THE CALCUTTA CHROMOSOME: A SCIENTIFIC JOURNEY

Amitav Ghosh won the Arthur C. Clarke Award for science fiction for *The Calcutta Chromosome*. In his novel he makes an experiment by combining varied themes and techniques. The novel is a combination of literature, science, philosophy, psychology, sociology, history and anthropology. It’s highly fascinating and imaginative story of quest and discovery in which the weaves past, present and future into an intricate texture.

As a social scientist and folklorist, Amitav Ghosh approaches human affairs from unconventional point of view like medical science, history, sociology and anthropology and has been able in discovering considerable information that is useful in understanding of human beings. *The Calcutta Chromosome* appears to be a scientific treatise a fiction on malaria but to present an alternative version of the story and through it to give a hint at an alternative reality-marginal. Amitav Ghosh seems to consider in marginally or substitute reality and wants to give recognition to less known, less fortune people.

Amitav Ghosh also attempts to rewrite the marginal or subaltern history and points out that the Western sense of confidence is misplaced. It is a false notion that the Western patronage guides the destiny of the post colonial nations. He deconstructs the Western view their sense of supremacy by Indian irrationality, and also here the reader finds the role of a social anthropologist, a researcher Ghosh who dismantles malaria research history with the help of counter science, religious beliefs, silence as a religion, irrationality of the primitive society, self-contradictory knowledge and by deconstructing the Western aura and Western politics.
The author reveals the historical truths about malaria research and brings the marginalized events and persons to the centre. His interest in social anthropology, in places of today and yesterday makes this novel more interesting and informative. The ardent ability for deep research which is seen in this novel is a quality generally not associated with Indian writers writing in English. He weaves history into narrative framework and attempts to subvert the colonial history. It provides the raw material to the novel. Post-colonial writers are of the view that fact is not to be found in recorded statements but statements in the creating because anything which is codified becomes institutionalized. There is an aspect of fiction in all historical accounts. But the author reorients his reading of the documented history of malaria research into a fresh and new direction and turns away from established truths. John C. Hawley explains about malaria research:

The science fiction and situated somewhere not too far in the future, it is in truth, an implied rewriting of history, suggesting, as he has in so many of his other works, that there may well have been a lot going on throughout the centuries that the history book writers just decided to overlook (8).

*The Calcutta Chromosome* is the amalgamation of a medical thriller, a ghost story, a scientific quest. A detective story is a science fantasy and a scientific discovery that delves into spiritualism of trances, tantric rituals and superstitions, religious beliefs and rebirth. He uses history and anthropology to produce fiction. Amitav Ghosh as a researcher rerecords the details from the past, the historical truths about malaria and the scientist Sir Ronald Ross, who was awarded the Nobel Prize for his findings on malaria.
fever. The action of the novel and takes the creative artist to the science laboratories, creates use of scientific vocabulary, the theory of science and counter science for the investigation.

Ronald Ross and his contemporaries are France’s Laveran, Britain’s Patrick Manson, Germany’s Robert Koch and Italy’s G.B. Grassi were motivated by the new interest in malaria that accompanied grand expansion and the rising infection of soldiers and administrators posted to the tropics. Malaria’s history parallels imperial history in another way too. The violent and often nationalistic competition among European scientists to first solve malaria’s mysteries came to resemble their countries perpetual scrambles for territory in Asia, the Americas and Africa. Robert S Desowitz writes in his book *The Malaria Carpers* 1991,

African and Asian people’s ideas about malaria’s connection to mosquitoes had been ridiculed by Europeans long before the link was scientifically discovered.

The medical history plunges Ghosh with *The Calcutta Chromosome* an astonishing novel that traces its own path through historical mysteries towards surprising discoveries. Amitav Ghosh takes as his starting point of the Ronal Ross’s halting achievements and unravels over the course of an ingeniously plotted narrative a set of mind-boggling alternative possibilities for where Ross’s knowledge. Through the character of Murugan demonstrates his reading of the journals of the Nobel Prize winning bacteriologist, Ronald Ross reconstructs the events of the 1898 that in his research to Ronald Ross some people were helping him to find out malaria parasite.
Murugan firmly believed in the ‘notion of the so called Other Mind’ a theory that someone had systematically interfered with Ronald Ross’s experiments to push malaria research in right direction while leading it away from others. The two men rewarded with Nobel Prizes for serving understand the disease, they are Alphonse Laveran of France and Ronald Ross of Britain were both imperial army doctors who paths to discovery were marked by intuition and unawareness, perseverance and blind luck. Particularly Ross, the later Sir Ronald was an eccentric and arrogant mediocrity who managed to trace the malaria leech through its life cycle despite being a neophyte at microbiology, clueless about the zoology and taxonomy of mosquitoes and convinced until the last minute that the disease was transmitted through drinking water.

The novel begins into the 21st century with an Egyptian clerk named Antar working in New York on a highly advanced computer. Ava as the machine is known outlandishly blends the visionary empowerment of recent internet hype; it really can do anything, speak any dialect, and find any document with the oppressive scrutiny of Orwell’s Big Brother. It won’t let Antar stop work early and its invasive hologram technology respects no bounds of privacy prompted by an image that appears unexpectedly on his screen, Antar starts with Ava’s help to investigate.

The term science fiction is equated with juvenile escapist fantasy. It is a literature of thought experiments which makes to think beyond the immediate. Its central concern is the relationship between man and science, Amitav Ghosh is a part of and involves different frames of reference, discusses technological innovations and futuristic visions.
In the words of Krishnamoorthy, the science fiction story usually takes place in the future or in a present which has been in some way altered by a new factor into a different world or our own world that has suffered a change. In the words of P.S Ravi views this technique as a, radically different perceptions of history are so artistically synthesized that the events of the past come alive, making it a living experience (39).

It is a narrative of a discovery in the natural sciences and consequent adventures and experiences. The historical section of the novel is related to the actual facts of the discovery of Ross’s malaria parasite and his record of his experimentation in Calcutta is linked with the religious cult through his imaginary characters.

The novel begins in New York, into the future not too far away on August 20, identified as “Mosquito Day”. On this particular day in 1898, Ronald Ross made his discovery of the malaria parasite in the blood of an Indian named Husein Khan in his laboratory at Calcutta. This bacteriologist is very close to the people of Calcutta as he did his research in Calcutta city. Ronald Ross memorial arch is there at the entrance of the P.G. Hospital. Except for this fact Amitav Ghosh deviates from the known account of the event and begins his work of undoing the aura around Ross.

Amitav Ghosh divided the book in two parts ‘August, 20, Mosquito Day’ and ‘The Day After’. The action of the first part begins in New York in the twenty first century, in the apartment of Antar, a programmer and system analyst at the International Water Council. Ghosh generally works at home and his retirement is just a year away. After his retirement he plans to return to his native Egypt
………….For years he’d been dreaming of leaving New York and going back to Egypt (CC 5).

Amitav Ghosh works at home with the powerful search engine computer system named the Ava/Ile or simply Ava. Antar finds an ID card that has been partially destroyed. Antar wants to find out the information from that ID, so he proceeds with the help of Ava. While reading out the information on Ava, Antar enters into his childhood memories and his village in Egypt. He remembers about al-Magari and her research of examining the dirt. This sets the tone of the novel and gives the hint that, it is about research.

**History and Anthropologist in The Calcutta Chromosome**

*The Calcutta chromosome* deals with medical history, Ronald Ross’s discovery of the malaria mystery, computer applications, indigenous society, religious cults, tribal society, superstitions, counter science, silence as religion and the belief in the self contradictory knowledge set against the background of nineteenth and twentieth century India.

The novel leads towards the history and anthropology. Amitav Ghosh’s most powerful anthropological detective story, the anthropologist deals with the static pictures of the immobile societies scattered in the remote concerns of the world, with their culture, beliefs, tradition, custom, religion and superstitions, while the historian tells the stories of the events and incidents of the colonial period. In this sense the novel deals with the both the aspects and Ghosh appears to be a social anthropologist as well
as the historian. Whenever there is historical presentation, there lays anthropology, there is the impact of anthropology on history.

Shyam S. Agarwalla points out that Ghosh joins history and anthropology to produce a fiction. The achievement marks him off from other Indian novelists writing in English. The word history contains the sense of events that have happened in time and the narration of those events, so it is both events and discourse. History is expanded to encompass all the reality. Everything has a history, ideas, people, cultures, nature, and things and so on. Thus one can say that history is a Meta narrative, a self-projection onto the past of the particular concern of a particular society at a particular moment in time namely modern Europe, history is tied to Eurocentrism.

Amitav Ghosh in this novel tries to locate marginal, subaltern lost or suppressed story from the other pasts and deconstructs the history of modern science by rewriting an alternative or subaltern history to inscribe the excised contribution of non-western knowledge systems of indigenous society.

Ted C. Lewellen writes in his book the Anthropology of Globalization that,

The anthropologists increasingly pay attention to the “subaltern voice” – the viewpoints of the postcolonial peoples and the ways that modernization is subjectively experienced by the worlds under classes (16).

Amitav Ghosh deconstructs the malaria research history of Ronald Ross. It appears that his path breaking scientific research is nothing but a mockery. The history of malaria research, Amitav Ghosh uses the parallel history of the indigenous people of India who were fare ahead in their research of malaria as compared to the other western
scientists. Mangala and Laakhan belonged to tribal area, they were uneducated. These indigenous people had their cultural heritage and set norms.

Anshuman Monadal points out the relationship between anthropology and history in the novel, “Anthropology thus acts History’s other side, as a kind of epistemological dustbin which helps to hive off other culture and their forms of knowledge through rhetoric of historical supercession.”

N.K. Behura and K.K. Mohanty point out the task of social anthropology:

In anthropology there were two tasks to be undertaken. One kind of task was to reconstruct the history of particular region or peoples and the second task was comparison of the social life of different people (18).

As a social anthropologist, Amitav Ghosh very successfully performs the task of reconstructing the history of marginal. He is of the view that in the field of social medicine the scientific investigations related to social medicine, health, hygiene, and control of epidemics can be conducted more economically by the indigenous people rather than those experimenting in the laboratories with improper knowledge. Amitav Ghosh introduces a belief system in the tribal people who accept interpersonal transference as regular affair. The continuity of life is maintained through this mysterious process. Still the literate, urban people like Mrs. Aratounian also get involved in this kind of system. Laakhan is a living example of interpersonal transference of Calcutta Chromosome.

Similarly the interpersonal transference process if carried forward then Roman Haldar who is a reborn Laakhan and Phulboni is a reborn Grigson or Farley. It is,
the most revolutionary medical technology … a technology for interpersonal transference (93).

The novel is in many ways clearly interested in the struggle to make the unknown known, it relies on few if any of the icons Wolf believes necessary to science fiction texts, of the five, the is only icon that might be present of the two cities in The Calcutta Chromosome Calcutta and New York the latter is the only one of real interest in terms of science fiction iconography since the scenes set in Calcutta take place either in the distance past of recent past or almost present, but even the 21st century New York Ghosh portrays barely fits with the traditional science fiction city.

Clifford Geertz writes about the bang anthropology, the science upon history, the discipline. He gives a fine division these two subjects, there seems to be some historians, who think that anthropologists, current static pictures of immobile societies scattered about in remote corners of the inhabited world and some anthropologists, who think that what historians do is tell admonitory and stories about one another episode in Western civilization.

Murugan was born in Calcutta, while he left it at an early age. Murugan was a graduate student of Syracuse that he first discovered the great love of his life as the medical history of malaria. While he was in New York in a small college, he pursued his study of the early history of malaria research. Then he joined Life Watch and he research went on uninterruptedly. Murugan found that Ronal Ross, he was born in India in 1857. Ross was awarded the Nobel Prize in 1906 for his work on the life-cycle of the malaria parasite.
Murugan shows the motifs that animate the plot of *The Calcutta Chromosome*, he demonstrates through his reading of the journals of the Nobel Prize winning bacteriologist, Ross looks and sounds like path breaking scientific research, is actually its contempt. Murugan’s reconstruction of the 1890s, Ronald Ross is progressing in his research because some people are helping him through the network.

Ronald Ross discovered the cause of malaria in Calcutta. In the small laboratory seventy yards to the southeast of this gate Surgeon- Major Ronald Ross I.M.S. in 1898 exposed the manner in which malaria is conveyed by mosquitoes.

The research work in malaria, Murugan says that the 19th century’s biggest break-through in malaria research had happened in 1840s. In the 1840s a man called Meckel found microscopic granules of black pigment in the organs of malaria patients, black spots, some round, some crescent-shaped, tucked inside tiny masses of protoplasm.

Alphonse Laveran a French Army surgeon in Algeria found it to be a critter, a protozoan an animal parasite. He was advanced further by Camillo Golgi in 1886. Golgi showed that Laveran’s parasite grows inside the red blood cell, eating its host and shitting black pigment that the pigment collects in the centre while the bug begins to divide. He is demonstrating that the recurrence of malarial fevers is linked to this pattern of asexual reproduction. According to Murugan, Ronal Ross was making progress because some people were helping him through the maze. Abdul Kadir came first then a Lutchman walked into Ronnie’s life. Lutchman volunteered to drink Ronnie’s cocktail. Lutchman as far as Ronnie knew was a ‘dhooley-bearer’, a government servant to shovel shit.
In April 1897 at Ootacamund, Lutchman succeeded in planting a crucially important idea in his head, that the malaria vector might be one particular species of malaria. Unaware of the indirect help of Lutchman, Ronnie was supplied more of the anopheles. They were about a dozen big, brown fellows, with well narrowed bodies and dappled wings, eagerly trying to escape through the gauze covering of the flask which the Angel of fate had given to my humble retainer.

Lutchman was somewhat high up in the pecking order. Ronnie gave him a big room in his bungalow. J.W.D. Grigson discovered that the actual name of Lutchman was Laakhan.

Ghosh in a similar study of history reveals that at the time of Ronnie’s stay in India there was a secret religious society which tried to conceal its own identity. Laakhan is a member of this secret society. The novel never visibly identifies the beliefs and goals of this furtive society it is apparent that its members are the devotees of the cult of silence. He narrates the story of Mangala who like Laakhan was in this group of people of silence. This linked with the story of Elijah Monroe Farley who arrived in Calcutta in the 1980s. He wanted to work in the laboratory of Dr. Cunningham. He had two assistants, a sweeper woman Mangala and a young man who came from Renupur.

Farley noticed that Mangala and the young man were not ordinary assistants in a laboratory. Farley noticed some half-dozen people in various attitudes of supplication before Mangala some touching her feet others lying desperate. The story switches to Ronnie once again, with Ronnie comes Laakhan. In Calcutta Ronnie began working
with a related avian species halteridium a bird version of malaria. Laakhan kept a large flock of infected birds for him.

Anthropologist do not merely note down facts of what they observe rather, they construct accounts of their experience of other people’s experience. These accounts are thus fictions, fictions in the sense that they are something made, something fashioned the original meaning of fiction not that they are false, unfactual, or merely as if thought experiments.

Geertz says: “a deeper understanding of history and anthropology, accouplement that progress lays.”

Amitav Ghosh, in *The Calcutta Chromosome*, joins history and anthropology to produce a fiction. This feat marks him off from other Indian novelists writing in English.

**A Post Colonial Novel in The Calcutta Chromosome**

The result of post colonial is a political phenomenon that had reached a height of demonic dimensions by the end of the First World War. The roots of colonization go back to the most ancient days of civilization. Colonization a system of political, economic, psychological and cultural domination of one country over the other always spawns a pattern of cultural and political marginalization of the colonized country.

The post in the context of Indian English Writings in considered being the literature after 1947. But the current implications of the world much enlarged, establishes the beginning of colonization from the early infiltration of the British traders
into the Indian ethos to the installation of the British Raj. The post-colonial consciousness begins a century before the First War of Independence in 1857 and continues distinctly through the present years.

The term post-colonial applies to all the cultures affected by the imperial process from the moment of colonization to the present day. In culture studies post-colonial does not apply to the time when officially colonialism ended, because a colonized society permanently and continuously absorbs a psychology that is concurrently pre-colonial colonial and post-colonial in experience. The constant interplay of variations of colonial experience gives rise to a cultural heredity that is reflected in their indigenous literature. The meaning of post-colonization has spilled over into the realm of history, patriarchy, all kinds of boundaries, the nuances of selfhood and art. Colonization establishes a myth of intellectual, social, cultural, religious and physical inferiority of the colonized. The alteration of history is predictably followed by a feeling of disbelief in selfhood.

In recent years the diminishing effect of the colonization has given birth to a post-colonial consciousness that generates ‘plurality of voices’ as Robert Stam has stressed in Mikhail Bakhtin and Left Cultural Critique. The colonized and the de-colonized are held by a ‘double consciousness’. All post-colonial writings of the last decade, is ambivalent about any very stark dualism or native celebration of pre-colonial revival. The double consciousness of the post-colonial writer enables him to reject and accept the dynamics of power or knowledge nexus controlled by the imperialistic country. The post-colonial literature has marginalized the centre that is to posit the falling importance of the western canon. A considerable invention of high quality
counter-canon has exploded the myth of Western supremacy. The assertively of post-structuralism, post-Marxist, and post-modernist literary genius has restructured the very pattern of white controlled English Literature, at present post-colonialness has become a serious theme of the contemporary international literary scenes.

Amitav Ghosh’s *The Calcutta Chromosome* is an attempt to focus on the implications of a post-colonial novel and to discover the post-colonial characteristics to be found in the Chromosome. The fantastic world of the novel presents a process of various thematic and technical experimentations and innovations.

Post-colonial literature, initially, critical of all forms of colonial way of life, gradually, also became a vehicle to communicate the disillusioned spirit of the natives. But such expressions are rare and are not to be found in *The Calcutta Chromosome*. Occasionally, a nostalgia for the English period is suggested by calling Murugan as Morgan or Ramen Halder as Romen Halder or referring to the Robinson street with its old colonial name and not the new Indian name.

Amitav Ghosh would have departed from factual truth if he had failed to portray the reverential attitude of the Indians for all fair-skinned humans a legacy of the colonial rule. The novel moves through the closing years of the nineteenth century into the whole of the 20th century and then passes on to the early years of the twenty-first century. It covers the colonial and the post-colonial years of Indian history. Of course the writer’s freedom of rejection, selection and creation has been judiciously exercised by Amitav Ghosh.
The Calcutta Chromosome opens in the early years of the twenty first century when Antar, an Egyptian computer programmer and system analyst in New York, suddenly finds the ID card of one Murugan, an old colleague and researcher, flashed on his computer screen. He discovers that Murugan had mysteriously disappeared on 21st August 1995, better known as the World Mosquito Day, from Calcutta. Murugan himself deeply interested in malaria research was very curious about Ronald Ross, a British scientist posted in the Indian Army in the last decade of the 19th century. Murugan confidently believed that there was an ‘other mind’ behind this entire operation of research and discovery. It was his theory that though Ronald Ross was thinking that he was doing experiment on the malaria parasite.

Ronald Ross had uncovered that there is one Mangala who with her handy-man Laakhan was carrying out the experiment through an indigenous method. Amitav Ghosh through the story-line subverts the superiority of the western scientific investigation and proves that not only were they far behind the scientific progress made by India but here, it had been spear-headed by a woman. Amitav Ghosh has granted them great liberty and decolonized the members of the lowest social strata the sweeper and the scavenger class.

Foucault in the ‘Order of Discourse’ states ‘Discourse is the power which is to be seized’. This power is traditionally controlled by colonizer. But in this novel, the ‘discourse of silence’ typically female in nature has been handed over to Mangala. It is stated in the novel,

……that the first principle of a functioning counter-science would have to be secrecy? The way I see it, it wouldn’t just have to be secretive about what it
did (it could not hope to beat the scientists at that game anyway), it also would have to be secretive in the way it did. It would have to use secrecy as a technique or a procedure (88).

The colonized Mangala is the upholder of the cult of secrecy and by this weapon she controls Ronald Ross, Farley, Grigson, Cunningham and all those so-called white male investigators of the malaria parasite. Those who come in the way like Farley are cursorily destroyed. Mangala uses the potent weapon of silence to score intellectually, over her male counterpart Ross and others. Amitav Ghosh in fact, suggests a broad based acceptance of the theory of transmigration of soul, by the colonized and colonizer. The concept easily acceptable to the Hindus is an art of sacrilege for the Christian and yet Ghosh makes it possible because: “Post-colonial allegories are concerned with neither redeeming nor annihilating history, but with displacing it as a concept and opening up the past to imaginative revision” (Selman 165).

In India the Indian writers have gone back to their roots very seriously and yet, the Indian English writers have not totally rejected the language of the colonizer, they have very vigorously gone for hybridization of the adopted language and thus the indigenous words have been very freely accommodated.

In Selman Rushdie’s creative works one can clearly see the aesthetic use of Hindi and Urdu words. None of the Indian writers have distorted the master’s language as many of the Afro-American and African writers have consciously done. Amitav Ghosh has followed the Indian practice of using native words like “bibi, dhooli, Addad al-Turab, Iskutti” etc.
Amitav Ghosh has not disturbed the syntactic norms of the English language of the centre and appropriation of that language for the expression of post-colonial experience. He has not only employed an indigenous theme of the Great mother Goddess Kali but has also projected the awareness, nuances and ambiguities of the post-colonial consciousness. In the novel the two contrasting societies are clearly etched, the society of the colonizer led by Ross and the other Culture conducted by Mangala. The irony of situation is that the so-called masters are mere puppets in the hands of this powerful woman.

The colonizers were in search of temporal truths and the colonized natives were motivated by the higher goal of eternity. The tussle between the western and eastern civilization is highlighted and victory is granted to the extensively oppressed and exploited. The struggle between the western and eastern civilization is highlighted and victory is granted to the extensively oppressed and exploited. Thematically and technically Amitav Ghosh has deconstructed the traditional western forms. His constant border-crossing from fact to fiction the disruption of the realities of the narrative technique in fiction has been done away with as something ineffectual or superfluous. This experimentation has enriched him with a double vision that enables the writer to present a cross cultural critical analysis. Like Rushdie Amitav Ghosh has employed Magic realism to invoke the impossibility of the happening without losing the immediacy of its experience.

Allegory a characteristic form of post-colonial writing creates, deconstructs, restructures, and reaffirms myths. The story line moves with many under tones. The
historical incident of Ross’s invention is consciously shrouded in mystery. Amitav Ghosh the fiction writer turns himself into a historian.

In fact, Ghosh role is not much altered as “Both history and literature are interested in power” (Lerner 94) and “etymologically the two words are the same and only in English have they separated in this way” (Lerner 12). The constant blending of fact and fiction has generated a situation where past has lost its antiquity. By crossing over the physical time, the writer has invented new allegorical meanings. The collision between the West and the East has also been projected symbolically through an ideological conflict between tradition and modernity faith and reason scientific knowledge and intuitive knowledge.

Post-colonial writing mystifies the real and demystifies the mystified. It is not the temptation of exotic expression that compels a writer to follow this intricate path but it becomes a necessity that give him the magical power to represent the culmination of many dynamic, cultural and social forces. The pluralistic sensibility of post-colonial writing has a significant impact on the writers of the coming century.

Amitav Ghosh’s *The Calcutta Chromosome* as a post-colonial writer has rearranged the simplistic equation of life, death and immortality to prove that word manipulated artistically can establish theories that are true and yet stranger than fiction.

**Fevers, Delirium and Discovery in *The Calcutta Chromosome***

Ross’s own self- aggrandizing diary of his researches and breakthrough, the novel proceeds to weave an ironic counter-narrative in which Ross’s heroic self-centeredness is displaced, as is the modern scientific epistemology that he represents.
Instead Ross is shown to be the unwitting pawn of a secretive cult of subalterns whose own knowledge of malaria is far in advance of Ross and the Western medical establishment – although it soon becomes clear that Ghosh is drawing into question historicist narratives of progress that articulate the language of being advanced in the first place.

Whilst the race find the cure for malaria (another one of those metaphors that indicate linear notions of history, time and program) is seen by Ross – and the immortality bestowed by History, the counter scientific cult seeks immortality of a different, more literal kind, allowing Ghosh to entwine subversively the discourse of Science with one of those Indian superstitions that colonialist loved to belittle: reincarnation. Ghosh has remarked that travelling is always in some way connected with his fictional work, and others have noted that Ghosh visualizes movement as in some way fundamental to human experience not necessarily seeing it as involving a physical journey, but also as potentiality that inhabits the consciousness of even those people often regarded as settled such as peasants. Instead much of his work challenges the assumption that human history is one of settled populations and stable cultures.

On the other hand Calcutta his native City, exerts powerful influence on Ghosh’s imagination. Its presents is marked and mediated by his birth into what is known as the bhadralok, the upper and middle sections of Bengali society that emerged in the nineteenth century as a consequence of the reorganization of the Bengal economy under colonial rule. Roughly translated the term means gentle folk of Calcutta constitutes
Bengals intellectual, cultural, and political elite, though at its lower reaches the economic position.

A part of the city that backs onto Calcutta’s ever increasing slums. Thus if travel is a key register of Ghosh’s awareness of the importance of space in human experience, it is nevertheless his recognition that space is not an inert physical dimension exterior to human consciousness but is rather intimately shaped by the particular ways in which it is imagined that determines his examination of culturally created spaces such as nation-states and the borders both physical and imagined that delimit and define them.

In ‘The Calcutta Chromosome’ the question of knowledge is explored in relation to science and history. Murugan is the driving force in the process, he casts doubts on official science and history, he puts together bits and piece trying to uncover what have been left out by the official reports, thus giving voice to those who have been kept silent.

In Murugan’s enquiry about the official story of the research on malaria, Murugan sweeps across centuries and continents. It’s discovered that artificially induced malaria could cure the last stage of syphilis, or dementia paralytic, he crosses from Europe to Asia, from Africa to North America. From Murugan’s tale of the past and from the narration of the present events, three groups of characters emerge, distinct but interacting through space and time, synchronically the western scientists who hypotheses are studied and successively modified the counter scientists.

The upcoming episodes concerning malaria take place in India and this is where the boundaries between science and counter-science become shaky, and dwindle.
Murugan pictures the settings where and when the bacteriologist Ross’s research started. It is India, in the mid-19th century when malaria one of the most widespread and debilitating diseases in the world becomes the “Zeitgeist”, the undertaking on which Europe and the United States invest their money.

From Murugan’s words, Ghosh establishes a parallel between the western conquest of the world and western scientific research, implying that they are two sides of the same coin in their common aim to control, dominate and impose power.

An Ania Loomba puts it, “The growth of Western knowledge systems and the histories of most disciplines can be seen to be embedded within and shaped by colonial discourse”. He takes up the research on malaria mostly because of the current fashion, his discovery is made in a surprisingly short time if compared to the decades devoted to this study by different and better qualified bacteriologists, and his achievements sound like a succession of odd coincidences. In fact all the western scientists who meddle with the research, apart from Ross, disappear in one way or another.

The protagonist Murugan’s counter-history is Mangala, the head of the other team. She represents the subversion of Western modes of perception rooted in empiricism and of the primacy accorded to science as dominant discourse. Only such a person not shackled by the conventions of academia, not biased by any duty to any authority could simply and freely venture to explore what Murugan calls the Calcutta Chromosome, a freak in the scientific field, a non conventional chromosome “an item that is to the standard Mundelein pantheon of twenty-three chromosomes what Ganesh is to the God”.

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The *Calcutta Chromosome* would be that something involved in a process leading to the transference of personality and perhaps to immortality; in Murugan’s hypothesis, Mangala realizes that her intuition needs official science to be fully grasped. However Mangala does not know that she is a scientist of some sort; her assistant and the people she cured have no other way of explaining her abilities but considering her a goddess. A goddess would not be accepted in the scientific community, that is why her ways and motivates remain unknown even when they come in touch with official science.

Secrecy and silence are the elements in which the other team moves. The importance of silence as a mode of alternative knowledge emerges from the very beginning of Murugan’s quest in Calcutta. Silence is the subject of the speech Phulboni, an old and acclaimed writer, holds on the occasion of the celebration of his 85th birthday. He talks about the secret of Calcutta, which unlike the secrets of other big cities paradoxically given out, is “withheld in silence”. In Phulboni’s words, silence is clarity of vision and vitality. It takes on the connotations of a mistress, ever-elusive but constantly sought for and wooed, because silence is the means that seems to lead to Calcutta’s heart, to allow the crossing to a new revelation.

The other team acted in silence and secrecy, why they could not simply and openly operate with the official scientists. One of the obvious reasons, Murugan explains lies in the fact that ‘they are fringe people marginal types’, consequently they would not be listened and they would not be taken into account let alone believed. That is why even though they lack the necessary tools and, therefore, need official science to
reach their aims, they cannot ask for help directly and openly, so they go on manoeuvring in the dark. But there is more than that.

Murugan puts forward the theory is based on the fact that the other team uses secrecy as a technique or procedure. In fact being counter-scientists they conceive no direct communication. What Ghosh is discussing here, through Murugan’s words, is western epistemology, the dominant Western way of knowing mastering the subaltern countries, is that of narrating them according to their own system of values.

Alternative knowledge reacts with silence, yet Ghosh seems to suggest a further step. In ‘The Calcutta Chromosome’ the subalterns are on the verge of an unimaginable discovery in the scientific field, one that would cause what Murugan defines the “leap into the next quantum”, that is to say they are at a point in the process when knowledge is needed in order to effect a change, a mutation ‘if it is true that to know something is to change it, then it is follows that one way of changing something of effecting a mutation, let us say is to attempt to know it or aspect of it.’ Therefore they try, by the silent, unuttered means and modes at their command, to unite their proceedings with the ones employed by official science. In other words Ghosh seems to convey the idea of a new, hypothetical epistemology, which would stem from a combination of two different ways of knowing thus putting an end to the traditional binary opposition between official and alternative knowledge.

*The Calcutta Chromosome* has been variously defined by reviewers as a science fiction novel, a thriller, even a ghost story, not without some good reasons. To a certain extent, the novel shares some of the features typical of these genres, it is set in a mildly
dystopia future, characters mysteriously disappear, the supernatural creeps in suspense is created around the final outcome. So as the story is based on the attempt at unraveling the secrets of malaria research with the contribution of futuristic high technologies, the form of the novel coherently fits its content. The message of the novel is mirrored by the plot, the way the story is structured.

Murugan’s intrusion into the real history of Ross and his research implies another level of contamination the one between fact and fiction, through which as chambers affirms, Ghosh makes the significant point that the rhetoric of science shares much with fiction. Moreover the novel is built up in much the same way as the alternative history of the malaria research is linear chronological sequence of events that neatly leads from beginning to development and finally, to conclusion grows out of a series of continual shifts in time and space tightly knit together by the writer, just a Murugan’s history of malaria is a patchwork of singular documents, coincidences and weird correspondences, which however, come in line to form a definite pattern. It is not by chance, then that Ghosh puts the metaphor of the book into Murugan’s mouth, when he speaks about his alternative history of malaria. In narrating Murugan’s account of the history of malaria, Ghosh tries to show that reality is more complex and diverse than what we are used to seeing. Besides the monuments to official science there is to obscure silent working of alternative science.

**Negotiating Between Science and Fiction in The Calcutta Chromosome**

The modern world is incomprehensible without considering the effects of globalization at the intellectual social economic and cultural levels of life. The revolutionary innovations and techniques in the field of science have also contributed
towards changes far beyond human expectations. Contemporary Indian writings in English particularly fiction have attempted to produce varied responses to the challenges and vicissitudes characterizing human subsistence in a scientifically and technologically advanced world.

Amitav Ghosh’s *The Calcutta Chromosome* as a presentation of the plight of modernity scorching its way to make sense of their life and existence in a scientific and technological age.

“there is something intractable hidden and remains lodged at the secret heart of everything that fits into the system, something that cannot fail to make things happen in it.

Jean Francois Lyotard, *The Postmodern Explained to Children*.

The novel proceeds by using Antar an Egyptian employee with International Water Council as a medium to track the life experiences of L. Murugan an Indian scientist working in New York based organization called Life Watch, “a small but respected non-profit organization that served as a global health consultancy and epidemiological data bank” (8).

Amitav Ghosh introduces us to the main thread that connects the different, yet interlocking narratives of the novel. In the opening pages of the novel, the readers are introduced to ‘the remnant of an ID card’, with the aid of Ava who ‘had been programmed to hunt out real-time information’, Antar finds out that the owner of the ID card was one of his former colleagues at Life Watch who had been ‘missing since August 21, 1995’ and last seen in Calcutta. The ID card found on Ava’s screen acts as a
stimulating influence on Antar who tries to unearth all the details regarding Murugan including Murugan’s research bent of mind and his search for the elusive Calcutta Chromosome.

Murugan has developed an interest in the early history of malaria research (CC31) right from his graduation days at Syracuse and has ever since been active in the field of malarial research. Having attributed a godly status to Ronald Ross, Murugan decides to devote his entire life to find more facts about Ross and his malarial findings and so lands in India. Therefore risking his career, Murugan undertakes to fulfill his quest by travelling from the United States to Calcutta, the haven of Ross’s discoveries. Murugan desires to reach Calcutta before August 20th the day which Ross has designated to ‘World Mosquito Day’ (33). Despite much protests from his organization which had done everything in its power to dissuade him, Murugan remains firm in his decision to leave for Calcutta and even to work there on a meager salary.

Ronald Ross and his discoveries, Murugan decides to learn more about the importance of the malarial research. As one goes through the novel, one finds that though Murugan is full of accolades for Ross, however he is also not without apprehensions in relation to Ronald Ross’s research career. In order to supplement for Ross’s results Murugan’s draws his own assumptions.

Ronald Ross and his malarial findings, Murugan even writes an article entitled, Certain Systematic Discrepancies in Ronald Ross Account of Plasmodium B, then he revises as an Alternative Interpretation of Late 19th century Malaria Research, Is there a Secret History? But unfortunately both
the articles meet with hostile reception and he is dubbed as an ‘eccentric’ and a ‘crank’ (32).

It is interest to note how Murugan’s quest has an instantaneous focus on the personal life as well as scientific career of Ross.

Lutchman in the scientific life of Ross can been seen as a deliberate move on the part of the novelist for as a ‘healthy looking young fellow’ Lutchman acts as a guinea pig whom Ross’s experiments on the malarial bug are carried out. Lutchman who cleverly tries to mislead Ronald Ross and Murugan is doubtful about Lutchman’s intentions. The Lutchman, stories featuring the eponymous hero in his different roles, either as a postman or a village schoolmaster is in fact a exposure of the mysteries surrounding, Lutchman and his experiences, murugan also finds that there is an inseparable bond between Mangala and Lutchman. Murugan has found out that Lutchman’s real name is ‘Laakhan’ and that he hails from Renupur.

Murugan’s spirit of inquiry to know more about Lutchman leads him to the knowledge that Laakhman identifies himself with Roman Halder and also connects himself to Phulboni. This is further testified when we comes across the whole story of Phulboni’s visit to Renupur and encountering an accident at the Renupur railaway station.

The author of the Laakhan stories is Phulboni, a splendid – looking man, over six feet tall, straight and lean as a lamp-post (98).
As Phulboni was working for a well-known British firm, Palmer Brothers, he was sent on a trip to the remote provincial town of Renupur. The writer is confronted with an eccentric experience at Renupur station. Amitav Ghosh’s particular fascination for trains and railway stations finds expression in *The Calcutta Chromosome* where he exploits the setting of railway stations to add to its supernatural touch. The readers are taken aback at the odd events which take place at stations and so the railway settings turn out to be a source of fear and suspicion. Mangala is found at Sealdah station and Murugan turns himself into a lunatic asylum at Sealdah station and Phulboni’s vision of the bizzaire spectacles take place at the Renupur station. Commenting on the role and significance of the rail in Amitav Ghosh’s novels,

Martin Leer writes “(r)ailway stations … function as the sites where characters and stories appear from and disappear into, centers which connect parallel worlds, a kind of real-world Internet portals” (41).

The readers come to realize that dream is a key trope in the novel. Phulboni dreams of being run over by a train and Murugan dreams of carrying out the research activities left behind by Ronald Ross. This dream for the ideal that informs the thematic direction of the novel and the passion for the perfect and ideal is undoubtedly linked to the man’s search and research into the nuances of her and finally to have an identity of his/her own.

In *The Calcutta Chromosome* Amitav Ghosh exposes the plight and fate of men like the real-life Lutchman who could have become scientists of great renown had they benefited themselves from education. Through the series of episodes in the novels, novel, Amitav Ghosh decisively points out that the intellectual subjugation and
subordination of those without knowledge is quite untenable and unethical. By means of this literary piece, Ghosh tries to highlight the contributions of those who pass into the suitable forgetfulness of history. In the novel Ronald Ross id projected as a symbol of scientific knowledge for his research in malaria in the mid-nineteenth century and his subsequent winning of the Nobel Prize point towards Ross’s urge to convey his knowledge for the sake of the posterity.

Mangala Bibi and Laakhan, Phulboni also is firm believer of the cult of silence. That knowledge is limitless and nothing can be known with a degree of certainty form the ideological standpoint the activist counter-science group and therefore, they choose to remain silent. Knowledge as viewed through the lens of the counter-science group is something that couldn’t begin without acknowledging the impossibility of knowledge. And based on this premise, the members of this group chose to work in a silent mode with the tool of indirect communication.

Michael Wood points out that “a complicated fidelity to silence is one of literature’s most attractive attainments” (1). Mangala and her team come across the unique Calcutta Chromosome “a biological expression of human traits that is neither inherited from the immediate gene pool, none transmitted into it. It’s exactly the kind of entity that would be hardest for a conventional scientist to accept.” (213).

Such a Chromosome as Mangala concludes exists in the non-regenerating tissue the brain and its peculiar features is that it could be transmitted through malaria. But Mangala a washer-woman did not know about the nature of a Chromosome and its applications in everyday life. Consequently, Mangala treatment often resulted in
producing strange personality disorders, but she became more and more interested in this kind of treatment through which she claimed to control the ways in which the ‘cross-over’s’ worked.

As Murugan observes:

Just think a fresh start: when your body fails you leave it. You migrate – your or at least a matching symptomology of yourself. You begin all over again another body, another beginning. Just think no mistakes a fresh start […] a technology that lets you improve on yourself in your next incarnation (95).

*The Calcutta Chromosome* presents situations where Ghosh has introduced supernatural elements into its narrative structure to explicate the theory of interpersonal transference of souls. Thus it can be seen that through a mixture of science, religion and history.

**Disappearances and Discovery: A Study of The Calcutta Chromosome**

Teams of research-journalists re-record the details from the past – the historical facts about malaria and the scientist Sir Ronald Ross who was awarded the Nobel Prize for his findings on malarial fever: these sets off the creative artist into the jungle of science-laboratories, scientific vocabulary, the methods of investigation and the scientists. Amitav Ghosh in his novel *The Calcutta Chromosome* takes up this issue of the malarial fever colouring it with mysticism and mystery, supernatural and superstition, calling it the theory of science and counter-science.
There was something like science and counter-science?

Thinking of it in the abstract, wouldn’t you say that the first principles of a functioning counter-science would have to be secrecy? It would have to be secretive in what it did. It would also have to use secrecy as a technique or procedure. It would in principle have to refuse all direct communication, straight off the bat, because to communicate, to put ideas language would be to establish a claim to know-which is the first thing that a counter-science would dispute (88).

Murugan further explains:

Not making sense is what it’s about conventional sense that is. May be this other team strated with the idea that knowledge is self-contradictory, may be they believed that to know something is to change it, therefore in knowing something, you’ve already changed what you think you know so you don’t really know it at all: you only know its history. May be they thought that knowledge could’nt begin without acknowledging the impossibility of knowledge (88).

Amitav Ghosh emphasizes secrecy, mystery and self-contradictory knowledge and confronts what he calls conventional science with the ingenious knowledge and method of the uneducated Indians. This paper attempts to examine how this theory of science and counter-science is presented and with what purpose.

The Indian scientist Murugan is working in New York’s Life - watch, expert on Ronald Ross and malarial fever who narrates the story to Antar, the Egyptian technologist working alone from his flat in New York with his computer Ava as per the
instructions of his employer, the International Water Council. Murugan and his story are screened, shown to Antar who has simply push some buttons and Ava goes hunting out all the details about Murugan, his movements his ideas, his beliefs, his suppositions and inferences. This happens cinematographically, Antar watching a sort of a film as we do so often on the TV screen. Only this is the twenty first century and the method and manner of the show is quite different. The novel opens sometime in early 21st century in Antar’s flat in New York with the appearance of an ID card on Ava’s screen which tripped her system and wouldn’t stop till she found out all about the subject: Why? What? When? Where? How? She has some sort of a simulated urge for self-improvement. Ghosh describes this system of the future minutely:

Anything she didn’t recognize she’d take apart on-screen, producing macroscopic structural analyses, spinning the images around and around, tumbling them over, resting them on their side, producing ever greater refinement of details ……she had been programmed to hunt out real-time information and that was what she was determined to get. Once she’d wrung the last, meaningless detail out of him, she’d Give the object on her screen, a final spin, with a bizarrely human smugness, before propelling it into the horizonless limbo of her Memory (3-4).

The tone of the novel and provides explanations for all sorts of details made known to Antar, surmised and inferred by Murugan, about the events that happened in 1995 in Calcutta as also some hundred years ago on Calcutta and Hyderabad. Ghosh has used this device of computer – system of the future, like H.G. Wells’ Time-machine, to move in time-past, recent past and present for Antar. For the reader past are the last
decade of the 19th century, the present days of August 1995 and the Future sometime in the early part of the 21st century.

Antar to watch Murugan’s experiences of two days in Calcutta and what Murugan explains of the experiments of Ronald Ross and others the few years of the 19th century. It is at three levels of time that the story is revealed to the reader and as it is unfolded through Ava. It also involves a high degree of ‘fictional faking’ and the novelist tries to create a sense of mystery and a special insight into the oriental sense of spiritualism, belief in birth and rebirth, transposition and transcendence which is no more than a numinously dramatic satisfaction.

Against the background of the historical facts of Ronald Ross’s discovery about malarial fever, the novelist presents the supernatural power of Mangala, an assistant to D.D. Cunningham. She is portrayed as a goddess-like figure, that who had found a so-called cure for syphilis but has also acquired knowledge of transcending life beyond life. The two parallel events described: Mangala sometimes in 1893 performs certain rituals (recorded in a letter by Farley):

What he (Farley) saw was this: the woman Mangala was seated at the far end of the room, on a low divan, but alone and in an attitude of command, as though enthroned. By her side at the far end of the room were several bamboo cages, each containing a pigeon..... they were all slumped on the floors of their cages, shivering, evidently near death... on the floor by the divan, clustered around the woman’s feet, were some half-dozen people in various attitudes of supplication, some touching her feet, others lying
prostrate. Two or three others were huddled against the wall, wrapped in blankets.... They were syphilitics, in final stages of the terrible disease (125-126).

The western scientist of Farley understands this clearly and wants to warn them not to waste their hopes on ‘whatever’ quackery it was that the woman offered, to deceive those simple people. But his curiosity makes him stay where he was unobserved by Mangala and sit through Mangala’s performance of rituals. Finally he returns to his own experiment and demands to see the slides ‘the transformations that Laveran described. Only after that he given the slides smeared with the dying pigeon’s blood: “it was then that he saw Laveran’s rods appear, hundreds of them, tiny cylindrical things, with their pointed penetrating heads piercing the blood miasma”. This was to be the future invention of his team mates. His knowledge proves to be his doom. He is promised by Mangala through the young boy assistant that everything would be revealed:

If I would but accompany him to his birth place. Fortunately the Place of which he spkes is not far from the location of my clinic. We are to leave tomorrow.... (129).

Elijah Farely never reaches Barich; he disappeared during the journey never to be seen again.

The police discovered that he had indeed boarded the train at Sealdah, as scheduled bur had disembarked before his destination a remote rarely used
station called Renupur, in severe monsoon weather. A guard was said to have reported later that a young man had been carrying his luggage (129).

Farley glimpse into Mangala’s knowledge is the cause for his disappearance-death. Even the letter he wrote from which Murugan constructs the story of Farley’s and Mangala’s encounter, disappears and there is no scientific proof of Farley’s knowledge and experiment as also about the existence of the letter. Cleverly the novelist constructs mystery both about Farley’s knowledge and his disappearance.

Which the rituals are performed is that Romen Halder and the woman is Mrs. Aratountain aho does not speak, to Sonali’s knowledge, Bengali. Roman Halder who was to meet Sonali that evening, suddenly and inexplicably disappears. The novelist does not explain his death or what he keeps on calling, ‘disappearance’ these two events separated by hundred years add to the mystification of the plot in the novel. In the case of Farley, it is his knowledge which is to be kept secret that brings about his disappearance and death. In Haldar’s case nothing is mentioned, except that in the Calcutta of 1995 such mysterious rituals are performed in the name of some special knowledge of transcendence. Then there is the mention of a station-master who gets killed at Renupur (where Farley had been killed 1894) on a moonless Amavasya night possibly in the year 1900, at the hands of a boy called Laakhan. In 1993 or so Phulboni miraculously saves himself from getting killed by the train at Renupur. Way back in 1895 in Secunderabad Grigson had also with great difficulty saved himself from getting killed just like Phulboni did in 1993. Both of them were followed by the railway station lantern and could not see who was trying to kill them, though Lutchman and Laakhan are mentioned. Phulboni in his stories mentions Laakhan and the ghost-trains that he
himself had seen, the ghost-station-master that he had come across. The characters Lutchman, Laakhan, Lucky of the 19th, the 20th and the 21st centuries appear and disappear.

**Female Empowerment in The Calcutta Chromosome**

Literature traditionally produced to satisfy the aesthetic needs of the masculine consciousness, evaluates and portrays the feminine through patriarchal perceptions. The issues of women’s mission, kingdom, and sphere are either ignored or tainted by gender bias. Only very recently the pressures of woman’s question have focused attention on the woman’s demand of power, autonomy, equality and fraternity.

A modify in mood has permitted woman to create a literature of her own. But any valorization or re-vision of the female protagonist or important alteration of cultural values is censured as a female fantasy for power. Against this all exploits and adventures of the male protagonist are received enthusiastically for its accuracy. The emergence of an autonomous female protagonist from the pen of a male writer is always welcome. Amitav Ghosh in *The Calcutta Chromosome* challenges the tradition of subservience and limitation with regard to woman. His progressive ideas empower the female characters of this novel.

In scientific thriller everything is resolved satisfactorily at the close of the novel but in *The Calcutta Chromosome* the theme of search for immortality moves through a never-ending line of female characters, Mangala Aratounian, Urmila, Tara, and one also hopes to meet many more Laakhans, Murugans and Antars through the ages.
The female protagonist and the pivotal character of this novel is Mangala, a sweeper-woman, whose presence physical or otherwise, concisely sums up the placement of other women in the novel. To the pleasant surprise of the female reader in *The Calcutta Chromosome* a new breed of powerful, self-aware, confident and autonomous female characters emerge to occupy the driver’s seat. The novel of the title resides in the malaria parasite and it enables transmigression of personalities without the need of sexual imitation. This extraordinary kind of cloning has been continually performed by Mangala and Laakhan during the course of the novel.

The personality of Mangala is transmigrated into the body of Mrs.Aratounian, the American landlady in Calcutta in 1995 and in the 21st century. She is incarnated as Antar’s neighbor Tara. In fact in subsequent generations Mangala is replaced physically by Countess Pongracz, Mrs.Aratounian, Urmila and Tara. Similarly, Laakhan chose the Calcutta real estate developer Romen Halder as his vehicle for interpersonal conveyance in 1995 and again he reincarnated himself as Lucky in the 21st century. These transmigrations seem to be distortion of reality, but; “Magic clears a path for the emergence of larger philosophically pointed questions which emerge as if out of a jungle fertile with the promise of life enhancing truth” (Mellen 20).

Elijah Monroe Farley one of the British scientists, researched on Laveran’s theory relating to malaria at the laboratory of Calcutta where D.D. Cunningham was in-charge. Farley’s bizarre experience here is the first experience of magic realism in *The Calcutta Chromosome*. In Cunningham’s laboratory Farley comes across the sweeper woman Mangala and the Dooley bearer lab assistant Laakhan. On the very first day in the lab Farley discerned that both these guys mainly Mangala were well acquainted with
the experiments that had previously been executed in the lab. The next day in the afternoon, Farley saw three figures cloaked and swathed, stumbling slowly towards the laboratory. Actually a man in dhoti and a woman in saree were bearing a very delicate person.

Farley approached the laboratory he could perceive that the stands of bamboo that separated the lab from the adjoining P.G. Hospital were animated with movements:

Looking carefully around through the trees and the bamboo thickets, Farley saw that a number of people had gathered around a low out-house, a short distance away. They were squatting in a circle, around a fire, chanting to the accompaniment of handheld brass cymbals, as though in preparation for ritual or ceremony……the woman Mangala was seated at the far end of the room, on a low divan but alone and in an attitude of command, as though enthroned. By her side were several small bamboo cages, each containing a pigeon…the bird… were slumped on the floors of their cages, shivering, evidently near death (125).

The divan some half-a-dozen people gathered around Mangala’s feet “in various attitudes of supplication, some touching her feet, others lying prostrate” (125). Some others were coiled up against the wall covered in blankets. Farley could identify from his experience that all these persons in the gathering were suffering from the final stage of syphilis. Mangala selected one of the shivering birds, muttered some prayer and rapidly with a scalpel with a single flick of her wrist beheaded the dying pigeon.
The experience of Sonali Das an actor-turned socialite at the massive mansion under reformation by the wealthy builder-cum developer Romen Halder may also be termed magical realist. As desperately in search of Romen Halder and Sonali came to his building situated at Robinson Street and witnessed a puzzling instance of counter-science which is inexplicable by rationality. Sonali Das’s sixth sense perceived that Romen Halder was inside the building. Entering the house she heard rhythmic sounds of drums accompanied by hand-held cymbals and smelt incense.

….. patched lungis a handful of brightly painted women in cheap nylon sarees a few young students several prim-looking middle-class women-people you would never expect to see together (138).

Sonali Das sensed that some ritual was destined to be performed and it particularly involved a young boy and a senseless body surrounding which the people congregated in concentric circles. Mangala’s status as a supreme permeates the novel. Her devotees address her as Mangala bibi and yet she is neither a wife nor a woman in a conventional sense, her marital status cannot reduce her power. Thus the ideology of motherhood and wifehood made important by patriarchy for their convenience is diluted by the writer.

By liberating woman from the false grandeur of these roles, Amitav Ghosh is allowing her to establish self-identity and self-ownership. In other words, he is underlining her potentially for freedom of thought and action.

Traditionally women treated as objects are evaluated on the basis of their physical beauty. The author has ignored the beauty-merit relationship. Mangala is
positively urge and the other female characters, the countess, Mrs. Aratounian, Urmila, Tara, and Maria are anything but beautiful and yet they are strong-willed, action-oriented and articulate. In the absence of sexist discrimination female ambition is achieved without any stigma; Mrs. Aratounian retires as a Principal, Sonali is a successful actress and Urmila is an acknowledged news reporter. Woman in the novel is freed from the hostile culture that either debases or projects her as a chronological.

In a revolutionary move all the female characters of the novel remain unattached. Marriage is no longer an institution of paramount importance of woman. They lead single but successful lives and no aspersions are cast on their singleness. These women are not enamored of the ideology of blissful marriage. There is no reference to Mangala’s family, the Countess and Mrs. Aratounian die enjoying their spinsterhood.

Urmila has a family consisting of father, mother and brothers but she is forever remains an outsider, the death of Sonali’s boyfriend, Romen Halder kills her dreams of domesticity for good, Tara and Maria in New York lead isolated lives and Urmila’s sexual desires roused by Murugan are radically crushed by Murugan’s admission that once he too had been a syphilis patient. It seems that in no way is patriarchal system able to undermine their confidence that has been additionally encouraged by their economic self-sufficiency. They have been vested with power to lead individual and independent lives that can ensure a continuation of their mission.

Women as ‘victims of economic scarcity’ do not exist in the world of The Calcutta Chromosome. While in actual life autonomy of thought and action is seldom decided to women and they remain trapped in the attachment of patriarchy, the
ideologies of marriage and economic dependence in the context of daily existence are deliberately disregarded in Amitav Ghosh’s novel. An oppressed and exploited woman through Urmila’s family life, she is a sought – after reporter of Calcutta but twice may see her being emotionally blackmailed and abused by the members of her own family. Her situation is like that of an entrapped young tree in a tomb but very soon “she is able to discover the power to crack the tomb and grow up to any height”.

The first positive step that she takes in this track is when full of indignation and courage, she decides to haul up the fish-seller for selling bad fish to her. The author turns the incident into a allegory of female assertion and revolt against the culturally forced patterns of male power and female powerlessness. She is in search of the substitute which is provided by ‘not silence, not the absence or the unconscious which bourgeois culture has mythic zed’. From that very point she becomes coherent, self-defined and non-conformist, she really grows up.

Amitav Ghosh has intentionally positioned his women above the conformist gender roles, emphasizing not displacement or discontinuity but some meaningful relationship with society which has been hitherto absent. The stigma of an illegitimate birth cannot touch Sonali, the successful actress. To gain power, the author connotes one must possess some form of excellence. Nowhere does the author suggest an unethical power-grabbing by woman, which is very wide-spread in the man’s world.

Amitav Ghosh’s fictional world in *The Calcutta Chromosome* has female captains and male lieutenants. Obviously, women in it are not the examples of maimed and dwarfed personalities. By recasting feminine values, the author has detached the
contradictions between ideology and practice and made them freshly visible as law-makers.

Balzac’s observations in physiology of marriage, Pay no attention to woman’s murmur, her cries, her pains, nature has made her for our use and for posture pains inflicted by men are made meaningless by the author. Eradication of gender discrimination enables the author to create strong women who transcend the debasing norms of society. ‘The rape trauma motif’, whether physical or psychological, is very much diluted in this text. A woman’s voice is constantly heard in The Calcutta Chromosome as she moves towards self-actualization and empowerment.