



**Disease as a Site of Counter-Science: Occult Practices
in *The Calcutta Chromosome* by Amitav Ghosh
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Abstract

Pandemics have always spurred the myriad imaginations of various disciplines. Literature is one among these discourses which offers its own range of narratives on illness and solutions for healing. Amitav Ghosh in *The Calcutta Chromosome* (1996), preoccupied with one such narrative on disease, works on a different perspective of malaria and its chromosome contrary to western science by delineating occult-science as an alternative. German theosophist and doctor Franz Hartman in his book *Occult Science in Medicine* (1893) asserts the role of occult tradition of treatment as a counterpart to western science. Ghosh enriches this discussion by weaving a web of science and myth to enlarge the literary spectrum dealing with themes of illness and healing. He challenges the Eurocentric discourse on discovery of malaria transmission with the myths and mysteries of occult science treating Malaria by re-imagining and re-framing Roland Ross's epoch-making discovery that malaria is transmitted by mosquitoes. It results into a science-thriller embedded in the theme of counter-science or alternative-medicine drawing lines between physiological and psychological dimensions of disease. This research paper argues that how Amitav Ghosh locates the indigenous occult chromosome of Malaria highlighting certain methodical distinctions (silence and re-incarnation) antagonistic to western science.

Keywords: Occult-Science, Counter-Science, Alternative-Medicine, Post-modernism

Introduction

In this current phase of pandemic, discourses on illness and healing have gained momentum and indispensability. Stories on medicine for illness carry plural perspectives which thicken the narrative of disease and healing. Unlike the dominant illness narratives which are embedded in clinical or methodological

scientific practices, literary imagination perceives ailment and treatment as socio-ritualistic practice. The resultant spectrum of countless stories delineating the disease from socio-cultural perspective highlights the necessities of looking at illness as a possibility to unshackle it from modern scientific inquiries. As far as remedy for illness is concerned, modern science has a dominant say over the world and it continues to be so even in present times. Literature reverses this equation with the concept of alternative-medicine by delineating occult-science parallel to modern-science.

While natural science, in the employment of scientific thoughts and method of research, stops short within the sense-perceptible, occult science would like to regard the work of the human soul on nature as a form of self-education, and apply the faculties thus educated in the soul to the realms of the non-sensible. (Steiner 22)

In present age where materiality of phenomenon is inquired as preferred form for generating knowledge, the idea of medicine as non-material is inevitably sighted as unscientific and unimaginable. However, occult science, a discipline opposite to modern science has been explored and researched consistently in the history of science. In Olcott's observation, "the term *occult* has been given to the sciences relating to the mystical side of nature – the department of force or spirit" (*A Collection of Lectures* 49). This is undoubtedly a practice, essentially postmodern, which shows, "incredulity towards meta-narratives" in Lyotardian sense and works on the concept of counter-science not as popular as modern science but seems to authenticate Hartman's statement that:

Since the modern discovery of Cholera, tubercle bacilli... it has been the opinion of many, that the presence of such microbes was the only and fundamental cause of such diseases; still...the presence of these microbes does not constitute the whole cause... and have also been found to exist in persons who had fully recovered from such a disease.

This surely shows that there must be an influence causing the microbes to come into existence...and the fundamental cause of such epidemics is therefore not the presence of the microbes...but the influences which cause them to come into existence, producing *states* of which the bodies of these organisms are a product and expression and which appears to proceed from causes situated deeper than visible physical nature, if we do not mistake the form for the “spirit” of which the form is the symbol. (*The Occult Science in Medicine* 54)

Main idea of the novel *The Calcutta Chromosome* jeopardizes the greatest discovery of medical science on malaria as the main protagonist of the novel Murugan claims that Ronald Ross’, “stuff on malaria was about the only cutting-edge work he ever did. And even that was a freak one-off thing” (*The Calcutta Chromosome* 46). This revelation is difficult to comprehend in the intricate narrative teeming with myths, mysteries and different time zones spanned across two cities Calcutta and New York. The story operates in three time phases. First is about Antar and his search for Murugan somewhere in an unspecific future in New York, Tara (Antar’s neighbor) and Lucky (Tara’s friend). Second is about Murugan (whom Antar is searching), Urmila (a journalist working on Phulboni’s stories), Sonali (working for Calcutta magazine), Mrs. Aratounian (an aged lady and owner of a nursery), Romen Haldar (A Construction mogul) and Phulboni (a writer who writes stories on silence) during 1995 in Calcutta. Third is about Mangala (an attendant in Cunningham’s lab) and Lutchman (Mangala’s confidant) during the years of Ross’ research in 1895 in Secundrabad.

The plot unfolds with Antar in an unspecified time in future. He is an employee with International Water Council in New York and comes to know about Murugan through a programmed machine named Ava. Murugan is missing since 1995 and said to have been located in Calcutta for the last time. He claims that Sir Ronald Ross was not the first person to

discover that malaria is transmitted by mosquitoes. He propounds the theory that this discovery was already made by propagators of occult-science and Ross was merely working as a tool in the hands of these practitioners Mangala, Lutchman in Calcutta during the last decade of nineteenth century.

The contention in the story is intriguing yet quite clear where two claims of discovering malaria transmission confront each other. At first place, Ross claims to have discovered the cause of malaria transmission and at second place there are the practitioners of occult science who already not only know the cause of transmission but also claim that an another mysterious malaria chromosome can cure syphilis and, “working with plasmodium falciparum but in a different way,” (*The Calcutta Chromosome* 92). They are unable to regulate this chromosome because it leads to neurological disorders in the patients. They realize that, “the next big leap in their project will come from a mutation in the parasite, “and need to, “find a conventional scientist who’ll give it a push” (*The Calcutta Chromosome* 92). Mangala secretly assists Ross to discover the reason of malaria transmission with the hope that once world will come to know about the latest discovery on malaria transmission, it will reveal more variants because, “that every time she reached a dead end, the way ahead was by provoking another mutant” (*The Calcutta Chromosome* 214).

Ghosh uses silence and re-incarnation to highlight alternative science embedded in indigenous cultural practices. He deals with the concept of alternative science in medicine and draws comparison between western science and occult science to build the argument that, “scientific knowledge does not represent the totality of knowledge; it has always existed in addition to, and in competition and conflict with, another kind of knowledge” (Lyotard 7). There are unheard and unacknowledged methods of cure for illness and, “what starts at the level of simple geographical border crossing, becomes an alternative way to approach and experience reality” (Beretta 60) as far as the novel in contention is concerned.

This intricate narrative woven around multiple characters searching for the hidden symmetries of Ross's discovery on malaria takes postmodern turn where western meta-narrative on malaria is challenged by an occult version of malaria chromosome. What we find at the end of this novel is not a blatant dismissal of Ross's one of the greatest discoveries on malaria but the manifestation of subaltern knowledge of malaria because, "it is not just myth for myth and reason for reason, but also the possibility that myth may embody a form or reason and the reason may itself work in mythical way" (Paranjape 15).

Modern Science versus Occult Science

Main contention of Hartman's comparison between occult science and western science is the difference between soul and body i.e. between spiritual and somatic. For this matter he first of all discusses the anatomy of human body which is primarily the site of disease as well as of cure. He finds western science wanting in its methodology for the inability to understand or realize the supreme constitution of human body because:

The ancients based their science of medicine upon the recognition of a universal, external, self-existent, self-conscious cause, the source of universal life, where popular modern medicine recognizes the outcome of a blind force only. (*The Occult Science in Medicine* 15)

This explanation is undeniably applicable to Ghosh's narrative of re-incarnation and mystery where an alternative occult chromosome of malaria lends viability to Hartman's observations as well as Murugan's belief that Ross's discovery was limited to biological specifications while Mangala and Lutchman propagated the idea of universality and spirituality in treating malaria. Ghosh propounds the cultural and spiritual features of an unacknowledged research on malaria by writing a science thriller connecting the elusive link of a chromosome named as, "The Calcutta Chromosome" (*The Calcutta Chromosome* 209). Murugan's obsession with medical history of malaria sets up the tone of the novel and his article, "An

Alternative Interpretation of Late 19th Century Malaria Research: is there a Secret History?" (*The Calcutta Chromosome* 32), lays bare the thematic concerns of the novel as, "he began to speak openly about his notion of so-called 'Other Mind': a theory that some person or persons had systematically interfered with Ronald Ross's experiments to push malaria research in certain directions while leading it away from others" (*The Calcutta Chromosome* 32-33).

The basis of this other mindedness is not a hypothetical assumption to entice the readers with a fantastical story. Before letting in Hartman's theory of occult science in medicine and Murugan's suspicion of a secret and parallel history behind one of the greatest discoveries of medical science, it is pertinent to talk about Ghosh's penchant for locale and indigenous historical and cultural narratives as manifested in his other novels. In the backdrop of a narrative of disease and its cure he presents the idea of a lost cultural and historical ingenuity which is the base of alternative science. He not only challenges the imposition of the western forms of medicinal knowledge but in fact by taking a step further challenges the conventional knowledge of malaria.

During the first half of the nineteenth century a new attitude made its appearance. The term science came more and more to be confined to the physical and biological disciplines which at the same time began to claim for themselves a special rigorousness and certainty which distinguished them from all others. (Hayek 15)

Ghosh reframes knowledge on disease as a cultural activity and for this matter he highlights occult orthodoxy as a potential alternative to western science in the form of counter science. The idea of western medicine is shown as imposed and a more locale and indigenous form of cure which advocates myth, silence, religion, and reincarnation against the established methodologies of pathology, medicine, drug and dose. Ghosh confesses that, "I read a lot of science... but I don't think that science is the only way to understand reality... it doesn't

exhaust our knowledge of the world” (qtd. in Ghosal’s *Amitav Ghosh on Myth, magic and his new novel, ‘Gun Island’*).

Mangala, main practitioner of occult science, has a deep knowledge of malaria and its chromosome. She knows about a secret variant of malaria and, “was actually using the malaria bug as a treatment in another disease” (*The Calcutta Chromosome* 210), syphilis, that is unknown to modern science. Her practices question the supremacy of western science which is still in the hunt for deciphering the causes of malaria transmission. She epitomizes the narrative of counter-science applied in context to claims of Ross and western science in researching malaria. Murugan explains, “You know all about matter and anti-matter, right? And rooms and anterooms and Christ and anti-Christ so on? Now, let’s say there was something like science and counter-science” (*The Calcutta Chromosome* 91).

The problem is that she has also reached to a dead end where she is unable to decode the neurological disorder developed by the patient when treated for syphilis through this mysterious malaria bug. “Remember that she started at the deep end, by stumbling upon the process of transmission, rather than the chromosome itself-after all she didn’t know what a chromosome was” (*The Calcutta Chromosome* 213). The assumption is that Ross was helped secretly to invent that malaria is transmitted by mosquito unknown in modern science and already known in occult-science, “because she actually believed that the link between the bug and the human mind was so close that, once its life cycle,” which is still to be found out by modern science, “had been figured out, it would spontaneously mutate in directions that would take her work to the next step” (*The Calcutta Chromosome* 214).

Hartman’s differentiation between medical science and medical wisdom corresponds to Ghosh’s apprehensions on incompetence of modern science in comprehending the realities about disease and cure beyond biological boundaries. This mysterious variant “is a biological expression of human traits that is neither inherited from the immediate gene pool, nor

transmitted into it. It's exactly the kind of entity that would be hardest for a conventional scientist to accept" (*The Calcutta Chromosome* 213). Mangala's occult practices of taking the malaria research further builds the departure point of the text which vouches for cults and ritualistic practices involving spirituality, myths, and non-physiological solutions for disease. Mangala's understandings of this so called mysterious Calcutta Chromosome which will help in deciphering the causes of neurological disorder in a syphilis patient treated with malaria by transmitting the bug through pigeons' blood is undoubtedly the case of cultural ingenuity which prefers a relatively ritualistic and mysterious practice based on methods beyond physiological dimensions propounded by occult science.

Science had to change itself, not only in size and in results, but in process of how knowledge is being produced. It is with regard to some key elements in the changing production process, that the antagonistic relationship between science and anti and pseudo-science becomes relevant again. (Nowotny 15)

Murugan specifies it when he opines about Mangala that, "unlike Ross she didn't need to read a zoological study to see that there was a difference between *Culex* and *Anopheles*: she'd have seen it like you or I can see the difference between a dachshund and a doberman" (*The Calcutta Chromosome* 209) and Hartman corroborates this difference when he states that:

The virtue which constitutes the true physician cannot be created by the colleges, nor can it be conferred by anyone personally upon himself. No one can confer upon himself a thing which he does not possess, or without the aid of any higher influence make himself better than that which he is; because ... the power exercised by any form is not the creation of the form, but an eternal principle, entering into objective existence in forms becoming manifested in and through them by its own power. (*The Occult Science in Medicine* 48-49)

Silence Maintained as the First Principal of Occult-Science

The inevitable question is if this chromosome can cure syphilis then why it is kept as secret? Antar asks the same question from Murugan, “that this other team... was already ahead of Ross on some of this research. But then why wouldn’t they just go ahead with this research themselves? Why wouldn’t they publish their findings and put themselves in the running for the Nobel?” (*The Calcutta Chromosome* 90-91). Hartman’s idea that occult science is occupied in spiritual nature of medicine contrary to physiological treatment of modern science offers answer to this question.

There is a great science and a little science; one that flies around the spires of the temple of wisdom, another that penetrates into the sanctuary; both are right in their places; but the one is superficial and popular, the other profound and mysterious; the one makes a great deal of clamour and show, the other is silent and not publicly known. (*The Occult Science in Medicine* 2)

Ross’s research comes to a revelation point only when Lutchman comes into play consolidating the idea of insufficiency of western science. Lutchman is Mangala’s confidant and their mysterious assistance to, first Cunningham, and then to Ross is noticed by Farley, another scientist working in Cunningham lab in Calcutta. “Lutchman was the young guy who walked into Ronnie Ross’s life on May 25, 1895 at 8 p.m., offering himself as a guinea pig... Every time Ron went running off in the wrong direction, Lutchman was waiting to head him off and show him the way to go” (*The Calcutta Chromosome* 206).

The essence of silence in practicing occult methods is noticeable and Lutchman, who is believed to be re-incarnated into Romen Haldar in the second phase of the story, is another key figure in whole narrative. He once worked with Ross and it is revealed that his real name is Lakhan. He is crucial to textual thematic and narrative concerns and is used by occult practitioners especially by Mangala as main operator giving

impetus to discovery of malaria transmission by offering himself as a guinea pig to Ross when he is stuck with his research and unable to advance further, "On May 25 1895 at exactly 8 p.m. a guy called Lutchman walks into Ronnie's life" (*The Calcutta Chromosome* 65). Moreover, even before it, when Elijah Monroe Farley, another scientist who works in Cunningham laboratory before Ross is helped by Lutchman in reaching close to the revelation of transmission of malaria by giving him a blood-stained slide which Mangala uses to transmit malaria bug from pigeon's blood to syphilis patient. It becomes clear that she as an occult-science practitioner knows that malaria is transmitted by mosquitoes and much ahead of modern science, though working silently and, "trying to stabilize the chromosome during the process of transference" (*The Calcutta Chromosome* 214). Mangala in, "her practice, in other words, capitalizes on a windfall characteristic that may have rendered the hosting of *Plasmodium* symbiotic (or selective for long-term survival) prior to the antibiotic treatment of venereal disease" (Lee 2).

Ross is obsessed with manifestations of malaria transmission based on modern science while for Mangala it is a preoccupation with a larger truth about malaria based on medical wisdom which rests on eternal principle of silence equally concerned with mind and soul of human body. "It would have to use secrecy as a technique or procedure ... because to communicate, to put ideas into language would be to establish a claim to know-which is the first thing that a counter-science would dispute" (*The Calcutta Chromosome* 88). The result is that Ross is burdened with manifestations and Mangala is silently aiming at curing syphilis to take the chromosome to a next level even though she knows the reason of transmission of malaria. Her findings of malaria are as scientific as claimed to be practiced by western science. Ghosh gives a vivid and structural analogy of Mangala's findings on malaria and substantiates these occult practices without repudiating western findings but just enlarging the spectrum of disease and its cure in a different cultural perspective. To put in standardized

medical terms Ghosh, through Murugan, dubs Mangala's discovery of this mysterious malaria bug as Calcutta chromosome which is still unknown to western science. While the known chromosomes of malaria are, "symmetrically paired" (*The Calcutta Chromosome* 213), this chromosome, "only exists in non-regenerating tissue: in other words, the brain" (*The Calcutta Chromosome* 213). Thus the idea of a non-material chromosome emanating from human mind corresponds to Hartman's claim on medical treatment that, "the first requisite of a rational and perfect system of medicine is a thorough knowledge of the whole constitution of man; of the whole" (*The Occult Science in Medicine* 12), and also incorporate the mind along with body to regulate a non-standardized chromosome with a non-standardized treatment of occult beliefs embedded in silence. Ghosh "is saying. It is as if, if you don't know where to look, you may be in a better position to find what you don't know you are looking for ... the natives know what they are looking for, and they are using the scientists' results, and the results' by-products, to gather the information they are seeking" (qtd. in Pierides, *The Wise Silence before and alongside Words*) with a commitment to secrecy and silence.

Re-incarnation Practiced to Regulate the Alternative Medicine (Chromosome)

Murugan claims that this mysterious Calcutta chromosome "is a chromosome that is not transmitted from generation to generation by sexual reproduction. It develops out of a process of recombination and is particular to every individual" (*The Calcutta Chromosome* 213). Peculiarity of the chromosome puts it into dubious domains as far as biological manifestations are concerned in modern science. Occult practitioners work on it as an opportunity to elevate their practice of re-incarnation which is again contradicted by modern science for its meagre manifestation. They keep on improving by deciphering the nature of the mysterious chromosome which causes neurological disorders when transmitted to syphilis patient through pigeon's blood. They rest on re-incarnation to follow it generation to

generation and to refine it. Mangala and Lutchman are exactly doing so since their association to Ross during the times of discovery of malaria transmission by modern science to the second phase as Mrs. Aratounian and Romen Halder during Murugan's expedition to decipher the chromosome in Calcutta in 1995, and as hinted indirectly that their latest incarnation is as Tara and Lucky in an unspecified future where Antar is trying to find out the reasons of Murugan's disappearance.

The way modern science rests on its experimental approach within physiological anatomy of human body in finding the cure for disease, similarly occult-science relies on spiritual anatomy of human mind in search of healing. Mangala, who works in Cunningham's laboratory, is the prime example of re-incarnation as an essence of occult science of medicine which has in sight the whole nature of human body including mind and spirit. Once "Mangala stumbled on something that neither she nor Ronnie Ross nor any scientist of that time would have had a name for (*The Calcutta Chromosome* 212), she not only grows occupied with deciphering that why, "her treatment often produced weird side-effects" (*The Calcutta Chromosome* 212) when she cured syphilis patients with this unknown malaria chromosome transmitted into patient's body through pigeon's blood to make, "the bug cross-over, so that bird could be used like a test-tube, or an agar plate" (*The Calcutta Chromosome* 212) but also becomes the leader of these occult science practitioners who are, "developing the most revolutionary medical technology of all time...the ultimate transcendence of nature... immortality" (*The Calcutta Chromosome* 93) and which she believes lies in re-incarnation. Murugan propounds this theory, though speculative yet viable:

If all of that information could be transmitted chromosomally, from body to body?' ... Just think a fresh start: when your body fails you, you leave it, you migrate- you or at least a matching symptomology of your-self. You begin all over again, another body, another beginning ... a technology that

lets you improve on yourself in your next incarnation.
(*The Calcutta Chromosome* 94-95)

This possibility of another life into another body is sought to comprehend the mysteries of Calcutta chromosome which is still incomprehensible as far as its anatomical structure is concerned. Hartman says that occult science is based on the principle that, “a true appreciation and understanding of the essential nature of man will show that the repeated *reincarnation* of the human monad in successive personalities is a scientific necessity” (*Magic: White and Black* 37), and Mangala along with Lutchman is on the mission to regulate Calcutta chromosome by practicing re-incarnation to gain more possibilities and longevity beyond time space of normal life of a human body to understand that why it causes neurological disorder when transmitted into a patient of syphilis.

At last, what we are left to believe is that the practitioners of occult science gain immortality and their reincarnation suggests the idea of silence and spirituality in regulating not only malarial strain but various other diseases also. Lutchman’s reincarnation into Halder and Mangala’s selection of Urmila to be her next transformation introduces the readers to the module of spatiality, spirituality and mystic in occult science and consolidates the notion of counter version of malaria. She advances further at a time when the modern science is still unable to decipher the cause of malaria transmission.

Re-incarnation becomes the tool with which these occult science practitioners assert their belief of curing illness with another illness though practiced in modern science but not favored as much as Mangala and Lutchman do. Further, this theory of diamond cuts diamond opens indigenous cultural and spiritual practices of occult-science which, in Hartman’s words, use incarnation not to commit the mistake, “to leave out of sight the source from which he is originated” because, it “is to ignore his true nature and to relegate medicine to the realm of the lowest plane of his existence; namely, that of his most gross and material form” (*The Occult Science in Medicine* 16). Thus Mangala has kept alive this tradition of occult science and re-

incarnation because one, “could call her a prototype,” (*The Calcutta Chromosome* 208), where this mysterious malaria bug cures syphilis and can give the opportunity to transmit into another life and body to gain immortality and to keep the promise of silence in practicing occult science as opposite to modern science which believes in revelations.

In the second time phase of the story there are two days 20th and 21st August 1995 in Calcutta when Murugan is believed to be disappeared and where he narrates the whole plan of occult science practitioners. Mrs. Aratounian is certainly latest incarnation of Mangala and looking for her re-incarnation on the line of occult practice to keep the Calcutta chromosome as a tool of cure and also to regulate it. Her criticism of Phulboni who is reported as talking about mysterious silence engulfing the city Calcutta clearly suggests that she like Mangala is against of revealing anything about Calcutta chromosome, “that man’s making an utter exhibition of himself. Isn’t anyone going to do anything?” (*The Calcutta Chromosome* 108), and further when Murugan visits her apartment what he find out, “an inch-long shard of thin glass, probably from some kind of tube” (*The Calcutta Chromosome* 137) reminding immediately to the ritualistic process of these occult science practitioners who transmit the malaria bug to the patient of syphilis through pigeon’s blood. Another instance in story that proves Mangala as Mrs. Aratounian is when Sonali sees that “it was- Mrs. Aratounian” the woman who was performing the ritual of re-incarnation on Romen Halder which is believed to be Laakhan in his latest re-incarnation.

She chooses Urmila to be her next body as Murugan says, “You’re the one she’s chosen,” (*TCC* 260). Moreover when Urmila visits Kalighat with Murugan she comes to know from a little girl that, “today is the last day of the puja of Mangla-bibi. Baba says that tonight Mangala bibi is going to enter a new body” (*The Calcutta Chromosome* 200). This is not an unexpected revelation as Murugan hints Urmila towards the great scheme of re-incarnation which is indicated to her through a xeroxed copy of an old newspaper *The Colonial Services*

Gazette dating back to 1898 given to her as wrapped around fish, she bought from a mysterious boy. This newspaper carries the information about how Ronald Ross was joining in Calcutta and D.D. Cunningham was leaving Calcutta under whose charge was the lab in Secundrabad where later on Ross believed to be succeeded in discovering the cause of malaria transmission.

Murugan explains that, “They’ve been planting carefully the selected clues for the last century or so...they choose to draw them to the attention of a couple of chosen people” (*The Calcutta Chromosome* 185), the way they did by choosing Ross to expedite the research on malaria so the world would know the cause of malaria transmission and its further mutation will help Mangala to regulate the Calcutta chromosome and this time Urmila has been chosen as a new body or soul to gain immortality and keep the research alive on Calcutta chromosome. At last, supposedly in her latest incarnation Mangala is said to be re-incarnated into Tara, who is one of acquaintances of Antar in New York and once Antar saw her friend Lucky, “flung himself down on the floor in front of Tara and touched his forehead to her feet,” (*The Calcutta Chromosome* 190) and when enquired by Antar, she, “explained later that they were related in some complicated way; thus the greeting” (*The Calcutta Chromosome* 191).

The concept of folk healing can easily be associated with subalterns like Mangala and Laakhan. Their belief in myth, the supernatural and the notion of the continuation of life even after the death of the physical body helps the subalterns to transcend their mundane existence, provides them with a platform from which to expand the range of their knowledge in ways which are not recognized by the western rational mind, empowers them collectively. (Abdullah 13-14)

Another character Lakhan, called as Lutchman and whose story told by Phulboni, helps Ross to discover the cause of transmission of malaria bug as he also like Mangala as an occult practitioner knows the reason of malaria transmission and

now helping Mangala to know the secret Calcutta chromosome which is another chromosome of malaria that has lent the opportunity to practice re-incarnation, “so that she could control the ways in which these cross-overs worked” (*The Calcutta Chromosome* 212). He is supposed to be in his latest re-incarnated self Romen Haldar, a real-estate businessman who is all set to be re-incarnated again as when Sonali visits his apartment; she sees that through this occult practice Mrs. Aratounian, “touched the body that was lying in front of the fire and called him Laakhan” and when Urmila asks her whose body it was, she replied, “It was Romen” (*The Calcutta Chromosome* 247). Moreover, it is revealed that both Halder and Lutchman are without thumb to consolidate the notion of re-incarnation as Urmila notices that his, “one of his hands was partly paralyzed, with the thumb lying stiffly curled against the palm” (*The Calcutta Chromosome* 56) and similarly Murugan reveals about Lutchman, “that he was digitally challenged- that is, his left hand was missing a thumb” (*The Calcutta Chromosome* 216).

According to the revelations in the text, Mangala and Lutchman have been re-incarnated into many selves and Murugan is desperate to attain re-incarnation by deciphering the mystery of Calcutta chromosome of malaria. Finally, Murugan who untangles these intricacies of this mysterious chromosome is revealed to be himself a patient of syphilis thus substantiating his debunking of Ross’s discovery and desperate search for this chromosome as he himself wants to be re-incarnated. Although he is cured successfully from syphilis by antibiotics but he knows that beyond this modern medicine there is a possibility of his immortality in occult science as he claims, “sure... I got cured. They can cure it now – except for what it does to your head” (*The Calcutta Chromosome* 244). When he discovers that Urmila is the one that prototype Mangala has chosen to be her next incarnation, he urges Urmila to, “promise me that you’ll take me across if I don’t make it on my own” (*The Calcutta Chromosome* 258).

Conclusion

Amitav Ghosh's *The Calcutta Chromosome*, a medical-thriller reestablishes the non-recognized subaltern practices of occult science occupied with malaria and its mysterious chromosome. He experiments thoroughly with this post-modern speculative fiction to construct a distinct narrative gripped in silence, myth and reincarnation suggesting the idea of counter-science and alternative variant of malaria. He asserts the legitimacy of orientalist research against the discoveries of modern science which comfortably ignores or is unable to fathom the occult practices involved behind malaria. Hartman's convictions on supremacy of medical wisdom over medical science comes into play to re-evaluate the role of psychological and spiritual dimensions in discovering cure for illness which is eventually a question of choosing mind over body in deciphering the secrets of disease like malaria which had once created havoc among mankind.

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