

Treatment of the body as design and subsequent initialization functional systems

K.N. Mkhitarian
(Center "IMEDIS", Moscow, Russia)

To the blessed memory of Yu.V. Dedicated to Gotovsky

Introduction

In this work, we proceed from the provisions expressed in a series of works [1-5], that:

- a functional system (FS) is a natural "unit of description" of the state of an organism, a kind of "quantum" of this state;
- adequate diagnostics of the organism within the framework of ART is reduced to the description of the classes of its switched on (initialized) and switched off (deinitialized) FS;
- adequate therapy of the body with the help of BRT is reduced to the design (compilation) of a suitable FS and then its subsequent initialization, i.e. inclusion in the patient's body.

The presentation is a holistic concept developed by the author in the process of analyzing various methods of using ART and BRT, invented by the founder of the IMEDIS Center - Yu.V. Gotovsky and his many students. As these methods were studied, a single logic emerged more and more, which laid the foundation for seemingly dissimilar and even seemingly contradictory techniques and concepts that were successfully used by various doctors in their work.

1. Basic concepts and notation

Under functional system is understood whole organism, decisive some task achieving a predetermined goal when certain boundary conditions are met. The solution of a problem by an integral organism, considered as an integral FS (hereinafter CFS) in relation to itself, we call self-fulfillment [6].

Self-fulfillment organism - this is an integral mode of its self-regulation, aimed at solving them as a whole the main tasks of its existence, due how is it species, so his individual forms of evolution.

To achieve the goal of its self-realization, the organism constantly controls its external environment, i.e. carries out external behavior, and controls its internal environment (or its physiology), i.e. carries out internal behavior.

These two the forms of the organism's behavior are complementary, i.e. inseparable and cannot be considered in isolation from each other. For any form implementation of external behavior, the body must to carry out some internal behavior and vice versa. External and internal behavior together constitute an integral mode of self-regulation of the organism, aimed at its self-realization.

The task of self-realization of an organism as a CFS is naturally broken down into a series particular tasks of its self-realization (ChZS), each of

which, by definition, corresponds to some its private FS (further ChFS, or simply FS). Each particular task of self-fulfillment of the organism corresponds to a single mode of self-regulation (external and internal behavior), carried out by the body in the process of its implementation, and, conversely, each particular FS of the organism can be considered as a mode of self-regulation that allows solving (performing) some particular task of its self-fulfillment. Thus, there is a one-to-one correspondence between the particular FS of the organism and the particular tasks of its self-realization.

In each of its current state the organism performs only particular tasks of its self-fulfillment from a certain set of them, correlated to this state. All other tasks that do not belong to this list remain postponed, "mothballed". These tasks

self-realization, as well as FS, their decisive ones, are called further initialized in the current state of the organism, and all other tasks of self-fulfillment and FS, which solve them, are uninitialized or deinitialized.

The current state of the body can be characterized by a list of the partial tasks of self-fulfillment initialized in it and the FS, which are one-to-one, correlated with it, and solve them.

The transition of an organism from one current state to another in this model can be described as a change in the list of initialized partial tasks of its self-fulfillment and FS that solve them, which is expressed in the initialization of some and deinitialization of other such tasks.

If, in some sense, "correct" and "incorrect" lists of self-fulfillment tasks and FS that solve them are defined, then it is possible, first, to pose the problem of diagnostics, i.e. task of defining health conditions of an organism in the current state, as the task of determining whether the "correct" or "incorrect" list of tasks of self-fulfillment is solved by this organism and, accordingly, the "correct" or "incorrect" list of FS is initialized in it.

Secondly, it is possible to set the task of therapy for the organism by initializing some of its FS, effective for therapy in the sense that in the new current state of the organism, achieved as a result of its initialization, the "wrong" list of tasks of the organism's self-fulfillment is replaced by the correct one. These issues are discussed in more detail in the next subclause.

In the BRT method, the initialization of one or another PS is achieved by supplying a certain information signal of its initialization - external or internal. The information carried by this signal is the essence of the command to initialize the FS under consideration, the command to start executing the particular task of self-fulfillment corresponding to this FS.

In a number of cases, it is advisable to use alphabetic symbolism to describe the relationship between the particular tasks of self-fulfillment of the organism, the FS that solve them, and the information signals that initialize these FS.

We use the following notation:

1) If the particular task of self-realization of an organism is indicated with a capital Latin letter, say, S, then the FS that solves it is denoted by FS (S), and the information signal that initializes this FS and this task is

I (S).

2) In the case when it is necessary to consider a certain class of problems self-realization, as well as the class of FS, their decisive, and / or information signals that initialize these FS, we use:

- a set of indices of belonging, also denoted by a capital letter, but not necessarily Latin, for example, "K";
- a variable membership index for a CWS, FS, or an initialization signal, denoted by the same letter as the set of indices, but uppercase, for example, "k";
- curly braces "{...}" to denote a set of indexed CHS and FS with indices belonging to a given set of indices;

- the "O" icon to describe the state of belonging to a plurality of indices, a plurality of FSSs or FSs, their decisive ones, and / or a set of information signals that initialize these FSs and FSs. Consequently, if the set of membership indices is K, then a separate membership index is k, the indexed class of NZS is the set $\{Sk, k \in K\}$, the class of FS that solve these FS is $\{FS(Sk), k \in K\}$, and the class of information signals for the initialization of these FS or PSS, corresponding to them, is $\{I(Sk), k \in K\}$.

3) If the abbreviated notation $S = \{Sk, k \in K\}$, $\Phi C(S) = \{\Phi C(Sk), k \in K\}$, $IFS(S) = \{I(Sk), k \in K\}$, then:

- S ' S means that S 'is a particular self-realization problem that coincides with the particular self-realization problem Sk for some k K;
- FS'OFS (S) means that FS 'is a functional system that coincides with the functional system FS (Sk) for some k K;
- I ' IFS (S) means that FS 'is an initialization information signal that coincides with an initialization information signal I (Sk) for some k K.

2. Classification of particular tasks of self-fulfillment and FS that solve them

The one-to-one correspondence between the tasks of self-fulfillment of the organism and the FS, which solve them, makes it possible to classify these FS using natural classifications of the particular tasks of its self-fulfillment.

The tasks of self-fulfillment of the organism can be divided into the following four classes:

- 1) adequate and / or inadequate,
- 2) equilibrium or nonequilibrium,
- 3) relevant and / or irrelevant,
- 4) constitutionally agreed

uncoordinated

regarding its current state.

(one) Adequate and inadequate tasks of self-fulfillment The task of self-fulfillment of an organism is called adequate, if the goal achieved in the process of its solution, as well as the boundary conditions fulfilled by the body in the process of its solution, are expedient for its self-realization as a whole.

FS, decisive an adequate task of self-fulfillment, called

physiological.

The task of self-realization of the organism is called inadequate if the goal achieved in the process of its solution and the boundary conditions fulfilled by the body are not expedient for its self-realization as a whole.

FS, decisive an inadequate task of self-fulfillment, called pathological.

Hence it can be seen that in order to strictly divide which FS of the organism are physiological, and which ones are pathological, criteria for distinguishing them are necessary. Full criterion distinction between physiological and pathological FS does not exist, however partial criteria distinctions can be formulated for such extensive classes of FS that in most cases they can be used how complete.

Examples:

1. The task of the functioning of any organ, tissue or system of the body within the limits of its homeostatic norm, is an adequate FS, and the private FS, which implements the appropriate mode of self-regulation (external and internal control), is a physiological FS.

2. An adequate CHS is the task of organizing reparation, regeneration or compensation of the material carrier or the function of any tissue, organ or system, provided that this task is solved at the expense of another tissue, organ or system, which are at the same time in the corridor of their homeostasis. A FS that implements a self-regulation mode aimed at solving this problem should also be considered physiological.

3. CHZS, which is the problem of coexistence with the external pathogenic agent (virus, fungus, bacteria, helminth, the simplest), should be considered as inadequate, and the FS, its decisive one, as a pathological FS;

4. ChZS, consisting in maintaining a pathological (going beyond homeostatic corridor) the state of a tissue, organ or system, arising from the formation of an engram of plastic memory (a vicious circle of causes and effects) that supports a chronic disease, and in general pathological mode of self-regulation - inadequate. Accordingly, the FS that solves this problem should be recognized as pathological. This pathological FS is called hereinafter pathological attractor (PA).

5. Finally, must be found inadequate a task self-fulfillment, which consists in maintaining a restriction or a system of restrictions that do not allow the body to solve certain adequate tasks of self-fulfillment. This pathological FS is called hereinafter pathological repeller (PR).

The division of FS into pathological and physiological (and the corresponding CHS - into adequate and inadequate) today is not formalized with the help of measuring schemes (including ART schemes) due to the lack of complete (necessary and sufficient) formal criteria for such a division. ...

(2) Equilibrium and non-equilibrium self-fulfillment tasks

Introduction into the body of an information signal that initializes

any of his FS, in the general case, will cause a restructuring of his mode of self-regulation and, in particular, the state of his ANS.

In this case, two situations are possible:

- first, change voltage ratios between the sympathetic and parasympathetic parts of his ANS and, as a result, a change in the conductivity of his skin;
- secondly, no change voltage ratios between the sympathetic and parasympathetic parts of his ANS and, as a consequence, the absence of changes in the conductivity of his skin.

The information signal in this situation is not obliged (in the general case) to be neither weak, nor even electromagnetic. It can be transmitted via any information channel - sensory, biochemical, etc. In this case, the only important thing is that in the considered (current) state of the organism, this signal is triggered to initialize some FS.

If FS initialization leads to a change voltage ratios between the sympathetic and parasympathetic divisions of the ANS of the body and, as a result, to a change in the conductivity of its skin, then this PS is also called non-equilibrium.

Otherwise, if the FS initialization does not lead to a change voltage ratios between the sympathetic and parasympathetic divisions of the ANS of the body and, as a consequence, to a change in the conductivity of its skin, then this FS is called equilibrium.

VRT is a measuring circuit that uses the division of the PS and the corresponding FS into equilibrium and nonequilibrium ones.

(3) Topical or irrelevant tasks of self-realization Let us consider some CHS and fix the current state of the organism. ChZS is called relevant for the body in its current state, if the introduction of an information signal into it, at potentially initializing (capable of turning on) FS, its decisive, there is a restructuring of the self-regulation mode of the organism, i.e. this FS really initialized (turns on).

The FS under consideration is called in this case initialized or semantically resonant to the body in its current state. We also say that the body semantically resonant to this PS or that PS and the organism are semantically resonant.

The particular problem of self-realization is called irrelevant for an organism, in its current state, if, when an information signal is introduced into it, potentially initializing the FS, its decisive one, there is no restructuring of the mode of its self-regulation, i.e. the corresponding FS is not initialized.

The FS under consideration is called in this case uninitialized or semantically nonresonant to the body in its current state. We also say that the organism is semantically nonresonant to this PS or that the PS and the organism are semantically nonresonant.

The body's ability to semantic resonance with individual FS is not a physical property. This property is inherent in him exclusively

how a system that perceives, stores and processes information.

All non-equilibrium FS of an organism are automatically semantically resonant to it. The reverse wrong - no change in the ratio of tension between the sympathetic and parasympathetic divisions of the ANS does not mean, that the restructuring of her state and / or the mode of self-regulation of the organism did not occur, i.e. is not a criterion for the FS uninitialization.

Suppose that when studying the property of PS to be semantically resonant to the body, we are limited by the need to measure only the change in the ratio of tension between the sympathetic and parasympathetic parts of his ANS (for example, by measuring the change in the resistance of his skin, as is done in ART). Let us also assume that we want to identify not only nonequilibrium, but also all semantically resonant FSs of this organism from some predetermined list.

In this case, it is advisable to use the following scheme:

1. To send an information signal I to the body, potentially initializing the FS in question.

2. Measure with the help of ART the change in the ratio of tension between the sympathetic and parasympathetic divisions of the ANS of the body.

3. If the change in the ratio of tension between the departments of the ANS the organism is revealed, then the FS under consideration is obviously semantically resonant to it.

4. If changes in the ratio of tension between sympathetic and parasympathetic divisions of the ANS of the body when injected into it information signal I is not detected, then to continue the test it is necessary:

a) select an additional class of information signals initialization of functional systems $\{J_k, k \in K\}$, where K are some indices, second set

b) sequentially introduce the selected class of signals into the body in two ways in two different series of measurements:

- in the first episode, filtering signals J_k through signal I, i.e. subject to a preliminary attempt to initialize the FS in question;

- in the second episode, without filtering signals J_k through signal I, i.e. without a preliminary attempt to initialize the FS in question.

FS initialization signals $\{J_k, k \in K\}$ are called trial information signals (PIS).

5. For each series of sample input J_k re-measure changes relationship of tension between sympathetic and parasympathetic departments of VNS.

6. If the results of measurements after entering the probe signals J_k in the first and second series differ At least on one such signal, a restructuring in the ANS of the organism occurred when an attempt was made to initialize the FS under consideration. Therefore, this FS is semantically resonant to the body (initializable), at least, with respect to the class of FS initialization signals $\{J_k, k \in K\}$, despite the fact that it is not non-equilibrium.

7. If the measurement results after inputting the test signals J_k in the first and of the second series do not differ in any such signal, then there was no rearrangement in the ANS of the organism when an attempt was made to initialize the FS under consideration;

at least we cannot detect it using trial information signals $\{j_k, k K\}$. It is natural to assume that this FS is really semantically nonresonant to the organism (uninitializable), at least in relation to class of FS initialization signals $\{j_k, k K\}$.

The described method of using ART is referred to below as the method indirect or generalized vegetative resonance. Restructuring the relationship of tension between the sympathetic and parasympathetic divisions of the ANS when filtering probe signals j_k through the tested signal I are called indirect or generalized vegetative resonances.

In practice, observe FS of a semantically nonresonant organism anyway test signal to the author of this work did not have to. If not limit the class of probing signals of FS initialization $\{j_k, k K\}$ using some additional criteria, then, apparently, all FS of the organism can be considered semantically resonant to it with respect to one or another class of test signals.

The situation changes significantly if limit class of test signals, for example, to investigate the semantic resonance of the considered FS in relation to classes $\{j_{Pk}, k PK\}$ and $\{j_{Ek}, k EK\}$ initialization signals, respectively, of pathological and physiological PS.

With such restrictions, it is possible to:

- formulate an abstract concept of state "Perfect health" organism, used in the framework of diagnostics by the method of ART and BRT;
- to construct an abstract method for determining how much the initiation of a given FS brings the organism, in its current state, to the state of "ideal health".

Namely, it is natural to assume that in a state of "ideal health" the body:

- either semantically unresonant to any pathological FS, which is natural to interpret as its complete protection from the possibility of initializing in it such "noise FS, i.e. complete immunity" of this organism,
- or, on the contrary, semantically resonant to any physiological FS, on extreme least relatively some class "Basic physiological" FS, hereinafter called ecological (such FS, by definition, solve the basic tasks of self-fulfillment, without which adequate self-realization of the organism is, in principle, impossible and which are adequate for it in any of its current state).

When approaching the state of "ideal health", as a result activation of a particular FS:

1) Increase "noise immunity" organism relatively initialization of any pathological FS. Me fervor pathological FS, which can be initialized in this organism under the condition of preliminary initialization of the FS under consideration, will be strictly smaller, i.e. strictly included in a multitude pathological FS, which can be initialized in it without this condition.

2) The body's ability to initialize ecological PS will increase. A bunch of ecological FS, which can be initialized in this

organism, subject to preliminary initialization of the considered FS, will be no less, i.e. will include a bunch of ecological FS, which can be initialized in it without this condition.

Suppose now that:

1) Specific classes selected $JP = \{JP_k, k PK\}$ and $JE = \{JE_k, k EK\}$ probe initialization signals, respectively, pathological and basic physiological (ecological) PS, which are considered complete within the framework of the used measurement scheme, i.e. including signals of initialization of all such (pathological or ecological) FS.

2) For under consideration FS - not necessarily pathological or ecological - its initialization signal I is selected.

3) The channels for transmitting signals of FS initialization to the body are fixed: I, $\{JP_k, k PK\}$ and $\{JE_k, k EK\}$.

4) A method for measuring the change in the ratio of tension between the sympathetic and parasympathetic divisions of the ANS of the body, which makes it possible to determine for each FS whether it is equilibrium or non-equilibrium.

5) A criterion has been set that allows you to determine the degree of deviation results of measurements of classes of probe signals of FS initialization $\{JP_k, k PK\}$ and $\{JE_k, k EK\}$ in two series:

- filtered through signal I, i.e. filed against his background,
- not filtered through the I signal, i.e. filed against the background of his absence, from the results of "ideal measurement" of the body in a state of "ideal health".

If the above conditions are met, we can say that in fact, a measuring scheme has been set, which makes it possible to solve the following problems:

- to determine the degree of deviation of the organism from the state of "ideal health" (let's call it task Z.1);
- to determine the effectiveness of his therapy by initializing some FS in it (let's call it task H.2).

To solve problem Z.1, it is enough:

H.1.1. After sequentially initializing all pathological FSs from class $\{JP_k, k PK\}$, determine which ones are semantically resonant for the organism under study. In a simplified version of this scheme, often realized with the help of ART, it is determined only which of these PSs are non-equilibrium for the organism in the current state.

H.1.2. After sequentially initializing all ecological FS from the class $\{JE_k, k EK\}$, determine which ones are semantically nonresonant for the organism under study. In a simplified version of this scheme, often implemented with the help of ART, it is determined only which of these FS are equilibrium for the body in its current state.

H.1.3. Comparing the results of real measurements carried out in paragraphs. 3.1.1 – 3.1.2, with the result of the "ideal measurement" of the organism in the state of "ideal health" in accordance with the given criterion, determine the measure of the deviation of the current state of the organism from the measure of "ideal health".

To solve problem Z.2, it is enough:

H.2.1. Determine the degree of deviation of the current state of the organism from its state of "ideal health" (according to the algorithm 3.1.1 – 3.1.3).

H.2.2. Initialize the considered functional PS system in the body using its initialization signal I.

H.2.3. After sequentially initializing all pathological FS probe signals from class $\{JP_k, k PK\}$, determine which of them are semantically resonant for the studied organism. In a simplified version of this scheme, which is often implemented in ART, it is determined only which of the pathological FSs are nonequilibrium against the background of signal I.

H.2.4. After sequentially initializing all ecological FS from the class $\{JE_k, k EK\}$, determine which ones are semantically nonresonant

for the organism under study subject to prior initialization of the FS under consideration. In a simplified version of this scheme, often implemented with the help of ART, it is determined only which of the ecological PS are equilibrium against the background of signal I.

H.2.5. Comparing the results of measurements carried out in paragraphs 3.2.3-3.3.4 with the results of clause 3.2.1 and the results of the "ideal measurement" of the organism in the state of "ideal health", determine the change in the measure of deviation of the state of the organism from the state of "ideal health" when it passes from the current state to the state with initialized considered FS. If this last state is closer to the state of "ideal health" than the current state of the body, then it is assumed that therapy by initializing the PS under consideration is effective. Otherwise, it is assumed that therapy by initializing the FS in question is ineffective.

The division of FSS into actual and irrelevant, and FS, decisive for them, into semantically resonant and semantically nonresonant is formalized with the help of ART, if and only if from any preliminary considerations, classes of pathological and ecological systems are given, respectively: $JP = \{JP_k, k PK\}$ and $JE = \{JE_k, k EK\}$.

(4) Optimal and suboptimal self-fulfillment tasks

Adequate NPV is called the optimal (relative to the chosen one, it is not criterion of optimality), if only appropriate for self-fulfillment of the body, but also allows him to achieve the designated goal in a way that is optimal for its self-realization as a whole relatively the selected criterion of optimality. For example, the CHD of an organism can be considered optimal if it contributes to the greatest extent to the solution of other particular problems of its self-realization, i.e. gives him the greatest resources for self-fulfillment as a result of its implementation. The FS that decides the optimal NPV is constitutionally called consistent with the self-fulfillment of the organism or simply constitutionally agreed regarding the selected criterion of constitutional consistency (which in this case coincides with the selected criterion of optimality).

Otherwise, if the solution of a particular problem of self-fulfillment is not optimal for the self-realization of the organism in accordance with the selected criterion of optimality, this task is considered non-optimal, and the FS, which solves it, is a constitutionally inconsistent FS.

Note that all inadequate tasks of the organism's self-fulfillment are considered suboptimal, and the FSs that solve them are constitutionally

inconsistent.

Measuring realization criteria constitutional consistency or constitutional inconsistency FS is possible only if the measurement criterion is set optimality the corresponding task of self-fulfillment. Such criteria can indeed be proposed within the framework of ART.

3. Terms of solving a particular problem of self-realization and the concept the intensity of the functional system

Suppose that some FSS S is solved by the functional system FS (S) with the initialization signal I (S) = IFS (S). Among the boundary conditions of S, an essential role is played by the estimated length of the period of its decision, those. estimated time to achieve the expected result T (S). For most NPDs, this time varies; tasks can be set to achieve the same goal over a different period of time.

In the case when a certain task of self-realization is solved periodically (breathing, heartbeat, discharge, wakefulness-sleep, nutrition, sex), the variable value becomes the period T (S), for which the state of the organism considered regarding this task, should play back, return to original state.

Thus, on the set of CHS, there are equivalence classes, those. similarity, similarity with respect to some criterion, in this case - the criterion for matching the designated goals. Namely, tasks S_{one} and S_2 are called potentially equivalent, or simply potencies one another, if they have the same designated goals, but, possibly, different anticipated periods of their achievement.

To indicate that some task of self-fulfillment S_1 is equivalent to the self-realization problem S_2 accurate to the period of obtaining the expected result (period of achieving the goal), the formula is used: $S_2 = Pot(S_{one})$, respectively: $S_1 = Pot(S_2)$. The notation $FS(S_2) = Pot(FS(S_{one}))$ and $I(S_1) = PotI(S_2)$ for FS and signals of their initialization respectively.

In ART and BRT, the initial it is possible to express the "measure of deviation" and potentially between the equivalent partial problems self-fulfillment as a number - potentiation factor or simply potency a the original problem. In this case, write: $S_2 = Pot_a(S_{one})$, or, which is equivalent to $S_1 = Pot_b(S_2)$, where $b = a^{-one}$. Similarly, $FS(S_2) = Pot_a(FS(S_{one}))$, $I(S_1) = Pot_aI(S_2)$ for functional systems and signals for their initialization, respectively. The designations are selected in such a way that it is possible to enjoy formal identities: $FS(Pot_a(S)) = Pot_a(FS(S))$ and $I(Pot_a(S)) = Pot_a(I(S))$ for potencies of the same CHZS S, functional system PS (S), its decisive and its initialization signal I (S).

The number a is associated with the period of achieving the designated goal T of some dependence $T = f(a)$, or, which is the same - $a = f^{-one}(T)$. In all practical applications, the specific form of this dependence, i.e. specific kind of expression f (or f^{-one}), not known.

In what follows, we will always assume only that the dependence $T = f(a)$ is positive, definite, and anti-monotonic (if $a_1 < a_2$, then $T_1 = f(a_1) > T_2 =$

f (a₂)), since such a situation arises within the framework of the technique using ART and BRT.

Let us assume that a class of "reference" FSS (respectively, "reference" FS, their decisive ones, and "reference signals of initialization" of these FS) is distinguished, for which $a = 1$. In this case, the coefficient a can be interpreted as a measure of the relative intensity of functioning of the potentiated FS relative to the reference, i.e. $FS (Pot_a(S)) = Pot_a(FS(S))$ relative to $FS(S)$. This definition of the PS intensity is consistent with intuitive ideas. The longer the estimated time for achieving the designated goal, the less biochemical energy produced by the body is consumed per unit of time by the PS, which solves the problem of achieving this goal. If FS were physical objects, then we could talk about a decreasepower potentiated FS in relation to the reference with an increase in the estimated time to achieve the designated goal. However, FSs are not physical objects, but informational ones, so such an interpretation would lead to confusion. We use for PS instead of the term "power" the term "intensity" - a systemic characteristic, which is a measure of the consumption of this PS of biochemical energy of the organism per unit time.

The transition from the physical level (power) to the system level (intensity) entails changes in the description of the difference between the behavior of FS with the same designated goal and different intensity and the same type of physical devices with different power. In the general case, a change in the PS intensity while maintaining the designated target entails a (unknown in advance!) Restructuringother (except for the time to reach the designated goal) of its boundary conditions. Accordingly, differently (in comparison with the "reference" FS) the work of the FS with the altered intensity in relation to the organism as a whole is consistent. Moreover, the integrated result of the activity of this FS in relation to the integral self-realization of this organism may turn out to be different. Section 2 introduced the concept of constitutionally consistent FS and noted that not all relevant or adequate FS are constitutionally consistent. It turns out that in many cases it is possible to transform a constitutionally inconsistent FS into a constitutionally consistent one by changing its intensity, i.e. potentiating - already in the technical meaning of this term - the electromagnetic signal of its initialization.

4. Vector functional systems and functional shells

Vector functional systems (VFS) we will call FS, consisting of several interacting FS "First order", satisfying the "primary" (with respect to the selected criteria of "primary", of course) needs of the organism [7].

Vector demand (VP) or needs vector The VFS under consideration is a set, the components of which are the individual needs of the "first order" functional systems, the totality of which makes up the full set of its needs. Vector demand can also be defined asvector designated target or vector of designated targets

considered VFS. For example, the components of the demand vector (vector

designated goals) VFS, unifying functional systems, responsible for "satiety" and "sleep", is the vector "{saturation / sleep}", which components are the primary needs of the body for satiety and sleep.

A VFS that satisfies a certain EP of the organism can be considered as an ordinary FS, the only difference of which is that the need it satisfies cannot be formulated in one word. In accordance with the paradigm of the functional approach, each VFS can be endowed with the standard architectonics of the functional system.

A VFS that satisfies some VP is not reduced to a mechanical combination of its constituent FS of the "first order". This follows from the non-triviality of the interaction of the above-mentioned FS of the "first order".

The internal architectonics of the VFS satisfying the EP - regardless of the standard architectonics with which it is endowed - can be described as a composition of two levels of regulation.

The first level of regulation is made up of independent functional systems, say FS (S_{one}), FS (S_2),..., FS (S_n), satisfying the primary needs of the body, i.e. systems of "first order". Second level is a special functional system of the "second order" FS (S_s) = FSs ($S_1, S_2, \dots S_n$), which:

- firstly, it carries out a mutual representation of information taken from each FS of the "first order" to each other (information represented from one FS to another is used in it for afferent synthesis in the form of an integral part of the situational afferentation data carried out by its block of afferent synthesis, and the construction of the expected result of the action carried out by its acceptor block the result of the action);
- secondly, it develops criteria mutual optimization of actions for each of the considered FS of "first order";
- thirdly, it modulates the actions of each of the FS of the "first order" in accordance with the additional criteria for optimizing actions developed by it (provides mutual modulation of the actions of private systems in order to mutually optimize their joint actions). A useful result of the activity of the FS, which constitutes the second level of regulation of the VFS, is, therefore, the coordination of the actions of individual FS of the "first order" with respect to the set of "correction" criteria for the mutual optimization of their activities. FS, which constitutes the second level of HFS regulation, satisfying some EP of the organism, in turn, is correctly defined within the paradigm of the theory of functional systems, since its useful result has been described. In accordance with this paradigm, it can also be endowed with the standard architectonics of functional systems.

FS, which constitutes the second level of regulation for the HFS, satisfying some EP of the organism, will be called covering functional system (NSF) for the specified systems of the "first order", the useful results of which are components of the vector of demand of the considered VPS. System blocks of the NSF are also called covering for the corresponding system blocks of the "first order" functional systems included in

considered vector functional system. For example, its block of the acceptor of the action result is called the covering block for the set of blocks of the acceptor of the action result of the FS of the "first order" included in the corresponding VFS.

Let there be given some set of FS, conventionally called FS "of the first order: FS (S_{one}), FS (S_2),..., FS (S_n), satisfying some of the body's needs, also conventionally referred to as "primary". Immediate initialization of each of these FS will not yet lead to the formation of a functional system that really satisfies any the body's need. For this to happen, it is necessary that the corresponding "primary" needs, satisfied by individual FS from the set under consideration, are combined into demand vector, and their actions are mutually coordinated. That is, a VFS should be organized, the structure of which contains an NSF, which is not reducible to any FS from the set $\{FS (S_{one}), FS (S_2),..., FS (S_n)\}$. This means, in particular, that the initialization signal of the considered VPS is not reduced to the combination of signals initialization of individual FS from the set $\{FS (S_j), j = 1, \dots n\}$.

Any FS that includes all FS from the set $\{FS (S_{one}), FS (S_2),..., FS (S_n)\}$, we will call functional shell (FO) the set $\{\Phi C (S_j), j = 1, \dots n\}$ and denote $FO (FS (S_j), j = 1, \dots n) = \{FS (S_j), j = 1, \dots n\}$.

If the index j , numbering individual FS included in the FD, is written as an element of some set J , i.e. in j form J , then the corresponding FO can be written in the standard form $FO (FS (S_j), j J) = \{FS (S_j), j J\}$.

An important empirical fact taken from physiology is the fact that what a very large number sets of individual FSs can be combined into FOs, i.e. in a VFS with a need vector, the components of which are the needs satisfied by individual FSs included in such a set. Formally speaking, any set of FS of an organism has an integral FS of self-fulfillment of this organism as an enveloping functional shell.

From a practical point of view, the importance of the FP concept is as follows. Let the patient's therapy be carried out with the help of initialization in his body of a suitable PS, say PS (OT), where OT is an abbreviation for the phrase "optimal therapy". Suppose we know individual components of this FS: a set of private FS, which perform particular tasks in the course of its activity. Is it possible, based on the known initialization signals of the set of these private FSs included in the FS (OT), to restore the initialization signal of it itself? It turns out that in a very large class of cases this problem is solvable in diagnostics and therapy using ART and BRT using hardware conversions sets of electromagnetic signals initializing private FSs included in

PS (OT) as its vector components.

5. Inverse FS

In the process of controlling an organism, a situation may arise when it is required to suppress (deinitialize, ie, simply put, "turn off") the activity of some of its FS, say, FS (S) (it does not matter, pathological or physiological). Is it possible to reduce this problem to the already considered problem

FS initialization? From the point of view of formal logic, this approach is correct: it is possible to set a control problem, the designated goal of which is deinitialization of FS (S), and the boundary conditions are chosen "according to the circumstances" (if there are no other requirements, this task can be considered constitutionally consistent). We denote any FS that solves the problem of deinitialization of FS (S) by i (FS (S)) and we will call it inversion original FS (S). In the general case, problem i (FS (S)) is not unique - you can choose different boundary conditions for its implementation. If I (S) is an information signal of the initialization of the FS (S) system, then the initialization signal of the system i (FS (S)) (more precisely, any of such FS, selected according to an additional selection criterion) is naturally denoted by i (I (S)) and called the inversion of the signal I (S). The multivalued mapping I (S) $\rightarrow i$ (I (S)), which matches the signal of its deinitialization to the FS (S) initialization signal, is called inversion or inversion of the original signal. Note that the rule i (i (I (S))) = I (S) here not done.

The practice of using ART and BRT as diagnostic and therapeutic methods shows that this approach is justified. Namely: knowing the informational electromagnetic signal I (S) of initialization of some FS (S), in a large number of cases we can construct using its hardware transform a new information signal i (I (S)), the introduction of which into the body will lead to deinitialization of PS (S). The signal i (I (S)) will also be called the inversion of the original signal I (S). In this case, the inversion is uniquely defined, since it is done in hardware. The rule i (i (I (S))) = I (S) in this case also not done.

Note that the concept of inversion of the initialization signal of some FS (S), introduced by us, is systemic a concept relating primarily to the human body as system, but not to methods of hardware transformation of the information signal I (S). Technically, the procedure for inverting the initialization signal of some FS (S) may not at all resemble (and does not resemble!) Any form of "inversion" of this signal in the sense in which it is understood in electrical engineering or in radio physics. It is significant not that the signal i (I (S)) in any sense "neutralizes" the signal I (S), for example, reverses it in phase, but that when this signal is perceived by the body as a system that perceives and stores information, this signal reverses the FS initialization command (S), i.e. is semantically inverse to I (S).

6. Connection between functional systems and electromagnetic information signals of the organism's self-regulation modes

The totality of the experimental and empirical studies of the body with electrophysiological methods allows the position: with ART to formulate or other the following

1. Each FS (including SFC, external or internal, associated with the organism) has a characteristic form of a weak electromagnetic signal, the introduction of which into the body leads to trying to initialize it, those. to an attempt to "turn on" the self-regulation mode of the organism that implements it. This weak electromagnetic signal is referred to below as electromagnetic initialization information signal

under consideration FS. The process of initializing the FS using its electromagnetic initialization information signal hereinafter called attempted resonance initialization this FS.

2. Suppression electromagnetic information signal FS calls an attempt to deinitialize it, i.e. an attempt to "turn off" the corresponding mode of self-regulation of the body. Electromagnetic signal, overwhelming the electromagnetic information signal of the initialization of the FS under consideration, is called hereinafter electromagnetic information signal of its deinitialization. The process of deinitialization of the FS by suppressing its electromagnetic information signal of initialization is called hereinafter attempted resonant deinitialization this FS.

3. Organism fundamentally different responds to attempted resonant initialization or deinitialization of some FS, depending on whether this FS is semantically resonant to him or non-resonant in his current state. Namely: an attempt at resonant initialization

(deinitialization) FS of a semantically resonant organism causes a generalized restructuring in its ANS. This leads, in turn:

- or to the same type of change in the reproducibility state on any of its BAPs as a result of a change in the ratio of activity between the sympathetic and parasympathetic parts of its ANS,
- or to a change in its vegetative resonant response in response to an attempt to initialize its other FS against the background of initialization of the considered FS.

In the first case, the FS to be initialized is non-equilibrium for this organism in its current state, and the phenomenon of the same type of change in the state of reproducibility on any BAP of the organism upon initialization of the PS under consideration is direct vegetative resonance. In the second case, the FS being initialized is pseudotransparent - equilibrium, but, nevertheless, semantically resonant to the organism in its current state. The phenomenon of changes in the autonomic resonance response of an organism in response to an attempt to initialize its other FS against the background of initialization of a pseudotransparent FS is called indirect vegetative resonance.

In practice, when detecting the phenomenon of indirect vegetative resonance, they usually limit themselves to checking that when filtering through the electromagnetic information signal of the considered FS, they change multitudes non-equilibrium pathological and / or environmental FS, owned by to advance chosen classes FS declared pathological or environmental.

An attempt at resonant initialization (deinitialization) of F, semantically nonresonant to the body, does not cause generalized restructuring in its ANS. This leads to the absence of a uniform change in state.

reproducibility to any of its BAPs as a result of the absence of changes in the ratio of activity between the sympathetic and parasympathetic divisions of its ANS. In this case, the initialized FS is equilibrium for this organism in its current state.

Moreover, the absence of a change in its autonomic resonance response in response to an attempt to initialize its other FS against the background of the initialization of the considered FS. In practice, they usually limit themselves to checking that for

filtration through the electromagnetic information signal of the considered FS does not change the set of nonequilibrium pathological and / or ecological PS, belonging to pre-selected classes of PS, declared pathological or ecological.

Note. Generally speaking, it is possible to introduce FS "intermediate" - from the point of view of ART measurements - between semantically resonant and semantically nonresonant. However, this will greatly complicate the presentation and at the same time will not give any meaningful practical output. Therefore, we omit the relevant part of the theory here.

Considering that VRT test pointers can be interpreted as electro-magnetic informational signals of initialization of some HRD of the body (corresponding to FS that solve these HRV), we obtain the following formulation of the above statements:

1) if some VRT test indicator is electromagnetic the information signal of the initialization of the CHZS actual for the organism in its current state, then when it is introduced into the measuring circuit, it will be observed direct or indirect vegetative resonance;

2) if some VRT test indicator is electromagnetic the information signal of the initialization of the CHS is not relevant for the body in its current state, then when it is introduced into the measuring circuit direct or indirect vegetative resonance will not be observed.

That is, the ART indicator test, introduced into the measuring circuit, causes a vegetative resonance if and only if it is interpreted (perceived) by the body as an information signal of the initialization of the FPS (FS), the solution of which is relevant (expedient, semantically resonant) for the body in its current state. condition.

Thus, the organism human, considered how self-regulating system with a biophysical level of regulation, manifests in relation to a certain class of weak electromagnetic signals fundamentally new system property - ability to interpretations these signals as attempts to initialize those or his FS.

7. Hardware transformations of electromagnetic information FS initialization signals and associated information processes in the body

The practice of using hardware (carried out with the help of electronic equipment) transformations of weak electromagnetic information signals of FS initialization in the body made it possible to distinguish at least four types of transformations that receive interpretation in the body:

1. Hardware potentiation of the initialization signal of some FS. If I is a weak electromagnetic signal of initialization of some FS (say FS (I)), then the hardware potentiation of this signal I Rot (I) is carried out by decreasing or increasing the Q-factor of its filtering channel. The number a determines the degree of decreasing or increasing the Q-factor of the signal filtering channel; it is convenient to identify it with the position of the tuning knob of the module making this change.

The set of currently available to us

data allows us to assert that if the initial electromagnetic signal I is interpreted by the body as a signal of initialization of some of its $PS = PS(I)$, then the potentiated signal $Rot(I)$ is interpreted by him as an initialization signal potentiated, those having a different estimated time to achieve the designated goal and, accordingly, a different intensity of $PS' = Rot(FS(I))$.

It is this interpretation by the body of a hardware potentiated information signal of a certain PS that caused the introduction of the concept of a potentiated PS as a PS with a modified expected time to reach the designated goal (see subsection 3.4.5). Hardware potentiation, as can be verified experimentally, satisfies the conditions for the antimonotonicity of the coefficient α relative to the time of reaching expected result: if $\alpha < 1$, then $\Phi C' = Rot^2(FS(I))$ has a longer expected time to achieve the designated goal than $FS' = Rot^1(FS(I))$.

2. Hardware inversion or truncation initialization signal of some FS . If I is a weak electromagnetic signal of initialization of some FS (say $FS(I)$), then hardware inversion or truncation of this signal $I \otimes i(I)$ is technically carried out, for example, by cutting out its low-frequency part from it.

The totality of the data currently at our disposal allows us to assert that the procedure for hardware inversion or truncation of the initialization signal I of some $FS(I)$ In many cases is perceived by the body as a command to turn on the functional system $i(FS(I))$, overwhelming activity of this $FS(I)$.

3. Hardware bioresonance adaptation organism To the initializing signal of a separate functional system $FS(I)$ or a set of such systems $\{FS(I_j), j\}$. In some cases, the initialization of an individual $FS(I)$ using a signal I or a set of such systems $\{FS(I_j), j\}$ is inadequate or irrelevant for the self-fulfillment of the organism as a whole. In these cases, you can try to modify the initialization signal of an individual $FS(I)$ or set $\{FS(I_j), j\}$ so that the modified signal initializes the FS with the same designated goal, but with different boundary conditions for its achievement, already adequate (semantically resonant, constitutionally consistent) with the self-realization of the organism as a whole. This change is achieved with hardware bioresonance adaptation organism to the initial (hereinafter, everywhere - reference) signal of initialization of an individual FS or their combination.

Technically hardware bioresonance adaptation organism is carried out with the help of a certain change in the physical boundary conditions in it as a nonlinear electromagnetic resonator at an additional condition of loading it with an information signal I or a set of such signals I_j, j . The change in the physical boundary conditions in the body consists in the return of the electromagnetic signals generated by it, filtered in a certain frequency corridor.

It turns out that if the model of changes in the physical boundary conditions in the body is suitably selected, then the initial signal I or a set of such signals I_j, j are modified (adapted) by themselves

the body. In this case, the modified signal in a large percentage of cases turns out to be an initialization signal that is already adequate (semantically resonant, constitutionally consistent) to the FS organism with the same designated goal as the original one (but, of course, with modified boundary conditions).

4. Narrowing (circumcision) initialization signal of some FS, say, FS_{one} to the frequency corridor in which the initialization signal of another FS lies, let's say FS₂, those. building the initialization signal intersections two different FS. The initialization signal is usually narrowed some FS on the initialization frequency corridor a separate meridian or the sum of several such meridians. Practice shows that in a large percentage of cases, the cutoff of the FS₁ initialization signal to the frequency corridor, which contains the FS initialization signal₂, is interpreted by the body as a signal of initialization of some PS₃, the designated purpose of which coincides with the designated purpose of the FS_{one}, but the boundary other achievements: achievement conditions of its designated purpose FS_{one} implemented through of physiological mechanisms, managed FS₂.

It is advisable to discuss one more hardware conversion: summation ($I_1 + I_2$) initialization signals I_{one} and I_2 functional systems FS (I_{one}) and FS (I_2). It turns out that this transformation, unlike the four hardware transformations described above, does not allow an unambiguous interpretations the body. A type the body's reactions to the amount ($I_1 + I_2$) signals FS initialization (I_{one}) and FS (I_2) depends on which signals are summed up. In the vast majority of cases, the sum of the initialization signals adequate (semantically resonant, constitutionally consistent) FS interpreted organism as an attempt to initialize inadequate (semantically ner resonant, constitutionally inconsistent) FS. This is a "literal last FS overlay" of the FS initiated by separate signals, from a sum that is not combined, however, into a common functional shell (remember Zhvanetsky: "try to immediately take both a laxative and a sleeping pill"). In most cases it is required additional hardware sum conversion ($I_1 + I_2$), in order for the FS, initialized by the converted signal, to be adequate, semantically resonant, balanced or constitutionally consistent. Usually, as such an additional transformation is used hardware potentiation (and then they talk about targeting signal sums ($I_1 + I_2$)), hardware bioresonance adaptation organism to the signal ($I_1 + I_2$) or chronosemantic adaptation.

Thus, hardware transformations of weak electromagnetic signals generate (due to the phenomenon of interpretation) a kind of universal algebra of information fields at the level of biophysical regulation of the body.

8. Design and subsequent initialization of FS for therapy organism

Therapy the patient from the considered point of view is reduced to a initialization suitable for therapy, i.e. solving a suitable problem self-realization S, functional system FS (S). To

to initialize a suitable FS (S), you need to:

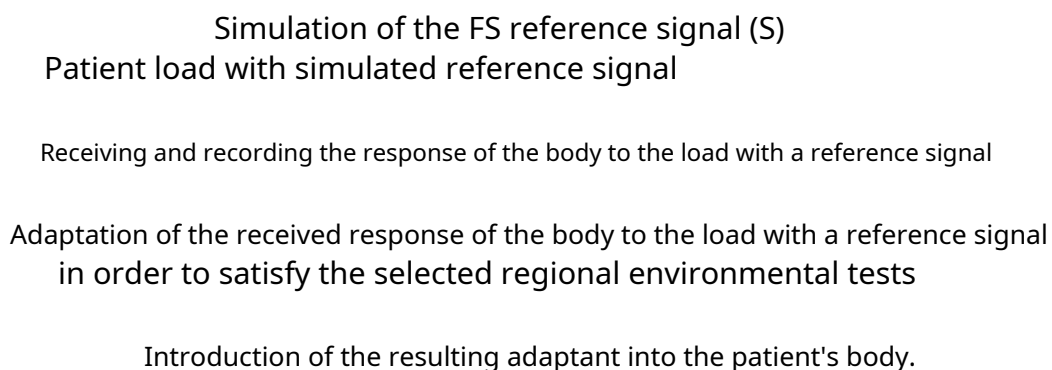
1. Simulate it reference signal.
2. Initialize PS (S) in the body according to its reference signal.

The first part of this procedure - modeling the reference signal of the initialized FS, coupled with the idea of how this signal should be perceived by the body, is also called the design of this FS. The second phase of PS initialization is called the adaptation of the organism to the selected reference signal. In practice, the adaptation of the organism to the selected reference signal is advisable to be carried out in two stages:

1. The reference signal is introduced into the body and the body's response to him. This answer is called a proadapting to the task of self-fulfillment, the solution of which the doctor wants to teach the patient. Proadapting is an information signal that is perceived by the body as setting a designated goal that must be achieved by it, but does not yet contain the correct boundary conditions for its achievement.

2. An additional adaptation of the signal is made - the body's response to reference signal to meet the environmental test system. An additionally adapted signal is called an adaptant to the problem of self-fulfillment, the solution of which the doctor wants to teach the patient. An adaptant is an information signal that is perceived by the body as setting a simultaneously designated goal that must be achieved by it and the correct boundary conditions for its achievement.

Thus, the design structure of the subsequent initialization of the FS (S), which solves the problem of self-realization S, can be symbolically represented in the form of a diagram:



Generally speaking, it is not always possible to construct an adaptant from a proadapting. The possibility of such a construction is due to the internal resources of the organism, i.e. the extent to which he can combine the achievement of the designated goal with the boundary environmental conditions.

Currently, there are three basic methods for obtaining an adaptant from a reference signal:

- 1) Bioresonance adaptation, which consists in the fact that the patient is loaded with a reference signal and then a general or particular bioresonance preparation is written off from it, which is, in essence, a response to this signal [7]. Of course, there can be various particular methods of both loading the patient with a reference signal and writing off the general or particular response of the body.

2) Chronosemantic adaptation, which consists in the fact that the basic signal is introduced, in essence, into the representative system of the patient's internal time and, thus, a response is obtained coming from the internal time system [6].

3) Direct targeting, which consists in the fact that some signal (for example, a patient's autonosode, SDA, or a signal of a certain process) is directly taken as a adaptant and then targeted (usually by potentiation) in such a way that unwanted vegetative resonances disappear from a pre-compiled list, including both target and environmental markers [8]. In this case, the FS being initialized is set as if "indirectly" - we can assume that its reference signal is taken directly as a proadaptant.

Numerous and diverse author's methods of bioresonance therapy are reduced to various variations and modifications of the above three-stage procedure for initializing the FS in the patient's body, suitable (from the point of view of the author of the method) for his therapy.

9. Simulation and structure of the reference signal for the subsequent FS initialization

The reference signal $O(S)$ for the subsequent initialization of the PS (S) is a "model" of its work decomposed into preparations from the selector of the Center "IMEDIS" or other energy-information preparations. Moreover, when this model is introduced into the body, the latter presumably develops a response - a signal of its initialization. Thus, this signal should not be confused with the actual initialization signal FS (S) - $I(S)$. It represents only the first approximation of the $I(S)$ signal. In fact, this signal is an attempt by a doctor to construct an information signal - a necessary and sufficient condition for the initialization of the FS (S) - from signals at his disposal, for example, from energy-informational preparations located in the selector of the IMEDIS Center.

Typically, the reference signal is the sum (overlap) of information signals for the initialization of various "primitive" FS, which, according to the physician, with the need are initialized when FS (S) is initialized, i.e. are a kind of necessary conditions for the initialization of the latter.

As such "primitive" information signals - "necessary conditions" for FS (S) initialization - the following signal classes are considered, in particular:

1) signals - organopreparations of tissue organs and / or systems, activation which is a necessary condition for the initialization of the FS (S). (For example, if we are talking about the initialization of the FS for the development of abilities, then a necessary condition for this is the activation of certain brain structures - generally speaking, for each ability - their own. Therefore, it is natural to include the organopreparations of these structures in the reference signal for the subsequent initialization of this FS.);

2) signals - the conditions of homeostasis or deviations from it, necessary for FS initialization (S) (examples of such signals are test pointers

the level of metabolism or catabolism, acid-base balance, level of tension of the ANS, etc.);

3) signals - "slogans", or, what is the same - attractive signals, representing an information signal from a subject who successfully solves the problem of self-realization S' , which is a "projection of the problem self-fulfillment S'' on the self-fulfillment of this subject (examples of "slogans" are: SDA, which are signals of expectations of worshipers, rewritten from a shrine, which, according to the author, they pray successfully, or a recording of a signal of regeneration and rejuvenation of a cut trepang);

4) signals - "provocations", or, what is the same - repellent signals, representing informational signals forcing the body to develop a preventive defense response (examples of "provocations" are homeopathic medicines);

5) ecologically matching signals that set certain edge ecological conditions (an example of such an information signal is the Kudaeva-Mkhitarian-Khodareva marker, or the KMX marker developed by this group of researchers [9]. The KMX marker is the sum of signals written off from the terminal and nodal mantle BAPs of the main chiroglyphic lines of the palm. experiments, the KMH marker can be used to obtain constitutionally consistent drugs, i.e. informational signals of initialization of constitutionally consistent PFS).

The internal logic underlying the construction of the reference signal for the initialization of FS (S) for solving some PRS S is as follows: FS (S) to be initialized is usually modeled as

$$FS(S) = Pot(FO(FS(S_j), j = 1, \dots, n)) = Pot(\{FS(S_j), j = 1, \dots, n\}),$$

where $FS(S_j), j = 1, \dots, n$, - "primitive" FS, the initialization of which is a necessary condition for the initialization of the FS (S); coefficient a indicates the degree of intensity of the functional envelope of these systems, which ensures the boundary ecological conditions, for example, the constitutional consistency of the FS (S), if a is selected according to the KMX marker; reference signal - it is simply the sum of the signals for the initialization of individual systems $\{FS(S_j), j = 1, \dots, n\}$ and can be defined as $O(S) = \sum_{j=1}^n I(S_j)$.

The basis of existing methods bioresonance and / or
 chronosemantic adaptation is based on:

1. An implicit assumption that when the body is loaded with the support signal in the process of bioresonance or chronosemantic therapy, it through returns a signal for some time $(FO(FS(S_j), j = 1, \dots, n)) = \{FS(S_j), j = 1, \dots, n\}$, those. connects individual systems $\{FS(S_j), j = 1, \dots, n\}$ into a single VFS - their vector functional envelope.

2. The implicit assumption that even if the system $(FD(FS(S_j), j = 1, \dots, n)) = \{FS(S_j), j = 1, \dots, n\}$ is for some reason not satisfying the selected boundary ecological conditions, its you can do this using the hardware procedure for potentiating it signal, i.e. using the transition to the Pota system $(FO(FS(S_j), j = 1, \dots, n)) = Pot(\{FS(S_j), j = 1, \dots, n\})$.

The direct targeting procedure stands somewhat apart. In this procedure, the implicit assumption of item 1 is not used, but something else is done

assumption (see item 3).

3. Implicit assumption that by means of hardware potentiation it is possible to create an energy-informational preparation from a sufficiently simple in its origin signal-adaptant (as such a signal, some well-chosen "slogan" or "provocation" is usually used), which removes vegetative resonances from a fairly wide list, including both target and ecological positions.

At the moment, it is not easy to say which of the FS design and subsequent initialization techniques is more efficient and which of them is better suited to solving problems of a particular class. Therefore, we will restrict ourselves here to only three remarks based on a detailed study, on the one hand, of the methods of modeling the states of the organism according to A.A. Hovsepyan [7], and on the other hand - direct targeting techniques:

1) Adding slogans to the reference signal significantly increases efficiency initialized FS in terms of clinical outcome. In particular, the addition of "slogans" significantly increases the efficiency of FS, built according to the method of A.A. Hovsepyan. With the help of such FS, it is possible to solve the problems of changing the abilities and status of the patient, which are unsolvable with the help of conventional FS built using this technique.

2) Adding a KMX marker to the reference signal significantly increases the patient's tolerance of the consequences of the initialization of the FS, in particular, when constructing the FS according to the method of A.A. Hovsepyan. In particular, after adding the KMX marker to the reference signal, there is a "contraction" to the optimal indicator of the test results on the BI, PI and RA scales. This allows us to say that FS constructed according to the method of A.A. Ovsepyan with the addition of the KMX marker to the reference signal are constitutionally consistent, in contrast to such systems built without the addition of this marker.

3) Alternating methods of direct targeting and building FS by the reference signal (taking into account the previous remarks), as well as various forms of "embedding" one of these methods into another, significantly increase the flexibility of therapy, its adequacy to current tasks and its effectiveness over sufficiently long time intervals.

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K.N. Mkhitarian Treatment of an organism as design and subsequent initialization of functional systems // XII

Pp. 186-221