

TGD view about homeopathy, water memory, and evolution of immune system

M. Pitkänen

Email: matpitka@luukku.com.

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Abstract

This article represents a brief sketch of TGD based model of water memory and homeopathy as it is after two steps of progress. First one was due to Pollack's findings about exclusion zones of water explained in terms of fourth phase of water. Second step or progress was inspired by an anomaly claimed by Tajmar et al and known as strong gravimagnetism. The attempt to understand the claim led to $h_{eff} = h_{gr} = h_{em}$ hypothesis unifying two TGD views about the notion of hierarchy of Planck constants proposed to characterize the phases of dark matter.

In this framework the attempt to understand homeopathy leads to additional insights about about water as living system and about prebiotic life as being based on the dark realization of genetic code realized in terms of dark proton strings which are nothing than dark variants of nuclei. Formation of exclusion zones would be formation of primitive lifeforms and primitive form of metabolism. Homeopathy could be seen as a manifestation of a fundamental form of immune system based on the recognition of invader molecules using reconnection mechanism for magnetic flux tubes and on mimicking the braiding of the magnetic bodies of invader molecules using dark variants of proteins (later proteins) and and eventually representing them symbolically in terms of dark DNA (later ordinary DNA) coding for the dark proteins. Genetic code might have geometric interpretation as coding for the 2-braiding of 3-D coordinate grids represented by magnetic flux tubes serving as the 4-D template coding not only for the structure of the organism but also its functions as spatio-temporal patterns. Protein folding would represent a behavior of protein and DNA would code also for it.

1 Introduction

Homeopathy and even water memory are cursed words in the materialistic science - in the same category as crop circles and UFOs. That water memory [I2, I3] is a real phenomenon that even homeopathy is something real is however suggests by large volume of researcher work: one example is the work of the group led by HIV nobelist Montagnier [I5]. Second example is the work by the group of Peter Gariaev [I6, I7]. Anyone having a unified theory consistent with existing physics but suggesting a revolutionary modification of world view, is of course interested in explaining anomalous phenomena and in this respect water memory and homeopathy are of maximal interest since they might pave the way to the understanding of fundamentals of living matter. I find this approach much more fruitful than the childish ridicule of researchers doing research at the frontiers of science.

This article represents a brief sketch of TGD based model of water memory and homeopathy as it is after two steps of progress. First one was due to Pollack's findings about exclusion zones of water explained in terms of fourth phase of water [I8, I1]. Second step or progress was inspired by an anomaly claimed by Tajmar et al [E1, E2] and known as strong gravimagnetism. The attempt to understand the claim led to $h_{eff} = h_{gr} = h_{em}$ hypothesis unifying two TGD views about the notion of hierarchy of Planck constants proposed to characterize the phases of dark matter [K2, K6].

In this framework the attempt to understand homeopathy leads to additional insights about about water as living system and about prebiotic life as being based on the dark realization of genetic code realized in terms of dark proton strings which are nothing than dark variants of nuclei. Formation of exclusion zones would be formation of primitive lifeforms and primitive form of metabolism. Homeopathy could be seen as a manifestation of a fundamental form of immune system based on the recognition of invader molecules using reconnection mechanism for magnetic flux tubes and on mimicking the braiding of the magnetic bodies of invader molecules using dark variants of proteins (later proteins) and eventually representing them symbolically in terms of dark DNA (later ordinary DNA) coding for the dark proteins. Genetic code might have geometric interpretation as coding for the 2-braiding of 3-D coordinate grids represented by magnetic flux tubes serving as the 4-D template coding not only for the structure of the organism but also its functions as spatio-temporal patterns. Protein folding would represent a behavior of protein and DNA would code also for it.

2 Summary of the basic facts and overall view

A concise summary of the basic qualitative facts about homeopathy [K3] could be following.

1. The manufacture of the homeopathic remedies consists of repeated dilution and agitation of water sample containing the molecules causing the effect which the remedy is intended to heal. This paradoxical looking healing method is based on "Alike likes alike" rule. This rule brings in mind vaccination causing immune system to develop resistance. The procedure seems to somehow store information about the presence of the molecules and this information induces immune response. Usually it is the organisms or molecules causing the disease which induce immune response.
2. The ultra-naive and simplistic objection of skeptic is that the repeated dilution involved with the preparation of homeopathic remedy implies that the density of molecules is so small that the molecules can have absolutely no effect. Despite the fact that we live in information society, this is still the standard reaction of a typical skeptic.
3. A lot of research is done by starting from the natural idea that the electro-magnetic fields associated with the invader molecules (or more complex objects) represent the needed information and that water somehow gets imprinted by these fields. This could for instance mean that water clusters learn to reproduce radiation at frequencies characterizing the invader molecule. Benveniste is one of the most outstanding pioneers in the field [I2]. Benveniste et al [I3] even managed to record the VLF frequency finger print of some bio-active molecules and record them in binary form allowing to yield the same effect as the real bio-active molecule induced. Benveniste was labelled as a fraud. The procedure used by the journal Nature to decide whether Benveniste is swindler or not brings in mind the times of inquisition. It tells a lot about attitudes of skeptics that magician Randi was one member of the jury!
4. Benveniste's work has been continued and recently HIV Nobelist Montagnier produced what might be regarded as remote replication of DNA using method very similar to that used in manufacturing homeopathic remedy [I4, I5].

The general conclusion is that the em frequencies possibly providing a representation of the molecules are rather low - in VLF region - so that frequencies assignable to molecular transitions are not in question. Cyclotron frequencies assignable to the molecules are the most natural candidates concerning physical interpretation. The corresponding photon energies are extremely low if calculated from $E = hf$ formula of standard quantum mechanics so that quantal effects in the framework of standard quantum theory do not seem to be possible.

My personal interest on water memory was sparked by the work of Cyril Smith [I9]. What I learned was what might be called scaling law of homeopathy [K3]. Somehow low frequency radiation seems to be transformed to high frequency radiation and the ratio $f_h/f_l \simeq 2 \times 10^{11}$ seems to be favored frequency ratio.

These two basic findings suggest what looks now a rather obvious approach to homeopathy in TGD framework. The basic physical objects are the magnetic bodies of the invader molecule and water molecule cluster or whatever it is what mimics the invader molecule. The information about magnetic body is represented by dark cyclotron radiation generated by the invader with frequency f_l . This dark radiation is transformed to ordinary photons with frequency f_h and energy $h_{eff}f_l = hf_h$, which is above thermal energy, most naturally in the range of bio-photon energies so that the radiation can directly induce transitions of bio-molecules. The analogs for the EZs discovered by Pollack are obvious candidates for "water molecule clusters".

The following summarizes this overall picture in more detail.

3 The TGD based model

3.1 Dark photon-bio-photon connection

The idea that bio-photons are decay product of dark photons emerged from the model of EEG [K1] in terms of dark photons with energies above thermal energy. Dark photons in question would be emitted as cyclotron radiation by various particles and molecules, perhaps even macromolecules like DNA sequences. Also cell membrane would emit dark photons with frequencies, which correspond in good approximation to differences of cyclotron energies for large value of $h_{eff} = nh$ [K5, K1].

1. Bio-photons have spectrum in the visible and UV would decay products of dark cyclotron photons. If the h_{eff} of particle is proportional to its mass then the cyclotron energy spectrum is universal and does not depend on the mass of the particle at all. The original model of EEG achieved this by assuming that h_{eff} is proportional to the mass number of the atomic nucleus associated with the ion.
2. The ideas about dark matter involve two threads: $h_{eff} = n \times h$ thread motivated by biology and the thread based on the notion of gravitational Planck constant and inspired by the observation that planetary orbits seem to obey Bohr rules. $h_{gr} = GMm/v_0$ is assigned to the pairs of gravimagnetic flux tubes and massless extremals making possible propagation of dark gravitons. The realization was the two threads can be combined to single thread: by Equivalence Principle h_{gr} hypothesis is needed only for microscopic objects and in this case $h_{eff} = h_{gr}$ makes sense and predicts that dark photon energies and dark particle Compton lengths do not depend on particle and that bio-photon energy spectrum is universal and in the desired range if one assumes that h_{gr} is associated with particle Earth par with v_0 the rotational velocity at the surface of Earth. Even $h_{eff} = h_{em} = h_{gr}$ hypothesis makes sense. $h_{em} = h_{gr}$ is also very natural assumption for ATP synthase which can be regarded as a molecular motor whose rotation velocity appears in the formula for h_{em} .
3. The prediction would be that any charged system connected to Earth by flux tubes generates cyclotron dark photons decaying to bio-photons. Bio-photons in turn induce transitions in biomolecules because the energy range is in visible and UV. Magnetic bodies can control biochemistry via resonant coupling with bio-photons.

3.2 Molecular recognition mechanism as basic building brick of primitive immune system

The reconnection of U-shaped magnetic flux tubes emanating from a system makes possible a recognition mechanism involving besides reconnection also resonant interaction via cyclotron radiation which can induced also biochemical transitions of $h_{eff} = h_{gr}$ hypothesis holds true.

1. Molecules have U-shaped flux tube loops with fluxes going in opposite directions. This makes possible also super-conductivity with members of Cooper pair at the parallel flux tubes carrying

magnetic fluxes in opposite direction since magnetic fields now stabilize Cooper pairs rather than tend to destroy them.

2. The flux loops associated with systems - call them A and B - can reconnect and this leads to the formation of 2 parallel flux tubes connecting A and B. Stable reconnection suggests that magnetic field strengths must be same at the flux tube pairs associated with A and B. This implies same cyclotron frequencies and resonant interaction. This would define molecular mechanism of recognition and sensing the presence of invader molecules - even conscious directed attention might be involved.
3. Systems with magnetic body could be constantly varying the thicknesses of at least some of their flux tubes and in order to reconnect with the magnetic body of a possible invader. This activity could be behind the evolution of the immune system.

The question is how the system or its sub-system could stabilize itself so that it would receive signals only from one kind of molecule specified by its cyclotron frequency spectrum.

1. If the flux tubes carry monopole flux (this is possible in TGD framework and requires the the flux tube cross section is closed 2-surface), stabilization of the flux tube thickness stabilizes the magnetic field strength. How the stabilization of the thickness of the flux tubes could have been achieved?

Pollack's negatively charged EZs with dark protons at magnetic flux tubes giving rise to dark nuclei identifiable as dark proton sequences suggests an answer. Maybe the presence of dark proton sequences could stabilize the flux tube thickness. Dark proton sequences have also interpretation as dark DNA/RNA/amino-acid sequences [K4].

A further question is whether the magnetic body of the prebiotic cell identified as EZ could use the information about invader molecule to represent its magnetic body either concretely and perhaps even symbolically and regenerate the concrete representation when needed.

1. The concrete representation could be in terms of dark proteins whose folding would represent the topology of the invader molecule and symbolic representation in terms of dark DNA transcribed to dark protein. If the dark protein has same topology of knotting it could more easily attach to the invader molecule and make it harmless. Note that the invaders are naturally other dark DNAs and proteins just as in living matter. The higher purpose behind this cold war would be stimulation of mimicry - emulation in computer science - leading to generation of cognitive representations and negentropic entanglement.
2. Not only the representation of the 3-D magnetic body - its behavior - is possible. In ZEO also the representation of the dynamical evolution of magnetic body becomes possible since basic objects are pairs of 3-surfaces at future and past boundaries of causal diamond. The challenge is to represent the topology time development of magnetic body - 2-braiding, first concretely by mimicking it and then symbolically in terms of DNA coding for proteins doing the mimicry. The obvious representation for the behavior of magnetic body of invader molecule would be in terms of folding and unfolding of protein representing it.
3. The question how the symbolic representation could have emerged leads to a vision about how genetic code emerged. The model for living system as topological quantum computer utilizing 2-braiding for string world sheets at 4-D space-time leads to the idea that 3-D coordinate grids formed by flux tubes are central for TQC: each node of grid is characterized by 6 bits telling about the topology of the node concerning 2-braiding. Could the 6 bits of dark DNA code for the local topology of the invader molecule and an the flux tube complex mimicking it?
4. This raises the possibility that DNA strands - one for each coordinate line in say z -direction could code for the 2-braiding of 3-D coordinate grid and in this manner code for the magnetic template of invader molecule and also that of the biological body. Therefore genetic code would code for both the basic building bricks of the biological body and 4-D magnetic body serving as template for the development of biological body.

One can imagine how the biochemical evolution after this stage might have taken place.

1. At the next step the chemical representation of genetic code would have emerged. Dark proteins learned to attach to real proteins and real proteins to other proteins and DNA and bio-catalysis became possible.
2. The transformation of the ordinary photons emitted in the transitions of biomolecules to dark photons made possible the recognition of invader molecules using ordinary photons emitted in their molecular transitions.
3. Magnetic bodies learned to control biochemical reactions by using dark cyclotron radiation transformed to bio-photons.
4. Gradually dark and ordinary proteins developed a rich repertoire of functions relying on reconnection, communication by dark photons, and attachment in invader molecule. Proteins began to serve as building bricks, as bio-catalysts, promote the replication of DNA, responding to stimuli, serve as receptors.

3.3 Possible mechanism of water memory and homeopathy

The general vision about prebiotic evolution described above suggests that the mechanisms of water memory and homeopathy are basically the same as those underlying the workings of the immune system.

1. Exclusion zones could define primordial life forms with genetic code. They are able to detect the presence of invader molecule from its cyclotron frequency spectrum.
2. Dark proteins can form concrete memory representations of the invader molecules in terms of dark proton sequences defining dark proteins. The folding of these dark proteins mimics the behavior of the magnetic bodies of the invaders. These dark proteins can attach to the magnetic body of the invader molecule to make it non-dangerous. Even symbolic representations in terms of dark DNA allowing transcription and translation to concrete dark protein representation could be involved. The procedure involved in the manufacture of homeopathic remedy could be seen as a series of "environmental catastrophes" driving the evolution of dark primordial life by feeding in metabolic energy and generating new EZs, which mimic the invader molecules and existing EZs mimicking them.
3. In organism the dark DNA representing the invader molecule would generate ordinary genes coding for ordinary proteins attaching to the invader molecules by the attachment of ordinary DNA nucleotides to them. The attachment would involve h_{eff} reducing phase transition reducing the length of connecting flux tube.
4. Later dark genetic code transformed to chemical genetic code as dark DNA strands were formed around dark double strands and large number of other biological functions emerged besides immune response.
5. The mechanical agitation in the manufacturing of homeopathic remedy generates exclusion zones and new primitive life forms by providing the needed energy. These in turn recognize and memorize invader molecules and their already existing representations as EZs.

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