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Analogy of Memory Properties of Water and the Ones of the Brain

Kovalenko Viktor Fedorovych

Ministry of Education and Science
Kherson National Technical University
Department of Cybernetics
Faculty for Physical and Biomedical Electronics
Kherson, Berislavske shosse, 24
Ukraine
e-mail:viktor.kovalenko.00@mail.ru

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Abstract

Dependencies of structural water parameters (set, sizes and forms of clusters, their relative concentration) on contend and duration of informational influence, time of exposure after it are studied by scattering method of laser emission. The received data made it possible to determine such water memory characteristics as ability to differentiate content of influencing information , increase degree of its memorization with rise of influence time to save it for a definite time and gradually regret. Based on analogy of these water memory characteristics and brain memory characteristics we have drawn the conclusion about identity of their nature: both of them have field nature. A physical carrier of brain memory is spin configurations of tetravalent oxygen atoms of water clusters that neurons contain.

Identity of water memory nature and the one of the brain let explain the mechanisms of brain memory formation, factors stipulating short-term and long-term memory, causes of its abatement as well as consciousness nature and assumed mechanisms of its origin, development and degradation based on experimental results of water memory characteristics study.

Keywords: cluster, memory, spin structure (configuration), torsional field, interaction, consciousness

Introduction

Longstanding studies of human brain structure and its work allowed determining functions of all its sections, but thinking and memory sections have not been discovered. On that ground there was assumption made that the brain as a whole takes part in thinking and memory processes. However up to nowadays how mechanisms of these psychology functions are realized have not been determined yet.

At present there are different viewpoints on nature of brain memory. Majority of them assume that memory has electrochemical nature. Its essence is as following: any external influence on nerve endings of neurons (receptors) transforms into electric signals (action potentials) in them. These signals reach brain neurons in the form of ion impulses moving along the nerves and causing definite changes in neurons. According to some ideas [1] these changes lie in induction of chemical reactions between neuron molecules causing formation of new compositions previously non-existing in it. It is presumed that it is new compositions of unidentified nature that are carriers of memory.

According to the other views [2,3] changes in neurons under incoming signals imply increase of synapses connections effectiveness (contacting places between neurons) that is frequency increase of transmitted by them signals. It is presumed that memory is formed as a result of coming impulses through synapses therewith to amplify and lengthen in time synaptic connection neurons should produce special protein nature and role of which are not identified yet.

The given hypotheses do not discover essence of memory mechanism. Nether they explain in which way various “files” of memory are formed in neurons. Considering that in the former case space attitude of molecules which are products of reactions in liquid cytoplasm of neurons are not fixed and in the latter case electric impulses from all receptors come to neurons in one and the same shape in spite of its various informative significance. It looks that studied hypotheses can satisfactorily describe only mechanism of reflectory brain reactions (to hunger, pain, fear, satisfaction etc.) which is connected with information processing coming only on its neural networks from sensor systems of an organism without participation of memory and thinking processes. Objective high-speed response of memory and thinking mechanisms that exceeds speed of electrochemical mechanism to transfer information also testifies to invalidity of electrochemical hypotheses of memory [4]. According to the assumption [4] such high-speed response in transferring, memorizing and extracting of big information volumes from the memory can be executed only on field level.

The first supposition about field nature of consciousness mechanism was expressed in 1991 [5]. It essence is as following: every conscious act has its own corresponding spin structure in the brain that stipulates characteristic torsional emission (torsional solitons). On the other side external torsional influence from physical vacuum (space) forms in the brain its own spin structure that corresponds to the definite perception in consciousness. Field conception of consciousness mechanism was formulated in the work [4]. It was based on principles of field informational interactions and developed the idea about their torsional nature. However, analysis of possible structural brain elements able to form stable spin configurations to realize memory and thinking phenomena was not able to determine material basis of the brain providing mechanism of consciousness on field level [4]. It was stated that neither neurons due to their ambiguous states of agitation nor incorporated in them protein macromolecules, subcellular structural elements – organelles - as well as the other components, quantitative, temporal and dimensional characteristics of which are not determined cannot be element basis of corresponding spin brain structure[4].

In the work [6] dedicated to study nature of water memory it is determined that it is torsional and implies formation of spin-oriented configuration of tetravalent oxygen atoms clusters identical to spin configuration of torsional waves of a thought or an emotion under informational influence or formed by structural state of water created by energy influence. Mechanism of spin redirection of oxygen atoms clusters was studied in detailed manner [6].

The present work which continues studies of [6] develops idea of field nature of human memory examines attributes of water memory and compares them to the ones of the brain memory which made it possible to explain nature and mechanism of the number of memory aspects along with human consciousness.

Methodology of Experiment

To determine characteristics of water memory dependences of its structural parameters (a set, sizes and forms of clusters, their relative concentrations) on content and duration of informational influence, time of exposure after it were examined.

The study was conducted by scattering method of laser emission of tested water. The essence of the method and methodology of measurements are scrutinized in [6]. The study of mental influence on water structure was carried out similarly to the one in [6] and implied measurement of scattering indicatrices of initial water samples $I(Q)_{init}$ and measurement of the ones after the influence $I(Q)_{inf}$, processing of the received data that made it possible to define values of the indicated structural parameters as described in [6].

An additional element of the methodology which was not considered in [6] but used in the present experiment was evaluation of three-dimensional form of water clusters by room temperature. The method is based on measurement of scattering indicatrices under various directions of falling emission on tested water after preliminary orientation of magnetic moments of clusters in horizontal and vertical plains. Detailed description of the method, its essence, possibilities, advantages and disadvantages was given in [7].

Spring water taken from the same spring-well as the one in [6] was used. All measurements were carried out under T=300K.

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Experimental Results

Structure of Initial Water

Scattering indicatrices of initial water samples as well as the ones being influenced were decreasing functions with increasing scattering angle. The overall view of indicatrices of initial water and scattering mechanisms which cause the observed form of function I (Q) considered in [6].

The structure of initial water was characterized by the set of clusters of various sizes – conditionally oversize (with radius r > 2,5 μm), large (0,95 μm ≤ r ≤ 2,5μm), medium (0,40 μm ≤ r ≤ 0,95 μm) and fine ones (r ≤ 0,40 μm).

To take into account influence of structural changes of initial water that occur in the process of its storage on the character of informational influence tables 1 and 2 contain its structural parameters observed before every act of influence.

Emotional Influence

Targeted emotional influence on water structure was executed 5 minutes long. To achieve it the cuvette with water sample after measuring of scattering indicatrix $I(Q)_{int}$ was places before the operator on the distance of 30-35 cm. The operator formed his psychological state according to definite emotion and kept it with the help of mental word support during the indicated time. After the influence the dependence $I(Q)_{inf}$ was measured once again.

In overall any emotional influence manifested itself in changes of all structural parameters: set of clusters, their sizes and concentration. Given relative indicatrices of scattering $R(Q)=I(Q)_{inf}\,[I(Q)_{int}]^{-1}$ in fig.1 [6] and in table 1 ones of cluster sets and sizes as well as integral intensities of scattered light I_{Σ} prove the fact that character and degree of change of structural parameters depended significantly on the emotional "content".

Thus, emotion of divine love (love to the world without claiming it [8]) lead to increasing concentration of clusters of all sizes and to the most degree that of the fine ones. Total concentration of clusters N_{Σ} proportional to integral intensity of scattered light I_{Σ} numerically equal to the square under the curve I (Q) [6] increased 44% compared to its initial value.

Emotion of hatred caused changes in sizes of oversize and medium clusters and significant decrease of fine clusters concentration. Total concentration of clusters N_{Σ} decreased 14%.

Emotion of envy stipulates insignificant increase of oversize cluster sizes and increase of fine clusters concentration. Total concentration of clusters N_{Σ} increased 7,5%.

Emotion of condemnation lead to both size increase of oversize and some fine clusters and decrease in concentration of large cluster and fine clusters, whereupon fine clusters concentration of various sizes was significantly reduced. Total concentration of clusters N_{Σ} decreased 3%.

Dependence of character and degree of water structural change on "content" of emotion is according to [6] resulted from spin redirecting of oxygen atoms clusters and free hexagonal rings $(H_2O)_6$ caused by three-dimensional configuration of torsional soliton of emotion emitted by the operator.

Influence by Neutral Information

Here neutral is referred as narrative information not accompanied by any emotions. In the given experiment the operator rendered informational content which in one case concerned functional principle and construction of a laser and in the other case referred to seasonal change, alternation of day and night, transport schedule i.e. it was an informational "mixture".

In fig. 2 relative scattering indicatrices are given and in table 2 represents sizes of clusters r and value of integral intensity of scattering I_{Σ} reflecting their total concentrations N_{Σ} under indicated variants of influence. Given data testify to the fact that influence of the uniform information lead to increase N_{Σ} 13,3% as well as to increase of the set and sizes of oversize clusters. Influence by informational "mixture" also stipulated increase of concentration, a set and sizes of oversize clusters, however in the given case there was decrease of clusters concentration of all other sizes. As a result value the N_{Σ} decreased 11%. Moreover in both cases influence also lead to insignificant decrease of sizes of some large, medium and fine clusters (table 2).

The difference of change directions N_{Σ} under the two variants of influence was stipulated by specific nature of water spin redirecting process. According to [6] this process consists of first phase – turn of some oxygen clusters atoms on to definite angles relatively their initial position that might lead to partial or full destruction of clusters. The second phase which is longer contains formation of new spin structure by changing sizes and a form of initial clusters (see below) and build-up of new ones with spin orientation of oxygen atoms which corresponds to spin configuration of influencing torsional waves. Evidently, under influence of uniform information the first phase of restructuring was de facto single fold and the second phase was prevailing that determined dominance of the formation process of spin-oriented large, medium and fine clusters.

Diversity of informational "mixture" caused multiple reproductions of the first stage of different spin configuration and insufficient duration of the second phase which was followed by predominant destruction of large, medium and fine clusters.

In the process of spin restructuration of oversize clusters the first phase was almost absent because of their high mechanical strength [6]. Formation of new and increase of sizes existing in initial water of oversize clusters was realized accordingly by binding and splicing on the surface of spin oriented free hexagonal rings $(H_2O)_6$ as well as clusters fragments of fine sizes destroyed in the first phase.

Influence by Prayer

Influence of canonic Christian prayer on water structure was executed by numerous mental reproduction of it text during 10 minutes before cuvette with tested water. In fig. 3 its relative scattering indicatrices are represented under various exposure time t_{exp} after the influence. The received data imply that in the reproduction process of the prayer there was insignificant decrease of concentration of fine clusters and to a lesser extent of medium ones as a result of which total concentration of clusters N_{Σ} decreased 5%. Repeated measurement of dependences $I(Q)_{inf}$ in t_{exp} =1,5 hour educed significant growth of clusters concentrations of all sizes and to the greater extent the one of fine and medium clusters as well as formation of new oversize clusters with r ≈ 3,5- 4,5 μm absent in initial sample which lead to 38,5% increase of N_{Σ} (fig. 3, curve 2). With following increase of t_{exp} up to 4,5 hours the process of restructuring lasted and lead to further increase of oversize and large clusters, probably, due to binding of fine clusters the concentration of which decreased (fig.3,curve 3). As a result of such redistribution total concentration of clusters N_{Σ} increased in overall 40%.

The received data testify to the long-term self-dependent existence of torsional soliton of a prayer and about long period of its influence on water structure. In the given experiment the study of informational influence on the form of clusters is also represented. Figure 4 represents forms of one of the medium clusters in horizontal and vertical planes of initial sample(a) and the one having been influenced by a prayer (b). Table 3 shows average values of radii $\bar{r}$ and root-mean-square derivations of radii r from the corresponding values $\bar{r}$. Figure 4 and table 3 imply that the form of the cluster of initial water is rather spherelike which is confirmed by little difference of values $\bar{r}$ in horizontal plane ($\bar{r}_{II}$) and vertical one ($\bar{r}_{\perp}$) making $\Delta\,\bar{r}=\bar{r}_{II}-\bar{r}_{\perp}\approx 4\%$ as well as insignificant values of corresponding root-mean-square derivations ∂_{II} and $\partial_{\perp}$.

The cluster form having been influenced was less spherelike- difference $\Delta\,\bar{r}$ increased up to 4,5% and values ∂_{II} and $\partial_{\perp}$ increased twice as much comapres to their values in initial water and exceeded limiting values of definition error r [9]which testifies to the reality of changes in a cluster form. Having been influenced the size of a cluster also decreased. Values $\bar{r}$ in both planes were less approximately 4% compared to the according values $\bar{r}$ in initial water. Thus informational influence stipulated formation of developed surface relief of a cluster , decrease of its size and increase of nonspheric degree. Mechanism of observed transformation of a form is reviewed in the section "Discussion".

Temporal Dependence of Informational Influence on Water Structure

Temporal dependence of mental influence on parameters of structure was defined under additional increase of influence time t in the interval 2≤t≤10 minutes and exposure time t_{exp} after influence was over in the interval 4 hours ≤ t_{exp}≤ 29 hours.

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Influence lead to formation of new oversize clusters the sizes of which were both smaller and bigger that those of the present ones in the initial water and their set grew with t increase (table 4) under simultaneous significant decrease in concentration of medium and fine clusters as following from presented in figure 5.a relative scattering indicatrices under various values t. Temporal dependence of integral scattering intensity $I_{\Sigma}(t)$ reflecting time change of total cluster concentration $N_{\Sigma}(t)$ was a decreasing function with growth t (fig. 6). The observed character of restructuring testifies to the fact that formation of new oversize clusters is connected to binding of spin oriented medium and fine clusters.*

During 4-hour exposure after having been influenced sample structure underwent some changes testifying to the continuation of restructuration process in this period of time (table 4; fig.5b) . With further increase t_{exp} gradual destruction of most oversize clusters occur followed by formation of smaller clusters fragments from them. For the observation period considerable reconstruction of medium and fine clusters concentration took place as a result of which dependence $N_{\Sigma}(t)$ grew while t_{exp} increased (fig.6)

It should be noted that except mentioned structural changes during exposure there was change of view of interferential images of the scattered light on oversize clusters under various values t_{exp} , in particular generation of conspicuous interferential maximum of zero order under Q ≈40° on longer exposure terms (fig. 5.b) which is evidently connected to change of dimensional scatter of oversize clusters.

It was discovered that time of water memory retention increased when its volume grew as it is shown in comparison of curves 2 and 2` in fig.6 reflecting dymanics in dependences changes $I_{\Sigma}(t_{exp}) \sim N_{\Sigma}(t_{exp})$ of water samples of various volumes.

*"Unidirectional" spin orientation of these clusters caused by numerous influence of one and the same informationally short torsional soliton stipulates their strong mutual attraction and binding.

Mechanical Influence

Mechanical influence was executed by energetic shaking, jerking of a cuvette which was 2/3 full with tested water during 1 minute. Initial sample contained oversize clusters with r=3,10 -3,46 μm, the large ones with r=1,36-1,50 μm, medium with r= 0,73 μm and fine clusters with r≤0,26 μm of various sizes. Under completion of influence scattering indicatrices in various time periods t_{exp} in the interval 2 min≤ t_{exp} ≤ 102 hours were measured.

The given influence mostly changed concentration of various sizes clusters without alteration of its set and decreased the sizes of oversize clusters insignificantly (up to r=2,75 -3,40 μm).

Presented in fig 7 relative scattering indicatrices imply that immediately after the influence significant decrease in concentration of fine clusters took place which is also proved by values R(Q)<1 in angular spacing Q> 30° and inconspicuous decrease in concentration of larger clusters which is indicated by values R(Q)≤1 close to 1 in small-angular domain Q <20° (fig.7.a,curve 1).

Increase of t_{exp} lead to reconstruction in concentration of medium, large and oversize clusters during 1 hour (R(Q)=1 in angular spacing Q≤ 20° in fig.7.a.curve2), partial increase in concentration of fine clusters during 10-11 hours. It is clear from the temporal dependency $I_{\Sigma}(t_{exp})$ represented in fig. 7.b that under t_{exp} ≥ 11hours the value I_{Σ} leveled off being less $I_{\Sigma\ int}$ 13%. Thus the given influence also caused changes in structural properties of water. However, unlike informational influence when restructuring resulted from torsional field of a thought or emotion in the this case it was stipulated by kinetic energy of moving water inducing collision of clusters among them and the one with walls of the cuvette that lead to their destruction.

Peculiarity of mechanical restructuring was the fact that fine clusters were destroyed most of all. It proves the conclusion drawn previously about higher mechanical strength of large-scale clusters which is provided by formation in their volume internal planes, strengthening their construction.

In the given case spin cluster configuration that "memorized" mechanical influence results from structural state of water created by this influence. The other peculiarity of mechanical influence is that the reconstruction degree of water structure after it was smaller than after informational influence for the observation period which is implied from comparison of dependencies $I_{\Sigma}(t_{exp})$ represented in fig. 7.b. and fig 6.curve2. This fact can be rendered as more long-standing preservation of mechanical influence in water memory compared to the informational one.

Discussion

Nature of Brain Memory

Set of experimental data given in the present and previous articles [6] makes it possible to determine basic characteristics of water memory under informational influence:

1. Water definitely recognizes the character of influencing information: its own spin –oriented configuration of cluster structure corresponds to every of informational type and content.

2. Memorization degree of influencing information by water grows up with the increase of influence time (the number of repetition) as well as with increase of water volume. The process of memorization continues for a while after the influence is over.

3. Water builds up two types of memory – short-term and long-term. The former is fixed in fine clusters and the latter is fixed in large and oversize clusters.

4. Water memory has an ability to forget previously received information which is manifested as recovery (which is partial during the investigation period) of the initial structure. As the volume of tested water increases the speed of forgetting decreases.

The mentioned water characteristics are similar to characteristics of human brain memory. This analogy makes it possible to state that material carrier of human memory is also water which is in the neural system of the brain presumably in neurons themselves which consist of water up to 84% that is the basis for cytoplasm [11].*

To confirm the drawn conclusion we can provide results of mechanical influence on water structure. Given influence is equivalent to concussion followed by possible loss of consciousness and long recovery period of brain activities. Experimental data correspond to the mentioned symptoms. Harsh mechanical influence causes significant destruction of fine clusters which leads to their total concentration decrease N_{Σ} to 23% . The latter can be associated with loss of consciousness and the process of initial structure recovery is slower than the one under informational influence. It should be noted that there exist almost absolute similarity of relative scattering indicatrices under mechanical influence and under influence of hatrid emotions (fig 7 and fig 1 curve 1 correspondingly).

Identity of water memory nature and the one of the brain makes it possible to explain previously unknown mechanisms of brain memory formation and its other aspects based on experimental results. It makes also possible to discuss consciousness nature and assumed mechanisms of its origin development and degradation. It is presumed that brain memory formation which is spin configuration of oxygen atoms in cluster structure of its water is accomplished by two mechanisms. The first one corresponds to the level of consciousness which provides all physiological and vital needs of an organism. It is executed under information input into the brain in the way of electric impulses (action potentials). Such impulses are variety of alternating current the characteristic of which is motion of electric charges and formation of electromagnetic field. The work [5] theoretically proves induction of torsional field by immobile or moving electric charges as well as by electromagnetic waves. Torsional component was experimentally discovered in emission of lasers and emitting diodes [13,14].

This explains the function of electric impulses in memory formation. Moving along nerve channels electric impulses cause torsional field which forms corresponding spin configuration in clusters of neuron water. Taking into consideration that a neuron can pass impulses to a number of other neurons (a neuron creates up to 10^3-10^4 synaptic connections with other neurons) in various parts of cerebrum the formed spinal memory configuration can be distributed over the significant part of the brain or further all over its volume. The other mechanism of memory formation lies in direct formation of new spin structure by its own torsional field of the brain which is total of spin configurations of water neurons clusters. Such a structure corresponds to the information which was created in it during the thinking process. Moreover according to the conception of field consciousness mechanism [4],the torsional field of the brain can also interact with torsional fields of physical vacuum the spin structures of which are similar to the ones of the brain.

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In this case the mutual attraction arises among them which is characteristic to similar torsional charges [15] and followed by the further entry of external spin configuration into the brain. This fields interaction is manifested in consciousness as sudden idea that strikes mind or insight which is inherent to creative character of thinking.

Under such mechanism of memory formation neuron sensor system is not engaged. The prototype of the latter mechanism is the method of mental influence on water which was used in the present work.

*It is infeasible to conduct direct research of cytoplasm characteristics of living men which makes it impossible to experimentally prove ability of its main component –water- to structurize. Indirect proof of such an ability can be experimental data of structural characteristics of blood serum [12] which has correlation of water and solid ingredients close to the one in cytoplasm.
Influence was executed by numerous mental "utterance" of words "love and gratitude" with corresponding emotional accompaniment. According to the data of M. Emoto [10] these words provide the most perfect form of microcrystals of ice when being frozen.

Short-term and long-term memory

The given data prove that formation of spin structure that remembers information is accompanied by change in concentration, sizes, forms and cluster set.
The most significant change of concentration is characteristic to fine clusters. The change of sizes and form is determinant to larger clusters. Such difference in exposure of influencing information on structural water characteristics is evidently connected to dependence of clusters mechanical strength from their sizes [6].

Being less strong fine clusters can easily disintegrate in the process of spin repositioning at the stage of deleting the information which was previously kept in them and then quickly form again with well-regulated spin configuration at the stage of recording the information which influences them. That`s why it is fixed by fine clusters in the first turn and to the greater extent. As a rule the memory of such clusters formed by narrative information is short-term since due to its little informative capacity it is erased either totally or to larger half by new spin repositioning under the next informational influence of other content.

Under influence of discrete information memory of fine clusters can become long-term in the result of bonding them in large and oversize clusters.*

In medium clusters having higher mechanical strength then the fine ones influencing information destroys only surface layer which is followed by insignificant decrease of theirs sizes and partial destruction of previous information (fig. 4; table 3).

In the strongest large and oversize clusters destruction degree of surface layer under the influence is the least which provides almost full storage of previous information in them for a long time.

Fixation of new information in these clusters occurs by adjunction of spin-oriented hexagonal rings or larger fragments to their surface which leads to the change of surface relief (fig.4) and as a rule to the increase of cluster sizes (tables 1;2;4). New spin structure overlaps with the old ones formed under previous influences. Each of the following informational influences stipulates build-up of a next spin-oriented lap which is a fragment of definite spin configuration in a separate cluster. As a result each of these clusters is a simultaneous carrier of fragments multitude of various spin configuration spread all over the cerebrum volume in multitude of other clusters.

Based on the given discussion a conclusion can be drawn that carriers of long-term memory of the brain are mostly oversize and large clusters and in the least extent – medium clusters.

Observed while the experiment increase of long-term memory along with volume increase of perceiving water (fig. 6) is directly connected to quantity increase of clusters involved in memory formation

Experimental data prove that duration of water memory and remembrance degree are influenced not only by factors of size and volume but also other factors. They are influence time (amount of repetition), information type (discrete or narrative), its content, emotional and psychological aspect.

Herewith character of influence is similar to the one that is caused by the same factors on human memory. This analogy also proves veracity of conclusion about the nature of a cerebrum memory carrier.

*Due to its informational brevity discrete information causes almost identical spin orientation of oxygen atoms in different clusters that leads to its mutual attraction and bonding as it was observed in the experiment [fig.5].

Abatement of Memory

It is presumed that "natural" cause of abatement of accepted information of water and the one of the human brain is lies in destructive influence of spin structures formed by previous actions in the clusters themselves on new spin configuration if the latter doesn't correspond to resulting torsional field of old structures. This field partially destroys new spin configuration which is equivalent to some abatement of new information. The degree of discrepancy between configuration of torsional fields of old and new spin structures defines the speed and degree of abatement of new information. Abatement process experimentally manifests as gradual reconstruction of previous water structure (fig. 6; fig. 7.b).

In human cerebrum abatement process appears as incapability to restore the information in its full volume under recall of definite file. On the other side the next spin configurations accumulated in the brain evidently also influence the old ones gradually destroying them and erasing memory of past information.

In contrast to examined mechanism of memory abatement stipulated by spin-spin interaction the nature of age-related memory aggravation verging to anility of different severity degrees is not finally determined. Main assumption about physiological cause of this pathology is considered to be impairment of brain cells caused by formation and accumulation in them experimentally observed protein plaques and in more severe cases neurofibrillary tangles are present which are formed by twisting protein fibers [16].

Based on this assumption the statement can be made that the presence of mentioned pathologic formations cause destruction of oversize and large clusters of water neurons as a result of which spin structures of long-term memory are destroyed with further loss of memory. Indirect prove of the statement are symptoms of anility which implies the behavior of a patient having severe stage of the affliction similar to the one of a baby having no long-term memory.

About Origin and Mechanism of Consciousness

It is possible to expose some assumptions about origin and mechanism of consciousness due to given in the work results and drawn conclusions about nature and mechanism of brain memory formation. A baby is born conscious free and stays in this condition for a definite period of time during which the vital processes of its organism are provided by reflectory mechanisms. It is assumed that nature of such unconsciousness is stipulated by statelessness of intercellular brain water of a baby. Authenticity of the given statement is based on the before mentioned experimental data testifying that reaction of water to external impacts and its memory are preconditioned by cluster constituent.

Evidently, in the unconscious period formation of hexagonal rings $(H_2O)_6$ occurs in water of cerebrum. Then they gradually interlock into small clusters. First attributes of consciousness appear with increase of their concentration. They are mother identification, reaction to toys and etc. These signs testify to the

formation of fine-cluster water structure in which separate, extremely simple, almost local short-term spin memory configurations can develop. They correspond to influencing through neuron censors external information. A baby starts to fragmentarily perceive the world.

While coming of age the brain volume increases along with water in it and consequently does the clusters quantity. This provides possibility for the brain to perceive more volumetric and complicated information because the more developed cluster structure lets more elaborate spin configurations seizing bigger brain sectors. But the most repeated influencing on the brain information is mainly remembered (mother`s face and voice, her caress, feeding, child care and etc). Process of remembering and deepening of this memory stipulates growth of clusters sizes that perceive given information – future carriers of long-term memory which starts forming in such a way.
It is assumed that accumulation of definite memory volume and formation of its spin structures which partially dimensionally overlap each other * is mandatory condition of ability to think.

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Interaction between overlapping spin memory configurations by their torsional fields can cause new spin configurations that are according to [5,17]physical carriers of thoughts and emotions. These spin configurations of thinking can form other spin configurations of thinking interacting between them and, thus, generating flow of thoughts which is the process of thinking. Uprising of cognition is final stage of consciousness formation. Hence, on the physical level consciousness represents on-going process of formation and destruction of spin thinking structures of brain water cluster which is determined by their interaction between themselves and spins structures of memory by their torsional fields. The given statement corresponds to the previously expressed assumption that consciousness is based on field informational interactions [4].

Further development of consciousness is connected to accumulation in memory diverse information with increasing complexity and scale when growing-up.

Such information forms spin memory structures in clusters which spreads in most part of the brain or all over its capacity. High overlapping concentration degree of such dimensionally amplitudinous spin configurations determines their significant interaction which can lead to development of conceptuality , creativity, perception expansion and its development to higher levels under accumulation of gnostic information which corresponds to principles of higher ethics and encouraging development of spiritual human component.

Absence or cease of information accumulation cause consciousness development halt which is followed by further degradation. The example of such a halt in childhood can be children-Mowgli. In adulthood consciousness of of majority of people on the planet is a tool to satisfy mostly physiological and material needs of a body. Such unambiguous orientation of human consciousness to serve its lowest nature and excluding perfection of basic spiritual aspect of human essence from the its functions represents termination of consciousness development. Inevitable consequence of it is abatement of memory slipping into anility.
Experimental data prove that dynamic transformation of spin configurations in thinking process can be either under its localization under fine clusters in which spin redirecting of oxygen atoms occurs in a more rapid and easier way.

*Term "overlapping' implies situation when one and the same cluster is an element of two or more spin structures of memory simultaneously. Degree of their overlapping increases with the increase in number of such clusters.

Conclusion

1. Experimentally stated analogy of water memory characteristics and the ones of the cerebrum testifies to the fact that brain memory has field torsional nature. Physical carrier of it is spin oxygen atoms configurations of water clusters which are in brain cells.

2. Brain memory formation occurs due to both neuron censor system and its no influence. In the former case function of electric impulses is induction of torsional fields that create corresponding spin memory configurations. In the latter case new spin configurations of memory are molded because of torsional fields interaction that are in spin configurations of the brain between them as well as the one with torsional fields of physical vacuum.

3. Short-term and long-term types of memory are connected to dependence of mechanical strength of water clusters on their sizes. Short-term memory is located in fine clusters that are less strong and that`s why easily destructed in the process of spin redirecting while long-term memory is located in large and oversize clusters. High strength of the latter prevents them from being destroyed and provides preservation of information for a long time.

4. "Natural" cause of forgetting information previously kept in memory is destructive mutual influence of spin memory structures torsional fields of which do not correspond to each other. Nature of age memory aggravation slipping into anility is determined by accumulation of pathological protein formations which destroy oversize and large clusters. These clusters are carriers of long-term memory.

5. On physical level consciousness represents on-going process in formation and destruction of spin thinking structures. The thinking process is determined by their interaction between themselves and the one with spin structures of memory by their torsional fields.

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Tables and Figures

Table 1 Parameters of Clusters Having Been Influenced by Various Emotions

№	Water sample state	r, µm	IΣ, %
1	Initial	6,70; 1,58; 0,90; 0,54; 0,42	100
	Influence by emotion of love	6,70↑; 1,58↑; 0,90↑; 0,54↑; 0,43↑; 0,16-0,33↑	144
2	Initial	4,45-6,70; 2,75; 1,36; 0,86; 0,48; 0,36; 0,27	100
	Influence by emotion of hatred	3,50-5,35; 1,36↑; 0,79-0,86↑; 0,59-0,68; 0,36↓↓; 0,27↓↓	86
3	Initial	2,50-4,0; 1,58; 0,95; 0,54; 0,36; 0,26	100
	Influence by emotion of envy	2,75-4,45; 1,58↓; 0,95; 0,54; 0,36↑; 0,26↑	107,5
4	Initial	5,35; 1,19; 0,59; 0,37;0,30	100
	Influence by emotion of Condemnation	6,70↑; 1,19↓; 0,59↑; 0,35↓; 0,31↓	97

Note to tables 1and 4: Arrows at some values of clusters radii indicate decrease (↓) or increase (↑) of their concentration according to previous value.

Table 2 Parameters of Clusters Having Been Influenced by Neutral Information

№	Water sample state	r, µm	IΣ, %
1	Initial	4,0-5,35; 1,58;1,06; 0,68; 0,54; 0,40; 0,25	100
	Monotopic influence	4,20-6,7; 3,7; 1,58; 0,95; 0,66; 0,53; 0,40; 0,28; 0,24	113,3
2	Initial	2,90-3,46; 1,46; 0,95; 0,68; 0,53; 0,43; 0,37; <0,24	100
	Multitopic influence	4,45-6,7; 3,1-3,46; 1,46; 0,95;0,63; 0,53;0,43; 0,35; <0,24	88,9

Table 3 Geometric Cluster Parameters of Initial Sample and the One Having Been Influenced by Prayer

Water sample state	Horisontal plane			Vertical plane		
	r̄|| ,µm	δ||, µm	δ|| ,%	r̄| , µm	δ| , µm	δ|, %
Initial	0,48	0,026	5,6	0,46	0,022	4,8
Prayerful influence (texp=4,5 h)	0,46	0,042	9,2	0,44	0,035	7,5

Table 4 Values of Cluster Parameters under Various Time Length of Influence *t* and Exposure after It t_{exp}

№	t; texp; minutes	r, µm	IΣ, %
Influence			
1	0(Initial)	4,45; 1,58; 0,91; 0,51; 0,37;0,26	100
2	2	4,45; 3,46; 1,58; 0,95; 0,52↓; 0,34↓; 0,26↓	93
3	5	5,37; 4,45; 2,75; 1,58↑; 0,95; 0,51; 0,26↓	92
4	10	6,70; 4,45; 2,90; 1,58↑; 0,93; 0,54↓; 0,26↓	87,3
Exposition after influence			
5	240	6,70; 4,45; 3,96; 1,58; 0,95; 0,55	85
6	780	6,70↓; 4,45; 3,46; 2,75; 1,36; 0,95; 0,51	90,3
7	1230	6,70↓; 4,45; 3,46;2,50; 1,58↑; 0,93; 0,53↑; 0,26	94
8	1750	6,70↓;5,35; 4,45↓; 3,96; 3,46; 1,36↑; 0,91; 0,53; 0,26↑	93,2

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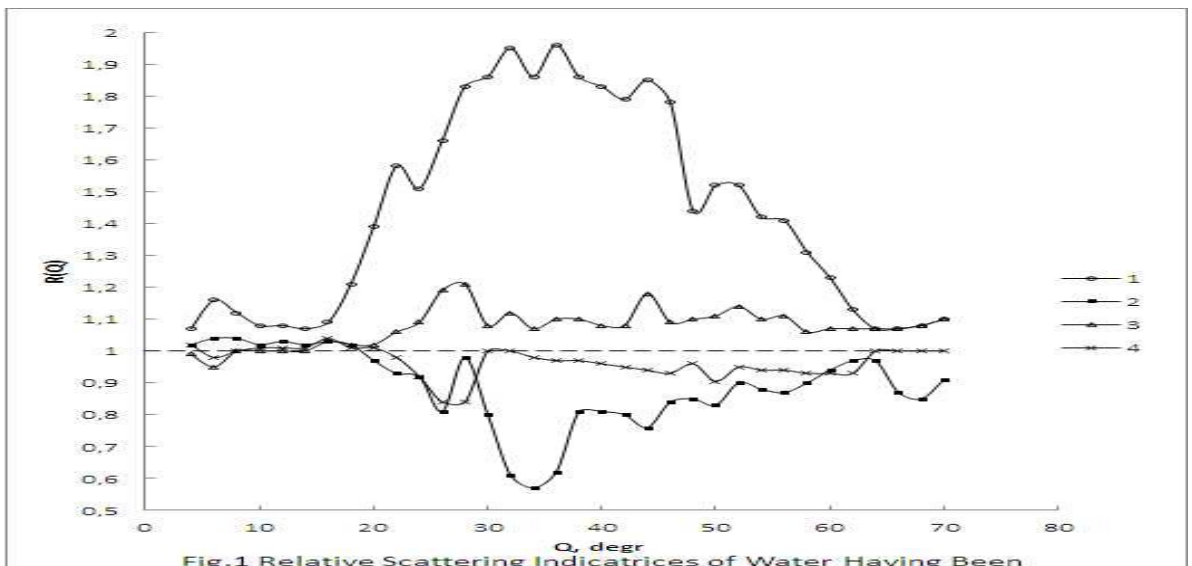

Fig.1 Relative Scattering Indicatrices of Water Having Been influenced by Emotions of Divine Love (1), Hatred (2), Envy (3), Condemnation (4)

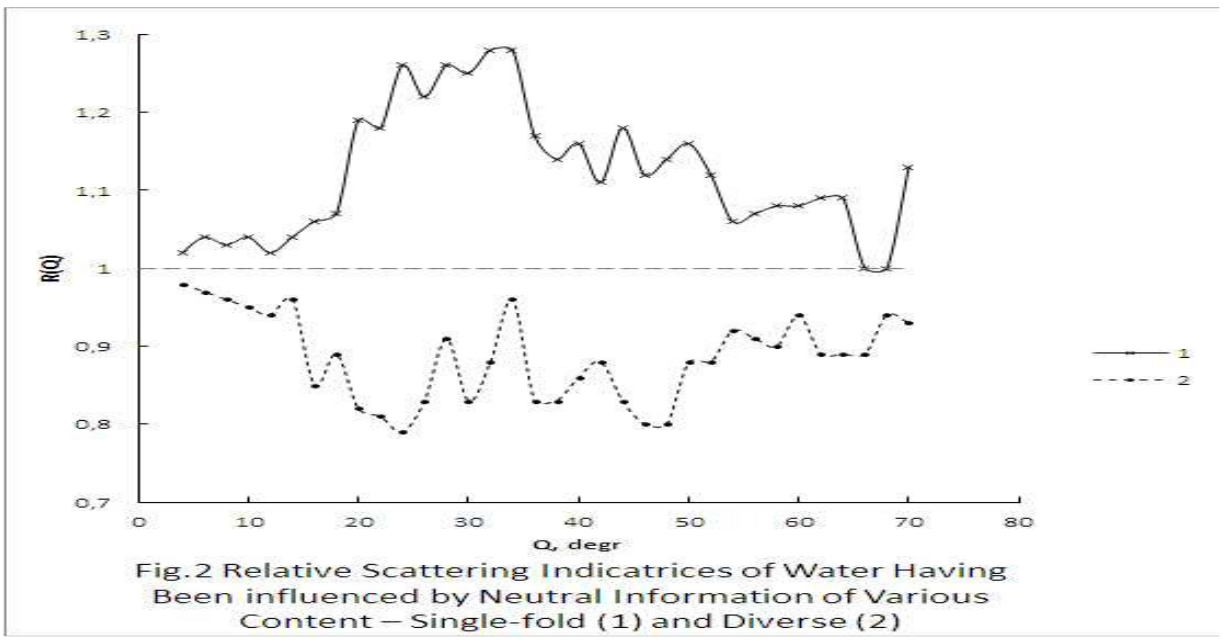

Fig.2 Relative Scattering Indicatrices of Water Having Been influenced by Neutral Information of Various Content – Single-fold (1) and Diverse (2)

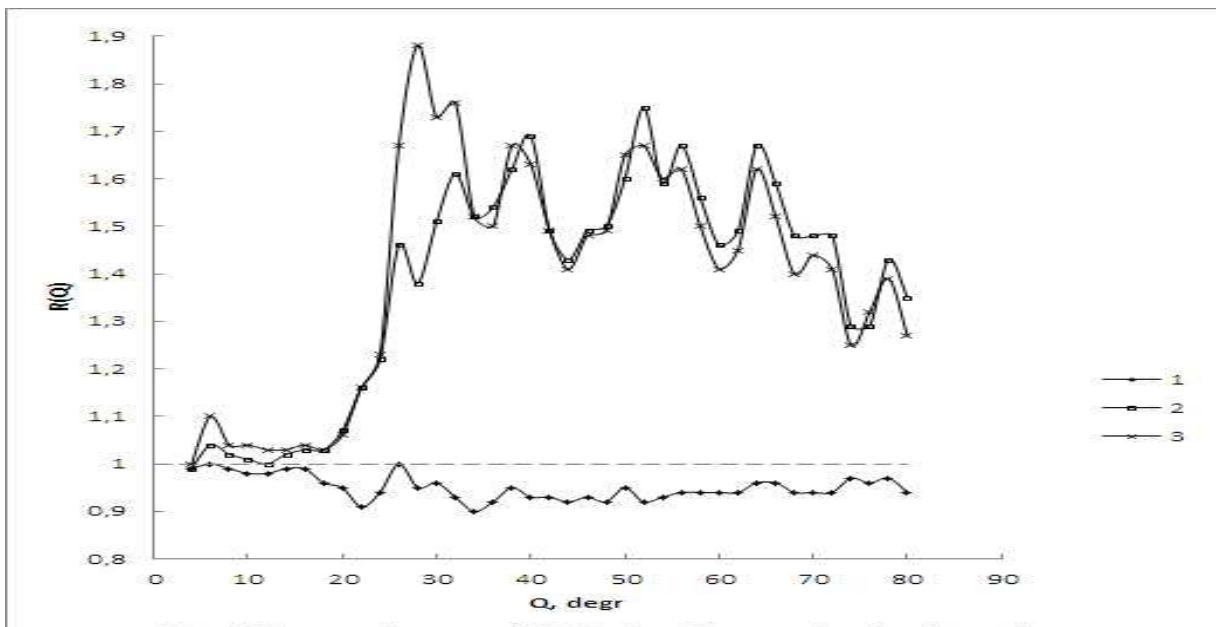

Fig.3 Dependency of Relative Scattering Indicatrices of Water on Exposure Time after the Sample Having Been Influenced by a Prayer $t_{exp.}$ min: 1-5; 2-90; 3-270

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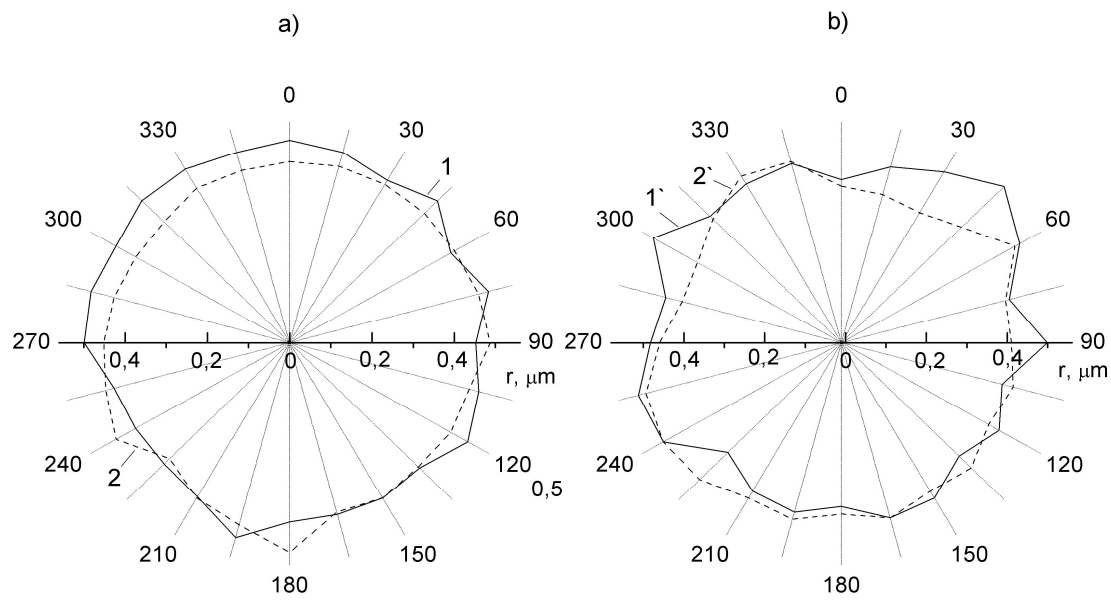

Fig. 4 Cluster Forms of the Initial Water Sample (a) and the Sample Having Been Influenced by a Prayer after exposure of 4,5 hour (b) Measured in Horizontal (1,1`) and Vertical (2,2`) Planes

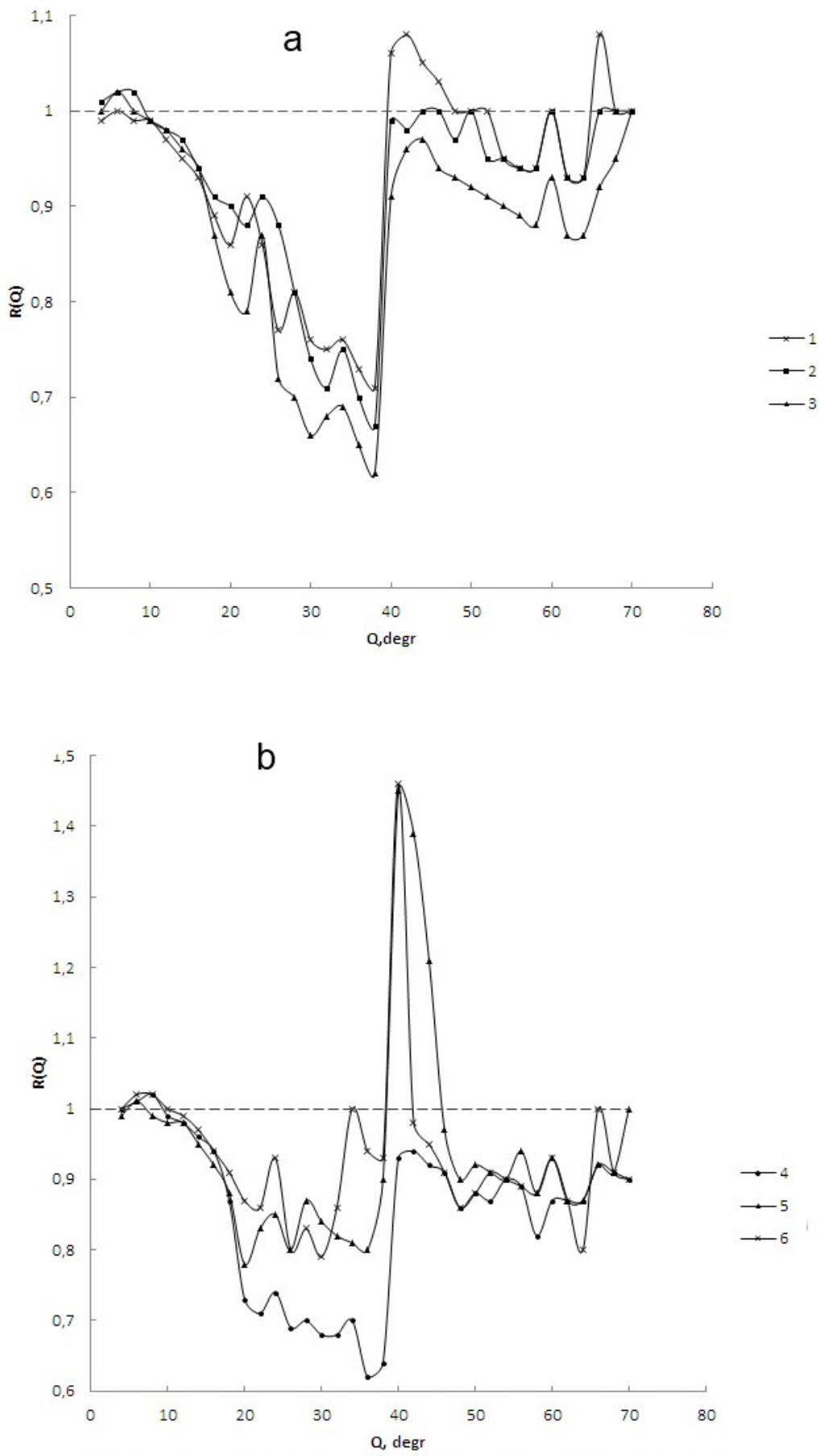

Fig. 5 Dependency of Relative Scattering Indicatrices of Water on Time of Mental Influence *t* by words "love and gratitude" (a) and Exposure Time t_{exp} after the Sample Having Been Influenced (b)
t, min; 1-2; 2-5; 3-10. t_{exp}, min: 4-240; 5-1230; 6-1650.

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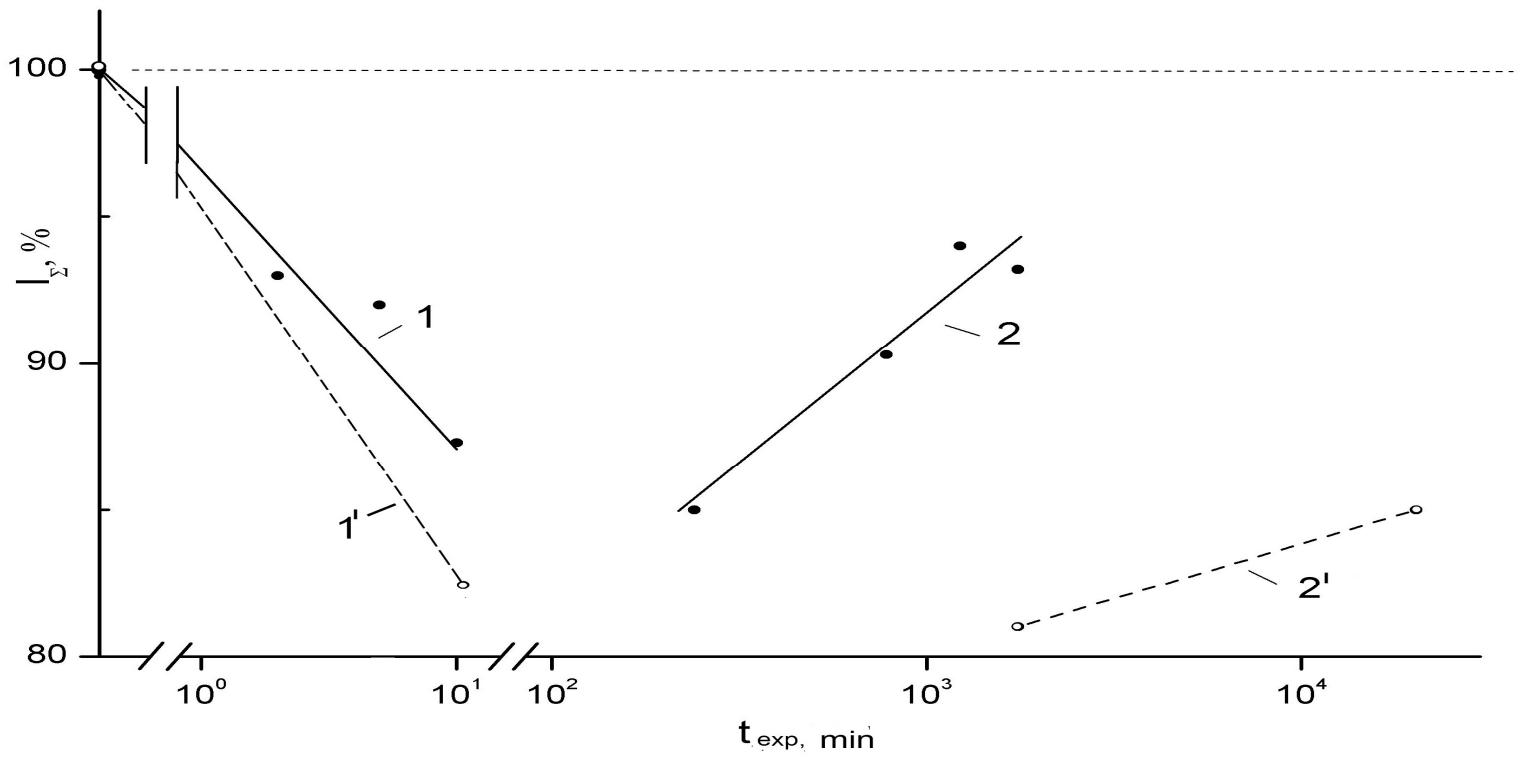

Fig.6 Temporal Dependences of Integral Intensity of Scattering under Influence (t)
by words “love and gratitude” (1,1`) and Exposure texp, after the Sample Having Been Influenced (2, 2`)
Volume of the Tested Sample V, cm3:1; 2-5; 1`;2`- 700

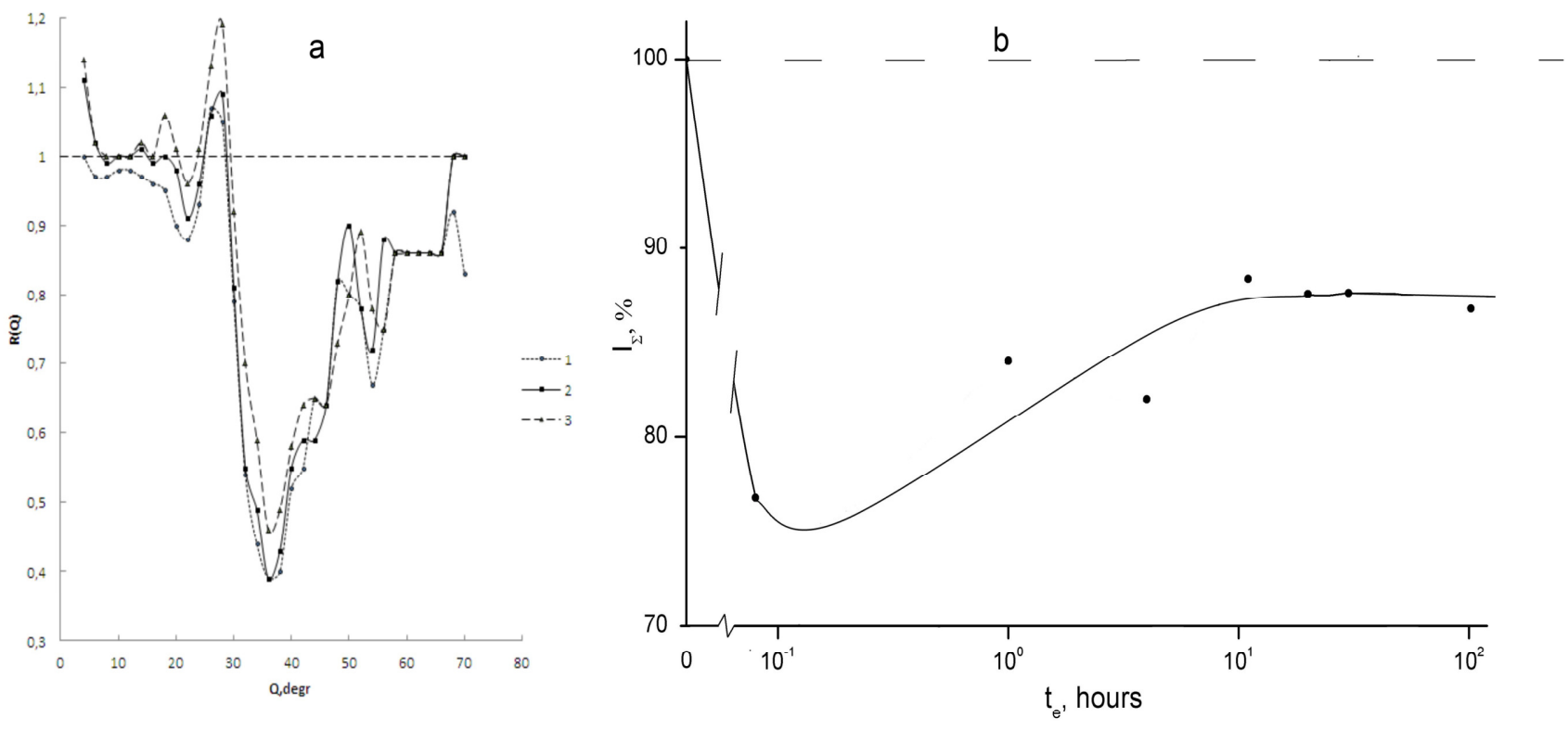

Fig.7 a) Relative Scattering Indicatrices of Water Sample under Various Exposure Time texp after Mechanical Influence on the Water Sample texp, min: 1-5, 2-60; 3-6120.
b) Dependency on Integral Intensity of Scattering on Exposure Time texp after Mechanical Influence on the Water Sample

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