More precise view about remote DNA replication

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Abstract

The works of Luc Montagnier and Peter Gariaev suggests remote replication of DNA is possible. The developments in the model of dark DNA allow to imagine a detailed mechanism for how water can represent DNA and how DNA could be transcribed to dark DNA - essentially the analog of DNA-RNA transcription would be in question. The transcription/association represents a rule and rules are represented in terms of negentropic entanglement in TGD framework with pairs of states in superposition representing the instances of the rule. Transition energy serves as a characterizer of a molecule - say DNA codon - and the entangled state is a superposition of pairs in which either molecule is excited or dark DNA codon is excited to higher cyclotron state with same energy: this requires tuning of the magnetic field and sufficiently large value of h_{eff} at the flux tube. Negentropic entanglement would due to the exchange of dark photons: this corresponds to wave DNA aspect. Dark cyclotron photons also generate negatively charged exclusion zones (EZs) discovered by Pollack and in this process transform part of protons to dark ones residing at the magnetic flux tubes associated with EZs and forming dark proton sequences. This allows to identify a mechanism of remote replication.

1 Introduction

Both Luc Montagnier [I5, I6] and Peter Gariaev [I8] have found strong evidence for what might be called remote replication of DNA. I have developed a TGD inspired model for remote replication using the data from Peter Gariaev [K8], who has developed the notion of wave DNA [I7] supported by Montagnier's findings.

Polymer chain reaction (PCR) [I1] provides a manner to build copies of piece of DNA serving as template. Once single copy is produced, it serves as a template for a further copy so that exponential amplification is achieved. Montagnier's and Gariaev's works suggest however that the synthesis of DNA could also occur without a real matrix DNA as remote replication. According to the proposal of Gariaev [I7, I9] DNA template would be remotely represented as what he calls wave DNA. Montagnier [I6] uses 7 Hz ELF radiation to obtain the effect whereas Gariaev [I8] uses scattering of laser light into large interval of frequencies to achieve the effect.

In TGD approach magnetic body containing dark matter with large Planck constant, the associated cyclotron radiation for which energy scale is proportional to effective Planck constant $h_{eff} = n \times h$ having large values implying conjectured macroscopic quantum coherence of living matter, dark analog of DNA represented as dark proton sequences at magnetic flux tubes and accompanying ordinary DNA, plus reconnection of U-shaped magnetic flux tubes assignable to the magnetic bodies of biomolecules and allowing them to recognize each other, are the basic elements. The model has evolved from the attempts to understand water memory and homeopathy in TGD framework [K3].

Both 7 Hz ELF radiation and scattering of laser light would both generate dark photon (large Planck constant) spectrum with a wide spectrum of frequencies but with the same energy which in Gariaev's experiments would naturally be the energy of scatter laser light. The dark photons would provide representation for DNA codons. If 7 Hz frequency radiation involves dark photons with energies of visible photons transforming to ordinary photons before scattering from DNA the outcome would be same as in Gariaev's experiments.

This picture conforms with Gariaev's hologram idea and also with TGD based vision about living matter as a conscious hologram [**?**]. The laser beam that Gariaev has used and the 7 Hz irradiation (involving dark ELF photons at bio-photon energies) would act as a reference beam allowing to read a biohologram coded by DNA and its magnetic body. The outcome is dark photons with same energy but with varying values of Planck constant and thus with varying frequencies propagating along magnetic flux tubes to the target, which could be exclusion zone (EZ). Flux tubes are characterised by h_{eff} and magnetic field strength B_{end} determining cyclotron frequency (coded by the transversal area by flux quantization if monopole flux is in question) . Metabolic energy is needed to create EZ and could be provided either by the radiation itself or by the repeated heating. Negentropic entanglement is generated and creates the correlation between dark (phantom) DNA codons and ordinary DNA codons.

The following involves same elements as the model discussed in [K8] but there are also new elements due to the developments in the model of dark DNA allowing to imagine a detailed mechanism for how water can represent DNA and how DNA could be transcribed to dark DNA. The transcription/association represents a rule and rules are represented in terms of negentropic entanglement in TGD framework with pairs of states in superposition representing the instances of the rule. Transition energy serves as a characterizer of a molecule - say DNA codon - and the entangled state is a superposition of pairs in which either molecule is excited or dark DNA codon is excited to higher cyclotron state with same energy: this requires tuning of the magnetic field and sufficiently large value of h_{eff} at the flux tube. Negentropic entanglement is due to the exchange of dark photons: this corresponds to wave DNA aspect. Dark cyclotron photons also generate negatively charged exclusion zones (EZs) discovered by Pollack and in this process transform part of protons to dark ones residing at the magnetic flux tubes associated with EZs and forming dark proton sequencies.

2 Some background

The model for remote replication involves the following basic building bricks.

1. Dark variant of DNA realized as dark proton strings representing dark nuclei.
2. The identification of bio-photons as decay products of dark cyclotron photons with large value of h_{eff} having universal energy spectrum due to the condition $h_{eff} = h_{gr}$.
3. TGD explanation for the fourth phase of water discovered by Pollack [I2] and characterized by negatively charged exclusion zones EZs generated by radiation.
4. A model for the radiative coding of DNA creating 1-1 correlation between ordinary and dark DNA codons and between two dark DNA codons.

2.1 Dark DNA as dark proton strings

TGD leads to a model of nuclei as nucleons strings [K5]. The model generalizes to the dark matter sector [K5, K3].

1. I have proposed the notion of dark DNA realized as dark proton sequences (3 quark states), which I have argued ton basis of a simple model to form representations for DNA, RNA, amino-acids and even tRNA is central for TGD inspired biology. Biochemistry would define only a secondary representation for more fundamental realization of genetic code and analogs of basic biomolecules in terms of dark nuclear physics.

   I have conjectured that translations, transcription, etc generalize and apply to pairs of ordinary and dark and dark and dark DNA and amino-acids. One could even consider that dark DNA would make possible induction of genetic changes: transfer dark DNA inside germ cells and transform them to ordinary DNA and attach to existing DNA. If dark DNA can be generated by radiation as wave DNA notion suggests then radiation from other cells to germ cells could induced genetic changes. Living systems would have kind of Research and Discovery apartment developing new candidates for genes. Evolution would be the opposite for blind random trials.

2. I have also proposed that immune system could have developed from what is basic mechanism of homeopathy and water memory. The magnetic bodies of water clusters mimic invader molecules - or rather their magnetic bodies. What is needed is a representation for cyclotron frequencies so that radiation would emerge in this phase. Cyclotron frequency spectrum would represent the invader and the simplest mimicry of invader molecule would be water structure with magnetic body characterized by same cyclotron frequency spectrum: water memory in short. Also the braiding of the magnetic body of the invader might be mimicked.

   Protein folding might be a chemical representation for this braiding and the proteins of immune system might mimic the braidings of the magnetic bodies of the invader molecules. DNA in turn would give a symbolic representation of proteins allowing to construct them when needed. Ordinary DNA and proteins would have been preceded by dark DNA and dark proteins. I have even proposed an interpretation of genetic code based on the idea that it represents the dynamical evolution of braiding of the magnetic body - or 2-braiding [K6].

   The basic mechanism of directed attention or sensing the presence of the invader molecule would be reconnection of U shape flux tubes of the magnetic bodies of the two system. Also resonant interaction by cyclotron radiation inducing cyclotron transitions is expected to be an essential piece of the mechanism. Magnetic body of water cluster could tune the thickness of flux tube so that the magnetic field is same as that in the flux tube of invader molecule so that primitive consciousness and act of free will would be involved.

3. Suppose that DNA codes for proteins, their cyclotron frequency spectrum and their braiding and knotting in protein folding in turn representing invader molecule. Is the frequency spectrum all that is needed to represent DNA and construct its dark variant? The experiments of Benveniste and followers [I3, I4] suggest that invader molecules are indeed represented by the cyclotron frequency spectrum alone. This would suggest connection with wave DNA concept.

2.2 Universality of cyclotron energy spectrum and bio-photons as decay products of dark photons

There are good empirical motivations [K7] to expect that the cyclotron energy spectrum is universal and in the range of bio-photon energy spectrum. This is achieved if h_{eff} is proportional to the mass m of the charged particle so that cyclotron energy $\hbar_{eff}eB/m$ is independent of mass and same for all charged particles.

Universality follows also from the condition that gravitational and biological Planck constants are identical: $h_{gr} = h_{eff}$, where $h_{gr} = GMm/v_0$ is the gravitational Planck constant introduced by Nottale and assigned with the flux tubes mediating gravitational interaction in TGD Universe. The condition states that electromagnetic and gravitational flux tubes have same the value of effective Planck constant meaning that also gravitation would become a key player in biology.

2.3 Fourth phase of water, EZs, and metabolic role of cyclotron radiation

The experiments of Pollack [I2] suggest a partial answer to the question. in terms of what he calls fourth phase of water containing negatively charged regions, exclusion zones (EZ) of size up to 200 micrometers.

1. Irradiation of water by visible light generates negatively charged regions which he calls exclusion zones (EZs). The energy goes to the formation of electric voltage between exterior and interior and is analogous to cell membrane potential. Predecessor of cell could be in question. Some fraction of protons must go outside the system and my proposal is that it goes to magnetic flux tubes and forms dark proton sequences defining the analogs of basic bio-molecules. The $H_{1.5}O$ stoichiometry of EZs [I2] characterizing also earlier findings suggesting that one fourth of protons of water are dark in attosecond time scale (not visible in electron scattering and neutron diffraction) suggests that every fourth proton disappears from EZ. This anomaly was one of the strong motivations for taking the idea about dark matter as large h_{eff} phases seriously [K2].

   These structures would be involved also with water memory and homeopathy and immune system would have emerged from these. Free energy researchers know these regions quite well [**?**] (no-one of course takes them seriously!) and they can be generated by just feeding energy to system used as metabolic energy. In homeopathy the mechanical agitation would do this and induce replication and perhaps even evolution of the resulting primitive lifeforms. Cavitation, use of strong electric field, maybe even heating used in PRC, etc... are possible mechanisms of energy feed.

2. The cyclotron radiation at cyclotron frequencies associated with flux tubes emanating from DNA codons could provide the energy needed to induce the formation of EZs. This would be the first function for the radiation.

3. If the DNA end of flux tube contains dark proton in state which corresponds to the DNA in one-one manner then the mass of the dark proton state would assign to it a unique cyclotron frequency distinguishing between DNA codons. The challenge is to understand the mechanism of DNA dark DNA pairing and dark DNA-dark DNA pairing and one expects resonant binding by exchange of dark cyclotron photons.

2.4 Pairing ordinary and dark DNA codons and two identical dark DNA codons by negentropic entanglement

One should understand the pairing of ordinary and dark DNA. As a matter fact, this pairing defines a realization of the genetic code as a physical 1-1 correlation of DNA codons with some physical states. I have consider this kind of realizations also in the model of DNA as topological quantum computer. The following realization relies on resonant interaction by exchange of dark cyclotron photons and can be seen as radiation based.

1. The most natural association between ordinary and dark DNA would via energy resonance. The energy for some molecular transition of DNA (in bio-photon energy range by argument below) would be same as cyclotron energy for the codon with large value of $h_{eff} = n \times h$ making cyclotron energy large.

2. By suitably tuning the value of the magnetic field B associated with the flux tube accompanying ordinary DNA codon the dark cyclotron energy can be tuned to be equal to the value of some biochemical transition energy of DNA, which is in visible and UV range typically - that is in the energy range of bio-photons.

3. Classically DNA codon and its dark variant can be thought of as exchanging forth and back dark photon at resonance frequency and become strongly correlated in this manner like tennis players during game. Quantum mechanically one has quantum entangled Schrödinger cat like state in which state pairs have same total energy but individual states do not have well-defined energy.

4. The correlation between dark proton states at two ends of flux tube would be realized as formation of bound state via resonant exchange of dark cyclotron photons. Negentropically entangled [K4] superposition for which simplest the possible form is $|n\rangle|n+1\rangle + |n+1\rangle|n\rangle$ of paired cyclotron states would be generated. DNA and dark DNA codons would pair to a negentropically entangled state in similar manner. Recall that in TGD framework negentropic entanglement (NE) carries potentially conscious information: the state represents a rule whose instances correspond to the state pairs in the superposition [K4].

5. One can consider also 3-particle NE of DNA codon and 2 dark DNA codons which is superposition of three 3-particle states with one particle excited to higher energy state with the same energy. DNA codon would be excited chemically and dark codons excited to cyclotron state ($n \to n+1$). 3-dimensional permutation symbol defines this kind of state. Also NE for larger number of particles is possible.

The tuning of the flux tube magnetic field to make cyclotron energy equal to chemical transition energy is possible for arbitrary biochemical transition energies and the association of dark proton states to arbitrary biomolecules is in principle possible via same mechanism. This would be essentially a symbolic representation of biomolecule, a name for molecule. If one has some number of different molecules able to form sequences, these sequences can be remotely reconstructed by using the cyclotron frequencies and transversal flux tubes associated with the template to generate the EZs and the name of the polymer to which the building bricks bind resonantly.

If the condition $h_{eff} = h_{gr}$ holds true, one can use instead of dark proton sequences sequences of *any* dark charged particles - say electrons and ions. Hence almost an unlimited repertoire of representations arises. These correspondences need not to be one-one. For instance, DNA-amino-acid 64-to-20 correspondence is possible to realize with the help of dark variants of DNA codons and amino-acids and also the partially or totally dark variants of this correspondence are possible.

This pairing mechanism would allow resonant interactions of the ordinary DNA codons in water and dark DNA codons induced by the dark cyclotron radiation and could play key role also in ordinary DNA replication and also in the remote replication reported by Montagnier [I6] and Gariaev [K8]. A phase transition reducing h_{eff} would bring ordinary and dark codon together and ordinary biochemistry would take care of the rest. Clearly, this mechanism would also allow biomolecules connected by magnetic flux tubes to find each other in molecular soup with pairing following by a phase transition reducing h_{eff}.

3 Does remote replication apply same mechanism as mimicry of invader molecules in the case of water memory?

Somehow the irradiation of water sample with the cyclotron radiation generated by real DNA should induce or be involved with the generation of dark DNA representing the ordinary DNA and the PCR process would use this dark DNA as template an involves pairing of ordinary and dark DNA nucleotides. How this could happen in TGD Universe?

The mechanism of remote DNA replication without chemical template would be essentially the same as in the TGD based model of water memory [K3] underlying also the model of homeopathy circumventing the ultra-naive skeptic argument that homeopathy is not possible because the density of molecules dissolved in water is practically zero.

The cyclotron frequency spectrum allows to create EZ whose magnetic body mimics the invader molecule. Resonant formation of negentropically entangled pairs would define a realization of genetic code based on radiation and dark cyclotron radiation would give rise to the formation of EZs and accompanying dark proton sequences.

In the recent case invader molecule would be replaced with DNA expressing its presence using dark cyclotron radiation propagating along the flux tubes transversal to codons and forming part of the magnetic body of DNA. The magnetic flux tube of ordinary DNA codon realizing dark proton sequence as dark variant of DNA codon would generate its own representation by generating EZs in water.

The rules would be following.

1. Magnetic fields at U-shaped flux tubes associated with codons and dark codons must be equal so that also cyclotron frequencies coding for dark proton masses and therefore for dark proton states would be equal so that frequency and energy resonance is possible and negentropically entangled state is formed. This assigns by resonance mechanism to the second end of flux tube same dark proton state as to the end near ordinary DNA. Recall that U-shape is essential for bio-super-conductivity based on large value of h_{eff} making possible large and negative spin-spin interaction energy for electrons of pair located at parallel flux tubes [K1, **?**].

   As described, binding is generated by resonant exchange of dark cyclotron photons between the ends which are in superposition of different cyclotron states. Magnetic field value in turn corresponds directly to ordinary DNA codon - or rather its transition in bio-photon energy range. It is essential that the value of magnetic field codes for ordinary DNA codon via a biochemical transition energy associated with it. One can imagine that magnetic body can tune the value of field by changing the transversal area of the flux tube carrying monopole flux (possible in TGD due to the CP_2 topology). Similar tuning would be involved when the magnetic bodies assignable to EZs detect possible invader molecules. Interestingly, the impurity molecules inside EZs are removed by unknown mechanism citebbioPollackYoutube.

2. Dark DNA codons associated with DNA would have U-shaped flux tubes which for large h_{eff} would extend to the water sample containing building bricks of DNA and catalyst. The flux tubes associated with dark DNA and building bricks of ordinary DNA would reconnect resonantly and lead to remote replication of DNA strand.

This option is definitely not the only possibility one can imagine but represents the general principle. For instance, one can consider using only DNA-dark DNA complex and inducing h_{eff} increasing phase transition transferring the dark DNA strand to the volume of the water sample. The mechanism allows also to consider remote translation of genes to proteins. The possible medical applications of this in a situation in which the DNA of the patient has suffered a mutation causing a disease are obvious.

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