

Space:Negative Selection, Physical Constraint, and Symmetry

Marvin E. Kirsh¹

kirsh2152000@yahoo.com

¹ Department of Anthropology California State University Los Angeles

Abstract

A descriptive role is suggested for uracil as a temporal divide in the immediate aspects of metabolism verses long term maintained genetic transmission. In particular, details of the mechanism of excision repair of uracil from DNA based on differential parameters of spatial distortion of the planar uracil molecule within the DNA helix verses RNA, when viewed in analogy to a proposed model for space involving the substitution of the act of mirroring for the element of time in processes and a descending complexity of structure with time of evolution, suggest the possibility that negative selection against decreased lifetime is the singular motive force of natural selection. The geometry of the Mobius strip, as it has a plane of mirroring symmetry, a twist able to account for torque in nature, an inversion of inside and out seen in biological structures, and an endless surface that can be accommodated to an atemporal account of physical processes is employed in a holistic model to elaborate a negative selection opposing death as zero volume or the logical existence of physical constraint to volumes that is represented as the ubiquitous inability of witnessing objects of any type to witness simultaneously both a self reflection and the reflection of self reflection. A role for uracil and its' physical structure, in a model in which both are evolved from the mirroring of events of the witnessing of energies, is elaborated in which temporal aspects such as those entailed in existing models of natural evolution are considered inappropriate in perspectives that are oriented

positively towards a successful comprehension of processes; focus is placed instead upon the geometry and arrangement of physical spaces.

Introduction

Uracil existing naturally in RNA species is found able to exist in DNA only in significantly contorted physical arrangements (Parikh, 2000). It is reported (Hopfner, 2000) that the excision of uracil from DNA by uracil glycosylase is dependent on the physical distortion of uracil in the DNA helix both for its identification within the DNA and the potential embodied to its' strained confirmation to energetically effect its' excision in a both failsafe and foolproof mechanism based on an exact familiarity not only with the structure of uracil but on the many counted and clocked steps that are elapsed involving its' physical distortion upon its' displacement from its' ordinary and familiar environment. A natural fitting of uracil in relation to its' existence in two potential situations, in RNA or DNA, discriminating not by absolute shape but by a contrast of shapes to the shape of spaces it occupies, might be extended for analogy to the situation of all natural structures involving affinity and shape mediated structure and functioning. As there is considerable difficulty to account for observation of the evolutionary behavior of all the species with the Theory of Natural Selection, the demonstrated interactive aspect of appropriate physical placement with regards to stress modulated environmental compatibility and the existence of recognition and employment of energy specific to stress occurred from inappropriate physical placement, i.e. uracil from DNA, might support speculation suggesting that all genetic processes are describable to possess a higher order logic that is not so obvious from comparative stereometric and energetic analysis based on the study of physical interactions.

As all organisms are observed in property to have some continuity of inside and outside, and temporal facets possessed to theories of evolution necessarily emerge in discussion as topics of controversy between science and religion, the Mobius strip, having a continuous never ending, contiguous inside with outside surface is chosen with which to draw example to the life processes, in particular with which to elaborate evolutionary explanation of life processes with analogy to a postulated mechanism of origin of the structure of uracil and a functional role of uracil in the lives of cells; more specifically to account empirically for both uracils' physical symmetry and a torque energy embodied to it from a mirror property given the plane of symmetry of the Mobius strip and an energy embodied to its' $\frac{1}{2}$ twist, respectively.

The purpose of this demonstration is not to establish a visualizable grand universal geometry in the form of a fixed physical conformation with which to refer to natural processes, but to demonstrate a perspective from which processes may be viewed in order to acquire understanding of their nature. Dynamic volumes of processes as places of physical path that are established by witness events might be given reasonably fixed description, though the process of the addition of energy or motion to statically visualized structures to bring them to action causes them to lose their visible order; second, though visible order, usually not apparent though it is intrinsically associated with the physical details of observation, might accommodate many distinct interpretations, it is alternately contended, if a valid interpretation exists in reality, that false interpretation necessarily exists in conceptual rendered orderings that resemble visual order apparent in observation; fixed visualizations can, with appropriately found test parameters, be induced to motion to both escape the form of their original conceptualizations and to emerge in a similar manner as the motions of life are viewed as emergences. If description of the changing/emerging concept as a life form has substance, a parametric, applied to common

sense logic from perception , rather than abstracted conceptually describable origin for life processes appears to be the only logically arguable course; the only possible real setting, especially for the purposes of science pursuit that appears to involve not only observation in which order is not present or apparent, but an existing real and visualizable motionless physical order that necessarily renders, in the first rather than third person witness, a chaos to the real world of change and processes. It might be inferred that the basic units of life, in imagined conceptual unification, involve an irrationality resembling a logically structured sentence to which motion is imparted as a temporally active change in meaning that is either able or unable to render a coherent story line upon the substitution of empirical values into appropriate positions in its' structure. As it is almost an innate if not a sacred ability to conceive of the living in this manner, one might have chosen that this analogy in discussion does not deserve much attention less he considers to recreate nature's experiment, or should I say to pursue death to arrive at a new birth, though the rules of nature that preclude the closed as non living and the open as all that exists also entail parameters to it that are necessarily already the broadest as they are declining as a result of a finite investment of energy. This author finds it appropriate to invest discussion in related analogies in light of contemporary efforts to clone living things, employ the metabolic energy of metabolism from living entities in mechanical assemblies, etc.,

Discussion

The third person witness described, is meant to be but a stationery reflection of its real living form in the first person, it is absent altogether from observation because it entails witness both to ones' reflection and to the reflection of ones' reflection simultaneously; entailing the absence of

life, it is both lifeless and selected against as unfitting, simultaneously referring to the present and its' reflection that is necessarily temporally removed from it; and embodies to description a single obstruction that births the particulars of history, volume, and time, i.e. as the effected product of the approach of a reflection to converge, along with its' temporally distinct own reflection, upon the frame of witness observation; if space is described physically as space-time, it is only space or time. In a mirror, one can see himself, a second mirror can be placed with which to see the first mirror, but the initial witness cannot simultaneously witness itself and the second mirror that reflects the first mirror, to view the self in both reflections. Though it might be concluded that the world is necessarily constructed of mirrors, the possibility can be reflected upon only, it cannot be brought to life with mirrors, it is absolutely selected against, i.e. the reflection, and the reflection of it bear no commonality to be mutually present to the same situation. If it is said time cannot see itself, it might first be taken to mean that it does not emerge, second, if effective description can not emerge, it therefore contains no element of time, third, if all elements of the world possess time, the existence of separate categories of death and timelessness are an illusion, the third person knows death only as a lifeless representation that is selected against.

Though uracil is selected against as a component of DNA, real positive selection in events temporally removed from the excision of uracil in DNA, i.e. removed from the negative selection against uracil in DNA, are not describable. Nature selects by criteria of what it does not like rather than what it likes. It might be stated that death is selected against in all aspects of all processes and that nature does not possess a mechanism for positive selection; if the closed space is death, if all that can logically exist are either open or closed spaces, only open space does exist and nature is that which seeks the open though it possesses only a mechanism to avoid the

closed. There is a great deal of confusion about this through out history. The theory of relativity posits open space as that which supports life and closed spaces as that which coexist that are unable to support life, in separate special and general theories of relativity respectively. It might be better stated in speculation that closed space both precludes and precedes open space, it is not clear that ‘closed space’ has rational coherent meaning but in the form ‘closing of space’ to indicate a notion of death, or threat of premature death and to fit with a notion of the world as always in a state of becoming.

A model for the origin, structure and function of uracil involves the following concepts:

- 1) Time and space are proposed to be the consequence of a path of energy, travel of a full course of space, represented by the inversion of the Mobius strip, is proposed to entail the simultaneous witness, of both a reflection of the path of energy and its’ reflection upon the same coordinate of space-i.e. death. This is further abstracted in an avoidance of death, to result in a breaking of velocity and the birth of a mass (i.e.-uracil) that assumes a role as a physical divide/buffer to prevent a neutralization of the energy. The new mass, is physical memory that is embodied to it from its’ possession of parameters of path in its original state as energy.
- 2) Three entities are postulated to have occurred in a parametrically shared interval that can be visualized as a length along the center axis of the Mobius:
 - a) DNA that is visualized in analogy to represent a difference state between the point of inception of the energy transit and a near intersection of simultaneous witness in the first perspective with first and second reflections.

- b) RNA that is visualized in analogy to represent a difference state between the ground or end state and the described point of near intersection
- c) A third species uracil is postulated to act as a death preventing buffer of the same species as the long and short DNA and RNA, its birth reflects a physical course of the near intersection with death; uracil physically not only bears its features, but shares its features both with DNA and RNA as all are postulated to have been born simultaneously from energy during the same near death encounter interval.
- 3) The center line of the Mobius strip serves as a mirroring divide from which the symmetry of uracil is rendered from near exact mirroring across the center line of the Mobius, replicating, interlocked twisted DNA loops, absent or with low levels of uracil related to relative lengths in ratio along the center line during the simultaneous period of occurrence of uracil, DNA (and RNA) and an opening, closing of Mobius strips to form interlocking loops, and shorter chains possessing uracil (RNA).
- 4) All of the species discussed, born of near simultaneously occurring reflections are necessarily nearly identical, (uracil) the smallest of the short interval-of-near-encounter, with the greatest mathematical symmetry, is the most vulnerable to death and hence the most sequestered. Though measured and not found (Kirsh, 1986). It might be inferred that, in the process of reliving the facets of birth, mutation in DNA is a manifestation of this occurrence as an inborn active changing element that is always engaged in an avoidance of death that is embodied to the living state in definition as the simultaneous witness of self and the reflection of the witness of self. Rates of mutation in the DNA for species tested has been shown to be constant (Dolgin, 2009, Drake, 1991, 2006) as

might be expected from the events described in which death resulting from the potential physical intersections of reflections of first and second order rates of change is quenched from the production of stable intermediate that is distributed among cellular and nuclear material based on ratios of events with a shared lifetime-i.e. varying physical dimensions. An inherent rate of change is reduced essentially to correspond to lengths of polymers.

- 5) In analogy to, but in reverse to the release of energy from collision of particles in an accelerator, an invisible energy is captured into many species and intermediates and structures based on an arrived arrangement from events related to conceptions.
- 6) It might be noted with respect to the occurrence of three atoms to each symmetrical half of the uracil molecule, the occurrence of three species, RNA, DNA and uracil, four species of bases adenosine, guanosine, thymidine, and uracil, with respect to the fact that witness occurrences can contain only two species at any particular instance, that either one or two additional species other than those entailed to mutual witness events, are entailed to activities in intervals of near death encounter. This might be explained with simple sets and acts of negative selection.
 - a) The third and fourth entities in each case must represent a negative selection from death.

- b) The case of uracil in the set RNA, DNA and uracil has been discussed as well as the preceding case of approach towards a zero energy state (i.e. zero volume) and (two) reflections of that state. Each has three members in the discussion.
- c) The existence of cases of A, T, G, C verses A, U, G, C , and codons as sets of three bases, seem to indicate in this model more than one single transition state involving two elements and negative selection for death resulting in the birth of three elements from an initial two in each event. It is also possible to represent base pairing phenomenon in terms of sets of two elements, and subsequent witness and near death exposure over the course of travel of interval of the twisted Mobius inversion to produce a third species at each directional reorientation resulting speculatively in the assembly of chains possessing either uracil or thymine to attain, as a train maybe visualized to slow to avoid a collision, an eventual braking of fast moving energy to result in a greatest diversity of bound energy to physical structure rather than death. Events are hypothesized to have ‘fallen together’ in a certain efficient way based on a circumstance of parameters of intersection-i.e. the age of beam of energy might be related to its’ speed, the dimensions and stability of mass evolved from it.
- d) Metabolically active memory as strings of nucleotides, remain as the product in which selection against death is accomplished as the genetic propagation in the form of ‘physical pieces of path’, physical memory, as the consequence of an event of near coincidence with death.
- 7) The life process in this model does not proceed from the birth of life, or birth of the individual to a result of death, but a resulting unwitnessable birth from a near collision

with a near witness of death of the self. It is, ubiquitously, witnessability that is the producer of death and is selected against and unwitnessability that is the producer of birth. Postulated to undergo no natural selection pressure at all, birth relies on the greatest conservation of open space, of diversity. The modern great historical rise in the rate of autoimmune disease is postulated to be caused by artificially applied selection pressures, in ordinary (political) activities in research and planned application that is oriented with respect to a propensity in natural reflexive perception to order processes in terms of a progression from birth towards death; artificial selection against death that is already at a maximum beneficial rate involves, in this case, a comprehensive change in system state towards a state of greater witnessability, hence shorter lifetimes and quicker deaths resulting as a product of inductive reasoning applied to establish the unverifiable, unwitnessable existence of conceived entities such as the constituents of atoms that are employed in the invention of mechanical contrivances with which to breach naturally established proximities and divides. Acts of witness are being invented for the purpose of energy yield as the self is becoming blind to itself. These events are occurring in the midst of disposition to apply impulse to change natural courses, venture across divides. An actual reduction in the evolutionary established tolerances for simultaneous self-witness of the reflection and its' reflection is being pursued amidst a loss of perceived space from overpopulation that the effects of actions are, as expected, as it is witnessability that is the currency of barter, only at the threshold of witness and not apparent. Rewarded encouragements in form of knowing ones' self is more aligned with an Aristotelian perspective that associates personal traits and spaces with a normalized statistical scale, than a Socratic one that aligns truth and action.

8) The spaces inside cells, the atom, can be considered to be open in the sense to be the same in definition as the vast openness of space is perceived to be infinite by an individual on the earth's surface. A total volume of space is postulated to be the exclusive sum of all volumes that are born witness to by witness relative to the earth and its population/survival, and describes, necessarily, all processes that exist as all potentially witnessable events, as all that exists though other values and means of definition might be construed from a more mechanical method; totals of space are not amenable to witness dependent evaluation, they are relative and non additive to whole values made from either rulers or theory that elaborates distance from constant values-i.e. a constant velocity of light- as a single cultural trait in a population might have importance to other cultural traits as a single volume in relation to the whole (cultural trait) capacity of a single individual and not as a whole additive population total of trait volume(s).

Conclusion

The existence of volume and space is discussed as a fact of the obstruction of the ground seeking path of energy, to produce energy possessing form. In this view all natural biological processes can be viewed as the consequence of negative selection, in the absence of positive selection, to avoid the waste of energy. It is possible to relate facts of the structure of biological macromolecules such as DNA, and RNA to models involving a mirror symmetry, the guarding of a natural and invisible energy bearing divide that is a prerequisite for the existence of life, and life processes whose means of functioning is indistinguishable from all processes, as occurring emergence caused by a mechanism of

energetic relations within witness events describable, as the atemporal mirroring of reflected energy to produce the proximal inheritance of physical form.

References

- Dolgin, Elie, *High mutation rate revealed , Next-generation sequencing provides the most accurate estimate to date*, Published online 27 August 2009 Nature doi:10.1038/news.2009.864.
- Drake, John, W. *A constant rate of spontaneous mutation in DNA-based microbes* Proc. Natl. Acad. Sci. USA Vol. 88, pp. 7160-7164, August 1991 Genetics.
- Drake, John, W. *Chaos and Order in Spontaneous Mutation*, Genetics, Vol. 173, 1-8, May 2006.
- Hopfner, K.P., Parikh, S.S., and Tainer, J.A. *Envisioning the Fourth Dimension of the Genetic Code: The Structural Biology of Macromolecular Recognition and Conformational Switching in DNA Repair* Cold Spring Harb Symp Quant Biol 2000 65 (0) 113-126.
- Kirsh, M., E., Cutler, R.G., Hartman, P.E, *Absence Of Deoxyuridine And 5- hydroxymethyluridine In The DNA From Three Tissues Of Mice Of Various Ages*, Mechanisms of Ageing and Development, 35 (1986) 71-77.
- Kirsh, Marvin,.E. *Uniqueness, Self belonging and Intercourse in Nature* 2010(in Press), Lambert Academic Publishing Saarbrücken, Germany
- Parikh, S., S., Walcher, G., Jones, G.D., Slupphaug, G., Krokans, H., E., Blackburn, G.M., *Uracil-DNA glycosylase–DNA substrate and product structures: Conformational strain promotes catalytic efficiency by coupled stereoelectronic effects* PNAS May 9, 2000 vol. 97 no. 10 5083-5088.