



# Psychosomatic unity of human from the position of chronopsychology on the example of ischemic disorders and heart diseases

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## ABSTRACT

**Objective:** To distinguish peculiarities of subjective time perception and dominant emotion in persons with ischemic violations of cerebellar circulation and heart disease.

**Method:** A chronometric sample method using an electronic chronoscope; the form and level of anxiety in accordance with the method of C. Spielberg, Y. Hanin "Scale of the level of reactive and personal anxiety"; methods of mathematical statistics: descriptive statistics, methods for determining the mean arithmetic deviation and the use of correlation relations between the value of the individual unit time of the individual and the form and level of anxiety.

**Results:** It has been experimentally proved that patients with coronary heart disease (I20 for ICD10) predominate in the range of the continuous spectrum of "τ-types":  $0.8 \text{ s} < \tau < 0.86 \text{ s}$ , and their dominant emotion provoking exacerbation of the disease is a high level of situational anxiety; Patients with ischemic cerebrovascular disorder (cerebral infarction) (I63 for ICD-10) are mainly localized in the range of the continuous spectrum of "τ-types":  $0.94 \text{ s} < \tau < 1.0 \text{ s}$ , and their dominant emotion provoking exacerbation of the disease is high level of personal anxiety. Levels of anxiety in these categories of patients are consistent with the duration of the biological cycle of a human, who suffers from ischemic disorders.

**Conclusion:** Experimentally proved the holistic view of psychosomatic unity of a person from the position of "locus minoris resistentiae". The exacerbation of the ischemic cerebrovascular disorders manifestation and heart disease is consistent with the duration of the biological cycle of the individual's life from the standpoint of the relational concept of time, and the emotional factor is dominant in the course of cardiopulmonary and cerebrovascular diseases, which confirms the effectiveness of the concept of psychosomatic diseases course chronopsychological prediction.

**Keywords:** subjective time unit of the individual, subjective perception of time, chronopsychological prognosing, anxiety

## INTRODUCTION

The psychological aspects of preserving health and restoring the personality take into account the consideration of the problem of psychosomatic unity of a person, its importance for the strengthening of health. The psychosomatic approach starts when the patient is no longer just a carrier of a leisured organ but is analysed in general. In this case, the psychosomatic direction may also be considered as an opportunity for "curing" from depersonalized medicine.

The pathogenesis of psychosomatic disorders is very complex and is defined by: non-specific heredity and congenital burdens with somatic disorders and defects (1); hereditary predisposition to psychosomatic disorders (2); neurodynamic shifts (violation of the central nervous system) (3); personality features (4); mental and physical condition during the action of traumatic events (5); as background of unfavorable family and other social factors (6). The listed causes not only take part in the emergence of psychosomatic disorders, but also make the individual vulnerable to psycho-emotional stress, impede psychological and biological protection, facilitate the occurrence and complicate the course of somatic disorders.

The emotional reaction, expressed in the form of anguish and constant anxiety, neuro-vegetative-endocrine changes and the characteristic feeling of fear, is a link between the psychological and somatic spheres. The full development of the feeling of fear corresponds to the protective physiological mechanisms, but usually it only reduces and does not

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eliminate completely these physiological phenomena and their pathogenic action. This process can be regarded as inhibition, that is, a state where psychomotor and verbal expressions of anxiety or hostile feelings are blocked in such a way that the stimuli coming from the CNS are diverted to somatic structures through the autonomic nervous system and, thus, lead to pathological changes in various organ systems (7). In the presence of an emotional experience that is not blocked by psychological defense, but by somatizing, it affects the corresponding organ system, the functional stage of the lesion develops into destructive-morphological changes in the somatic system, the psychosomatic illness is generated. Thus, the mental factor acts as striking. A theoretical analysis of the pathogenesis of psychosomatic disorders allows us to conclude that psychosomatic diseases include those health disorders, the etiopathogenesis of which is true somatization of experiences, that is, somatization without psychological protection, when bodily health is damaged during the protection of mental balance. In general, in modern psychosomatics there are distinguished predispositions to the disease and factors that provoke or delay the development of the disease. Addiction is an innate, and under certain conditions, acquired readiness, which transforms into the form of a possible organic or neurotic disease. The base for the development of this disease are difficult life situations. If neurotic or somatic diseases manifest, then they develop according to their own laws, which, however, are closely related to environmental factors (8). In any case, the diagnosis of both mental and neurotic diseases requires an understanding of the situational nature of its origin. The statement of the presence of psychosomatic disorders does not lead to a denial of the main diagnosis. If today one speaks of a psychosomatic, biopsychosocial disease, then this only indicates a connection: predisposition — personality — situation. But the question remains: is it possible to foresee (predict) a person's propensity for psychosomatic illness? A person who is in a harmonious relationship with his environment can take on extreme somatic and mental stress, avoiding illness. However, in life there are personal problems that cause so painful fixation and mental disorder that in certain situations of life they lead to negative emotions and self-doubt. It is in difficult situations that psychosomatic patients who manifest emotional depression cannot properly assess and describe their condition (9). Thus, in the modern understanding of the pathogenesis of psychosomatic diseases, multifactorial nature is recognized. The ratio of somatic and mental, ie the influence of addiction and environment; the actual state of the environment and its subjective processing; physiological, mental and social effects in their totality and complementarity - all these matters as interacting factors of psychosomatic diseases (8-9). The center of gravity of psychosomatic suffering is always the organ, the most vulnerable and important for the life of the organism in the individual's experience. "The choice of the organ" indicates the predominant orientation of the protective-adaptive mechanisms that cause the damage effect as the disintegration increases in stressful situations. But which organ will be the most vulnerable in this situation remains unclear. The initiative in choosing an organ belongs to cortical bonds that influence emotional subcortical apparatus and program the degree of involvement of certain organs in a stressful situation. What kind of effector path will be predominant for reaching the periphery of emotional arousal depends, ultimately, on the characteristics of a given emotion, the nervous constitution of a person and on the entire history of her life? Questions of predicting the possible damage to an organ or organ system in the process of developing a psychosomatic disorder remain open. Thus, as a theoretical and methodological basis for predicting the course of psychosomatic diseases, we will consider issues related to the analysis of emergence theories and models and "preferred diseases" development, as well as highlighting the psychological and temporal prerequisites for predicting the course of these disorders. Therefore, the identification of psychological indicators of psychosomatic disorders is a key issue. Considering the issue of "preferred" diseases (10), we came out of the well-known position that each individual, depending on his belonging to one or another typological group, has an "locus minoris resistentiae" (place of least resistance) in the body. Analysis of the age of patients from the date of birth to the onset of the disease shows that the place of least resistance is most vulnerable at the end of the current large biological cycle or its current quarters. Tracing the "C-periodicity" of diseases, it can be argued that in the life of an individual there are a number of separate age points that become critical. It is at these points that the exacerbation of psychosomatic illness takes place. A logical question arises, why precisely at these points do the exacerbations of "preferred" diseases appear? The explanation of the onset of "preferred" diseases, based on the cycloid model of experiencing time proposed by B. Tsukanov (11), is associated with the concepts of phase singularity (12). Phase singularity is understood as the merging of the time phases of different cycles into separate points (13). According to the cycloid model (11), the phase singularity (FS) occurs at points where the end of the previous large cycle merges with the beginning of the next cycle. Using the gear ratio in reverse order, it can be shown that at the five points of the phase singularities of the large cycle, the ends and beginnings of smaller and smaller periods of the "sliding wheels" to the respiratory cycles and the "real present" cycles merge. As is known, in a single-phase singularity, a large number of ends and beginnings of the individual life cycles are compressed in an instant to incredibly small sizes. This is the main threat to the phase singularity, because

after a minute of changing the end to the beginning, the body seems to die and reborn. Indeed, in many studies (11, 14) it was found that the cause of a sudden cessation of respiration, fibrillation of the heart muscle, as a result of which a person dies, is phase singularity. Statistics of angina and heart attacks (11, 15) argues that the onset of the disease coincides with the phase singularity within the current large biological cycle of the individual. Phase singularity can be explained by age turning points in which "psychological personality fractures" take place. In general, the model of the "Chrono psychological profile of the personality" makes it possible to single out the important role of phase singularities in the frequency of manifestations of psychosomatic diseases and the timeliness of their prognosis. However, we would like to note that the singularity of the flow of time at the level of its immediate experience does not exclude the periodicity of manifestation of psychosomatic diseases (exacerbation, reconvalescence and remission). An analysis of the factors responsible for the course of psychosomatic illness gives grounds for attributing the differentiation of temporal characteristics in subjects with these disorders as the most important prerequisites for predicting psychosomatic disorders. In this regard, the key issues of Chrono psychological prognosis of the psychosomatic diseases course were the allocation of psychological and temporal indicators of these disorders, namely the manifestation of individual-typological properties of a person suffering from psychosomatic diseases in the Chrono psychological continuum; differentiation of psychosomatic "risk factors" and analysis of psychosomatic manifestations in different groups of individuals. The "Chrono type" of the individual is the central factor on which it became possible to construct a concept that combines somatic and mental, healthy and sick; the concept of Chrono psychological forecasting of the course of psychosomatic diseases, developed by I. Savenkova (16). The mechanism for identifying the time of acute development of somatic sphere disorders based on the individual-typological features of the subject has determined further diagnostic, rehabilitation, prophylactic and prognostic measures. Thus, considering the individual characteristics of the relation to time is extremely important for solving the problem of Chrono psychological prediction of the course of psychosomatic diseases. Such prerequisites, on the one hand, make it possible to present as a single system the whole diversity of "external" and "internal" factors influencing the course of psychosomatic disorder, on the other hand, they make it possible to more accurately determine the boundaries of Chrono psychological prediction of the course of psychosomatic diseases when solving psycho-prophylaxis of psychosomatic disorders. This means that we addressed the issue of the psychosomatic diseases course, taking into account typological groups. P. Fress writes that "different types of people are dominated by various diseases, the disease itself proceeds in them in different ways, and the rehabilitation process takes place in different ways depending on the individual characteristics of the human psyche" (17). Hippocrates, having typological groups in a linear order, believed that choleric people in their diseases are the exact opposite of phlegmatic persons (18). Sanguine individuals suffer from choleric type, while phlegmatic and choleric diseases prevail in melancholic. This order of typological groups established by Hippocrates is also related to psychosomatic diseases (19). The content of Hippocrates' idea of the typological groups existence with their "preferred" diseases is that the disease itself is localized in the group and does not go beyond its limits. Thus, the dominant disease is one of the objective indicators of the individual belonging to a particular typological group. Special attention is paid to psychosomatic diseases, since the development and course of such diseases has a temporary sweep, with periods of exacerbation and remission (attenuation) of the course. The studies of I. Savenkova (14) present the results that convince us that the dominant disease is localized within its typological group. Distribution of patients with chronic non-communicable diseases gave a clear separation of the continuous spectrum of "τ-types" into typological groups (16). These results of the study correspond to the way Hippocrates explained the origin of diseases in representatives of certain typological groups by the advantage of one of the four fluids in the body. Thus, we approach the consideration of the issue of "psychosomatic diseases" from the standpoint of the law of experiencing time (19). As for time, D. Elkin noted: "The perception of time, reflecting objective reality, gives a person the opportunity to navigate in the external environment, and gives an objectively correct picture of him" (15). Using D. Elkin expression that each individual has his "little Chronos", B. Tsukanov added: "With its own rate of time flow and with its own time perspective" (19, 20). H.Ehrenwald considered the question of the processes that take place in the human brain in terms of perception of duration, speed and sequence, concluded that the "measure of time" in the nervous system is the change in excitation conducted by inhibition (20). D. Elkin considered the dependence of the duration reproduction accuracy on the type of temperament (15). He drew attention to some differences in the accuracy of the reproduction of time intervals in choleric, sanguine, melancholic, phlegmatic, but did not give a complete description of the attitude to the current experience of the time of representatives of these four typological groups. J. Berren wrote that every living individual has his own time, that is, a sanguine person has one perception, a phlegmatic person has another (1). In his opinion, although these differences are small, there is no complete coincidence at all. In the works of Tsukanov it is scientifically proved that

representatives of various typological groups not only have "different times", but also have a similarity to the experience of time among individuals belonging to the same typological group, which indicates the presence of generalized profiles that are compared with the classical typology of temperaments. Generally, he identifies and analyzes in detail five types of profiles (11).

**Research purpose** is to substantiate the individually determined regularities and mechanisms of time experiencing in patients suffering from ischemic violations of cerebral circulation and heart and to identify the role of the emotional factor in the occurrence and course of the disease.

**Research objectives:** 1) to allocate in duration the subjective time unit of an individual who suffers from ischemic violations of cerebral and cardiac blood circulation; 2) compare the duration of subjective time unit with the psychosymptomatology of ischemic brain and heart disease; 3) to investigate the form and level of anxiety in somatic patients with ischemic violations of the brain and heart with the duration of subjective time unit; 4) to investigate the manifestation of "C-metrics" on an example of cardiovascular disorders in different periods of the disease (aggravation, convalescence and remission).

## MATERIALS AND METHODS

The study involved 620 patients with ischemic heart disease (120 for ICD 10) and 619 patients with ischemic cerebrovascular accident (163 for ICD 10) aged 34 to 60 years. Of them: 536 men, 703 women.

In the first stage of the experimental study, each "Ct-type" examined by the method of chronometry was determined, which used the classical ways of reproducing intervals of duration  $t_0 = 2, 3, 4, 5s$ , set by the experimenter and reproduced by the electronic chronoscope with the accuracy up to 0.001s. At the same time, each examinee was asked to recreate the duration he experienced and limited to two signals - "start" and "finish" in the form of sound that occurs when turning on and stopping the chronoscope. The subjects reproduced the intervals that were set on this chronoscope.

The individual value of subjective time unit " $\tau$ " (or the chronotype - Ct) was calculated by the formula according to each proposed interval:

$$\tau (Ct) = \frac{\sum t}{\sum t_0} \quad (1)$$

where  $t_0$  is the duration given by the experimenter, and  $t_s$  is the duration that the surveyed reproduces.

The reproduction of each time interval was repeated five times, and then the average value of the Chrono type of each subject was calculated.

At the second stage of the study of the subjective time experience, the subject (11), determined the large biological cycle of the individual's life by the formula:

$$C = 8,5 \tau (Ct) \text{ (years)}$$

where  $\tau$  is the subjective time unit of the individual or Ct - chronotype of the individual. This unit acts as a "step", which measures the lifetime of each individual from the moment of birth.

At the third stage, the study of the form of manifestation and level of anxiety in the somatic patients of the given sample was studied, and then the results were compared with the value of the subjective time of the individual and the duration of his biological life cycle. At this stage, psychodiagnostic instruments are represented by the method of Spielberg, Hanin "Scale of assessment of the level of reactive and personality anxiety".

## RESULTS

All the patients examined for the "chronotype" were divided into four groups (**Table 1**), but the two groups became "predominant". In the range of  $0.8 \leq Ct < 0.86$ , 14% of patients with ischemic circulatory disorders and 23% of patients with myocardial infarction were found. And in the range of  $0.94 < Ct \leq 1.0$ , - 25 % of patients with ischemic violations of blood circulation and 14% of patients with myocardial infarction.

Data from the study results of patients with ischemic heart disease, in which the chronotype was in the ranges:  $0.8 \leq Ct \leq 0.82$  and  $0.95 \leq Ct \leq 1.0$ , were subject to statistical processing of the age data. For each group, the average age, lived from the date of birth to the beginning of the disease was calculated as large biological cycle and translated into years. Estimated and statistical age of the patients with ischemic heart disease in the period of exacerbation of the disease are summarized in **Table 2**.

The obtained data on the research of personality manifestation and situational anxiety are given in **Table 3** and **4**. They show the correlation between the value of the individual's chronotype and the level of manifestation of personal and situational anxiety.

**Table 1:** Localization of clinical symptoms of IHD in the "chronotype" spectrum

Clinical diagnosis	"Chronotype"	Quantitative distribution of the subjects (12 39 = 100%)	
		Subjects quantity	%
Ischemic disorder of the cerebral circulation	$0.7 \leq Ct < 0.8$	99	6
	$0.8 \leq Ct < 0.86$	174	14
	$0.86 \leq Ct \leq 0.94$	23	2
	$0.94 < Ct \leq 1.0$	286	25
	$1.0 < Ct \leq 1.1$	37	3
Ischemic heart disease	$0.7 \leq Ct < 0.8$	101	8
	$0.8 \leq Ct < 0.86$	285	23
	$0.86 \leq Ct \leq 0.94$	24	2
	$0.94 < Ct \leq 1.0$	173	14
	$1.0 < Ct \leq 1.1$	37	3

**Table 2:** Estimated and statistical age of exacerbation of ischemic heart disease

Group	"Chronotype"	M	Cycles (in years)			Statistical age	$\sigma$	t
			5C	6C	7C			
Men (179 ind.)	$0.8 \leq Ct \leq 0.82$	6.9	34.5	41.4	48.3	34.1-41-47.9	1.3	0.001
Women (192 ind.)	$0.8 \leq Ct \leq 0.82$	6.9	34.5	44.8	53.5	34-44-54	1.1	
Men (203 ind.)	$0.83 \leq Ct \leq 0.85$	7.0	49	54.3	59.6	49-54-59	1.6	0.01
Women (174 ind.)	$0.83 \leq Ct \leq 0.85$	7.0	49	56	64.7	49-56-64	1.3	
Men (154 ind.)	$0.95 \leq Ct \leq 1.0$	8.2	38.9	49.2	59.4	39-49-59	1.2	0.001
Women (337 ind.)	$0.95 \leq Ct \leq 1.0$	8.2	51	55.2	59.5	51-55-59	1.1	

**Table 3:** The level of situational anxiety in the "chronotype" spectrum

"Chronotype" (in sec)	Level of anxiety SA (in points)	Quantitative distribution of the subjects (185 = 100%)		$\eta$ Ct, SA	$\eta$ SA, Ct
		number of subjects	%		
$0.7 \leq Ct < 0.8$	31-35	35	19	0.76	0.65
$0.8 \leq Ct < 0.86$	45-47	40	22	0.98	0.99
$0.86 \leq Ct \leq 0.94$	28-30	38	21	0.34	0.28
$0.94 < Ct \leq 1.0$	32-36	37	19	0.77	0.68
$1.0 < Ct \leq 1.1$	26-30	35	19	0.28	0.19

$\eta$  Ct, SA - the correlation between the chronotype and the level of manifestation of situational anxiety;

$\eta$  SA, Ct - feedback of the correlation relation between the level of manifestation of situational anxiety and the value of the individual's chronotype

**Table 4:** Level of personal anxiety in the spectrum of "chronotype"

"Chronotype"	Level anxiety SA (in points)	Quantitative distribution of the subjects (185 = 100%)		$\eta$ Ct, SA	$\eta$ SA, Ct
		number of subjects	%		
$0.7 \leq Ct < 0.8$	31-34	35	19	0.76	0.65
$0.8 \leq Ct < 0.86$	27-29	40	22	0.29	0.21
$0.86 \leq Ct \leq 0.94$	33-37	38	21	0.69	0.73
$0.94 < Ct \leq 1.0$	45-48	37	19	0.97	0.98
$1.0 < Ct \leq 1.1$	25-29	35	19	0.28	0.19

$\eta$  Ct, SA - correlation between the value of the chronotype and the level of manifestation of personal anxiety;

$\eta$  SA, Ct - feedback of the correlation relation between the level of manifestation of personal anxiety and the value of the individual's chronotype

Results of the study of situational anxiety underwent correlation analysis (see **Table 3**), which were calculated using the correlation relationship between chronotype and the level of situational anxiety and vice versa. The connection proved to be quite high in the interval:  $0.8 \leq Ct < 0.86$ , namely, 1)  $\eta$  Ct, SA = 0.98; 2)  $\eta$  SA, Ct = 0.99.

The correlation between the value of the individual's chronotype and the level of personal anxiety indicates that the connection was quite high in the interval:  $0.94 < Ct \leq 1.0$  (see **Table 4**).

## DISCUSSION

Comparing this distribution, it is not hard to make sure that patients with ischemic heart disease have clearly fallen into zones where healthy "chronotypes" have a hypertensive trend, according to B. Tsukanov's research. Apparently, the patients themselves clearly outlined two boundaries ( $Ct = 0.8$  and  $Ct = 1.0$ ) in the spectrum of "chronotypes", in which there is a jump-like transition from hypotonic tendency to hypertonic. That is, the results of the research convince: ischemic heart disease is localized within the limits of mainly two types of individuals groups for which it is "predominant" and it almost never goes beyond the limits of these groups. The disease itself outlined the boundaries of the two groups as moderately extrovert and moderately introverted who have suffered a myocardial infarction.

Between the individuals of these groups there are a number of significant qualitative differences in the course of the clinical form of the disease. Thus, in individuals from the sanguinic group, ischemic heart disease with myocardial infarction predominantly transmural and crumotal. Repeated heart attack threatens human life. The process of recovery in these patients proceeds slowly. In individuals of the melancholic group, on the contrary, the course of the disease has mainly manifestations of angina, and myocardial infarction is found in the minor-denominational form. Such patients can carry two or three or more heart attacks, but the process of their recovery is much faster.

The results of the research of gender differences in the periods of ischemic heart diseases exacerbation were obtained for the first time in research practice, which indicate that the periods of ischemic heart disease exacerbation in men and women of this "chronotype" are significantly different. So the average age of *ischemic heart disease* (hypertensive crisis, angina pectoris, myocardial infarction) in men who are within  $0.8 \leq Ct \leq 0.82$  is  $41 \pm 6.9$  years. Men who fall within the range of  $0.83 \leq Ct \leq 0.85$ , mean age equals  $54 \pm 5$  years.

The mean age of the onset of the disease in women who are in the range of  $0.8 \leq Ct \leq 0.83$  is  $44 \pm 10$  years. And in women whose chronotype is within the range of  $0.83 \leq Ct \leq 0.85$ , it is equal to  $56 \pm 7$  years.

In men with a chronotype within the range of  $0.95 \leq Ct \leq 1.0$ , the age of the onset of the disease is  $49 \pm 10$  years, and in women of this group -  $55 \pm 4$  years.

Comparison of the calculated and statistical age shows that in "midgroup patients" heart disease begins at age, which is determined by a whole or fractional number of C-periods, and the onset of the disease coincides with the end of a long cycle or with the end of its quarter.

The existence of high correlation can be explained by the fact that the dominant manifestation of the behavior of individuals with a value of the chronotype in the interval:  $0.8 \leq Ct < 0.86$  is a high level of situational anxiety.

With the help of previous studies by Savenkova, we were convinced that "the place of the least resistance" of individuals whose chronotype is in the range:  $0.8 \leq Ct < 0.86$ , are heart disorders such as ischemic disease with myocardial infarction and arterial essential hypertension, as well as manifestations of functional rhythm disorders with tachycardia. The results of our research suggest that the basic emotional color of the such patients' behavior is *situational anxiety*, which can act as a trigger mechanism in the pathogenesis of these psychosomatic diseases. Thus, a psycho-correction program designed for such patients should be aimed primarily at reducing the level of situational anxiety, namely in the period of the patient entering the phase in singularity.

The correlation between the value of the individual's chronotype and the level of personal anxiety shows that it was quite high in the interval:  $0.94 < Ct \leq 1.0$ . With the help of the conducted research it can be argued that *individuals with a high personal anxiety* are characterized by a chronotype of  $0.94 < Ct \leq 1.0$ . Accordingly, research by Ehrenwald these exact patients "prefer" such heart disease as ischemic disorders of the cerebral circulation with stroke and functional disorders of the rhythm with bradycardia. The results of our study convinced that the emotional background factor of such patients' psychosomatic illness is a driving force in creating an effective primary and secondary psychoprophylaxis program for these diseases, taking into account the period of decline of a large biological cycle of the individual's life. Thus, the results of the research provide an opportunity to follow the differentiation of anxiety manifestations in the light of the psychosomatic illness nosological forms in the typological group of the "chronotype" spectrum.

## CONCLUSION

The results of our survey suggest that in different individuals their dominant disease manifests itself with a certain "C-periodicity". An analysis of the patients' age from the date of birth to the beginning of the disease shows that the place of the least resistance is most affected at the end of a long, large biological cycle or their long quarters.

By tracing the "C-periodicity" of diseases, we can say that in the life of an individual there are a number of separate age points that are be critical. It is at these points that there is an exacerbation of the symptoms of psychosomatic illness.

And why at these points there is an exacerbation of the disease? The answer to the question assumes that the nature of the temporal orientation of the individual is related to the bioenergetic processes in the individual organism and any bioenergetic cycle has a mark on the "arrow of the internal time" of the organism, in which the beginning and end of the cycle are separated by the duration of period. During a period that has ended, the body undergoes a number of internal changes that lead to external changes of physiological and psychological nature.

Proceeding from the cycloid "sliding wheels" model of time experiencing, one can answer the question of the onset of dominant diseases. The cycloid arch reflects the full revolution of the "wheels" of the biological cycle. If the area under the arch provide the content of the bioenergetic potential of the individual, as suggested by Krivonogov in his studies, then the beginning of psychosomatic diseases will coincide with the end of the biological cycle or with the end of its long quarter, that is, with separate age points of life in which the potential reaches a minimum.

What most of the patients in psychosomatic illnesses have in common is that the clinical symptoms of the disease not only coincide with the end of a quarter long cycles and their end, and begin to repeat at intervals  $\frac{1}{4}C$ ,  $\frac{1}{2}C$ ,  $\frac{1}{16}C$   $\frac{3}{4}C$  depending on affiliation to typological group. The disease takes a chronic character, because it is not diagnosed in the early stages of ontogeny.

Thus, the discrete counting of individual time leads to the fact that at the level of subjective experiences and behavioral manifestations human life passes unevenly, that is, during the life periods in the middle of which a person is in the optimal psychosomatic form, and in the beginning and in the end - at a minimum of their capabilities clearly distinguished.

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