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## On Centromeres' Evidential Values in Physical Cosmology

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*Keywords:* black hole; cation; DNA; nuclear analysis; scission point; white hole.

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# On Centromeres' Evidential Values in Physical Cosmology

Yang I. Pachankis<sup>1</sup>

**Abstract-** The research combines literature research and evidence analyses for a cosmological direction in theory building. It differentiates the physical causal models from physical cosmology causalities. Centromeres are anchored with the partial evidences on the fifth cosmic force between the black hole and the white hole on NGC 3034. The fission-fusion transition mechanisms with centromeres are analyzed, analogous to the black hole and white hole asymptotic momentum. Ionization flows of the universe with regard to the origins of life is analyzed and concluded in the research.

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## I. INTRODUCTION

In the matters on the origins of life, there is an ambiguity in causal inference concerning cosmology. Scientific and epistemic endeavors are extensive from human activities, and are anthropological in nature. No scientific theories claim or would claim the origins of life marking the origin of the universe. Therefore, physical inferences on cosmological causalities are inverted in nature, with the observers or discoverers in the bottom of the causal chains [1, 2].

Intriguingly, the dilemmas of physical cosmology are no different from the theological logics in knowing your creator. No matter how the universe began, materials from the vicinity must have come from cosmic origins; homophony of structures may be the key to locate the physical reference sampling points for causal inference [3].

The homophony is found between the fifth cosmic force and human DNA epigenetics. There is a nuclear structural similarity between the breakage fusion bridge (BFB) in DNA transcription, division, and replication cycles [4, 5], and the asymptotic momentum between the charged spinning black hole and white hole on NGC 3034 [6]. It is hypothesized that both nuclear processes are regulated by antimatter electromagnetism, namely the quasitopological electromagnetism with annihilation activities [7].

The article synthesizes the evidence from existing literature and previous experiments in astrophysics and cosmology. The evidence suggests that there might be homogenous material components between white holes and centromeres, which may only

be revealed by scission point transitions with fusion activities. The transition links the fifth cosmic force.

## II. METHODS

The methods follow an analytic framework on proton-motive force (PMF) in the transmembrane fusogenic domain in organizing the paths with existing literature [8, 9]. The analytic framework, therefore, constitutes bioenergetic nuclear oscillation analysis.

Albeit meiosis is easily understood in terms of the nuclear fission process, there is a knowledge gap in the origins of biomaterial capacities for mitosis. The null hypothesis is thus derived from the black hole and white hole thermonuclear binding research [10] that the exotic fissile biomaterial originated from white hole oscillation by the fifth cosmic force. A constructive perspective is adopted to the null hypothesis, treating the finite multiplication in breakage-fusion-bridge-breakage mechanism the consumption of biomaterial capable of mitosis [4].

The first subsection explores the logically deductible limit in chromatid research from the premise. With the analyses of the dipole momenta regarding cell division plane, further research on the source of asymmetry at the prophase is structured in the second subsection. Gamma-ray-induced fast-neutron polymerization and apoptosis rates' correlations have been analyzed in the second subsection, in relation to centromere's functions in transitioning between fission and fusion in DNA activity cycles. The third subsection reverts the causal reference to causal inference from the DNA basis of bioenergetic activities fueling consciousness and cognitive activities.

### a) Fission Limit in Finite Telophase Division

All three electromagnetic (EM) dynamics are possible in telophase for separation: 1) electron-electron repulsion, 2) positron-positron repulsion, and 3) electron-positron annihilation. The former two's differences with the latter only preside with energy emission levels during telophase, and inductive to the dipole movements in anaphase, metaphase, prometaphase, and prophase, respectively [11]. Polarity on the orientation of cell division plane involves cell division axis, an intracellular signaling network, mitotic spindle controlled by cellcortex polarity-related molecules, partitioning defective (Par) complex functioning as a master polarity determinant, and cell

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geometry in degree of freedom [12]. The perpendicular elongation of Src kinase-inactive cells (SYF-KD) long axes to direct-current electric field vector suggests a pro-annihilation force by induced electric field gradient, possibly counteracted by the strong and weak forces [12]. It implies that the depreciation of the biomaterial during mitosis fission may be caused by annihilation during telophase. The double-helix DNA structure may therefore be interpreted as a result of EM force field maintained by cortical polarity, and regulated by the weak force between the coupled strands, where chained critical fission underlies the mutation processes.

Telophase annihilation can only be a direct-current inducing environment, and only an alternating-current environment in anaphase may shift towards the electrodynamic equilibrium, driven by the growing weak force / strong force ratio in metaphase with the Par complex [13], resulting from microtubule bombardments on the nuclear area in prometaphase [11]. With anaphase the shortest stage of mitosis [11], chromatid separation by Cut2 fission yeast *Schizosaccharomyces pombe* is accompanied with Cut1-associated continuing replication until the metaphase-anaphase transition, halted by immunoblotting anti-Cut2 antibodies and immunoprecipitated anti-HA antibodies acting on both [14].

The transitions in anaphase can be critical for fission-fusion phase transitions in the breakage fusion bridge (BFB) breakage cycle. Large-scale genome rearrangement and assembly by polymerase chain reactions (PCRs) experiment has corroborated with this assertion [15]. Pentameric ligand-gated ion channel (pLGIC) and hydrodynamic pH scattering correlations with allosteric regulation underlie the proton-gating of the process [16], which is explanatory of the Par protein behaviors [13] with the variable of PMF in vectorization, with hydroxyl anions [9, 17]. *Gloeobacteriovulvaceus* (GLIC) potentially senses pH environment with a protein-lipid mechanism, and proton-sensing residues located in opposite loop F, which may bypass the classic agonist-binding site [16]. In particle physics terms, flavor symmetry and isospin in liquid-liquid interactions govern the complex process in one-pore and two-pore fusogenicity inside and outside of the cell membrane respectively. The fission-fusion transition in DNA multiplication and proton-gating phenomenon imply an asymmetry at the prophase, possibly contributed by cations [18].

#### b) *Centromere in Telomere Breakage Fusion Bridge*

The epigenetic expressions in centromere are key to the prophase asymmetry, and causally relevant to the asymptotic transitions between fusion and fission. If annihilation underlies the separation-breakage in the BFB and BFB-Breakage cycles [4, 5], determination of the scission point and subsequent fusogenetic activities are dependent on the material components of the

centromere. Most centromeres do not appear to have well-defined lncRNA genes with distinctive genetic features such as promoters, splice sites, and polyadenylation signals [19], and they form in both repetitive and non-repetitive regions of DNA [5]. The collection of evidence implies that not only centromeres' formation is determined by asymptotic momenta, but also that the asymptotic momenta are determined by the post-annihilation environment similar to the functions of EM fields in many fusion devices with the foundations of Maxwell [20].

Bystander effects may be crucial for chromosome segregation accuracy. Transcription cannot happen without centromeres nucleating the assembly of the kinetochore, for sister halves to attach to spindle microtubules [21]. Position-dependence of spindle forces and poles determine the length of spindles and subsequently kinetochore behaviors, especially in metaphase steady-state [22]. This supports the possibilities of aftershock from electron-positron annihilation in telophase to the prometaphase nuclear envelope opening and pole-spindle rearrangements [11, 23]. With mitotic centromere transcription linked to the active kinetochore, such a process with bystander effects may be contributed by the limited centromere transcription capacities [21].

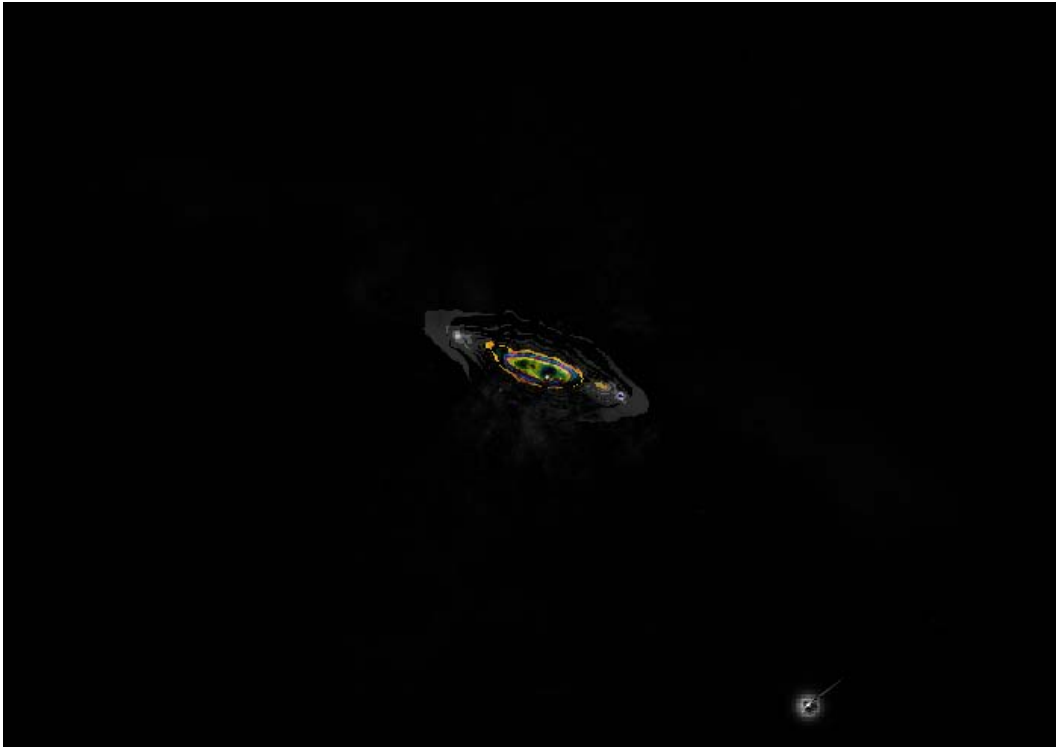
Reference planes for linearity in the dynamics are essential for structural understandings. Although resistance force exists in kinetochores' counteractions to spindle force, with approximated linearity with movement velocity on a molecular scale [22], however, the repetitive nature of centromeres lacks of linear reference models [21]. This can be contributed by the scission point functions of centromeres on fusion transitions and the force proximal to the fifth cosmic force. Relative biological effectiveness (RBE) in neutron exposures [24] and the structureless quark residues from electron-positron annihilation [25] further complicate field analyses. Gamma-ray-induced fast-neutron polymerization can be a nuclear chemical substitute for further studies [26], supported by the lack of bystander effect with direct neutrons, regardless of photons, and its reinstallation by gamma rays, or high doses of photons, in controlling irradiation in cells [24].

#### c) *Consciousness and Epistemic Evidence*

Formation of a newly structured understanding for reference planes may better bridge the gaps between quark spins and Higgs mechanism. The first step is the falsification of Riemann hypothesis concerning the critical line of  $\frac{1}{2}$  for a new dimension vista [27]. If the PMF constitutes the hidden autonomous dimension to our consciousness, hence epistemic activities and cognition, the dimensional ascension of consciousness to the non-unique critical line of nontrivial zeros [27] dissects the introspective bioenergetic plane and projective cosmic plane.

If the scientific approach to cosmology is inevitably subjective epistemology, the epigenetic consciousness to the origins of life is equivalent to the origin of death wish in psychoanalytic terms, just as moths to the sources of fire. The finite fission capacities of genetic biomaterials are determined by the cosmic

origins of materials that constitute the fundamental blocks. The false-positive result on the fifth cosmic force in Figure 1 does not exclude the possibilities of material forms beyond the existing component blocks of life; therefore, fulfilling the criteria for cosmology to be at least partially able to explain the origins of life [28].



*Figure 1:* Multispectral Material Field Recombination on the Kerr-Newman Supermassive Compact Object (KNSMCO) on NGC 3034 with the Outline of the Fifth Cosmic Force

### III. RESULT

The mitotic spindle functions correspond with the Kerr-Newman's asymptotic momentum by the nuclear structural similarities with centromeres. It is seen that the reference plane for the peripheral structural dynamics can be anchored to ring singularity with black hole seed and white hole seed collision momentum in terms of the KNSMCO in Figure 2, and such a plane can exist in outer layer structures, such as endoplasmic reticulum.



Figure 2: The Black Hole Seed and White Hole Seed on NGC 3034

Cations and positrons increase bystander effects and RBE in human genetic activities and environment, and can be the referential method in fission-fusion transition surrounding the fifth cosmic force. This implies an asymmetric spatial depth of electron-positron compression under the weak force counteracted by the strong force, underlying the structureless quark spins and preventing arbitrary electron-positron annihilation. The particle-physical causal inference is consistent with the proton and neutron flavors, and the one-pore and two-pore fusogenetic differentiations under PMF.

Isospin determinants in inducing alternating current activities govern the mitotic phase transitions. Matrices stability in asymptotic degrees of freedom parallel to apoptosis is analogous to the cosmic resonance activities amongst celestial objects. There is no current cosmic causal evidence on the mechanism of the analogous celestial dynamics — cycles of which determine the anthropological definitions of time.

#### IV. CONCLUSIONS

The cosmic causality of string and super-string theories is analogous to mitosis. String theories lack the potentials in further discovering cation causalities beyond the standard model analogous to the microtubule bombardments at the core of Hawking points generation, albeit it serves a superior framework for cosmic ray analyses in relations to particle physics with phenomenological descriptions.

Scission point may transition to fusion by cation involvement. The process may change the peripheral pH environment, and in turn induce fission by the asymptotic degrees of freedom. No evidence is obtained on the existence or falsification of monopoles, but the fifth cosmic force might be able to alter the positron-electron spatial asymmetry, hence vector rearrangements and annihilation catalysis.

The layer structures of centromeres can be similar to black holes and / or white holes, with stronger plausibilities in material components of white holes. Material-dependence is presumed for the layer formation with force carriers; scission point transition is inferred to be dependent on the materials' synthesis origins. Our corner of the universe can be anion-rich with regard to white holes, and cation maintenance on the material origins of life can only be thus possible.

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#### Conflict of Interest

The author has no known conflict of interest to declare.

## Data Availability

Project experimental data is publicly available on Open Science Framework with the DOI: 10.17605/OSF.IO/WT5Z2.

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