

NEURAL SUBLIME: A NEUROSCIENTIFIC READING OF JOHN KEATS'S "ODE TO PSYCHE" AND S.T. COLERIDGE'S "KUBLA KHAN"

By

Sruthi Mohan

Lecturer, BVM Holy Cross College, Cherpunkal, Kottayam, Kerala, India.

Abstract

Reconciling Arts and Science is bound to be formidable; romantic poetry and neuroscience will have to be yoked by the most extravagant violence if they are to be juxtaposed. Neuro-linguistics is a branch of linguistics which deals with the nexus between language and the structure and functioning of the brain. This study is thus partly an attempt to juxtapose the poetry of John Keats, the most sensuous of all Romantics, with anatomy and neuro-linguistics. At the risk of anachronism, it proposes to scrutinize Keats's "Ode to Psyche" using the language of modern neuroscience, with an express aim to put it in a linguistic perspective, the intersection between literary Romanticism and human brain anatomy as it existed in the early nineteenth century. Setting aside the popular characterization of John Keats as a hopelessly melancholic young lover dreaming his way through medical lectures, for us he is a sophisticated thinker abreast with latest developments in the sciences as well as in literature, a brilliant medical aspirant who refused himself a degree, a "poet-physician" whose medical background left profound marks on his verse. Read along these lines, as will be illustrated in this scrutiny, one could consider "Ode to Psyche" as Keats's tribute to Neuroscience. The poignant images that embellish the mindscape in the poem can be traced to exact aspects of the brain anatomy as Keats understood it. Samuel Taylor Coleridge is another stalwart of the Romantic era, whose poetry can be profitably explored along the same lines. His celebrated "Kubla Khan" is a poem that may be analysed and understood like "Ode to Psyche". The dream element and fragmentary nature of the poem add to the possibility for exploring the mindscape. The poem also reminds us of the impact of opium, which has medicinal value, and at the same time, has the ability to spur on the imagination. The physician Keats and opium-addicted Coleridge share certain peculiar features which become central to the very connection between neuroscience and Romanticism. Moreover, the study offers a foray into the scientific ramifications as well as the creative romantic ideals in an unprecedented manner. The prevailing notions regarding the romantic conceptions are further subverted and many veiled relics of neuro-linguistics are excavated here.

Keywords: *neuroscience, romantic poetry, neuro- linguistics, dream and psyche.*

Literary Romanticism has engaged with a number of motifs and ideas including fragmented psyche, revaluation of feeling, instinct and intuition, the active mind,

developmental models of subject formation and most prominently the unconscious. Alan Richardson in his seminal work British Romanticism and the Science of the

Mind (2001) introduces and discusses the nexus between Romantic literary culture and brain. Alan Richardson rightly mentions, “the half century conventionally associated with literary Romanticism (1780-1830) had also witnessed the rise and first flourishing of a biological science of mind” (Richardson 15). It argues that the pioneering Neuroscience of the era manifests a romantic character and that romanticism intersects in numerous and significant ways with the physiological psychology of the time. It also aims to give the brain a central place in the history of the Romantic mind. “If the Romantic period can indeed be seen as an age of revolution, its iconoclastic brain science played a major role in the ideological ferment of the time,” (Richardson 23).

Historians of neuroscience, of biological psychology and neurology, concur that the late eighteenth and early nineteenth centuries was a decisive period for the emergence of an unprecedented series of hypothesis and discoveries concerning the human brain and nervous system. Richardson says “Only in the Romantic era, in fact, was the brain definitively established as an organ of thought, although this seemingly inevitable notion would continue to be challenged on religious and other grounds well into the 1820s” (Richardson 22). Recent works on

the brain have been instrumental in throwing romantic era developments into new relief and restoring a certain cultural weight to it. In kinship with the romantic era, recent works on the brain and the mind can help scholars to perceive distinctions, register nuances, and appreciate moral and philosophical repercussions that might have seemed non-existent, subtle or not worth pursuing a few decades ago.

William Keach, the notable Coleridge scholar and editor of his poetry anthology, has analysed the above-quoted observations of Coleridge in his essay “Words are Things”. Keach affirms that the letters have informed plenty of significant speculations on romantic theories of language and the implications of Coleridge’s theory of mind. Coleridge is more engaged with the brain science of his era than has generally been acknowledged and is in this way representative of a number of writers bracketed today as ‘Romantic’. Alan Richardson argues that the significance of Coleridge “is that how questions of language, volition, logic, organic development, and non-arbitrary” elements of linguistic and cultural activity have become linked in recent cognitive science can help us to follow comparable links in the nascent psychology of Coleridge’s day” (Keach26).

“Neural Sublime” is an innovative coinage by Alan Richardson in his ground-breaking work *British Romanticism and the Science of the Mind*. He proposed the term to discern the new “sense of the embodied mind’s unconscious and ineffable magnitude” that indicates the Romantic poetry’s surprising consanguinity with the period’s widely circulating scientific and philosophical discourse about the mind’s physical anchoring in the nervous system (Richardson 148). The book attempts to resituate canonical literary texts and literary theoretical texts of Romanticism chiefly in terms of embodied mind science of the day.

“Ode to Psyche” & “Kubla Khan” as Neuroscientific Mines: A Close Reading

Among the English romantic poets, John Keats is arguably the brightest star, his position of predominance stemming from two well-distinguished causes: firstly, the unquestioned richness and sensuousness of his works which continue to excite enduring readership and secondly, the cruel exasperated brevity of his life, which spanned just for twenty-five years. Medicines, as well as literature, are woven into the fabric of his being and certain aspects of his medical life have deeply influenced his poetic faculty. Hillas Smith construes “Medicine certainly contributed

to the man, but also something to the poet, Keats; his training and his family and personal experience of tuberculosis speak for themselves. More subtly, his medical experience influenced in some degree his ideas and even his choice of words” (Smith 01).

As a medical apprentice, Keats was fortunate to study under the influence of Astley Cooper, one of the great founders of modern surgical technique. Smith continues to trace Keats as a physician of utmost patience thus: “During the later period of his life at Guy’s, Keats seemed to develop reservations about surgery. There is a distinction to be made between Keats the physician and Keats the surgeon. There is no doubt that he had the ability, training, and qualification to practice as a physician; in the event, he chose not to practice” (Smith 06).

Keats, who preferred poetry to medical aspirations, was eventually forced to consume heavy pills but at that time he was at the pinnacle of lyrical invention. Though he attempted to immerse in poetry, many subjects and diction within his poetry reflect his medical background. Hillas Smith assumes that “there are few direct references to medical subjects, but his use of language suggests that even though he seldom allowed his medical

training overt expression in his poetry, such influences can, in fact, be discerned” (Smith 15).

Keats commences his great odes with “Ode to Psyche”, which was composed in the spring of 1819, probably between 21st and 30th April. Though the poem is explicitly hints about Cupid and Psyche, it alludes, rather carelessly, to Keats's notions on human psyche and mind. A young poet who proclaimed love as his religion and imagination as his monastery, Keats has left serious imprints of his medical life on his poetic career. The romantic poet who deals with heart and emotions also somehow manages to muse upon reason and the functioning of the brain; this apparent preoccupation finds expression in many of his poems. “Ode to Psyche” best exemplifies Keats’s conception regarding the scientific aspects of life.

Lord Evans of Hungershall in his article entitled “Keat: The Man, Medicine and Poetry” introduces and further discusses the Keatsian intentions while writing “Ode to Psyche”. For him, Keats had come upon the story of Cupid and Psyche in a sixteenth-century translation of Apuleius's *Metamorphoses* or *Golden Ass*: “But Psyche- surely Psyche should be a goddess? She appeared too late in history for the Greeks to make her a goddess. Yet

Keats will do this- in his mind, she shall be a goddess and so, suddenly in his last and commanding stanza he builds up a thickly wreathed complication of images for the mental apotheosis of Psyche” (Evans 5).

Alan Richardson regards Keats as “a sophisticated thinker in touch with important developments in the sciences as well as literature, a ‘poet- physician’ whose medical field left profound marks in his verse” (Richardson 137). Richardson analyses Keatsian involvement in understanding brain science in the romantic era, specifically in the fifth chapter of his book *British Romanticism and the Science of the Mind*. He muses, “Keats’s exposure to the revolutionary brain science of the time transformed his understanding of the mind and its relation to the body, facilitating an unprecedented poetics of embodied cognition that runs throughout his best and most characteristically daring verse” (Richardson 137).

Cooper who was Keats’s teacher endorsed primarily a brain-based, corporeal approach to mind. Richardson excavates Cooper's definition for “Sensation”, a leading term in Keats’s later thought and is later transcribed by Keats thus: “it is an impression made on the Extremities of the Nerves conveyed to the Brain. This is

proved by the effects of dividing a Nerve. Volition is the contrary of Sensation it proceeds from internal to external parts” (141). Keats had great conviction about the workings of the brain and nerves. He discerns nerves as “They take a serpentine direction. They arise by numerous branches from the Substance of ye Brain” (54). Richardson affirms that “Sensations are the constructs of an embodied mind-constitutes a corollary truth of Romantic brain science, no less than for Romantic poetry” (Richardson 145).

Keats writes in one of his letters, of an “electric fire in human nature” (Keats 80), the conceit is scientific and poetic as well, recalling the “electric fluid” attributed to brain and nerves by Cooper. The image recurs again, resonant with its original context in Romantic brain science, in some of the notable lines of *Fall of Hyperion*:

Shall be to thee a wonder, for the scenes
Still swooning vivid through my globed brain,
With an electral changing misery
Thou shalt with these dull mortal eyes behold (240-44).

“Ode to Psyche” offers sufficient instances to further establish the nexus between Keats’s romantic poetry and the brain

science. Keats’s most elaborated and imaginative reworking of his early knowledge of brain anatomy finds expression here. Many of the images that embellish the mindscape of the poem have been traced to specific features of the new brain anatomy as Keats understood it. The winding stanza of the ode best testifies these assumptions.

Yes, I will be thy priest, and build a fane
In some untrodden region of my mind,
Where branched thoughts, new grown with pleasant pain,
Instead of pines shall murmur in the wind:
Far, far around shall those dark-cluster’d trees
Fledge the wild- ridged mountains steep by steep; (Keats 50-56)

The “dark cluster’d trees” and their “branched thoughts” evoke the tree-like appearance of some brain structures as revealed by the new dissection technique, most notably the cerebellum with its *arbor vitae*. It also resonates with Keats’s “numerous branches from the Substance of ye Brain” (Keats 54). The “wild- ridged mountains” (Keats 55) suggests the convolutions of the cerebral cortex, which

had appeared more like intestines to the early anatomists.

And in the midst of this wide
quietness
A rosy sanctuary will I dress
With the wreath'd trellis of a working
brain,
With buds, and bells, and stars
without a name, (Keats 58-61)

The “streams” and “rosy sanctuary” corresponds to a network of blood vessels nourishing the brain and connecting it with the circulatory system. “With buds, and bells, and stars without a name” indicates the typical structure of a human neuron. “buds” and “bells” denote dendrites and myelin sheaths, and the “star” indicates the head end of the neuron structure including the dendrites, nucleus, and the cell body. Alan Richardson contends “Most strikingly “the wreath'd trellis of a working brain” evokes the fibrous texture of the brain’s “medullary” or white matter as described by Gall or Spurzheim. Their description of how the “fibers” of the medullary pyramids cross or decussate each other, which so impressed Cooper, especially brings trellis work to mind (Richardson 146).

The final stanza takes us along a virtual tour through the compartments of the human brain: the “wild ridged mountain”

like convolutions of the cerebral cortex, the nerves arising “by numerous branches from the Substance of ye Brain” the fibrous texture of the brain’s white matter, the “wreath'd trellis”. As Keats testifies, Psyche is the “latest born” of the Olympians. Neuroscience too, in Keats’s time, was nascent. Evidently, Psyche, for Keats is none other than the goddess of Neuroscience. He saw, at the inauguration of the revolution in brain science, the truth concerning human understanding, more clearly than we do now. This scrutiny is an attempt to place Keats in a higher plane, contrary to the traditional conception of Keats as a hopelessly melancholic young lover.

Coleridge was a vivid and prolific dreamer who carefully recorded, analyzed and discussed the distinct features, possible causes, and meanings of his dreams. His renowned poem “Kubla Khan” reveals key ideas on Coleridge’s thinking on dreams and dreaming. He coined the term “psychosomatic” in 1828 to denote complex interactions between body and mind in his classification of passions.

Coleridge has contributed much by blending psychological elements into poetry. The dream element and fragmentary nature adds to this convergence. Romantic poetry helps to

revitalize psychological language by creating new forms for articulation, evolution, and evaluation of the subjective experience.

Perhaps no writer exemplifies the ambivalence better than Coleridge whose fascination with mental processes repeatedly brings him up against the conflicts between his holistic sense of the embodied mind and his demand for a transcendent, free subjectivity, his speculations on the 'organic' character of the psyche and his fear for a 'lawless' mental chaos driven by bodily desires and random associations. (Richardson 59)

These tensions come to a crisis in "Kubla Khan". Coleridge's influential defence of a unitary, transcendentalist conception of mind seems ironic in that "Kubla Khan" is a standard example within cognitivist accounts of a modular and material brain-mind. Steven Pinker in his popular book *The Language Instinct*, cites Coleridge's description of "poetic composition in which all the images rose up before him as things, with a parallel production of the correspondent expressions" (Pinker 70) in discussing the concept of "mentalese", a preverbal and unconscious representational system probably closer to computing languages than to any human

dialect. The Artificial Intelligence researcher, Margaret A Boden finds "Coleridge's scattered remarks and poetic practice the outlines of a computational approach to unconscious mental composition, recuperating his revisionist account of associationist theory as an inspired premonition of neural network models of creative cognition" (Boden18-19).

In his thirteenth chapter of *Biographia Literaria*, Coleridge coins the term "esemplastic" meaning to mold into unity as a description of the nature of the imagination and more explicitly says that "it dissolves, diffuses, dissipates, in order to recreate" (Coleridge 491) which within his cosmology of the imagination means that the imagination is responsible for the generation of ideas.

Richardson observes that the landscape of "Kubla Khan" presents at once a "mental topography" or map of the human psyche and a representation of the human body. According to Alan Richardson "Mind is not a thing apart but rather expression of the continuous activity of the brain and nervous system, and cognitive performance can be altered by material substances like narcotics and alcohol or disrupted by brain lesions and other neurological insults" (Richardson 39). The

opium-induced dream that Coleridge had, and the conversion of his dream into poetry, and its eventual fragmentation is justified here. A largely unprecedented emphasis on unconscious mental life can be found in the brain science of Coleridge's era. "Where Alph, the sacred river, ran/Through caverns measureless to man/Down to a sunless sea" (Coleridge 3-5). The relation between "chasm", "fountain", "river", "caverns", and the "sunless sea" does suggest mind and its activities, says Fred L. Milne in his article "Coleridge's "Kubla Khan": A Metaphor for a Creative Process". According to him, "the landscape with its descending levels would be the mind as structure, and the processes within it, summed up in the flowing of the river, "meandering with a mazy motion", the mind as activity" (Milne 4). He assumes that "Xanadu is the symbolic name for the mind" (Milne 4). He considers the visible and hidden regions of Xanadu as corresponding to the conscious and unconscious realms of the mind. The basic structural pattern of the Xanadu mind-landscape and the circular motion allows depiction of the conscious and the unconscious, the measured and measureless aspects coexisting in the mind's processes. As the immediate source of the river in the visible or conscious region of Xanadu, the fountain and chasm

from which it momentarily gushes, represent the wellspring through which the unconscious becomes conscious. The fountain chasm symbolizes the initializing point of conscious thought, depicted as violent and potentially fertile springing forth from what has been "sunless" and "lifeless", dark and unformed. Because the passage from the unconscious to the conscious is shrouded in mystery, the place where that passage or birth occurs is "holy and enchanted". As the fountain is "holy and enchanted", the river is properly called "sacred", which represents the stream of thought; it is the life of the mind; the first unifying principle of all mental activity, signified by the name Alph.

Just as in "Ode to Psyche", "Kubla Khan" also puts forth the medullary cortex as "that deep romantic chasm which slanted/Down the green hill athwart a cedarn cover" (Coleridge 12-13). When Keats assumes himself as a priest to Psyche, capable of building a "fane/ In some untrodden region of my mind" (Keats 50-51) Coleridge considers his mind as "A savage place! as holy and enchanted" (Coleridge 14).

Both Keats and Coleridge are romantic poets of great imagination and intellect, who travelled much ahead of their times. Both these representative poems seem to

be mythological poems at a first glance, though they offer scientific explanations when exposed multiple layers of scrutiny. This is a careful dissection of both poems using the language of modern neuroscience, with an express aim to put it in a linguistic perspective, the intersection between literary Romanticism and human brain anatomy as it existed in the early nineteenth century.

Conclusion

The Medical and the Mystical: Keats and Coleridge as Harbingers to Modern Neuroscience

Yoking romantic poetry and neuroscience seems at once alluring and repulsive, though amalgamating the two fields offer a plethora of further findings. The scrutiny recognizes John Keats as a poet-physician, whose medical circumstance left intense reflections on his poetry. Coleridge's camaraderie with Keats's teacher, J. H. Green might have accentuated his inclination to the unconscious and fragmentation. The brain-based models of the time have intermingled in the literary psyche of the time. Moreover, both poems demonstrate a veiled influence and share certain concerns as well.

The conventional prospect of romantic poetry as a passionate outpouring of emotions is transcended by sheer rationality, in the garb of exceeding imagination. Even the concept of imagination is cemented in rational thought, and poets like Coleridge and Keats had theorized them much ahead of their times. As poets of the late eighteenth century and early nineteenth century, they had contributed much to the modern times. Their poetry could be considered as the records of the upcoming boom in neuroscience.

As men of letters, they enriched the literary canon and acted as channels to merge the mystical and the medical. Recent branches like cognitive cultural studies and neuro-linguistics thrive to act as a bridge between many isolated branches of study as well. The universal theme of oneness could be possible in literature by holding every discipline under a single umbrella. Further research into this field that amalgamates the medical and the mystical with the poetic and the scientific is a pursuit that this study hopes to leave behind as its legacy.

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ABOUT THE AUTHOR



Sruthi Mohan is a guest lecturer at BVM Holy Cross College, Cherpunkal, affiliated to Mahatma Gandhi University, Kottayam, Kerala, India. She holds MA degree in English Language and Literature and has qualified UGC NET in English in July 2018. She teaches CA, Civil Service and NET aspirants. She has participated and presented papers in National seminars. She is a poetess who contributes to the venture named Maples, world's greatest anthology, aiming for Vajra World Records.
