Review Article

Coupling Gloomy Eyelets in the Nucleus of Cells and Forming Unknown Distinct Structure (UDS)

Jean-Marc Sabatier[1]; Farzan Amini[2]*

[1]Institute of Neurophysiopathology (INP)-UMR 7051, Faculté des Sciences Médicales et Paramédicales, Aix-Marseille University, France

[2]exERT, Bd Pierre Dramard, France

*Corresponding author: Farzan Amini

2 exERT, Bd Pierre Dramard, 13015 Marseille, France.
Email: f.amini@protonmail.ch

Abstract

The purpose of this article is to study about the Coupling of Gloomy Eyelets inside the nucleus of cells. The Gloomy Eyelet consists of the nano distortion of space-time (with υi and τi denote volume and time) and the Latent Buoyancy force. The particular Helmholtz resonator (for υi and τi) can define for the distortion of space-time (for υi and τi) of Gloomy Eyelet. The Hamiltonian equation will be applied for the category of nucleus of cells including the numerous Gloomy Eyelets.

The coupled Gloomy Eyelets can build the virtual mass. The virtual mass can be considered as the Unknown Distinct Structure (UDS) of human body organs and performs a unknown specific function. If failure occurs in one of the Unknown Distinct Structure (UDS), the conventional treatments may be less effective for ones. The UDS can be affected by the variation of gravitational, ultrasonic and radiation fields. The internal and external interactions of UDS can play a key role for human beings healthy.

The Unstable and Transient conditions of Gloomy Eyelet of cell nucleus can be considered as a new approach for the study of the disturbance of cell.

Introduction

It is predicated to appear Gloomy Eyelet into mediums as left Ventricular and DNA with assumed rotating frequency (ω). The beat pressure (standing wave) with the assumed frequency (Ω) can be generated by the pressure wave of blood on the blood vessel and reflecting wave of blood pressure on the blood vessel. The beat frequency of pressure vessel is anticipated around 1 Hz to 1.3 Hz.

A spring pendulum (also called elastic pendulum or swinging spring) is a physical system which it can appear Gloomy Eyelet (GE). DNA with doubles helix can act as two swinging spring at the specific frequency of swinging motion.

The beat frequency (ω) of blood pressure on the blood vessel and the rotation of Left ventricular with speed (Ω) coincide together on Rankine model. In this case, it leads to appear the sudden pressure drop and an accelerated cavity in medium of Warp Drive Hydro model. It is expected to occur this phenomenon for DNA and the swinging spring frequency (Ω) of DNA approach to the beat frequency (ω) of blood pressure on the blood vessel, it is possible to appear sudden pressure drop (accelerated cavity) based on Rankine model.

It leads to a longitudinal increase in DNA and the creation of cavity with nano scale with a drop in pressure in DNA. In this case, it is anticipated to appear Gloomy Eyelet (GE) inside WDH model in DNA.

The photons caused by QED (quantum electro dynamic) inside Gloomy Eyelet can participate in the process of CMRF (Co-Moving Reference Frame). Generally, these phenomena in Gloomy Eyelet (GE) reveal the tiny distortion of space-time inside the cell nucleus. The Gloomy Eyelet moves inside the trajectory of Pseudo- Spherical trajectory of Warp Drive Hydro (WDH) model on Rankine model [1].

The Gloomy Eyelet can introduce a new definition named " Nano Latent Buoyancy (-(γv))" for the nano space-time (γ, v) can be considered as the specific weight of a cell and the distortion of space-time respectively).

Main Models

Appearance of Resonator inside Gloomy Eyelet

A Helmholtz resonator consists of a hollow neck attached to an empty volume. In order to understand how the air inside a Helmholtz flask behaves, consider a mass bouncing on a spring. The air oscillating in the neck is comparable to the mass, and the air inside the cavity is comparable to the spring. The motion of the mass at the end of the spring can be described by New-

ton's Second Law, which states that the sum of the forces acting upon an object are equal to its mass times its acceleration.

$$f(t)e^{i\omega t} - Rv - kx = ma \quad (1)$$

There are three forces acting on the mass in the driven, damped spring-mass system. The first force is the force driving the mass to oscillate and is denoted f(t)e^{iωt}. The sinusoidal component, e^{iωt}, mathematically describes the paddle's sinusoidal motion, which is dependent upon the angular frequency, ω, and time, t. The second force resists the motion of the mass as it moves through the air and is represented by Rv, where R is the resistance and v is the velocity of the moving mass. The third force is the restoring force of the spring, kx, where k is the spring constant and x is the displacement [3]. The forces due to the air resistance and the restoring nature of the spring are negative because both forces oppose the motion of the mass.

However, there is a fourth force acting upon the mass- gravity. Before the mass is driven by the oscillating paddle, the mass is attached to the spring, and the force of gravity pulls the mass downward, stretching the length of the spring. Eventually, the mass's weight will be offset by the upward restoring force of the spring, and the mass ceases its downward motion. When this situation occurs, the system is said to be at equilibrium. After the system reaches equilibrium, the driving paddle is then used to oscillate the mass about its equilibrium position. Therefore, the force due to gravity is not considered when inserting the forces acting upon the mass into Equation 1.

From Newton's Second Law, the mass of air moving within the neck of the cavity when driven by an external sinusoidal driving force can be represented by the equation:

$$m\frac{d^2x}{dt^2} + Rv + kx = SPe^{i\omega t} \quad (2)$$

The amplitude of the spring-mass's oscillation will be affected by the mechanical resistance in the system. The main source of resistance in the spring-mass system is the air's resistance to the moving mass. The quality factor for a spring-mass system describes the amplitude of the spring-mass's oscillation in terms of the system's resonance frequency and resistance and is given by:

$$\omega_0 = \sqrt{\frac{k}{m}} \quad , \quad q = \frac{\omega_0 m}{R} \quad (3)$$

In this equation q represents the quality factor, ω0 represents the resonator's natural angular frequency, and R is the resistance of the system. A system with a high quality factor has little resistance and large oscillating amplitude at resonance whereas a system with a low quality factor has more resistance and a dampened response at resonance. The quality factor is also associated with the shape of the resonance peak for a system. A system with a high quality factor will have a sharp peak whereas a system with a low quality factor will have a broad peak.

Newton's Second Law equation to give the ratio of the displacement, x, to the maximum displacement, xmax, at resonance as a function of frequency, v0, and the quality factor, Q, for the system.

$$\frac{x}{x_{max}} = \frac{1}{\sqrt{1 + \left(\frac{v_0}{v}\right)^2 q^2 \left[1 - \left(\frac{v}{v_0}\right)^2\right]^2}} \quad (4)$$

The equation for natural frequency of cavity:

$$v_{Natural-Cav} = \frac{c_s}{2\pi}\sqrt{\frac{S}{LV}} \quad (5)$$

In this equation, $v_{Natural-Cav}$ is the natural frequency of cavity, c is the speed of sound in the air, S is the cross-sectional area of the neck, L is the effective length of the neck and V is the volume. If a person can calculate the speed of sound and measure the dimensions of the resonator, a person can easily determine the frequency at which the resonator will produce sound [3,4].

$$f_{oscillation} = 2\pi\sqrt{\frac{k}{m}} = 2\pi\sqrt{\frac{k}{\rho S}} \quad (6)$$

$$f_{oscillatin} = v_{Natural-Cav} \quad (7)$$

$$2\pi\sqrt{\frac{k}{\rho S}} = \frac{c_s}{2\pi}\sqrt{\frac{S}{LV}} \quad (8)$$

Results

Gloomy Eyelet Resonator

A Gloomy Eyelet is a structure that can store energy such that is continuously converted with a specific rate between two kinds of energy. When the Gloomy Eyelet oscillates, energy is converted from one kind to another and back. If more energy is fed to the one at the same frequency and in phase with the oscillations, energy will be absorbed and stored in the oscillator. If energy is continuously fed into a Gloomy Eyelet, the amount of energy stored will grow until energy is dissipated with the same rate as new energy is stored. The Gloomy Eyelet can act as a resonator (for space-time with v_i and τ_i) as shown in Figure 1.

The term resonator is most often used for a homogeneous object in which vibrations travel as waves, at an approximately constant velocity, bouncing back and forth between the sides of the resonator. Resonators can be viewed as being made of millions of coupled moving Gloomy Eyelets. Therefore they can have millions of resonant frequencies, although only a few may be used in practical resonators. The oppositely moving waves interfere with each other to create a pattern of standing waves in the resonator. So the resonant frequencies of resonators Gloomy Eyelets, called normal modes, are equally spaced multiples (harmonics) of a lowest frequency called the fundamental frequency. The above analysis assumes the medium inside the resonator is homogeneous, so the wave travel at a constant speed, and that the shape of the resonator is rectilinear. If the resonator is inhomogeneous or has a nonrectilinear shape, like the various types of Gloomy Eyelets, the resonant frequencies may not occur at equally spaced multiples of the fundamental frequency. They are then called overtones instead of harmonics. There may be several such series of resonant frequencies in a single resonator, corresponding to different modes of vibration. The quality factor Q of a cavity can be decomposed into three parts, representing different power loss mechanisms.

$$Q = 2\pi f \frac{Stored\ energy}{Power\ disspated} \quad (9)$$

If the excitation of a resonator stops, the amplitude of oscillation will decrease exponentially at a rate determined by the quality factor 1/Q.

Figure 2 shows three situations involving one or a pair of identical resonators are affected the resonance frequency. Figure 2 is seen a pair of the identical resonators as two Gloomy Eyelets initially loaded in phase with each other; each oscillates with the same period. The amplitudes add from each of
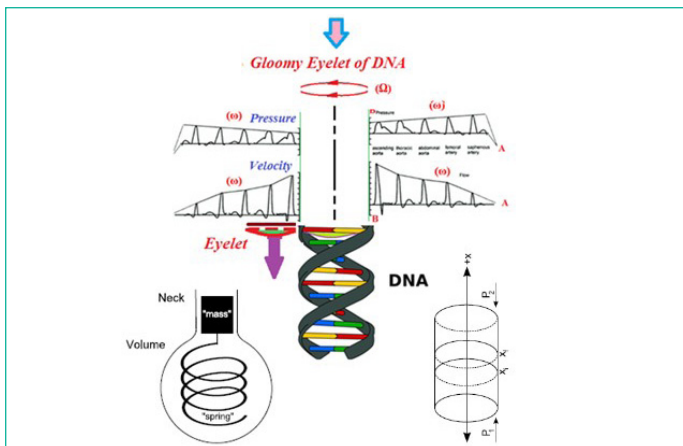
Figure 1: The rotating standing wave in cell nucleus with the rotating speed (Ω) inside the WDH Model and the beat pressure wave in the blood vessel with the rotating speed (ω) and as well the behavior of air inside a Helmholtz resonator.
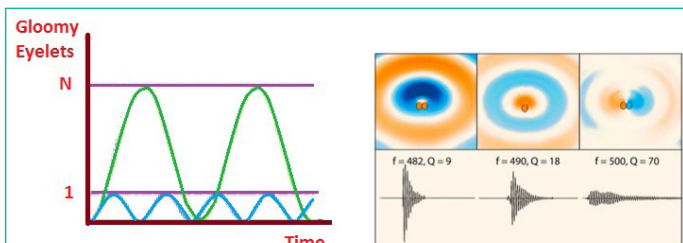

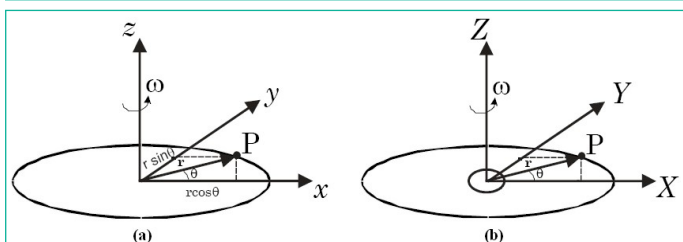**Figure 2:** Coupling between infinity Gloomy Eyelets inside a category of nucleus of cells.

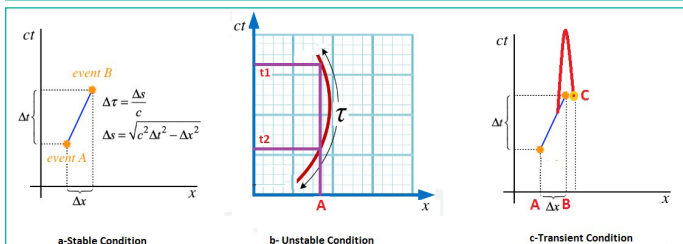**Figure 3:** The model of rotating disk.

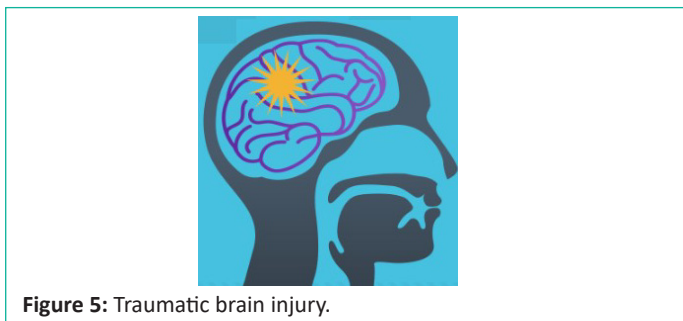**Figure 4:** Three conditions of Gloomy Eyelet of cells.

Figure 5: Traumatic brain injury.

the resonators, and since they are in phase they reinforce each other. The amplitude increases by a factor of 2 compared to one resonator alone. The power goes as amplitude squared, so a four-times faster decay of stored energy takes place compared to one resonator alone. A factor of two faster decay would be expected since two resonators are decaying, with twice the initial stored energy of a single resonator. The other factor of two is due to constructive interference of the two resonators.

The Hamiltonian of a system represents the total energy of the system; that is, the sum of the kinetic and potential energies of all particles associated with the system.

It is required to be considered a Hamiltonian for a category of nucleus including N Gloomy Eyelets with arbitrary statistics:

$$H = H' + U(\vec{r}_j + \vec{r}_2 + \dots \vec{r}_N) \quad (10)$$

where H' and its domain depend on p parameters with length dimensions $l_1, \dots, l_p$ on $\hbar$ and on the mass of the particles. U($\vec{r}_j + \vec{r}_2 + \dots \vec{r}_N$) denotes a regular arbitrary function that allows the domains of H and H' to coincide, with $\vec{r}_i$ the position vector for the ith particle. Then,

$$E = \left\langle U + \frac{1}{2} \sum_{j=1}^{N} r_j \bullet \nabla_{r_j} U \right\rangle - \frac{1}{2} \sum_{q=1}^{p} l_p \frac{\partial E}{\partial l_q} \quad (11)$$

with E being the total energy.

The coupled Gloomy Eyelets with total energy E can form the virtual mass (for space-time with υ_i and τ_i). In this case, the virtual mass (for space-time with υ_i and τ_i) can be considered as the Unknown Distinct Structure (for space-time with υ_i and τ_i) with the specific function. If failure or any phenomena occur in the Unknown Distinct Structure (UDS), this model can help us to analysis the effects of this raised issue in the human body. The UDS can be influenced via the field variations as the gravitational, the radiation and the ultrasonic.

Gravity Interactions

The Gloomy Eyelet of cell nucleus can be affected by phenomena as the blue shift and the redshift of Earth (moving towards or away from Earth). It is expected that the sudden change of the local gravitational field of the Earth and the moving towards and away from the surface of earth and as well the latitude can influence the latent buoyancy of Gloomy Eyelet. The new distortion of space-time caused by the internal reactions of Earth can occur. It can be assumed that the internal energy of earth may influence in the case of primary space-time along with its buoyancy force and the external effects on the Earth can reveal in the secondary shifts of space-time along with its buoyance force. For instance, the amount of Latent Buoyancy force should change via the new distortion of space-time due to the variation of gravitational field.

It is assumed the cavity inside Gloomy Eyelet (GE) made by resonance act as CMRF of the vessel S'. The energy content will be $\bar{E}_{com} = \bar{N}h\nu_0 + E_g$; $\bar{N}h\nu_0$ resides in a region of space-time in which time is distorted according to dt/dτ and Eg is the new distortion of space-time caused by the sudden change of local gravitational field of Earth (due to the internal reactions). The radiation pressure inside the cavity of Gloomy Eyelet (GE) and Pseudo-sphere geometry will be [1,5]:

$$\Delta v_{com} = (v_2 - v_1) + \delta\vartheta_g = -v_{com} r_{(cavity-GE)} \bar{\nabla}\left(\frac{\partial t}{\partial \tau}\right) \quad (12)$$

$$\vec{F}_{com} = \frac{h}{r_{cavity-GE}}\{(v_2 - v_1) + \delta\vartheta_g\} = -h v_{com} \bar{\nabla}\left(\frac{\partial t}{\partial \tau}\right) \quad (13)$$

$$\vec{F}_{GE} = -E_{com} \vec{\nabla}\left(\frac{dt}{d\tau}\right) = \bar{N}h\nu_{com} \nabla\left(\frac{dt}{d\tau}\right) \quad (14)$$

Study of Stable, Unstable, and Transient conditions for Gloomy Eyelet of Cell

Let us consider a rigid disk that is rotating at a constant angular velocity ω, as shown in figure 3(a). Figure 3(a) represents the

motion as observed from the moving frame of reference while Figure 3(b) represents the motion as observed from the stationary frame of reference. The symmetry of the problem suggests that we use a cylindrical coordinate system to describe the motion of the disk.

The fundamental quadratic from for this rotating disk becomes

$$d\ell^2 = dx^2 + dy^2 + dz^2 - c^2 dt^2 \quad (15)$$

$$d\ell^2 = dr^2 + r^2 d\theta^2 + dz^2 + 2\omega r^2 d\theta\, dt - \left(1 - \frac{r^2\omega^2}{c^2}\right) c^2 dt^2 \quad (16)$$

The time dτ is the time interval as observed by the stationary observer at the center of the rotating disk, which we can dτ0, the proper time for the clock. The rotating observer reads his clock time to be dt. With this notation, equation (16) would be written as

$$d\ell = \frac{d\tau_0}{\sqrt{1 - v^2/c^2}} \quad (17)$$

It is shown that an accelerated body (the disk is undergoing a centripetal acceleration as it is rotating) has the same time dilation as an inertial body.

The torque and torsion terms are coupled algebraically to stress-energy tensor. The effect of the torque term leads to secondary effects of the Coriolis forces that are expressed in metric. Torsion is a state of stress set up in a system by twisting from applying torque. Hence, torque acts as a force and torsion as a geometric deformation. Torque and torsion also has intrinsic properties of geometry of the space-time

The product of the force and the perpendicular distance from the axis line of the action of the force is called the force arm or movement arm. The product of the force and its force arm is called the moment of the force r the torque τ_T. The angular momentum is L= r x p where r is a radial variable and p is a linear momentum. The torque

$$\tau_T = \frac{d\vec{L}}{d} = \vec{r} \times \vec{F} \quad (18)$$

F is perpendicular to r and L is the vector angular momentum $\vec{L} = \vec{r} \times \vec{p} = m(\vec{r} \times \vec{v})$ [6,7].

Three conditions can be predicated to occur for the Gloomy Eyelet of cells. They help us to study the behavior of cell by new approach.

• **Normal Condition-** The normal changes of cells can influence the normal shift of Gloomy Eyelet as shown in Figure 4a.

• **Unstable Condition-** The unusual changes of cell can raise the unstable conditions for Gloomy Eyelet. Figure 4b has been shown that there are two components of time at one specific space-time. In this case, it seems the cell growth will suffer its disturbance behavior. It is possible to put the malignant cells in this category for more studies.

• **Transient Condition-** In the models such as Traumatic brain injury (Figure 5) can lead the high Coriolis acceleration in the too short time. In this case, it is expected to create high pressure in the Gloomy Eyelet due to the distortion of space-time. It seems that some of the effects on the brain are caused by the sudden tiny changes of space-time in the gloomy Eyelet of cell nucleus.

The pressure profile of the fluid pulse can be applied the new and modified equation of the Joukowsky equation [8].

$$\frac{\partial P}{\partial t} = \rho a \left(\frac{\partial (v) + (\delta\tau)}{\partial t} \right) \quad (19)$$

where ΔP is the magnitude of the pressure wave (Pa), ρ is the density of the fluid (kg/m^3),a is the speed of sound in the fluid (m/s), and Δv is the change in the fluid's velocity (m/s) and as well δτ is the distortion of space-time inside the Gloomy Eyelet of cell. The pulse comes about due to Newton's laws of motion and continuity equation applied to the deceleration of a fluid element.

Discussion

Phonon on the DNA acts as a massless boson which expose to pressure and velocity fields and they are similar to photons, the quanta of the radiation field that describe classical light. Vibration at natural frequency cause to form phonon. Thus it is possible to reveal the force caused by phonons inside the pressure and velocity field. The behavior of phonon in the vortex field is like the photon in the gravity field.

Photon interacts with phonons inside the Cell Nucleus. The change of gravitational field can influence the vibration and sound frequency of DNA particles and dynamic weight. Thus, the ultrasonic and radiation methods and as well gravitational fields can be influenced for Unknown Distinct Structure (UDS) and can be applied for treatment ways.

Unstable and Transient conditions of Gloomy Eyelet can create the possibility of changes at the behaviors of cells. In this case, the phenomena such as pain and consciousness and as well the unstable condition (as Malignant cells) of cells can study in the transient conditions of Gloomy Eyelet in the nucleus of cells by a new way.

Conclusion

Unknown Distinct Structure (UDS) is introduced as an invisible part of human beings. It can participate in the various interactions and the particular behaviors. It can help researchers to design the new and or supplementary methods of treatments. Unknown Distinct Structure (UDS) can be continuously taking part in the responses frequency between members of body. It may identify the some changes of external surroundings.

Unknown Distinct Structure (UDS) is introduced as an invisible part of nucleus of cells. It can participate in the various interactions and the particular behaviors. It can help researchers to design the new and or supplementary methods of treatments. Unknown Distinct Structure (UDS) can be continuously taking part in the responses frequency between members of body.

Unstable and Transient conditions of Gloomy Eyelet in the nucleus of cells can be studied for controlling the changes of behavior of cells.

Author Statements

Acknowledgment

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