alignments. The rite of the sacred hoop and medicine wheel differed and differs amongst indigenous traditions

A 2007 [Indian Country Today](#) article on [Indigenous American hoop dancing](#) defines the hoop this way:

The hoop is symbolic of “*the never-ending cycle of life*”. *It has no beginning and no end*. Tribal *healers* and *holy men* have *regarded the hoop as sacred* and have *always used it in their ceremonies*. Its significance enhanced the embodiment of healing ceremonies. One teaching involves the description of the *four directions*.

So, these structures, as any esoteric symbol, have many meanings. In [29] it was shown that by their structure (central cairn and orbed spokes) and attributes which the indigenous people relate to them the medicine wheels quite exactly present the Sun and the form of the [Interplanetary magnetic field](#); as well, these spiralling spokes reflect the concept of motion since the Solar particles and magnetic fields propagating along such curved lines reflect the motion in time and space. But now we see that *namely the basic elements* of their structure (*central cairn, orbed spokes and outer circle*) *present* the multi-armed spirals not only geometrically, but as the [Time Spirals](#) as well, since they are considered as symbols of “*the never-ending cycle of life*”.

Besides, with taking into account of the Resume of Para. 3.8.4.2. *we obtain even more grounds* to state that *they were used by Tribal healers and holy men as a “magic” instrument for enhancing their concentration on the subtle planes for perception of information and subtle energies*.

3.9.2. Labyrinths

In Greek mythology, the [Labyrinth](#) was an elaborate structure designed and built by the legendary artificer [Daedalus](#) for King [Minos](#) of [Crete](#) at [Knossos](#). Its function was to hold the [Minotaur](#), a creature that was half man and half bull and was eventually killed by the Athenian hero [Theseus](#). Daedalus had made the Labyrinth so cunningly that he himself could barely escape it after he built it. Theseus was aided by [Ariadne](#), who provided him with a skein of thread so he could find his way out again.



Fig. 3.18. Famous types of labyrinths

In colloquial English *labyrinth* is generally *synonymous* with *maze*, but many contemporary scholars observe a *distinction* between the two: *maze* refers to a complex branching (multicursal) puzzle with choices of path and direction; while a single-path (*unicursal*) *labyrinth has only a single, non-branching path*, which leads *to the center* and *is not designed to be difficult to navigate*. The *unicursal*

seven-course “*Classical*” design (Fig. 3.18.a) became associated with the Labyrinth on coins as early as 430 BC, and became widely used to represent the Labyrinth. Visual depictions of the Labyrinth from Roman times until the Renaissance are almost invariably unicursal. Branching mazes were reintroduced only when garden mazes became popular.

There are *examples* of labyrinths *in many disparate cultures*. The symbol has appeared in various forms and media ([petroglyphs](#), classic-form, medieval-form, pavement, turf, etc.) at some time throughout most parts of the world, from *Native North* and *South America* to *Australia*, *Egypt*, *Java*, *India*, and *Nepal*.

India. A prehistoric [petroglyph](#) in [Goa](#) shows the same pattern and has been dated to *circa 2500 BC*. Other examples have been found among cave art in northern India and on a dolmen shrine in the Nilgiri Mountains, but are difficult to date accurately. Early labyrinths in India all *follow the Classical pattern*. Labyrinths in Indian [manuscripts](#) are often called “*Chakravayuha*” – army formation mentioned in the [Mahabharata](#) epic (Fig. 3.18.b). Note also, that [Chakra](#) is a concept referring to *wheel-like vortices* which exist in the subtle bodies of man. The Chakras are said to be “force centers” or *whorls of energy* permeating, from a point on the physical body, the layers of the [subtle bodies](#) in an ever-increasing fan-shaped formation. *Rotating vortices* of *subtle matter*, they are considered the *focal points* for the *reception and transmission of energies*.

Egyptian labyrinth. Even more generally, *labyrinth* might be applied to any extremely complicated maze-like structure. [Herodotus](#), in his [Histories](#), describes as a “labyrinth” a building complex in Egypt, “near the place called the [City of Crocodiles](#)”, that he considered to surpass the [pyramids](#) in its astonishing ambition:

It has twelve covered courts – six in a row facing north, six south – the gates of the one range exactly fronting the gates of the other. Inside, the building is of two storeys and contains three thousand rooms, of which half are underground, and the other half directly above them. I was taken through the rooms in the upper storey, so what I shall say of them is from my own observation, but the underground ones I can speak of only from report, because the Egyptians in charge refused to let me see them, as they contain the tombs of the kings who built the labyrinth, and also the tombs of the sacred crocodiles. The upper rooms, on the contrary, I did actually see, and it is hard to believe that they are the work of men; the baffling and intricate passages from room to room and from court to court were an endless wonder to me, as we passed from a courtyard into rooms, from rooms into galleries, from galleries into more rooms and thence into yet more courtyards. The roof of every chamber, courtyard, and gallery is, like the walls, of stone. The walls are covered with carved figures, and each court is exquisitely built of white marble and surrounded by a colonnade.

During the 19th century, the remains of the Labyrinth were discovered “11½ miles from the pyramid of [Hawara](#), in the province of [Faïoum](#)”. In 1898, the [Harpers Dictionary of Classical Antiquities](#) described the structure as “*the largest of all the temples of Egypt*, the so-called Labyrinth, of which, however, only the foundation stones have been preserved”.

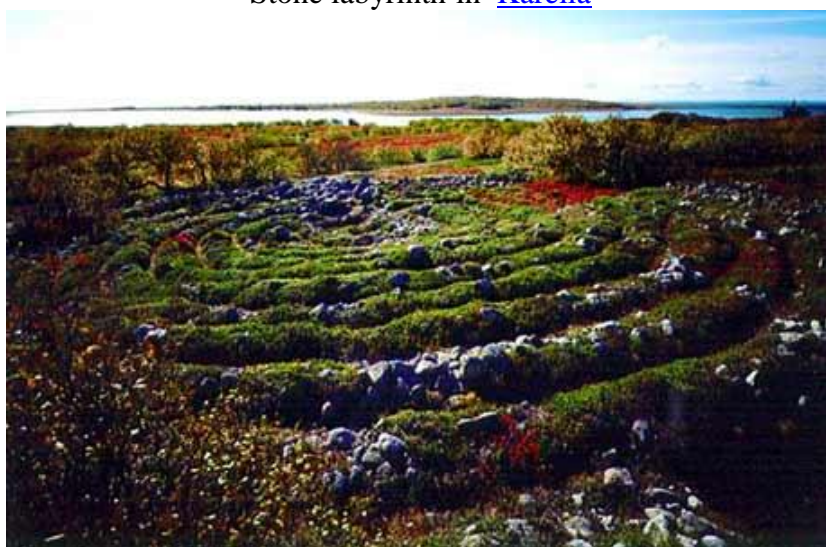
It was a *Temple complex*; in particular – for the mysteries. One of the most famous was the yearly Mystery of *Resurrection of Osiris*.

Labyrinths have historically been used both in [group ritual](#) and for [private meditation](#).

3.9.3. Stone labyrinths of the Northern Europe [L1 - L3]¹



Stone labyrinth in [Karelia](#)



The labyrinths of [Karelian](#) White Sea coast are built by the end of the I millennium BC



A classic stone labyrinth on [Oleniy](#) island, White Sea

Fig. 3.19. Stone labyrinths of Karelia

¹ The references [L1 – L3] are given at the end of this section



Fig. 3.20. Stone One of “Stone nets” in Solovetsky Islands ([Photo](#): S. Nikolaev)

The stone labyrinths of Solovetsky Islands still present an unsolved mystery. They have a diameter of 3 to 25 meters with the entrance looking to the continent. They have no dead ends; so, after entering a labyrinth and circle several times around the centre you leave it through the same entrance. Just after several turns it becomes unclear how much you have walked and how much more to walk. Subjectively, the time stops, but by watch the great labyrinth is passed in 15 minutes. It is difficult to think about something collateral: the path is narrow and you are required to look permanently underfoot. The path is twisting clockwise and anticlockwise. At last – the exit; and you are happy that the journey is over. The historians consider them to be built several millennia ago. Nearby, there are the burial mound and dolmens. [[Vlad Abramov](#)]

Since the ancient times especially many *stone labyrinths* are allocated in the Northern Europe; thus, more than 600 of them reside in Scandinavia, along the Baltic Sea coast. By the White Sea, notably on the Solovetsky Islands, there have been preserved more than 30 stone labyrinths. The most remarkable monument is the [Stone labyrinths of Bolshoi Zayatsky Island](#) - a group of 13 – 14 stone labyrinths on 0.4 km² area of one small island. It is considered that these labyrinths are *2,000 – 3,000 years old*. The total number of such labyrinths in Europe is counted by thousands.

Design. Measuring between *6 and 25.4 meters in diameter*, the labyrinths are mostly *made of boulders* (30–40 cm in diameter) *set in a row*. *The rows are twisted in the form of a spiral*; often there are two spirals set one into another, which has been likened to "two serpents with their heads in the middle looking at each other". Intermittently along the spiral there are thicker or wider heaps of stones; the ends of the spirals are also wider.

The entrances are generally on the southern sides of the labyrinths, but can also be found in the southwestern, eastern or western parts. The labyrinths have *five types of settings*, but *each has only one entrance which also serves as an exit*.

Purpose. The function of the stone settings is *considered unclear*.

* *The main suggestion* is that they may have *symbolized a border between this world and the underworld*. This general concept corresponds to the following.

* The labyrinth *may have been used* for *specific rituals* to *help the souls* of the dead *travel to another world*.

* The labyrinth retains its connection with *death* and a *triumphant return to life*.

* Labyrinths are believed to have served *as traps for malevolent spirits* or as the paths for *ritual dances*.

* *In medieval times*, the *labyrinth symbolized* a hard path to God with a *clearly defined center* (God) and *one entrance* (birth). To this end the labyrinths can be thought of as *symbolic forms of pilgrimage*; people can walk the path, ascending *toward salvation or enlightenment*. Many people could not afford to *travel to holy sites* and lands, so *labyrinths and prayer substituted for such travel*. Later, the religious significance of labyrinths faded, and they served primarily for entertainment.

Therefore, as far as the most world beliefs and religions affirm the existence of subtle planes (or other forms of “other worlds”), it is quite natural to consider the main suggestion as correct the more so since in the different parts of the Globe generally the same structures were used for the same purpose.

In other words, the common feature of labyrinth is *establishing connection between this and “that” worlds*, that is *between the physical and the subtle planes*; the result of establishing such connection *inevitably results* in *changing of perception of Time and Space*.

The labyrinths allocated in the Northern Europe may be referred to several types: *unispiral*, *bispiral*, *horseshoe-shaped*, *concentric* and *specific* (Fig. 3.21) Their age is estimated as III – I millennia BC.

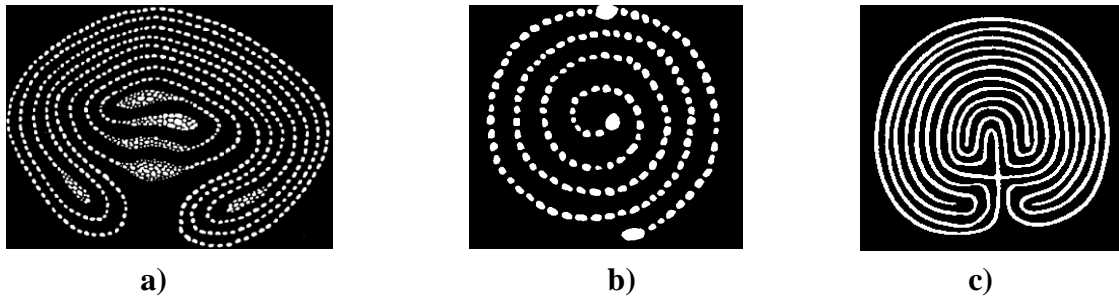


Fig. 3.21. Stone labyrinths of the Northern regions (by N.N. Vinogradov):

- a) bispiral horseshoe-shaped (Bolshoy Solovetsky Island);
- b) unispiral (Zayatsky Island);
- c) bispiral horseshoe-shaped with entrance crossing (Gotland Island).

Unispiral labyrinth – the laying of stones presents *one serpent* (Fig. 3.21.b);

Bispiral labyrinth – the laying of stones presents *two spirals*; it symbolizes a clew of *two clotted serpents*, their heads are allocated in the centre of the labyrinth, facing one another. This pattern may have two forms:

- 1) *proper horseshoe*: the two serpents are discontinuous so that between them remains a passage along the entire labyrinth (Fig. 3.21.a); the imagery of the serpents with especially exact and expressive reproduction of elongated heads and orb-ed tails is presented in *Bolshoy Solovetsky Labyrinth* (Fig. 3.22);
- 2) *horseshoe with entrance crossing of serpent trunks*, where the way along the labyrinth leads into a dead end (Fig. 3.21.c).

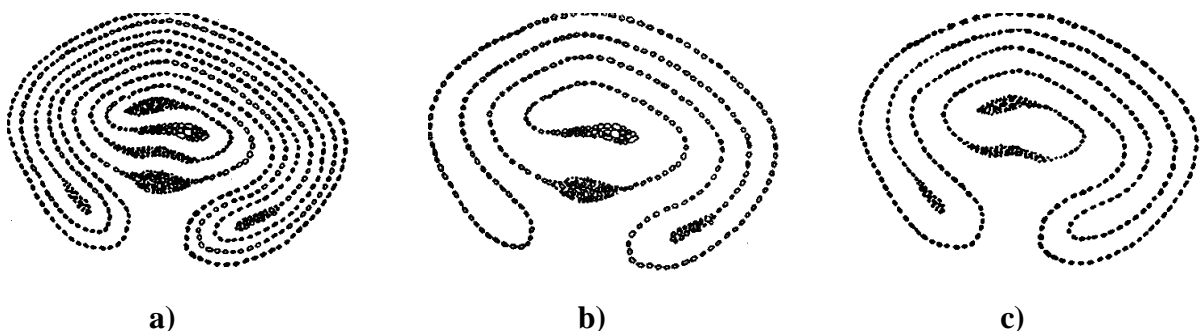


Fig. 3.22. The structure of the Bolshoy Solovetsky Labyrinth

- a) – the imagery of the actual laying of stones presenting a clew of two serpents;
- b), c) – the extracted contours of each of the serpents of the labyrinth

3.9.4. The mystery of stone labyrinths

Until now the labyrinths remain *among the most mysterious places* on the Earth. There is no vegetation in the labyrinths except mosses and berry bushes; the *planted trees perish* and the *animals keep off* these places. The *main unguessed puzzle* of this ancient symbol (both in a form of stone laying and in petroglyphs) remains *its origination and distribution* throughout the world [L1].

The helical forms are encountered all over the world thus leaving an impression that the *image of spiral represents some code that was handed down across the generations and peoples, despite of the cultural and religious differences*. However, the knowledge that stood behind them and the keys to it were lost long ago. Dozens of *hypotheses relative to origination and dissemination of labyrinths* throughout the world had *failed to explain this phenomenon* [L3].

In the preceding consideration it is shown that *from the esoterical point of view* [2] the *spiral* (or *vortical*) motion presents the *principal form of activity* in *creating the worlds* and an important aspect of *interactions within the space systems* (like solar systems and galaxies). In particular, *this type of motion leads to manifestation of more dense planes* including the *physical plane which we perceive as the "only" plane of reality*.

This may explain why deliberate physical *and/or* thought motion along a spiral may cause change in perception *of the surrounding world*, that is "switching" of the conscience *to another plane of existence* where the Space and Time are perceived in *a way pertaining* to the *perceived sphere*.

From time immemorial the stone labyrinths were esteemed as "indicators" *of the proximity of other spaces and as the "guides" to them*. The below consideration shows that this may be put in other way: the labyrinths are the historic instruments for interaction with the subtle planes

Myths, rites and experiences [L3]

In China the *labyrinths* were built *before* the *entrance* of each *city* and even – before the *houses*; the citizens believed that they were saving them from evil spirits.

The legends of the Northern European peoples associate the *stone spirals* with the existence of fairy peoples: "*wonder people*", elves, gnomes and the like dwellers of the "underground world". Moreover, historian and archaeologist A.L. Nikitin tells that *namely labyrinths* are indicated in the legends *are pointed* as the "entrances" and "exits" of the "*subterranean kingdom*" (viz. to the *subtle planes* – SS) which *could be opened just by those who know the magic key to this "back door"* {viz. to Initiates - SS}.

By the Karelian-Finnish myth the so-called "*wonder people*" live in *mountains* and *caves* {as the most Spiritual beings - SS}; they are *provided with some power* which *resembles electricity* {which, along with plasma belongs to a *boundary state with the astral plane* – SS}. They are of medium (or lesser) height, very beautiful and pleasant voice.

The "*wonder people*" are the *foretellers*; they are provided with a gift of *supernatural wisdom* and *provision*: they know the *future* and *everything that takes place at present*, they are aware of the *healing properties of the minerals* and *plants*. To hear and to *listen them may* the *eligible people* only – those with the *pure souls* and *intentions*.

{The *existence* of these *beings in the subtle planes causes* all these *abilities automatically*, as is explained in Sec. 3, and their consciousness allows them to become visible in the physical plane due to condensing their astral bodies, although those who are capable to concentrate their mind in the subtle planes (viz. eligible – the shamans, extrasensory individuals, Spiritual persons, etc.) may perceive them and communicate with these beings when their conscience is concentrated in these planes; for this, it is required, as described above, to have a pure conscience since the attributes of these beings allow us to refer them to

the Right (or White) Powers. There are also beings in the subtle planes which belong to the left (or black) powers; for getting in contact with them the purity is not required, but possession of powerful subtle energies is still necessary. As the common sense presumes that any creature must live somewhere, the *exoteric believes allot them the underground*, since their dwellings are not found above the ground – SS}

They may dispose themselves with an incredible speed – in a single leap they may transpose form a mountain to a mountain, even if their tops were separated by several hours of walk; today they appear here, and tomorrow – in another part of the world {in their condensed astral bodies being visible to our eyes they, nevertheless, follow the laws of that plane, in which such “flying” does not present a problem. A series of acknowledged examples of such condensing of astral bodies is described in [1, 2] – SS}

The rites and ceremonies that were conducted within or near these stone sanctuaries had allowed the ancient peoples to change their state of conscience and, in this state, to study that “world of spirits” {as exoterically is called that which cannot be explicitly put in the physical reality – SS} as the source of enlightenment and power {only if this source belongs to the higher plane, since in the astral plane one may have gathered not less filth than in our civilization – SS}.

Magicians of the Northern Europe [L3]

It is well known that among the ancient peoples were specific persons (shamans, magicians, etc.) which possessed special knowledge of occult nature that were beyond the reach of the remaining population. Among them were the Finnish and Lapp tribes which were famous for their magicians and wizards the might of which was marked by the Antique writers. {We may add to this that the Secrete Doctrine estimates the Finnish epos *Kalevala* as an important source of esoteric knowledge [2] – SS}. And these were they who built and used the stone spirals as the symbols and “instruments” for their magic occupation.

It is also important to note that like in other countries, in their religious and magic concepts the Northern peoples related the *image of spiral* with that of *coiled serpent* which considered as a *symbol of Power* and *Time*. These images were highly honored and widely spread in this region (e.g. at the burial grounds).

“Superstitions” as the reflection of occult influence of labyrinths [L1]

In the ancient times an image of labyrinth was considered as splendid talisman and amulet. Indian tribes Tohono and Pima (*Arizona*) until present, as millennia ago, weave baskets and decorate them with a labyrinth pattern in a protection from evil spirits. In *India* and *Pakistan* the symbol of labyrinth is carved on the tallest tree in the garden with the aim to frighten off the stealers. In *Sri Lanka* a labyrinth pattern is weaved into blankets and baskets. In *Scandinavia* and *India* a stone labyrinth is laid in a desert place or on a coast for the fulfillment of a lifelong desire.

At the same time, *the powers* that are hidden *behind the labyrinth* are *neither foolproof nor safe* for unskillful investigator, and this is a natural consequence namely of the might of these powers. With due regard of this *danger* in some countries the following rules are obeyed:

- *children* (of up to 7 years old) and *old people* (above 70) *are not taken to a labyrinth* for it *not to bereave their souls*;
- *expectant mothers* are *not recommended* to attend a *labyrinth*, for the child not to embroil in the umbilical cord;
- *it is recommended not to make photos in labyrinth, or against a background of it*, in order *not to attract worries* and *problems* with *sight* and *memory*.

There is a popular belief that if you, while *residing in the centre* of a *labyrinth*, had *thought a wish* and, after then, quickly found the exit, your wish would fulfill shortly. However, there is an opinion that in exchange for fulfillment of your wish the labyrinth *would bereave you of 7 years of life*. {there is no contradiction in this situation, neither this presume any “evil” nature in labyrinth itself. This is one of the dangers of occultism: if an operator have no sufficient power, the occult energies may get out of hand and strike that who disturbed them – SS}

Space-Time anomalies of stone labyrinths [L3]

“In 1999 a stone labyrinth research group from Sankt-Petersburg came to Kusov islands in White Sea. These islands are rich in the artifacts of this kind which frequently astonish researchers and simply tourists. Towards evening of August 23 that group was given a chance to observe an “interesting” phenomenon.

When the group was about to finish its work, from the centre of the stone labyrinth a strange opaque cloud appeared that, right away, had transformed into a light pillar. Before the researchers had time to regain consciousness the pillar started to transform into ... “human figure”. The brilliant-green bounds of the main body of that “man” were seen quite exactly, whereas the internal part of the “body” was filled with orange luminescence, like a mist. In the whole, the “body” was evidently opaque; it was observed for approximately 15 minutes on the same place; its height was about 200 meters (650 feet). After then, the body started to transform in a cloud once again and slowly lowered oneself in the centre of the “spiral”, where it had disappeared. In the same evening the researchers of the ancient “artifacts” transferred their camp, and in the morning they left for their native city! It was the lam from that horror which they had experienced at that labyrinth”.

“At the very beginning of Winter of 2006 I came to my natives in Belomorsk – tells Prokop Yuriev of Samara (Russia). On Sunday we decided to go all together to sightsee the ancient stone labyrinths, some of which were allocated close to the city. A snowfall took place several days ago and the ski-track was new, not used. After we passed ten kilometers and were close to the “destination”, we suddenly had seen that some distance away from us a not tall man was unhurriedly walking, as if he was strolling; he was lean and dark-haired. It was several seconds later when we had understood that the term “not tall” was absolutely inappropriate: it was less than half-a-meter “dwarf”. Consciously and intuitively I marked in him something unusual. Everybody was amazed that he was capless and in Summer clothes. In a deep snow, skiless, in Summer shoes, so far from the city, in a dense forest! We stopped and discussed him for a long time by following him with our eyes. He walked in the same direction as we were and disappeared behind a knoll where, in essence, the “labyrinths” were located. We followed in the tracks of that man, but the footprints abruptly had cut short practically in the very centre of one of labyrinths. It was clearly seen on the snow. We were taken aback and stiffened with astonishment, but suddenly we had seen him in a hundred meters, in front of us. He appeared from nowhere – but we understood that that was impossible. He stood still and gazed on us; after then, he made a step toward the “labyrinth” and disappeared, straightly before our very eyes. This was the last straw of mystics, and we quickly went backwards, to Belomorsk. A year later, when I was reading the literature on megaliths, I understood that we had met with another reality; the reality, which is close to us and somehow associated with the stone structures being left to us by our distant ancestry.”

References for Sections 3.9.3, 3.9.4

- L1. [Labyrinths](#) © x-files.org.ua
- L2. [V.A. Burov](#). Semantics of the stone labyrinths of the Northern Russia. (in Russian)
- L3. [A. Popov](#) . “Stone labyrinths” of Karelia – a mystery of millennia. (in Russian)

3.9.5. Resume to Sec. 3.9.

1. The legends tell that the stone labyrinths, as the medicine wheels, were used by shamans for discernment in past and future, apart from other purposes. And the contemporary experiences acknowledge that these objects may exert influence on the conscience of an ordinary man. A typical example is change in a state of conscience that arises when an ordinary man moves along the spiral path of labyrinth toward its centre (this may be related to tuning of his conscience to the subtle planes); this effect is observed not always: the moment of “turning on” of a labyrinth is unknown and this “turning” may depend, in its turn, on the state of the conscience of operator itself (not in vain there were shamans, “trained” persons, who were conducting these rites).

As well, these are seemingly the *worship* and unintelligible *fear* of labyrinths’ power, that were based on peoples own experience, that was *keeping them from destroying these objects* while not only the houses, but the states were disappeared in multitude.

Therefore, *it is evidently naïve* to think that the stone *labyrinths*, in contrast to decorative ones, *were built for entertainment*: due to their small size and small height they were easily observable; besides, almost all of them are unicursal, viz. present a simple spiral. None of the proposed explanations pertaining to their “practical” destination has met with approval from scientific community.

Nevertheless, although the *exact* destination of these *labyrinths* remains a mystery, and none of the existing researches can say definitely what was their destination or how they were used, except of those theories which consider them as the material illustrations to the fables of underworld (as if they had nothing to do in those Northern counties except than to hug boulders for making those “Disneylands”), it becomes evident that the *stone labyrinths*, as the *medicine wheels*, present the *ritual objects*.

2. The *properties inherent to labyrinths* are *worthy of principal concern* already by the fact that they are systematically take place everywhere and are described by generally the same *myths and contemporary experiences* which *reflect* the *esoteric* (magic, or occult) *concepts* the *existence* of which was known for peoples. However, in their masses they were in possession not of them, but of their *reflections* in a form of popular beliefs such as legends and superstitions (e.g. underground kingdom, realm of shadows, etc.) which provided those peoples with a “natural” description of life in the subtle planes (for more detail See [1, 2]). And it is not a physical “gate”, but the change in the state of the conscience which opens the “entrance” to those “other worlds” – that is to the subtle planes; to this end the stone labyrinths seemingly present the structures the terrestrial position and heliacal geometry of which serve as an “*amplifier*” for such switching of the mind.

Meanwhile, the “magic powers” that were assigned to labyrinths and spirals were not considered by masses as “non-dangerous”; this approach fully corresponds to an occult truth:

Do not open a door to mysterious unless you know how to close it.

To this end it is interesting to note that in the Bolshoy Solovetsky Labyrinth (Fig.3.22) a widening of the serpent’s body is placed straight opposite the entrance: that was a menacing remind to a newcomer about the actual danger.

3. From the ancient times for the effects they were able to manifest the *stone labyrinths were honored* as “*pointers*” or “*gates*” to *other worlds, Past and Future*. In particular, they were associated with other forms of life and beings the nature of which was likened to *light* (and now – to *electricity*, or *plasma*). Until our days such space-time anomalies are registered in plenty, but they have not obtained any generally accepted explanation; only esoteric approach allows us to explain all these phenomena and within a single paradigm – as getting into contact with the subtle planes, or rather – with the denser astral sub-planes; pay attention to this end that no remains of these beings (now called “*extraterrestrials*”) have ever been found – and this is natural, since their forms are seemingly not made of “our” physical matter.

4. *The image of spiral is correlated with the coiled serpent(s)*. To this end it is very important that both in peoples' beliefs and in esoteric concepts, as in Eurasia [1, 2, 27], so in America [14] the **Serpent** was honored as a symbol of the Highest Wisdom (viz. *Esoteric Knowledge*) and **Time** (the coiled Serpent – the *cycles of Time*), and only in definite aspects – as a symbol of evil.

5. In the *centre of labyrinths* there is, as a rule, a *hillock* which is considered as its *energy centre*. In this we see an *analogy* not only with the *medicine wheels*, but with the *pyramids* and *pyramid-like cult objects* (mounds, mountain temples, etc.) as *powerful instruments* for *concentration* and *transformation of energies* [1, 2, 24]. Some of these energies are registered, but not explained physically.

6. The above analysis allows us to conclude that the ancient *stone labyrinths* present an *esoteric instrument* for getting into contact with the subtle planes, or – in other words – for perceiving the flow of events in these planes. As explained above, this changes the rate of flow of time and allows to see the Past and forming of the Future. Intentional, or accidental getting in this contact automatically changes the state of the conscience of the operator who starts to perceive these worlds (for better or for worse) to a degree which depends on many factors. And, those who were able to get in this contact intentionally and keep their conscience under the control, thus, were able to use these spirals for getting the information relative to past and future and, therefore, to *exert direct influence on the flow of events* by healing and making changes in these flows before they have realized in the physical plane.

From this point of view making use of *several spirals* in labyrinths and *mazes* was aimed to achieve *specific effects on Space-Time*; at least the experience with the *opposed spirals* (See §3.8.4.2) tells that the *two-spiral* labyrinth presented in Fig. 3.22.a would act in other way than a one-spiral labyrinth.

In this sense the variety of structures of labyrinths may reflect the variety of modern physical instruments. For example, in some labyrinths (See Fig. 3.21.c) there is a *cross* which, in particular, is associated with the crossing of the *Solstice and Equinox axes* and, thus, with the *Sun*. In this connection such labyrinths may be considered as “tuned” to perception of cycles of time, and with the GCC [25 – 27] – in particular.

7. On the other hand, if a labyrinth presents a channel that facilitates an access to other planes, it could probably be used by the inhabitants of those worlds in the inverse direction as well – for attending our plane of existence, but in their own “ethereal” body that could be made visible for our eyes.

3.10. Conclusions

1. The **psychological time** and **evolutional time** are defined with the use of **operational definition**, that is in the same way as the **physical time**. Namely, **for the “time” is taken a metrization of the states of the considered process**; this mapping of the states to the unit segment was called the **time function**. From this point of view the principal difference between all these kinds of “time” consists in the choice of the states, or rather – their models. For this reason any time count system may be collectively called the evolutionary, since any process present a kind of evolution.

Therefore, any existing “time” (either physical, or evolutionary) *principally* presents a time function, called simply “time”, which is defined in the appropriate Time count system (TCS) as a mapping of the chosen set of states of the actual process to the unit segment $[0, 1]$. (For short, we omit here the nuances relative to scale factor, etc.)

2. Any “time” as a **set of values of unit segment** is **uniform in itself**, it cannot neither accelerate, nor decelerate since it is described by the unit segment of numerical axis, and it makes no sense to discuss whether or not this segment is uniform; in itself, the time is simply the values of this segment.

Example. Let the states present the segment $X = [0, 2\pi]$, and the function take the values on the segment $Y = [0, 1]$. Then, we have a **temptation to say** that **only the linear time function** $y = c \frac{1}{2\pi} x$, where C is a constant, **presents** the “**uniform**” time. But if the angle x presents the Sun’s Ecliptic longitude, the time y will provide us with non-uniform apparent solar time! (See the example in Sec. 1.4.).

However, **if** we consider **two** (or more) **Time Count Systems**, we may compare the **time** defined by one of them against the time defined by the other TCS **by correlating their states**, or rather – mappings of their states on the unit segment. On this ground we can make conclusions as to the **relative uniformity** or **non-uniformity** of one TCS with respect to the other. But none of them remains uniform in absolute meaning.

From this point of view that time is “more adequate” which better reflects our understanding of the considered process; for this, the states of this process are to be defined and mapped on the unit segment with taking into account of its basic peculiarities.

Therefore, if we are interested in a development of social process, we have to reflect in the states what is most important for us – the properties of this process; in this case we obtain the evolutionary time. But if we are interested in a development of natural process, we are interested in physical time. Meanwhile, the indisputable advantage of physical time is its universality and reproducibility; namely this makes it the irreplaceable media for other types of TCSs, and for dealing with the evolutionary time we are required in it.

For these reasons we bring the **Evolutional time** τ into correlation **with a physical time** t (UTC, or any other – it does not matter) with the use of the **reference time function** $\tau = f(t)$ which maps the states of evolutionary process to physical time. Its inverse function $t = \psi(\tau)$ defines the reference function for physical time with respect to evolutionary one.

The reference function for the evolutionary time may be linear, or nonlinear. In the former case it gives an impression of uniformity of evolutionary time; in the latter – causes an astonishment for the sound judgment (e.g. by its obscure accelerations and decelerations). So, if the evolution is considered as the flow of calendar years, this defines the evolutionary time as a linear function of physical time. However, if we define the evolution as a sequence of events being specific to the internal state of the society, we would hardly obtain a linear dependence with the physical time. And the actual history shows that at a *long enough* time interval this kind of evolutionary time is not linear in calendar years, although at a short time span the difference between them is rather to be unnoticeable.

The same situation takes place with the psychological time.

3. A widespread **general notion** “Spiral of Time” (or Time spiral) **has** quite **definite mathematical meaning** which **pertains namely** to **mathematical spiral** and to **operational concept of time**. This is the **graph** of the **reference time function** for the **evolutional (psychological, or the like) time** when presented **in the polar coordinate system**, or its phase portrait.

Visually – this is a *convolving* or *untwisting spiral*, depending on some conditions.

Meanwhile, the *esoteric meaning* of a spiral *does not reduced to a spiral of time*.

The **SPIRAL MOTION** *describes the general principle of putting the matter into manifestation and aggregating the matter in different planes of existence*, and as far as it is the *motion*, it develops *in time*.

So, the “**SPIRAL OF TIME**” presents a concrete *realization of general concept* of “**SPIRAL OF SPACE-TIME**”.

Therefore, it is not strange that these *properties of spiral* are somehow *transferred* to its *geometrical images* – to *drawings* and, *especially*, – to *stone labyrinths*. The *artifacts* presenting these *geometrical spirals manifest themselves* as peculiar *two-way bridges* to another, *subtle spheres* of the *space-time*, especially when they are disposed in specific places on the Earth.

4. In a *linear sweep presentation* (viz. in Cartesian coordinate system $\Sigma(t, \tau)$) *the graph of evolutionary time* presents a *saw-like curve* the *cogs* of which correspond to *bifurcation points* – relatively short historical periods (in physical time) when in nature and society the surges of activity (or global changes) are observed, the swing of which depends on the hierarchical level of the cycles described by this curve.

5. The existing information relative to the *historical events* (according to existing documents) and *pre-historic developments* (by esoteric chronicles) *acknowledge* the *exponential nature* of *reference time function for the evolutionary time*, as well as existence of *evolutionary cycles* for physical time periods being not less than the duration of the Mayan Long Count. Meanwhile, the contractive sub-cycles of the Mayan calendar being defined by the Auric Time Scale [18, 19] also show non-linearity, although not in exponential growth, but in *concentration of events* at the bounds of these cycles.

By drawing an analogy, we may suggest that such a concentration of events is to be specific for other cycles of lesser durations; and it is actually observed in periodic processes (e.g. in planetary configurations that are considered in astrology, and, in particular, in Foci of the comet Hale-Bopp [30]).

At the starting (physical) time span, which is incommensurably longer than the final period of the cycle, the exponential growth of the reference function $\tau = f(t)$ is unnoticeable, and the evolutionary time is well approximated by physical time. However, when the (physical) time approaches the *point of bifurcation* the growth of the reference function becomes so fast that at an “observable” time span it increases its value by several times. This situation can be compared with an *explosion* since the processes in society cannot pace with this trend synchronously and thus discharge in a crisis the scale of which depends on the hierarchical level of the cycle (Root-race, sub-race, etc.). Notice, that some processes which are approximated by hyperbolic function [18] explode even mathematically – they have a fixed break point at which the function grows infinitely.

6. The *phase portraits of evolutionary time*, or the *Spirals of time* for the *base period of the Sidereal year* and its *main sub-periods* with *harmonics 2, 4 and 5* (having the durations $1/2$, $1/4$ и $1/5$ of the base period) which define the periods of the *Great Celestial conjunctions* and *Long Count* of the *Mayan calendar* (more exactly – their graphs) *coincide geometrically* with the *main religious* and *esoteric symbols* which we *find all over the world* – from America to Far East including Europe and Asia, which bear *the similar concepts of cyclic evolution in nature and society* (including their causes of Cosmic nature associated with the influence of Sun and Galaxy).

7. The presented analysis allows us to conclude that the *evolutional time* being defined *by analogy* with the operational definition of *physical time* (although for another base process) quite adequately reflects the evolution in nature and society as a coordinated process that, however, develops non-linearly in physical time; this non-linearity manifests itself both in cyclicity of the evolutionary process and in exponential acceleration of this process at each cycle that becomes noticeable by the end of the cycle – on approaching the bifurcation point.

These concepts evidently *were known long ago* since they are clearly seen in a unified system of esoteric concepts, symbols and multiple artifacts all over the world.