

Kazi Nazrul Islam and the Science of Life: An Interdisciplinary Reading of *Bidrohi* (The Rebel) and *Shristi Sukher Ullasey* (The Joy of Creation)

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Abstract: This article seeks to imagine a link between the poetry of Kazi Nazrul Islam and the ideas of scientists Paul Nurse, Venki Ramakrishnan, and Carlo Rovelli. By comparing Nazrul's famous poems *Bidrohi* (The Rebel) and *Shristi Sukher Ullasey* (The Joy of Creation) with modern biology and quantum physics, it suggests that literature and science often describe similar realities from different angles. Paul Nurse's notions on the cell and Venki Ramakrishnan's research on ageing provide a structural as well as material framework to the knowledge of life and death. At the same time, Carlo Rovelli's theories speak of a fluid and relational view of the universe. The article argues that Nazrul's poetic images in these two poems are not merely metaphors but instinctual maps of those biological and physical processes. It also speculates that rebellion is a fundamental necessity for life to evolve and overcome the immobility of entropy. By placing these thinkers in dialogue, the article tries to present a unified notion where the act of creation and the spirit of defiance are seen as indispensable forces that drive both the human spirit and the cosmos itself.

Keywords: Kazi Nazrul Islam, Creation, Destruction, Defiance, Quantum Physics, Molecular Biology, Interdisciplinarity

Introduction

Studying literature, it is often found that the boundaries between the humanities and the sciences are far more porous than our academic conventions might suggest. My fascination with Kazi Nazrul Islam's verses, alongside an interest in the wonders of biology and quantum physics, has led me to read a couple of his well-known poems in the company of noted biologists Paul Nurse and Venki Ramakrishnan, and the theoretical physicist Carlo Rovelli. This article is an outcome of reading these four authors together – as a conceptual experiment, or as a pure assumption. It seems that the biological structures described by Nurse and Ramakrishnan might find a twin image in Nazrul's *Bidrohi* (The Rebel), while the dismantling of time proposed by Rovelli appears to vibrate within the pulse of *Shristi Sukher Ullasey* (The Joy of Creation). By placing these disparate texts in dialogue, this article aspires to explore how the "how" of the scientist alongside the "why" of the poet might perhaps be two aspects of the one reality.

To expand this conceptual experiment, we shall situate our three scientists and the poet within their respective landscapes. Moreover, we shall try to justify the bridge to be built between literary and scientific thinking. First, one must recognize the vantage points from which these thinkers observe the world. Paul Nurse is a Nobel laureate and geneticist who works on cell cycle regulation. He provides the very blueprints of how life replicates. In the book *What Is Life?*, he summarizes the complexity of the biosphere into five foundational pillars. He offers a structural clarity that perhaps mirrors the disciplined meter of a sonnet. Venki Ramakrishnan, also a Nobel laureate, writes like a historian of human beings' molecular mortality. His exploration of the ribosome and the inevitable decay of biological systems in *Why We Die* provides a materialist counterpoint to Nazrul's poetic metaphors.

Meanwhile, Carlo Rovelli, a pioneering mind in the field of loop quantum gravity, moves physics away from the "static" view and toward the "relational" view. He creates a space where the fleeting nature of a poem and the fleeting life of a particle finally meet. By placing Nazrul at the center of these scientific discourses, we can acknowledge his unique stature in the Bengali and Indian literary consciousness. Popularly known as the *Bidrohi Kobi* (Rebel Poet), Nazrul was a tidal wave of anti-colonial resistance and pluralistic philosophy. It is well acknowledged that in the early twentieth century, his voice shattered the socio-religious dogma by blending Islamic and Hindu motifs with an egalitarian humanism.

In fact, the attempt to read Nazrul alongside Nurse, Ramakrishnan, and Rovelli is part of a long tradition of relating together knowledge across disciplines. History is full of instances where the poet's intuition anticipated the scientist's discovery. For instance, Lucretius' (first century BCE) poem *De Rerum Natura* (On the Nature of Things) anticipated atomism and the laws of physics long before the arrival of the microscope. In the 19th century, Goethe moved freely between his masterpieces of literature and his foundational work in plant morphology. He proved that the shaping force of nature is a singular phenomenon, whether expressed in a leaf or a line of verse.

In the modern era, this dialogue has only intensified. In 1930, Rabindranath Tagore met Albert Einstein. They discussed the nature of reality and the role of human consciousness in a deterministic universe. More recently, authors like physicist-novelist Alan Lightman, a “spiritual materialist,” have demonstrated that science and literature are inextricably linked. (Lightman 3 -11)

The most significant point of contact between Paul Nurse’s biological philosophy and Carlo Rovelli’s quantum ontology is the definition of existence. In his book, Nurse identifies the cell as the first great idea of biology, describing it as biology’s atom. (Nurse 8). Its membrane defines it. It is a physical boundary separating the inside of the cell from its outside. This layer creates a distinct individuality of the cell by making it an autonomous entity managing its own chemistry.

In contrast, Rovelli’s *The Order of Time* argues that at the basic level of physics, there are perhaps no things with fixed boundaries. There are only “events” (Rovelli 86). Rovelli suggests that a stone, a tree, or even a person is not a static object. Those are processes in time. Everything is a happening that is inherently temporary and relational. The world is not a collection of things, but, as he writes, it is “a network of events” (Rovelli 88).

In the famous poem *Bidrohi*, it appears that Kazi Nazrul Islam adopts a persona that simultaneously acknowledges the biological “Self” (I or *Ami*) while manifesting the physical event. He declares:

*Ami Jhonjha, Ami Ghurni,
 Ami PothoSommukhe Jaha Pai Jai Churni.
 Ami Nritya Pagal Chhanda,
 Ami AponarTaale Neche Jai, Ami Mukto Jibanananda.* (Islam 1).

If we think of a meeting ground here, we see a fascinating divergence in scale. Nurse’s cell is a defensive structure, an island of order. It seeks to maintain its internal state at all times. However, it seems that Nazrul rejects this static equilibrium. By defining himself as a cyclone, he might be aligning himself more closely with Rovelli’s quantum ontology. A cyclone, after all, has no boundary. It is a purely energetic dance defined by its movement. While Nurse might lay stress on the inhibition of the storm within the cell, Nazrul emphasizes its unleashing. Though for Nurse, life is the maintenance of the boundary; for the poet, it appears to be the ecstatic violation of it.

To understand why the Rebel must eventually face this great dissolution, we must turn to the Second Law of Thermodynamics, or Entropy. It is a concept that both Rovelli and Venki Ramakrishnan explore in detail. Entropy is the measure of disorder in a system. Physics tells us that the universe moves inescapably from order to disorder. (Rovelli 20-27). This movement is what creates the arrow of time. In his book, Ramakrishnan views entropy through the lens of molecular decay. He postulates that we age because our biological machines – our proteins, mitochondria, and DNA repair kits – accumulate damage over time (Ramakrishnan 47- 68). He introduces the “Disposable Soma” theory. He says that the body is a temporary vessel designed for the transmission of genes. Once reproductive success is achieved, evolution appears to

neglect the body, leaving it to the hand of entropy (Ramakrishnan 21– 22). In *Bidrohi*, Nazrul identifies himself with the very force of entropy. He writes:

*Ami durbar,
 Ami bhenge kori sob churmar!
 Ami aniyom utsrinkhal,
 Ami doley jai joto bondhon, joto niyom kanun srinkhol!*(Islam 2).

I am unstoppable, I smash everything to bits! I am lawless, I am wild, I trample all bonds, all rules, laws, and all chains!

There is a remarkable similarity here in the recognition of destruction as a fundamental principle. However, the attitudes of Ramakrishnan and Nazrul appear diametrically opposite. For the scientist, the accumulation of disorder is a tragedy leading to the end of the individual. For Nazrul, this disorder is a liberating force. Nazrul's use of the *Nataraj* (Shiva dancing *tandava*, the great dance of both creation and destruction) image in *Bidrohi* is perhaps the literary personification of Rovelli's thermal time. Just as Rovelli argues that without heat and the change of order, time would not flow (Rovelli 118- 121), Nazrul suggests that without the dance of destruction, history cannot move forward. Perhaps, Nazrul's Rebel incarnates the heat that dissolves the old, low-entropy structures of the past:

One of the most important ideas in Paul Nurse's book is "Life as Information" (Nurse 118- 159). He argues that living things are managed by the genetic code, which acts as a set of instructions, or an information system. This information connects all life on Earth. For instance, the gene that controls cell division in yeast is virtually identical to the one in humans. This suggests a deep, universal connectedness. Rovelli, however, takes this concept of connectedness further. He suggests that the properties of an object in the quantum world are not inherent but exist only in relation to other objects. Nothing exists in isolation. Things only emerge through interaction. In Nazrul's *Bidrohi* too the Rebel's identity is highly relational. The poet does not define himself by what he is, but by his contact with the universe. He writes:

*Ami bondhon-hara kumarir beni, tanwi-nayane banhi,
 Ami soroshirhridi-sorosijoprem uddam, amidhonni!
 Ami unmonmonudashir,
 Ami bidhobar buke krondonswash,hahutashamihutashir
 Ami bonchitobyathapothobasi chiro grihoharajotopothiker,
 Ami obomanitermorombedona, bishjwala, priyo-lanchhito buke
 Goti fer*(Islam 3)

I am the unbound braid of a maiden, the fire in the eyes of a slender beauty, /I am the wild love in the lotus-heart of a sixteen-year-old girl, I am blessed!/ I am the restless yearning of the detached, /I am the weeping sigh in a widow's heart, the burning lament of the hopeless. /I am the pain of the deprived street-dweller, of all the eternally homeless travellers, /I am the deep agony of the humiliated, the venomous burn, the restless tossing in the breath of the scorned.

It seems that by claiming to be a touch or a glance, or in other words so many relationships, he is anticipating Rovelli's assertion that the fundamental units of reality are interactions. It seems that Nazrul's "I" is not an isolated biological unit, but a relational event. This supports Nurse's idea of connectedness, but it takes it into the realm of the quantum. While Nurse focuses on the continuity of information through the gene, Nazrul speaks about the experience of that interaction. It appears that for him, the "Self" as a knot of information only becomes real when it touches another.

In another poem titled *Shristi Sukher Ullasey*, Nazrul turns his attention from the macro-event of rebellion to the micro-process of creation. While Paul Nurse defines "Life as Chemistry," stating that living organisms are chemically driven information-processing systems (Nurse 80- 117), the poet describes it in physical terms. He writes:

Aaj Shristi-sukherullase
Mor mukhhasey mor chokhhasey mor togbogiyekhunhasey
Aajshristi-sukherullase. (Islam 8)

"Today in the ecstasy of creation / My face smiles, my eyes smile, my bubbling blood smiles/Today in the ecstasy of creation".

To a molecular biologist like Ramakrishnan or Nurse, "smiling blood" might be a metaphor for a highly metabolic state. Metabolism is the process of hauling out energy from the world to create order within the cell (Nurse 86- 87). Nazrul's *Ullasaor* exultation appears to be the manifestation of this biochemistry. However, Ramakrishnan describes the biological clock as a master controller that keeps these chemical reactions under control. Nazrul describes it differently as a "broken dam" and a "lawless flood." It seems that the poet's vision of creation is that of self-organization at the edge of chaos. Life perhaps requires enough order to survive. However, it also needs enough disorder to develop. Especially on the level of poetic creation, the imagination invites disorder:

Oi dhumketuarulkate
chaysristi take ultate,
Aaj tai dekhiarbokkheamarlokkhobagerfulhase
Aajsristsukherullase!

"The comet and meteors yearn/ To turn the Creation upside down;/ So I gaze, while in my breast a million flowers smile/Today, in the ecstasy of creative joy!"

One of the most challenging concepts in Rovelli's *The Order of Time* is the crumbling of time. Rovelli explains that there is no universal "Now. The past, present, and future perhaps coexist in what physicists call the "Block Universe" (Rovelli 96-97). In *Bidrohi*, Nazrul appears to collapse all of history and mythology into a single moment of simultaneousness. He is the *Bedouin*, the *Chengis*, the *Balaram*, the *Orpheus*, and the *Vriguall* at once.

Perhaps for the biologists, time appears linear. It is measured by biological markers – like the shortening of telomeres and the rhythmic firing of neurons. Biology needs linear time for development. However, it appears that Nazrul's poetics goes hand

in hand with Rovelli's quantum time. By asserting that he is both "Creation" and "Destruction", the poet perhaps dissolves the temporal distance between them. Nazrul's Rebel occupies a timeless space. He is acting as the fundamental "Spin Network" (Rovelli 109 - 110) upon which the history of humanity is interweaved.

The final point of disagreement between the scientists and the poet is the resolution of life's end. Venki Ramakrishnan pulls apart the quest for immortality as a biological impossibility. For a world without death would be a stagnant one. Nazrul does not argue for the immortality of the body. He agrees with Ramakrishnan that, like an earthen pot, it must break. However, he finds immortality differently. Ashe writes:

*Moha-bidrohironoklanto,
 Ami sei din hobo shanto,
 Jobe utpiriterkrondon-role akasha batashedwonibena,
 Atyacharirkhodgo kirpan bhimranabhumeranibena-
 Bidrohirono-klanto, ame sei din hobo shanto.*(Islam 6)
 "I will be quiet only when / The cries of the oppressed no longer ring in the sky".

Nazrul Islam hopes that even after the death of the body, the signal of rebellion will continue. As Paul Nurse suggests that information of life is passed through DNA, Nazrul thinks that the Rebel is a piece of cultural information that uses individual bodies to replicate itself.

When we read Nazrul's poems alongside Nurse, Ramakrishnan, and Rovelli, a transformation occurs in our understanding of the text. It appears that the poet's imagery is an intuitive map of the real world in a special sense. We are compelled to think that the Rebel is not just a political figure, but a biological and physical assertion. While Nurse provides the structure of the cell, Ramakrishnan provides its mechanical decay, and Rovelli provides the fluidity of time, Nazrul portrays the energy that moves through these systems. His creative vision portrays life as a joy happening amidst the great dissolution. As long as we can rebel against the stillness, we are manifesting the essence of the universe. Nazrul's proclamation that he is the messenger of the great beginning clearly suggests that the Rebel is the catalyst for the next state of information. He is a universal model for the energy that drives the arrow of time.

Note: All translations of Kazi Nazrul Islam's poetry used in this article are my own.

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