

**BIOSEMIOTICS IN ANCIENT EGYPTIAN TEXTS:
THE KEY UNLOCKING THE UNIVERSAL SECRET
OF SEXUALITY AND THE BIRTH OF THE LIMITLESS**

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Cultural semiosis (sign processes) is linked to the interpreting human mind. This theoretical concept dealing with nonconscious sign processes is the inspiration of C. S. Peirce (1839-1914). Biosemiotics is all levels of biological sign processes, and T. A. Sebeok (1920-2001), believing that language has biological roots, is credited with building this field that encompasses signs meaningful to other living systems, such as animals, plants, bacteria. As Sebeok states, «*Culture*, so-called, is implanted in nature; the environment, or *Umwelt*, is a model generated by the organism. Semiosis links them.»¹

Using this semiotic framework, a study spanning 2000 years of Ancient Egyptian texts² reveals a biological basis for pharaonic literature, architecture and art. In this consistent model, the value or meaning of each sign emerged, not by choice, but rather from an analysis of each sign's interaction within a matrix of 870 interlinked thematic signs. The code mirrored a complex knowledge of modern sciences, while explaining a human's potential for horizontal gene transfer (HGT), viz., the exchange of DNA between two different species. The texts support this afterlife option for evolvability is mediated by an ancient virus called bacteriophage Lambda (phage for short) that operates as the world-heart of the Universe, generating two DNA-texts producing matter and energy.

Recently, biologists discovered HGT is a common biospheric process occurring not only in Bacteria and Archaea, but also in Eukarya — plants, fungi and human cells³. Since many of Nature's laws are still veiled, it is clearly illogical to argue absolutely that HGT for human DNA is not possible after death based on the absence of hard evidence. However, the core Egyptian myth from the least corrupted *Pyramid*

¹ SEBEOK, 2001: vii.

² KING, 2004; 2005; 2006.

³ SORENSEN et al., 2005.

Texts (PT) and *Coffin Texts* (CT) details phage Lambda's complex lifestyles, showing that Egyptian deities and themes can be explained as microbial proteins and genes undergoing lytic transformation.

This paper briefly summarizes the core myth and its relationship to viral and bacterial proteins binding, folding and tunneling along the DNA in a manner similar to micro black hole/white hole formation/evaporation processes.

The Core Myth

The least-corrupted *Pyramid* and *Coffin Texts* include seven themes: 1) merging with the Sun-god or Light, 2) brother rivalry of Seth/Horus, 3) Osiris dead, 4) virgin birth by Milk-Goddess Isis, 5) Cross 6) Osiris risen, 7) Great Flood/millions. In the texts, the brothers Horus and Seth compete for the throne of their father Osiris, which is the Eye of Horus. Seth injures the Eye of Horus by stealing the left half. This results in two Eyes or two arms. When Seth wins the left Eye or arm, Osiris dies or becomes inert. When the firstborn Horus wins back the left Eye or arm, the Eye of Horus is whole, the two gods are at peace, and Osiris rises from the dead with the help of his sister/wife, the Milk-Goddess Isis, whose power creates by virgin birth. With the injury to Osiris removed, he then establishes millions that ascend into the starry heavens as the offspring or child Horus⁴.

The Sun-god, the throne of Osiris, the Eye of Horus, the Two Eyes, and the two arms are the signs for the actual two arms of the Lambda genome. Phage Lambda is a genetic control system involved in the action of repressor proteins regulating **two lifestyles: lysogeny versus lysis**. In lysogeny, the phage genome integrates into the host chromosome, where it remains dormant and replicated silently with the host cell. Lysis is when the phage genome begins producing progeny through rolling circle replication. Whereas lysogeny is regulated by cI protein, the sign for Seth, lysis is regulated by cro protein, the sign for Horus.

Seth (cI protein) becomes the father of the human race by his possession of the left arm of the Lambda genome (lysogeny). With Horus' (cro protein or right arm) victory over Seth (left arm), both arms are operative under «Rightful Order» (Maat), the two gods are reconciled, Osiris rises from the dead, resulting in HGT and lytic

⁴ FAULKNER, 1969; 1973-78.

transformation of the Dead King. Isis is central to this asexual transformation as the sign for lactose, the necessary nutrient medium.

Phage Lambda is a tailed virus with an icosahedral head in a sphere (20 equilateral triangles arranged around the face of a sphere with 12 vertices, 30 edges). Literature describes phage morphology or heads, tails, necks, and vertices, the same terminology used by modern scientists. In *Amduat* Hour Ten, humans have spheres for heads, and the most interesting morphological imagery is the strange drawing in the Tomb of Ramesses VI over Doorway G leading to Hall H in Plate 182 prepared by Alexandre Piankoff⁵. The imagery depicts a transformed armless human form with serpentine legs and a large spherical head.

Literature and Art define Lambda Lifestyles

In the Edifice of Taharqa, Room E is the Chapel of the Rites of Djeme and the Divine Reentrance (Rites of the Mound of Djeme, Plates 22, 23). The left side of the lintel in the Upper Register shows the King wearing a kilt and ceremonial tail, with the «Wife of the God» holding a palm, and a priest carrying a standard with a falcon on the perch⁶. However, the dominating scene is a mound with a wide band arching above two outstretched arms with hands open to the sky, suggesting the two arms of the Lambda genome. A falcon is centered between the arms on a lotus with the plume of Maat, a word interpreted as «Truth, Rightful Order»⁷ on the right (Plate 22). The text refers to Amun-Re as «Lord of the Thrones of the Two Lands», (52) suggesting the combined activity of both Lambda arms. The text then states that «the *btw*-serpent is driven away», an echo of the Apopis theme from the *Pyramid Texts*. On the left side of the Lintel, references are made to the «Lord of the Sublime Arm», «The arm of Geb», and «The arm of Horus» (53). From this Old Kingdom theme, it is obvious that the arm of Geb (left) and arm of Horus (right) comprise the whole Sublime Arm.

Texts support that Lambda DNA or Osiris is the quantum world-heart of our Universe, producing two DNA-texts for survival. Put simply, the left arm (Conspiracy of Seth) results in the creation of the human world via sexual genesis or vertical gene

⁵ PIANKOFF, 1954.

⁶ PARKER et al., 1979, 49.

⁷ GOELET, 1994.

transfer (VGT), while the right arm (Horus) results in transformation to energy through HGT and asexual genesis (cloning). This is the biophysical meaning of the mythic brother rivalry between Seth and Horus over the throne of the dying/rising god Osiris. The following review of this well-studied protein battle for genetic expression will explain signs pointing to HGT and transformation.

1. «Come, cross over» (CT 293): Crossing Over as Recombinational Repair

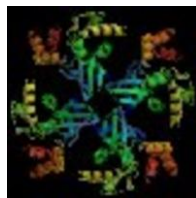


Figure 1. Holliday Junction recombination
Public Domain Protein Data Bank ID: 1HJP. Nishino et al. 1998.

In Egyptian texts, merging with the light of the Sun-god is the first sign of HGT or DNA recombination with phage Lambda. In its lysogenic lifestyle, Lambda attaches its tail to the host cell and injects its DNA down the tail into the cell. Once inside the cell, the DNA circularizes and becomes negatively supercoiled or twisted reversely with a zig-zag backbone, referred to as Z-DNA. The Lambda DNA or genome (Osiris) then must go through a DNA-cross called a Holliday junction (see figure 1) which is a seven base pair (7 bp) branch migration or what the texts refer to as seven gates or the Boat of the Branch in *Amduat* Hour Three. This is also indicated by artwork depicting crossed arms and literary references to *crossing over*.

The Holliday junction is a site-specific recombination process responsible for integration and excision of bacteriophage genomes into and out of the host cell chromosome. After entry, the genome lodges at a specific spot, a 30 base-pair region between the *b-gal* and *bio* genes, referred to in texts as the «House of 30» or the «Hidden Chamber». The *b-gal* gene is another name for the lactose genes or Isis. The major portion of phage protein is derived from the lactose nutrient medium, thus Isis as the Lady of Provisions plays a major role. The Lambda genome or Osiris falls asleep here next to the inactive lactose genes that are tied off by the lac repressor protein or the Isis-knot (see figure 3). The genome or Osiris becomes dormant, inert, or dead, to be

silently replicated with the bacterial cell DNA, resulting in our classical world or the Conspiracy of Seth.

The proteins battle over control of two promoters or series of three leftward operator sequences $O^{L1}-O^{L2}-O^{L3}$ and three rightward operator sequences right $O^{R1}-O^{R2}-O^{R3}$ («Mansion of the Six»), determining lysogeny or lysis. Cro and cI are produced from opposing transcripts that both originate from the rightward operator region. Both proteins bind to the right side but in a preferential order: cI binds the right $O^{R1}-O^{R2}-O^{R3}$, and cro binds the right $O^{R3}-O^{R2}-O^{R1}$. If cI protein or Seth binds the O^{R1} first, it captures the entire operator sequence, stimulates its own synthesis, and stops the *rightful order* of cro or Horus. Lysogeny is the result. Yet, CT 1181 states, «I am sitting on the Eye of Horus as the first of the three», indicating victory for Horus by binding O^{R3} . How does cro or Horus win this battle for the operator seats and restore «Rightful Order» or Maat?

In vivo, if the cell DNA is badly damaged by ultraviolet (UV) irradiation, the SOS response is triggered, which activates the host cell protein *E. coli* RecA. This enzyme destroys the Lambda cI repressor and cro wins. The phage, induced by UV, then goes into the lifestyle of lysis or the lytic pathway, producing progeny by means of second stage rolling circle replication (signified by Osiris bent backward in circle). RecA protein is upregulated by the SOS response and cleaves the monster LexA Repressor or Apopis, which catalyzes its own digestion or poisons itself as the texts state. Forty-two (42) genes are derepressed⁸, the Lac repressor is cleaved and lactose is available. Seth or cI protein is inactivated because Horus or cro beats cI to the operator sequences and binds first via the *rightful order*. Osiris rises from the dead, goes through the 7 bp branch migration or DNA cross, and forms a DNA arc (Osirian ouroboros) to clone progeny via second stage rolling circle replication for head and tail assembly. Millions of clones then lyse or burst the cell in a Great Flood. The texts indicate that the incoming Sun-god or Dead King journeys to Osiris' Hidden Chamber or gene seat, and second stage rolling circle replication begins.

It is evident that HGT and Lambda lifestyles mirror historical religious themes: merging with the light, the dying/rising god, the brother rivalry, the mother goddess, the virgin birth, and the Great Flood, suggesting religion can be proved as Science.

⁸ ROSENBERG, 2001.

2. Protein Folding Funnel Energy Landscapes

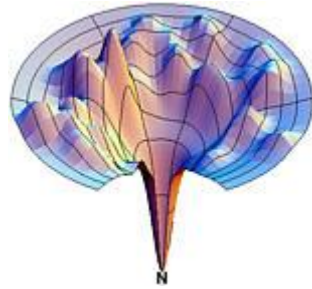


Figure 2. Funnelscape for a fast folding protein. With permission from Hue Sun Chan and Ken A. Dill, Protein Folding in the Landscape Perspective: Chevron Plots and Non-Arrhenius Kinetics, *Proteins: Structure, Function and Genetics*, January 1998, 30(1): 2-33.

Egyptian deities operating within the Duat, such as Apopis, Seth, Horus and Isis, are signs for viral/bacterial proteins folding and binding in funnel energy landscapes (see figure 2). Protein folding is a process by which a protein structure assumes its functional shape or conformation by freezing to a unique stable structure in a funneled energy landscape biased toward the native structure⁹. Textual descriptions and actual drawings show a remarkable correspondence between serpents and viral/bacterial DNA-binding proteins. When creating DNA-binding proteins, the scribes portrayed the folding molecules as serpents with three, four or five heads corresponding to the protein's alpha helices (primary structure) and beta sheets (secondary structure).

Interestingly, modern scientists use the same terms the Egyptians used, such as families, wings, arms, upstream, downstream, domains, fields, and so on. Our scientists also classify proteins in families such as «winged helix-turn-helix». In the *Amduat* Hour Four (Seti I), the top register shows the three-headed, winged serpent or DNA-binding protein DRADA (dsRNA-specific Adenosine Deaminase). Its structure reflects the characteristic wings or beta sheet loops and the three alpha helices¹⁰.

3. Monster Apopis as the Sign for the Monster LexA Repressor Protein

⁹ ONUCHIC et al., 1997.

¹⁰ HERBERT; RICH, 1996, 2001; RICH, 1999.

In the Protein Data Bank (www.rcsb.org/pdb), the *E. coli* LexA repressor protein is a structure containing three regular alpha-helices and an antiparallel beta-sheet exhibiting a coil-like shape. PT 502 describes Apopis as follows: «O Htty, Htty, you who go on your four coils, wake up, come and lie down in your house...O Monster, lie down!» Apopis matches not only the structure, but also the function of the monster LexA repressor protein that allows cI protein or Seth to function and helps maintain Osiris in an inert lysogenic state. Induction of the SOS response de-represses at least 42 genes that function in DNA repair, recombination, mutation, translesion DNA synthesis and prevention of cell divisions¹¹. These genes are usually depressed by the transcriptional repressor LexA. The inducing signal that de-represses these 42 genes is single-stranded DNA, which binds to RecA protein (serpent Mehen around Sun-god in *Amduat*), activating a co-protease activity. The texts explain this reaction, where the monster LexA repressor protein catalyzes its own digestion or self-cleavage: «O you expectoration of a wall, you vomit of a brick, what comes out of your mouth is turned back against yourself» (PT 241). When Horus wins the protein battle, Apopis is slain, that is, the protein catalyzes its own digestion or self-cleavage. Seth then becomes Horus' partner, Lambda lysis results and Osiris rises.

4. Isis as the Sign for the Lac Operon

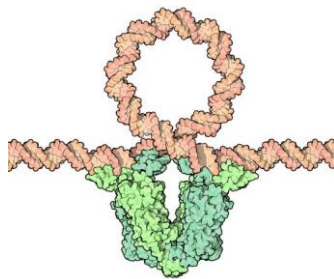


Figure 3. Lac Repressor Protein looping DNA at lactose genes in *E.coli*. Protein Data Bank Molecule of the Month (2003). Illustrator: David S. Goodsell

Jacob and Monod first elucidated the lac operon or lactose metabolism system in *E. coli*, which prefers glucose. If lactose is present in the bacterium, enzymes such as *beta-galactosidase* (LacZ), lactose permease (LacY) and thiogalactoside transacetylase

¹¹ ROSENBERG, 2001.

(LacA) are turned on for lactose degradation. LacI is the gene (360 amino acids) encoding the Lac repressor protein, which actually loops the DNA into the shape of an ankh at the lactose genes. When lactose is present, it induces the lac operon and binds to the repressor, which falls off the DNA. In the core myth, the milk-goddess Isis, who is present on the bark, is the sign for lactose entering the cell to induce the lac operon.

To the Egyptians, Isis represented the *Magna Mater*, the great creative power nurturing all living things. Nephthys was her twin form and the consort of Seth. Isis' crown consists of a pair of horns between which is a lunar disk, sometimes surmounted by the throne symbol. The Lambda prophage lodges in the host *E. coli* chromosome at the site of the LacZ or *b-galactosidase* gene. With the prophage inserted here, the LacZ operon may be inactivated, resulting in a nonfunctional galactosidase¹². With the excision or removal of the prophage, this gene for lactose metabolism is vacated, leaving an empty seat, or so to speak, an empty throne. Thus Isis' name depicts the empty throne or seat and the potential for lactose metabolism, which is necessary for the birth of the self-created Horus lineage. The text states, «Isis wakes pregnant with the seed of her brother Osiris», saying «His seed is within my womb, I have moulded the shape of the god within the egg» (CT 148).

When active during lysogeny, the monster Apopis or LexA repressor protein also maintains the lac repressor protein, thus genetic expression of the lactose genes is tied off by the Isis-knot (see Figure 3) or looped DNA. The Lambda genome is lodged next to the lac operon, and so to speak, Osiris is sleeping with his sister Isis. When Horus or cro protein wins the battle for the arms, Apopis or LexA catalyzes its own digestion, the lac repressor is cleaved and lactose is available for the excision of the prophage or the rising of Osiris. DNA looping has not only been identified in the lac system, but also in other systems such as the *deo* operon of *E. coli*, the lysogenic to lytic switch of phage Lambda and the human *b-goblin* locus¹³.

The Birth of the Limitless

In first stage *theta* replication, the phage Lambda genome becomes a negatively-supercoiled structure or a left-handed form of the DNA molecule called Z-DNA with a zigzag backbone. Negative supercoils arise behind a transcribing RNA

¹² NICHOLL, 2002, 135.

¹³ SAIZ and VILAR, 2006.

polymerase, which plows straight through the DNA double helix instead of rotating around the DNA¹⁴. When cro protein or Horus wins the battle for the rightward operator sequences, RecA protein cleaves repressor proteins, the polymerase (Thoth) transcribes lactose (Isis), and cro protein (Horus) stimulates its own synthesis, resulting in a transcribing polymerase plowing straight through the DNA double helix or wormhole, as shown in the *Amduat* by the Sun-bark in the middle register, a sign for the Lambda supramolecular transcribing complex of molecules and/or proteins. This is also suggested by artwork depicting two-headed serpents and entry/exit through serpents.

Egyptian texts describe this DNA magnetic field wormhole as a tiny black hole connected to a white hole, a micro Einstein-Rosen bridge or wormhole, a time machine for a particle or wave. Wormholes are allowed by the mathematics of General Relativity; in fact, Einstein attempted to model particles as wormholes. As Erik Hornung observed¹⁵, the Netherworld is a black hole and «the location of time past» while «Time reversal permits us to leave the Black Hole». The technical name for this type of black hole is a spinning Kerr black hole, discovered in 1963 as the Kerr solution to the vacuum Einstein field equations. Having outer and inner horizons and a ring singularity, Kerr black holes drag spacetime. Due to the angular momentum or spin, the ergosphere or area around the rotating black hole, drags anything present in the same direction the hole is spinning. Egyptian references to dragging the bark (CT 60, 818) indicate this rotating geometry, as does the likely translation of Rosetjau as «place of the dragging»¹⁶. References to the inner horizon (PT 669, CT 682) are present, which is also referred to as the middle gate in the east, the Inner Circle, the Middle Sky and the middle of the eye (CT 159, 161, 164, 467, 641). Further, references to doors keeping out the plebs, the secret gate and secret portals also refer to the inner horizon (PT 373, 611, 667, 716, 724; CT 68, 217, 237, 516). References to both outer and inner horizons are numerous¹⁷

Also, when approached from the inner horizon, the ring singularity is repulsive, allowing one to theoretically leave the black hole. Thus, the *Book of Two Ways* Text 1054 states, «No man is able to penetrate the fire — he will be repulsed there»¹⁸, along with advice that the Deceased should pass by «Repulsive-Face» (CT 1066). Further, Text 1064 states, «This is the door of the circle(?), the opening of the Holes(?)»,

¹⁴ LIU and WANG, 1987.

¹⁵ HORNUNG, 1994.

¹⁶ GOELET, 1994: 143.

¹⁷ For compiled data, see www.isisthesis.com/papers.htm.

¹⁸ PIANKOFF, 1974.

suggesting the existence of a second hole, a white hole. According to Sethe's interpretation (which Faulkner questions) PT 291 is translated by Faulkner as: «Your honour is removed, O white hole, by him who came forth from the *fnt*-snake». Coming forth from the *fnt*-snake is similar to the Sun-god's departure from the Netherworld through a serpent in the *Amduat* and the *Book of Gates*.

In astrophysics, a white hole is a body that spews out matter or a black hole running backward in time. When the Deceased states, «I eat with my mouth, I defecate with my hinder parts» (CT 105, 701), the texts are describing this process. Modern scientists describe a mouth as an entrance to a wormhole. CT 1181 states, «my hinder-parts are those of the *wrrt*-crown», suggesting a white hole. Other Egyptian signs referring to the black hole are black eye and Red Crown, whereas signs for a white hole are white eye and the White Crown, which exhibits the shape of a white hole. The Egyptians had a very good idea of Kerr black hole dynamics that lead to wormhole formation, and they actually described a naked ring singularity, the circle of fire (CT 1032) or place of destruction belonging to the Red Crown (CT 712).

1. Traversable Time Machine

How does a spinning Kerr black hole become a time machine? A spinning Kerr black hole has a ring singularity, a place of destruction where tidal gravity and spacetime curvature are infinitely strong. When an entity falls in from the outer horizon, it rotates around the hole, inevitably crushed at the ring singularity, the Egyptian *second death*. However, if approached from the inner horizon or the axis of the black hole or the north pole, the gravitational repulsion of the central singularity slows the entity down, turning it around, and accelerating it back out through the inner horizon of a white hole. Put simply, the space axis and time axis exchange places when one crosses the outer event horizon, and the future becomes an unavoidable place in time or the crushing singularity. Crossing the inner event horizon, time and space resume their normal axes, making the singularity an avoidable place in space, while allowing access to the past singularity of the white hole. Ultimately, one goes through four horizons—the outer and inner of the black hole, and then the inner and outer of a white hole, what the Egyptians referred to as the opening of mouths four times. The Opening of the Mouth ceremony parallels the movement of the Deceased through four horizons (the

breaking of magnetic field iron four times), while textual advice to access the guiding polestars aligns the quantum Deceased to a micro black hole axis or north pole.

According to scientific speculations, inside a spinning Kerr black hole, the act of looking backward would allow one to see a white hole or the past singularity, a full moon. Since a white hole is a black hole running backward in time, the Negative Confession of the *Book of the Dead* describes deities «who come forth backwards» and «He whose Face is behind him who came forth from his hole».

At the inner horizon, infalling radiation is blueshifted as it accumulates¹⁹. References to Field of Turquoise (PT 473) and the Blue One, Lake of Turquoise, traveling with turquoise, Lord of Turquoise, and open door of the blue sky (CT 147, 220, 467, 468, 1003) indicate blueshift or the high frequency light associated with approaching radiation. In contrast, radiation moving away from the observer appears redshifted. The Dead King observes, «he who departs is red and smeared» (CT 624), and «N has gone up in the red hour» (CT 749). What is interesting is that the color change is not perceptible to the human eye unless the relative speed of the source of light and the onlooker is very great. This suggests that light-speed perception exists for mind in the Universe via a quantum state reduction.

Due to quantum effects, gravity becomes repulsive and the black hole becomes a wormhole backward in time. The Egyptian texts describe this process clearly, referencing inner horizons, redshift, pair creation, the thunderpop effect, blueshift, throats, and so on, and support it with art depicting two-headed serpents or wormholes. Yesterday belongs to Ani, and Einstein's math provides solutions for wormholes. In addition²⁰, demonstrated the existence of spacetime geometries containing traversable wormholes that are supported by arbitrarily small quantities of exotic matter.

2. The Thunderpop and Other Anomalies

The CPT theorem, with its three parameters of Charge, Parity and Time reversal, is a basic precept of particle physics. According to the theorem's logic, if there is a violation of C, there most likely will be a violation of P and T. After discussions with Hawking, Andrew Strominger²¹ investigated CPT, finding that in two dimensions,

¹⁹ VISSER, 1996.

²⁰ VISSER et al., (2003).

²¹ STROMINGER, 1993.

weak CPT invariance can be restored in a sector of Hilbert space by including the possibility of white hole formation/evaporation, viz., the time reverse of black hole formation/evaporation. The Planckian thunderpop is necessary to nucleate the white hole into which CPT-reversed Hawking radiation falls.

Hawking radiation, a possible manifestation of the Dead King as radiation or energy, originates just outside the event horizon. This effect is significant for micro black holes where quantum mechanical effects dominate. Micro black holes are predicted to undergo runaway evaporation and vanish in a burst of radiation. When mass is compacted in a small volume, gravitational forces are powerful, and everything collapses into a black hole. In mini black hole theories with large extra dimensions, a brane of localized particles plays the role of our 4-dimensional world of matter. A mini $(4+n)$ -dimensional black hole emits Hawking radiation both in the bulk and in our brane world. Since the Dead King escapes the black-hole Netherworld and is associated with uraei shedding «light by means of their radiance [which cometh] from their mouths»²² or uraei pouring fire from their mouths (200), a quantum parallel exists between the transformed Deceased and Hawking radiance in the bulk. In a review on theories postulating the existence of large extra dimensions in small black holes, Kanti explains: «The brane-localized modes and bulk modes live in spacetimes of different dimensionality. Whereas the bulk modes have access to the whole of the $(4+n)$ -dimensional spacetime, the brane modes live in a four-dimensional slice of it, which is the projection of the higher-dimensional spacetime on the brane»²³. This description defines holographic dynamics.

Juan Maldacena has shown black holes operate according to the holographic principle²⁴. All the information about the black hole is stored on the horizon. Particles living on the boundary describe objects in the interior, which could be very complex. Maldacena explains that spacetime (the interior) and everything in it emerges dynamically out of the interaction of particles living on the boundary. The two-dimensional surface encoding the information about the three-dimensional shape of a black hole is this boundary or horizon, thus the Dead King is a horizon-dweller, has a seat in the horizon, and takes possession of the horizon, «so that those who are in the horizon may live for this spirit» (CT 260). «My power is in the horizon» (CT 573).

²² BUDGE, 1904: 184.

²³ KANTI, 2004: 17.

²⁴ JUAN MALDACENA, 2004.

In the texts, two-headed serpents and even the Sun-bark with serpent heads (*Amduat* Hour Four/Five) indicate the idea of a wormhole or movement back in time to Atum. CT 755 clearly states, «There is put together for me the worm of Him who approaches his father(?)». Other indicators are that the Deceased desires to become Nehebkau (CT 84-86), a serpent «who is not scorched because of fire» (CT 88), a reference to the ring singularity. He states, «I am the throat of Nehebkau», (CT 822) and «I am king of the sky, (even) Nehebkau who rules the Two Lands, Nehebkau who grants souls, crownings, doubles and beginnings» (CT 647, 943). Nehebkau can be translated as «He Who Unites the Kas»²⁵.

Egyptian deities are signs for viral/bacterial proteins folding and binding in funnel energy landscapes to produce millions within a mirror process of black hole/white hole formation/evaporation to produce radiation or energy on the brane (second death) or in the bulk (transformation). The preferred path permits the associated thunderpop effect, with the texts describing it as a fiery blast of mouth, thundering sky, quaking lands, broken mountain, and the raging White Crown.

3. Eye of Horus Numbers

An apparent horizon is a structure of spacelike hypersurface that can be determined locally in time. However, event horizons are global structures that cannot be detected during a time evolution²⁶. The Eye of Horus numbers ($1/2-1/4-1/8-1/16-1/32-1/64$) are equivalent to black hole resolutions determining the position of the inner event horizon via the apparent horizon. The numbers almost converge on zero or the minimum radius of the inner horizon necessary to avoid the repulsive ring singularity, which has a non-zero radius.

Finally, the long spiral of the Eye of Horus is a mirror image of the Fibonacci spiral, a geometric spiral whose growth is regulated by a series of numbers (1, 1, 2, 3, 5, 8 . . .). Converging on the golden ratio phi (1.618), the spiral is related to the icosahedron, the pentagon, DNA and Kerr black holes. Dr. Mario Livio, Sr. Astronomer at Hubble Space Telescope Science Institute explains:

²⁵ BUDGE, 1904.

²⁶ SCHNETTER, 2003.

Spinning black holes (called Kerr black holes, after the New Zealander physicist Roy Kerr) can exist in two states, one in which they heat up when they lose energy (negative specific heat) and one in which they cool down. They also can undergo a phase transition (similar to the freezing of water) from one state to the other. The transition can take place only when the black hole reaches a state in which the square of its mass is precisely equal to ϕ times the square of its angular momentum (in the appropriate units).

A black hole phase transition, the sudden change from one state of energy to another, such as the transition from a rotating Kerr black hole state to a naked singularity, is similar to protein folding, a process by which a protein structure assumes its functional shape or conformation. Bryngelson and Wolynes created a phase diagram for folding transitions, consisting of three distinct regions: unfolded or coiled state, misfolded or glassy state, folded or native state²⁷. Egyptian texts in Table 1 explain obvious similarities between the dynamics of proteins folding and unfolding and black hole/white hole formation/evaporation processes.

Table 1: Comparative Sampling of Viral and Black Hole/White Hole (BH/WH) Dynamics

SIGN	VIRAL DNA DYNAMICS	MICRO EINSTEIN-ROSEN BRIDGE
Amduat zigzag course	Z-DNA	Black Hole Twist/Shear in inner horizon
Sun-god dragged straight on Serpent wormholes	Plowing straight through DNA wormhole v. rotating around DNA	Plowing straight down BH axis, stopping at ring singularity; going backward via WH
Sun-god halting	Stalled replication forks; change to Rolling circle replication (Osirian ring)	Turnaround point at BH ring singularity or inner horizon where time stops
Rising Osiris from Hidden Chamber	Phase transition to prophage excision	BH Phase transition to naked ring singularity
Crossed arms; Crossing over	Cruciform Holliday junction or recombination	Rotation/shear of time and space axes
Osiris in circle	Rolling circle replication	Ring singularity; closed timelike loop

²⁷ MULCAHY, 1997.

With the knowledge of HGT and viral and bacterial proteins binding, folding and tunneling along the DNA wormhole in folding funnel landscapes, Egyptian accounts intuitively twist their descriptions into micro black hole/white hole formation/evaporation processes, that is, a traversable Einstein-Rosen bridge back to the Early Universe for an energy product interpreting as mind in the Universe. As the transformed Sun-god enters the Eastern horizon to the Early Universe of Atum, the darkness lightens and the Dead King rises «upon the eyes of mankind in their circles»²⁸. Theoretically, if one looked back from the horizon into a white hole, mankind on earth would appear, although there would be no return to this world. Put simply, Egyptian accounts are observational evidence carved in stone supporting traversable micro wormholes, within which viral and bacterial proteins fold to their native conformation.

Conclusion

Luminet et al. analyzed light data remaining from the Big Bang, observed by NASA's Wilkinson Microwave Anisotropy Probe²⁹. Based on this cosmic radiation background afterglow, they determined the shape of the Universe is a dodecahedron enclosed in a hypersphere. Although this claim was contested by Cornish et al.³⁰, the dodecahedral topology, a dual to the icosahedron, reinforces the main conclusion of *The Isis Thesis* that the micro-structure that left this signature at the origin of Time was phage Lambda, which has an icosahedral phage conformation of 20 triangles arranged around a sphere. Also, human genome sequencing and the viral history of life on our planet suggest that a lambdoid virus with its capacity for HGT may be a deep structure in our gene pool, while human behavior (art, architecture, religion, scientific cloning, and so on) mirrors Lambda DNA dynamics³¹, suggesting it is the origin of signification and meaning in the Universe.

Egyptian texts also support the hieroglyphs have biological roots, religion can be explained as science, and HGT and transformation may be possible for humans after death.

²⁸ BUDGE, 1905.

²⁹ LUMINET et al., 2003.

³⁰ CORNISH et al., 2004.

³¹ KING, 2006.

During a time of evolutionary crisis for Man, this transdisciplinary Egyptian science disguised as religion explains the Secret of Sexuality that may free humanity from myth and superstition and offer an option for evolvability. In light of recent research and to better understand the impressive legacy of Ancient Egypt, Egyptologists need a biosemiotic understanding of evolution, along with knowledge of New Physics and other sciences.

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