THE METAPHYSICS OF SILENCE

They told me the silences were best kept there where they could be labelled, annotated, dated, catalogued— “in such and such a year, this piece of silence was taken from the _____.” You could fill in any name you wanted— when and how— it was all the same. It was all there in carefully regulated, climate-controlled rooms.¹

“…our silence has lost all meaning.”… “At the very least,” I continued, “we should own our silence.”²

Like most of the other fictional works of Amitav Ghosh, it is difficult to categorise The Calcutta Chromosome³ and reduce it to a particular genre. In 1997, The Calcutta Chromosome received the Arthur C. Clarke Award for the best science fiction book of the year. This book is remarkable in the sense that this is a science fiction which, in a way, looks back at the past. In an interview with Paul Kincaid, Ghosh has remarked:

I think it’s a pity that science fiction always seeks to project into the future: it’s just as interesting to project into the past.⁴

The Calcutta Chromosome is a science fiction that not only projects back to the past, but also does history by probing the serendipitous circumstances under which Ronald Ross, who was awarded the Noble Prize for malaria research in 1906, had been able to make his discovery. The novel fuses science, myth, religion, story-telling, the past and the future in a seamless whole; hence, to reduce it to definite generic category would be to do

²Ibid. 58.
an injustice to the novel. In this chapter, I would like to primarily focus on how Ghosh ‘does’ history in The Calcutta Chromosome and then tries to restore the subaltern agency, as Ghosh does in most of his novels, and in that process I would try to find out how he explores issues related to language and communication—a concern that has been predominant in postcolonial literature as well as in the social sciences. Secondly, I would like to analyse how, by bringing in theosophical studies and occult religious studies, Ghosh constructs an entire metaphysic of silence which, in a way, shows us the possible limitations of the hegemony of Euro-centric knowledge. This is a novel where Ghosh is eloquent about silence; and silence is here posited as part of alternative metaphysics as well as an alternative epistemology. Ghosh here uses philosophical discourses and religion to suggest that ‘silence’ can be a part of the epistemological prerogative and that it is often difficult to comprehend different forms of knowledge systems within the theoretical parameters of Western epistemology, or within the formative limitations where everything is perceived in terms of Manichean binaries.

Science Fiction:

Darko Suvin had defined Science Fiction as:

… a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author’s empirical environment.5

‘Cognition’ is that aspect of science fiction by which we seek to rationally and logically comprehend the ‘alien’, the ‘other’ and the ‘fabulous’ in science fiction. ‘Estrangement’,

on the other hand, is a term from Brecht which in the English language approximates to the term ‘alienation’. It is that part of science fiction which renders the feeling of alienation, in the sense that it is different from the familiar and the everyday. It is the co-presence of these two features that prevents it from being reduced to a mere fantasy or a scientific documentary. The formal device by which science fiction appeals to our cognition is the ‘novum’. Novum is essentially the scientific device around which the story revolves and, in Ghosh’s novel, the primary novum is the Calcutta chromosome, which enables transference and mutation of human traits. The other novum is the supercomputer AVA, which seeks to possess and gather all types of information. The scientific pursuit to recognise, discover or utilise this chromosome is not carried on by a scientist or a group of scientists, but rather by the members of a secret religious cult. The elitism of scientific research, as is found in many science fictions, is overridden by the quest of those who supposedly live in the periphery of knowledge. The ‘estrangement’ is provided by the quest of re-incarnation; but within the scope of this fictitious quest, is a challenge posed to our very sense of cognition, suggesting in a way that there are other ways of understanding the world, which might not attest the notion of rationality and order embedded within our notion of cognition. European science is again the hegemonic referent behind this notion of cognition.

The issues regarding the elitism, or rather the chauvinism, of scientific research is dealt with by the Austrian born philosopher of science, Paul Karl Feyerabend, in his book, *Against Method*. Feyerabend is against the idea of strict scientific methodologies

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which has led to the chauvinism of science. He reflects upon the domination of Western
science not as something that evolved naturally because of the march of reason, but as
something which actually involved complex equations of power.

It is true that Western science now reigns supreme all over the globe; however the reason was not insight in its ‘inherent rationality’ but power play (the colonizing nation imposed their ways of living) and the need for weapon: Western science so far has created the more efficient instruments of death.8

Modernity, from the perspective of Western rationality, is thus perceived in terms of the superiority of bombs, as is evident in the confrontation between the Imam and Amitav in In an Antique Land9. The supremacy of Western science is also premised on the scientific methodologies which are said to be logical and rational and are perceived to be uniformly applicable in every context. Feyerabend also explores this myth of uniformity of scientific methodologies, and instead of perceiving it as an advantage, he views it as something that is reductive in nature and is a hindrance to the pursuit of knowledge. He suggests that the history of science is not only about success and facts, but also about failures and ideas:

The history of science, after all, does not just consist of facts and conclusions drawn from facts. It also contains ideas, interpretations of facts, problems created by conflicting interpretations, mistakes, and so on.10

Murugan, in The Calcutta Chromosome, launches on a similar investigation about the history of Malaria research, especially about the discoveries made by Sir Ronald Ross; he is discredited by the scientific communities because his interpretations do not fall in line with them. The novel in fact critiques in an indirect manner the notion of the strict

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8 Ibid. 3.
10 Feyerabend, 11.
methodologies of science. Any idea or information that is not derived from within the apparatus of that methodology is discredited as non-science. The methodologies abided by European science are not the only methodologies from which knowledge can emanate. It is the plurality of knowledge (epistemological anarchism\(^\text{11}\)) that Feyerabend advocates against the homogenisation of order and reason; and this is an important thematic concern too in Ghosh’s works. This epistemological anarchism is more desirable and more humanitarian than other systems or organisations. Feyerabend’s epistemological anarchism, whose sustaining spirit is the plurality of views and methods, is something that Ghosh’s works also advocates— an acceptance of the plurality in our ways of being and knowing. This opens up issues related to epistemology and the possibility of alternative knowledge system that the novel then goes on to explore. The rational and the logical, which provide the narrative basis of science fiction, are in a way challenged in Ghosh’s novel.

Science Fiction “has historically been perceived as a genre of the fabulous”\(^\text{12}\), a genre which stays mostly outside the canon of literature\(^\text{13}\) in the sense that the strict boundaries of other canonical literature seem to dissolve and dissipate in science fiction. As a genre, it challenges our imagination in the way it tries to foresee our future, and this it does within the apparatus of ‘cognition’. In its experiments about the future, it often seeks to reflect on the human condition from outside the time frame. Such a narrative stance often contributes to our social and cultural thinking about the possibilities of

\(^{11}\) Feyerabend’s Epistemological anarchism advocates that there should not be any rigid, single, prescriptive scientific method which would then lead to the reduction of scientific activities. He suggests that science should benefit from a dose of theoretical anarchism which is in favour of plurality of methods and it would be more humanitarian than other systems of organisation.

\(^{12}\) Patricia Kerslake, Science Fiction and Empire (Liverpool: Liverpool University Press, 2007) 1.

\(^{13}\) Ibid. 1.
progress and degradation in the near or far-off future. Patricia Kerslake, in her book, *Science Fiction and Empire*, compares Science Fiction with the mirror image:

> SF [Science Fiction] provides mirrors that stretch to either end of our existence. Since seeing ourselves directly in the mirror of the future is impossible, SF produces instead an unending succession of literary experiments, each one examining a small part of a much larger image and each equally necessary to the greater vision.  

The metaphor of the ‘mirror image’ can be perceived to be present in the sense of the ‘other’ conceived in terms of the ‘othering’ which is used in the postcolonial perspective in the same sense in which Edward Said uses it, or from the philosophical point of view (Hegelian master-slave dialectic). The ‘other’ is a reflection of the self, yet not quite the self. It often precedes the self and is unconquerable and indeterminate. Science Fiction is the mirror image of the other of human existence, as it tries to perceive the indeterminate future. *The Calcutta Chromosome*, perceived to be locating itself within the genre of science fiction, reverses this generic othering, where the linearity of time, which is supposedly a constant within the approved discourses of science fiction, is dismantled by the thematic schema of inter-personal transference. The continuity of time breaks down, as a scientific alternative of the Hindu concept of reincarnation is being fictively constructed. The super-computer AVA, rather than projecting into the cyborgs of the future, seems to fill up discursive spaces in the past. The characters also appear, disappear and re-appear, as the notion of the linearity of time is dismantled within the narrative time-space, and also because of the thematic pursuit of reincarnation. Ghosh’s novels often seem to re-explore and re-read the archive in a manner where the silences of the meta-narratives are exposed not only to point out the lacunas in the meta-narratives,
but also to suggest the possibility of alternative forms of knowledge. Ghosh thus in a way turns the very genre of science fiction on its head by firstly, dissolving the time-space continuum so essential to such genres, secondly, by focussing on the past and fictively reconstructing the historical material available to him, thirdly, by problematising both the ideas of cognition and estrangement, and finally, by trying to make possible a different reading of the silences and gaps in such documents.

Early Science Fiction has often been preoccupied with the development of science and technology and has especially been obsessed with futuristic technology. Technology that could dissolve the factors of time and space— like the time-machine that could transport us to any age and any place and space-crafts bringing different human-‘others’ in contrast or in relation to us— has often been part of its fabulous narrative. In the representation of time and space, however, Science Fiction, in a sense, has been obsessed with notions of imperialism— of conquering different lands, different spaces and different worlds, so that the alien is here posited as the conquerable ‘other’. (Modern science fiction has also tried to be anti-imperialistic by showing the failure of such domination. One can refer, for example, to the recent science fiction film, Avatar. However, it has been difficult for the genre of science fiction to leave the impulses of empire behind.) Patricia Kerslake’s book, Science Fiction and Empire, preoccupies itself with these questions:

Why does an archaic imperialism still seem to hold sway in a genre which claims the future as its present? How does the fictional combination of science and power affect contemporary cultural expectations? Will humanity ever outgrow its urge to expand and conquer, or are fictional galactic empires more important to the socio-political
health of our race than we can possibly imagine? Are the terraforming and exploitation of a planet a human right?..\textsuperscript{15}

*The Calcutta Chromosome* is, in a sense, a different type of response to the general obsession of science fiction to be fixated with the future and the always-already present aspects of domination that are projected as man’s attempt to conquer time, space and the ‘other’ through science and technology. *The Calcutta Chromosome* rather looks back to the mythological past, and not to the future, or rather to a past through which the future can be made sense of. In this novel, an understanding of the past requires an investigation into a rather heretic religion whose main ideal is secrecy and silence. The people who are part of this cult have used their secret knowledge to manipulate investigations of modern science to their own ends.

In a science fiction, the narrative impetus is on the marginalising and the silencing of the ‘other’ (In science fiction the ‘other’ is often perceived in terms of the human and yet significantly different from it, like the alien or the monster.) to an ultimate exercise of coming to terms with the self or an examination of the self. The very construction of the ‘other’ in Edward Said’s book, *Orientalism: Western Conceptions of the Orient*, is premised upon the difference between the orient and the occident. Said elaborates this conception of the other through the metaphor of the theatre:

On this stage will appear figures whose role it is to represent the larger whole from which they emanate. The Orient then seems to be, not an unlimited extension beyond the familiar European world, but rather a closed field, a theatrical stage affixed to Europe.\textsuperscript{16}

\textsuperscript{15} Ibid. 3.
The ‘other’ in science fiction is the alien which is also affixed to the human. It is in contrast and contra-distinction to the alien that the ‘human’ can be understood and analysed:

It is with the possibility of gaining a new perspective on ourselves that the prospect of an encounter with the Other, the alien, takes hold. Humanity’s endless dissatisfaction with the status quo ensures that the question of self is an unanswerable binary.\(^{17}\)

The ‘other’ it seems is always located in the periphery of existence. The ‘other’ in *The Calcutta Chromosome* is, however, the dominant one and it is difficult to come to terms with the other because of its secretiveness and silence, which cannot be perceived properly within the confines of the Western knowledge system. This other here is in a privileged position rather than being in a disadvantaged position, precisely because of its marginality in the social context. The other is also privileged in the sense that the ‘other’ is not already pre-constituted by an existing socio-cultural discourse particularly because of the liminality of their situation. Another important aspect is how to give this ‘other’ narrative agency and narrative power. The ‘other’ in *The Calcutta Chromosome* is a subaltern group led by Mangala whose intention is to lead science towards what is considered the ultimate of knowledge—immortality. Its methods are, therefore, mysterious because it cannot be understood within the methodological apparatus of conventional knowledge forms. The novel, therefore, remains open-ended and there is a sense of mystery prevailing till the end, as the readers try to comprehend whether they would be able to know the right moment when the discoverer would be the discovered. There is always this sense of inadequacy in the end about the chosen person, and this sense of inadequacy is suggestive of the fact that stranger things happen in heaven and

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\(^{17}\) Kerslake, 10.
earth for which we cannot always account for. Ghosh’s *The Calcutta Chromosome* is different from the conventional science fiction in that, in this novel, Western science gets connected with the endeavours of the cult of silence and secrecy. Ghosh does this deliberately to question the hegemony of Western science over other forms of knowledge. A similar attempt can be observed in *The Circle of Reason*¹⁸, where we find racial sciences like phrenology and craniology are not only being humorously discredited, but are also being appropriated by the native intellectual to suit his own purpose. The truth-claims of scientific knowledge, which poses to possess a universal rationality placed outside any subjective, moral or ethical framework, makes it a more desirable objective form of knowledge than any other. Its validity is attested by an uniform scientific method about which Feyerabend is extremely because this uniformity is in actuality a hindrance to knowledge. Through its translation into technology, it is tied up with the notion of civilisation progress, as is evident in the conflict between the Imam and Amitav in *In an Antique Land*.

Vandana Shiva, in her book, *Staying Alive: Women, Ecology, and Survival in India*¹⁹, argues for a recuperation of the feminine principle in science represented by the goddess ‘Shakti’—a symbol of the primordial energy that pervades everything. The feminine principle is not based on the dualism of man and nature. Mangala and her cult of silence and secrecy can be said to be based on the same feminine principle. Shiva proposes the idea of ‘ethno-science’ which is in direct contrast to the reductive Western science in the sense that through the feminine principle it provides a corrective to the rather masculine

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Western science. The cult of silence and secrecy, we can argue, in terms of what Vandana Shiva suggests, is based on this feminine principle, which is not based on the dichotomies like man and nature, science and myth et al. Thus Mangala as a figure of the goddess seeks to unite these binaries and introduce the feminine principle to further the quest for knowledge. The role of the Bon Bibi legend as referred to in *The Hungry Tide* is also, in this sense, similar to the cult of Mangala-bibi in *The Calcutta Chromosome*. By accepting this feminine principle in science, one may argue that science would not be restricted to the separation between science and nature or the separation between the different sciences, but rather would be directed towards the advancement of knowledge by acknowledging plurality of views and methods. It would then be anarchist in the sense that Feyerabend uses it to further the development of humanity.

**Science Fiction and History**

I have argued in the earlier chapter how Ghosh does history in his other novels and here I would like to analyse how Ghosh is also doing history in *The Calcutta Chromosome* within the confines of the science fiction genre, thereby redefining the genre itself. *The Calcutta Chromosome* published in 1996 looks forward to the near future as well as to the past, so that the time-space continuum of the narrative is itself challenged to keep pace with the thematic structure of the novel. Ghosh has himself acknowledged the influence of Rabindranath Tagore’s “The Hunger of Stones”, a short story, which he has

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himself translated and which is narrated in the manner of a ghost story set in colonial India about the alternative states of being.

There happen more things in heaven and earth, Horatio, than are reported in your newspapers.22

In a sense, Ghosh’s novel echoes the spirit of this line to suggest that there are other things that happen in heaven and earth than what conventional historiography can register. *The Calcutta Chromosome* is partly historical and partly fictive reconstruction of the alternative possibilities and aims of research. Ghosh has also been influenced by the writings of the Hindi writer, Phaniswarnath Renu, particularly his ghost story, “Smells of a Primeval Night” (“Adim Ratri ki Mahak”). Renu’s writings are coupled with subaltern characters and he depicts “some of the most economically decimated landscapes of postcolonial India”23. Bishnupriya Ghosh, in her article, “On Grafting the Vernacular: The Consequences of Postcolonial Spectrology”, rightly points how Tagore and Renu from their very different perspectives could have influenced the writing of *The Calcutta Chromosome*:

Both Tagore and Renu saw their literary projects as crucial to the formation of a national ethics beyond the narrow concerns of territorial governance and sovereignty; but Renu focussed primarily on rural subjects, while Tagore's protagonists often inhabit a colonial metropolitan milieu. No wonder Ghosh is attracted to these two literary stalwarts in his writing of the postcolonial diasporic subject’s struggle to represent the subaltern “other”.24

The major influence of science fiction on Ghosh’s writing has been the works of Satyajit Ray, which he mentions in one of his articles on Ray:

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24 Ibid. 201.
But my appetite for the genre was sustained I think, largely by the ethos of my birthplace, Kolkata, which has a passionate, if curiously ambiguous relationship with the sciences. One of the city’s greatest offspring, Satyajit Ray, had a lifelong interest in science fiction and I like to believe that my own interest derived partly from his stories.  

Ghosh considers films such as Parash Pathar (The Philosopher’s Stone) as a science fiction. Ray contribute significantly to the Bengali science fiction with his Professor Shanku series. Satyajit Ray’s project ‘The Alien’ predates the making of Spielberg’s blockbuster movie E.T. and many allege that it is based on Ray’s script although Stephen Spielberg had never acknowledged it.

The novel begins with Ross’s self-aggrandising versification inscribed in the marble arch of the monument:

This day relenting God  
Hath placed within my hand  
A wondrous thing; and God  
Be praised. At His command,  

Seeking His secret deeds  
With tears and toiling breath,  
I find thy cunning seeds,  
O million-murdering Death.

I know this little thing  
A myriad men will save.  
O death where is thy sting?  
Thy victory O grave?  

This self-celebrating high sounding sententious morale in a sense provokes Ghosh to fictively reconstruct the history of the discovery of malaria in the late nineteenth century. This lofty social and religious overtone is ultimately ironical in the sense that even today  

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27 Ghosh, Calcutta Chromosome, 35.
in the third world countries malaria remains a fatal disease and many people die of malaria everyday. The discoveries that took place in Malaria research were carried on primarily by military scientists in colonial laboratories with the natives serving as guinea-pigs for their experiments. Sergeant-Major Ronald Ross was no exception. In most of his novels, Ghosh, I have already argued, does history in a way that challenges conventional historiography. In this novel, also, we find that Ghosh has meticulously researched the medical history of malaria research. Inter-textuality and use of historical character or references to historical characters and events abound in his novels, for example, King Thebaw, Aung Saan Suu Kyi and others in The Glass Palace, and the Morichjhapi incident in The Hungry Tide. In The Calcutta Chromosome, we find that Murugan is directly quoting lines from Ross’s Memoirs in some portions of the novel. In fact, the name Luchchman appears several times in the Memoirs. The serendipitous circumstances under which things presented themselves in the right time to Ross can also be made out from his letters to Patrick Manson or from a critical reading of his Memoirs. Ghosh does fictively reconstruct the narrative based on the gaps that exist in Ross’s Memoirs. The connivance can be sensed from the memoir itself and even from Ross’s biographies that there existed a possibility that the subaltern people, who assisted Ross in his experiments, could have manipulated the scientific discovery to further their own intentions. Ghosh thus develops his story on the silences and gaps that exist in Ross’s texts. Ross’s discovery also suggests that it is not the uniformity of scientific methods that have led to the discovery; rather chance and circumstances had a significant role to

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play in it. Feyerabend had argued in his book how successful research has often used non-scientific or non-standard methods to achieve their ends:

Successful research does not obey general standards; it relies now on one tick, now on another; the moves that advance it and the standards that define what counts as an advance are not always known to the movers.30

Developments regarding the fields of Science, Technology and Medicine had assisted the cause of both colonialism as well as that of European imperialism. Development in medicine was used for several reasons. It was directed towards safeguarding their stay in inhospitable places and in climate which they were not familiar with. It was also used to promote their superiority and bolster their ideological position. In other words, it assisted in the process of sustaining the empire for such a long period of time. It was the developments in these fields that proved to the natives the superiority of the colonisers. It also helped the coloniser to stereotype the colonised ‘other’. The developments in technology, especially related to transport, also helped in carrying these diseases far and wide, so that it became imperative to find solutions to the diseases with the help of medicine. David Arnold’s book, Imperial Medicine and Indigenous Societies31, is a collection of interesting essays on the empire’s use of medicine in relation to indigenous societies. He observes in regard to the book’s content:

Rather they [authors] see medicine and disease as describing a relationship of power and authority between rulers and ruled and between colonialism’s constituent parts.32

30 Feyerabend, 1.
32 Ibid. 2.
It was primarily for the preservation of the colonial economy and the ecological changes, brought about due to the improvement of transport, that there was a demand for the improvement of medicine; the other reason being that the diseases spread from one country to the other. Besides the already existing diseases, several, diseases were imported from the West:

Some diseases were transmitted directly by Europeans themselves. The spread of syphilis—known to sixteenth and seventeenth-century India as *firangi roga*, the European disease—was closely associated with European sexual contact.33

The primary reason for Murugan’s interest in malaria research is that Murugan has contracted syphilis in India and has been cured of it through artificially induced Malaria. Most of the main characters in the novel such as Antar, Murugan, and Laakhan have in some point of time suffered from syphilis or Malaria. The reliability of the narrative framework is brought to question, as the narrators are susceptible to ‘fever’ and ‘delirium’. In fact, Ghosh uses the scientific fact regarding the strange capacity of malaria to live dormant in the human body for several years and then again blossom up in the form of high fever, as is the case with Antar.

Ghosh is thus doing history in the sense that he is trying to fictively recuperate the subaltern agency and indigenous knowledge systems which have almost been written out of the history of Malaria research. In *Memoirs*, Ross often finds it difficult to remember the name of the hospital assistant:

> Next morning, the 16 August, when I went again to hospital after breakfast the hospital assistant (I regret I have forgotten his name) pointed out a small mosquito seated on the wall with its tail sticking outwards.34

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33 Ibid. 6.
He often refers to him as the ‘worthy hospital assistant’, because he is the one who helps him with the experiment and often produces the right thing at the right moment. The other thing that is frequent in the Memoirs is his reference to the ‘Angel of fate’. He does not question the way in which useful information are presented to him by his supposedly illiterate assistants:

Mostly he doesn’t even know [his assistants’] names, hardly even their faces; he doesn’t think he needs to. As for who they are, where they’re from and all that stuff, forget it, he’s not interested.\(^{35}\)

Laakhan, who is one of the most important characters in the novel, is also part of history, since he finds mention in Ross’s Memoirs as well as in the biographies on Ross. The colonies also served as laboratories for the experiments of the colonisers. Be it Pasteur or be it Ross, the experiments were conducted on native men and women. They had served as guinea pigs for the development of Western Science and Medicine. In June, 1985, Ross had tried an experiment of putting four mosquitoes which have sucked the blood of patients suffering from malaria in bottles of water and administered it to Laakhan:

The water in this bottle was given to a native—a man called Lutchman.\(^{36}\)

It was after eleven days that Laakhan developed fever. Ross had asked Mansion not to disclose the thing, as giving fever to a government servant was illegal. The same experiment was conducted with other men who, however, did not develop fever. So, Laakhan was a pointer to a new direction of work:

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The experiment seemed more or less a failure, though Lutchman seemed an interesting pointer to new lines of work.37

Ghosh materialises this silence of the historical narratives and reconstructs a fictional narrative based on the recuperation of the subaltern agency. In this novel, a subaltern history thus runs parallel to, and even counters, the colonial or mainstream history.

Like in other science fictions, the novel is framed within the futuristic present. The future is diasporic, as most of the important characters, like Murugan, Antar and Tara, inhabit a different world of their own. It is a world where the forces of globalisation have had a significant impact with agencies, like the water council; man and machine have all been transformed into units within its huge mechanism. It is the twenty-first century when Antar, a programmer and system analyst at the International Water Council (formerly Life Watch), works from his house in New York. He is to retire in one year’s time and would like to return to his native land Egypt. He uses a super-computer called AVA/Ile which is equipped with an extremely fast search engine and capable of finding out real time information; it is in itself a great “horizonless”38 repository of huge quantities of data. There is also a hint of an unfavourable power relationship between the machine and the man. The computer is attributed a feminine name and is also invested with the power to speak in terms of the human language. Its mastery of language is such that it can even speak in dialects. She is characterised as possessing an unflinching eagerness and a constant desire to improve herself. The narrative also indicates that Ava is continuously watching and, in a sense, monitoring Antar’s activities. However, Ghosh is not pitting the one against the other in terms of a binary opposition.

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37 Ibid. 97.
Ava had thrown up a lost ID card belonging to a Life Watch employee on the screen. Ava reconstructs from the information flow available to her that the lost ID card had been found in Calcutta. After a series of searches, it was established that the subject was missing since August 21, 1995, and that he was last seen in Calcutta. The narrative structure unravels like an onion peel or like a set of Chinese boxes— one layer underneath the other— in the complex form of a quest. The present is the future, but the story moves on with the quest in the past by exploring the medical research of malaria.

Ava and Antar are finally able to work out the mystery of the lost Identity card. They come upon the name of L. Murugan, an employee of Life Watch, a former organisation, where Antar also used to work. Murugan’s love of life was to research on the medical history of Malaria, especially the work of Sir Ronald Ross, who received the Noble Prize for discovering the malaria vector. It seemed to Murugan that the circumstances under which Ross conducted his research and made his discovery seemed rather too fortuitous. He is struck on a theory that some other group might have manipulated Ross’s research to serve their own purpose. Murugan decides to leave for Calcutta to investigate his theory of the ‘other mind’. Conventional scientists have discredited Murugan’s article, “An Alternative Interpretation of Late 19\textsuperscript{th} Century Malaria Research: Is there a Secret History?”\textsuperscript{39} and have felt that Murugan was eccentric. The hostility shown toward Murugan shows the attitude of the scientific community and the society at large toward any deviant or alternative discourses. Murugan’s colleagues considered his research a harmless activity and a “time-consuming hobby”.\textsuperscript{40} In reality, research is a pain-staking activity, but the tremendous effort it requires hardly gets

\textsuperscript{39} Ibid. 31.
\textsuperscript{40} Ibid. 31.
recognised. The novel is, in a sense, an ironic commentary on the discourses and attitude of modern scientific communities who are hardly receptive to any non-standard idea. Thus, within the narrative apparatus of science fiction, the protagonists of the novel launch on an investigation of the past and set off on a quest for knowledge which itself would, in a way, be transforming them. This knowledge would be shrouded in secrecy. The quest is also historical in the sense that Murugan arrives in Calcutta in a much reduced pension to investigate the ‘other mind’ behind Ronald Ross’s discovery.

**Silence and Secrecy**

Murugan believes that Ross’s research was manipulated by an ‘other mind’:

> ...he began to speak openly about his notion of the 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.\(^{41}\)

The quest that Murugan thus sets forth for himself is not only to unravel the real people behind Ross’s discovery, but is also an acknowledgement of the existence of an alternative epistemology. This ‘other’ mind is not grounded in the conventions of European scientific methodologies, nor is their aim remotely connected to the developments in tropical medicine; rather their aim is transferring personality traits chromosomically. In religious terms, this could be a scientific working out of the Hindu idea of reincarnation. The two most important aspects of this ‘other mind’ are ‘secrecy’ and ‘silence’. References to the Occult and the religions considered heretic in the West abound in several of Amitav Ghosh’s fictions. Lionel Tresawsen in *The Shadow Lines* ...

\(^{41}\) Ibid. 31.
used to attend the meetings of the Theosophical Society in Calcutta. Tresawsen was also a man of science and has had twenty-five patents for several types of gadgets. His visits to the Theosophical Society had made him and his family unpopular among several circles of the British society. He also attended the séances conducted by a Russian medium. It was in one of the séances that Lionel Tresawsen met Tridib’s grandfather, Justice Chandrashekhar Datta-Chaudhuri. The Bon Bibi story has a great relevance to the narrative of *The Hungry Tide* and we find in *The Glass Palace* that Dolly is inclined to spend her old age in the monastery; it is also mentioned that she was miraculously able to save Dinu when she saw a vision of King Thebaw. She had rushed Dinu to a hospital following a dream or a vision she had had of King Thebaw. Religious references abound in several of Ghosh’s novels in such a way that science, religion, local knowledge are not treated in an exclusionary or reductive manner. The possibility of alternative forms of knowledge, which is not always understandable from the perspective of the mainstream discourses, is acknowledged and developed to a great length in *The Calcutta Chromosome*.

There are several references to occult and deviant religious traditions which assume a great deal of significance in *The Calcutta Chromosome*. The first diatribe on silence is launched by the writer Phulboni. In order to save himself from the rain, Murugan enters the auditorium and has a chance meeting with Urmila and Sonali Das who are reporters and are both there to cover a literary celebration of Phulboni’s eighty-fifth birthday. The famous writer Phulboni’s voice can be heard across the auditorium because of the loudspeakers. Saiyad Murad Husain has adopted the pseudonym Phulboni,

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as his father threatened to disown him. The name Phulboni is probably an amalgam of the name of two writers, Banophul and Phanishwar Renu. Banophul was the pseudonym of the Bengali author, playwright and poet, Balāi Chānd Mukhopādhyāy (1899-1979). Phanishwar Nath 'Renu' (1921-1977) was an influential Hindi writer in the post-Premchand era, who primarily promoted the voice of contemporary rural India. Both these writers had a significant influence on Ghosh. It is through Phulboni’s words that the epistemology of silence and secret gets a vocal representation:

‘Every city has its secrets,’ the voice began, ‘but Calcutta, whose vocation is excess, has so many that it is more secret than any other. Elsewhere, by the workings of paradox, secrets live in the telling … that which is hidden has no need of words to give it life; like any creature that lives in a perverse element, it mutates to discover sustenance precisely where it appears to be most starkly withheld— in this case, in silence.’

The paradox of secret and silence is that it requires telling. This is the type of telling that Ghosh throughout his fiction is trying to attempt. The silence would be full of life and would be animated in the telling:

‘Mistaken are those who imagine that silence is without life; that it is inanimate, without either spirit or voice. It is not: indeed the Word is to this silence what the shadow is to the foreshadowed, what the veil is to the eyes, what the mind is to truth, what language is to life.’

For Phulboni, silence encompasses an entire metaphysics, where silence is full of life and where silence is not perceived as opposed to language in terms of binaries. Silence has always been an important aspect of Indian philosophical and religious tradition. The Sanskrit word for sage is ‘muni’ and it is derived from the word ‘mauno’ which means silence. The word thus signifies that true knowledge can be attained through the practice

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of silence. Silence is revered in Hinduism where it is related to the notion of the absolute. The Tantric tradition lays a great emphasis on silence where the mantras are often uttered silently.\textsuperscript{46} In Buddhist traditions, “the practice of silence is needed to provide a spiritual condition for purification and thereby growth in inner awareness, wisdom, compassion, loving kindness, and joyful sympathy reflected in thought, word and action.”\textsuperscript{47} There is also the other negative aspect of silence in religious scholarship which is the silence of the grave. This is the type of silence which probably Mangala’s group is set to conquer. Silence has played an important role in many religions like Hinduism, Buddhism, Christianity etc. Silence also occupies a pivotal position in Quakerism, where silence is considered as wisdom and speaking is considered as folly.\textsuperscript{48} Speaking was, for the Quakers, a carnal activity. The Quaker’s notion of personal salvation was also related to silence:

\begin{quote}
The primary concern of the early Quakers was personal salvation, and on this matter they considered themselves to be totally subject to God’s will; committed to wait silently upon his decision as to their fate.\textsuperscript{49}
\end{quote}

In the Quaker tradition, however, silence is perceived in terms of the binaries— as something that is opposed to word and speech. The Amist, the Trappist etc. are also deviant Christian traditions who have laid a great emphasis on silence.

Silence plays a very interesting role in Buddhism, especially in the tradition of Nagarjuna of the Madhyamika School. According to Nagarjuna, things are never treated as either/or, that is, in terms of the binary; but are always considered as both/and.

\begin{itemize}
\item \textsuperscript{46} Stuart Sim, \textit{Manifesto for Silence: Confronting the Politics and Culture of Noise} (Edinburgh: Edinburgh University, 2007) 80.
\item \textsuperscript{48} Sim, 65.
\item \textsuperscript{49} Ibid. 65.
\end{itemize}
Nagarjuna refuses to choose between one side of the argument or privilege one argument over the other. He recommends silence when faced with such paradoxes:

Things are never either/or in this thinker’s work, but always both/and, and he steadfastly refuses to choose between opposing positions in an argument, recommending silence instead when faced by metaphysical problems.\(^{50}\)

Raimunda Panikkar, in his book, *The Silence of God: The Answer of Buddha*,\(^{51}\) also analyses the meaning of silence in the Buddhist tradition, especially in regard to the Buddha when faced with such paradoxes. The Buddha, according to Panikkar, emphasises on the silence of thought, so that even on the ultimate question of God, the Buddha is silent. If silence is perceived as absence, then, in Buddhist traditions, it is considered a positive absence. *The Calcutta Chromosome* is also based on primarily three paradoxes in regard to knowledge, secrecy and silence. Silence, as it appears in Phulboni’s speech, also voices this paradox. It is not opposed to speech; but, like Nagarjuna’s philosophical position of both/and, silence acquires relevance in the telling.

*The Calcutta Chromosome* also refers to another philosophical tradition which emphasises on the value of ‘silence’. In Chapter 31 of *The Calcutta Chromosome*, we find that C.C. Dunn unexpectedly intrudes in one of the weakly séances with Mme Salminen organised by the Spiritualists. There is also a mystery associated with the name C.C. Dunn, which can be actually the reverse of D. D. Cunningham. It was an occasion which demanded attention, because the spiritualists and the people in the army had a relationship of mutual animosity and, therefore, Dunn’s presence was quite surprising. Mme Salminen advocated the teachings of Valentinus, the Alexandrian philosopher of

\(^{50}\) Ibid. 74.

the early Christian era. The School of Valentinus was one of the early schools which were rejected by the Christian Orthodoxy. In Valentinian cosmology, the “ultimate deities are the Abyss and the Silence, the one being male and the other female, the one representing mind and the other truth”.\textsuperscript{52} The Valentinus connect their silence with the mythic figure of \textit{Sigê}, who is one of the members, along with Depth or Profundity, of the primal \textit{syzygy} from which all else derives.\textsuperscript{53} Silence plays a significant role in the creation of the myth of Valentinian cosmology. The creation of the world was set in motion in the divine realm called ‘fullness’. In the beginning, there was only one eternal invisible Father in deep quiet and stillness, who was accompanied by his thought:

\begin{quote}
The Father’s thought is also called “Grace” and “Silence.” As the Father decided to “emit from himself the beginning of all things,” his decision impregnated his thought, Silence, who gave birth to two other divine qualities, Mind and Truth.\textsuperscript{54}
\end{quote}

This, according to the Valentinians, started off a chain reaction from which was created the human being. Another interesting aspect of the Valentinian Theology is that the Valentinian notion of God incorporates both Masculine and Feminine characteristics, which is different from the Christian description of God in terms of the Masculine. The aspect through which the Father in the Valentinian theology provides sustenance to the universe is considered a feminine aspect and is called Silence, Grace and Thought. Silence then become’s God’s primordial state of tranquillity and self-awareness.\textsuperscript{55} There are also references to Madame Blavatsky and the Theosophical Society in \textit{The Shadow...}

\textsuperscript{52} Ghosh, \textit{Calcutta Chromosome}, 177.
\textsuperscript{53} Elliot R. Wolfson, ed. \textit{Rending the Veil: Concealment and Secrecy in the History of Religions} (New York: Seven Bridges, 1999) 44-45.
Lines as well as in *The Calcutta Chromosome*. The very title of one of her books, *The Secret Doctrine: The Synthesis of Science, Religion, and Philosophy*, suggests the type of synthesis that such societies attempt to achieve. *The Calcutta Chromosome* in its thematic structure also attempts a synthesis of Science, Religion and Philosophy. Blavatsky, in the first few pages of the book, states that:

>This is the true reason, perhaps, why the outline of a few fundamental truths from the Secret Doctrine of the Archaic ages is now permitted to see the light, after long millenniums of the most profound silence and secrecy. I say “a few truths,” advisedly, because that which must remain unsaid could not be contained in a hundred such volumes…

As Blavatsky suggests here, silence and secrecy have been important to several theosophical schools and these schools often perceived that the fundamental truths are unsayable. Several religious and philosophical traditions believe that silence and secrecy was a mode of preserving the essential truths, certain truths can only be realised and perceived by the spiritual mind; otherwise, it would be profaned. Silence and Secrecy are the modes of preserving the mysteries related to life and death. The thematic impulse of silence and secrecy is not something that Ghosh has invented; rather Ghosh’s fictive construction of Mangala’s cult is also informed by detailed research. Ghosh refers to these several defiant traditions which privilege silence over speech, and where silence is perceived not as opposed to the *logos*, but as something complementary or supplementary to it. These philosophies, which are considered heretic in terms of Orthodox Christianity, are in a way a challenge against Western Monism. The traditions that Ghosh refers to are also synthetic in nature. In a sense, within the narrative structure, Ghosh restores the

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57 Ibid. 4-5.
silences of these several traditions and feels the imperative that these traditions also require a telling. This approach is in keeping with his openness to different knowledge traditions. Also by referring to the séances conducted by the Finnish Madam, Liisa Salminen, and also to the Valentinian cosmology, Ghosh reminds the readers that “Europeans are as capable as Indians of inventing esoteric spirituality.”\(^{58}\) In fact, by referring to so many various traditions of the cult of silence and secrecy across nationalities, Ghosh suggests that development in science had almost gone hand in hand with the developments in such metaphysical and theosophical literature— with the only difference that the latter did not get the privilege of place in the meta-narratives of history.

In this metaphysical and theological context, the naming of the characters in the novel also assumes great significance. In the Hindu mythology, Murugan is often considered to be the six-faced God of war and seems to be another variant of Skanda, the six-headed son of Shiva. This God seems to be of ancient Dravidian origin and has been later assimilated into mainstream Hinduism. In the quest for Bomma’s name in *In an Antique Land*, Ghosh refers to such assimilation of local Gods in mainstream Hindu religion. The name ‘Antar’ can also be traced back to a mythic Arab hero and poet who have evolved out of the Bedouin tradition. *Sirat 'Antar ibn Shaddâd* (The Romance of 'Antar) is an Arabian epic dealing with the life of the pre-Islamic poet and warrior, “Antara ibn Shaddad who was originally a half-caste slave born of an Arabian father and a black African mother who earned his freedom and fame through his poetic and martial

abilities.”59 The narrative is structured like a quest of establishing one’s own identity. The word ‘Antar’ also has several resonances in the Indian tradition, especially in Sanskrit. Several words like antar-atma (antar and atma), manuvantara (manu and antara)—all having religious connotations—are derived with the help of the root word ‘antara’. Mangala and Tara are both derived from the names of Hindu Goddesses. Goddess Mangala in the Hindu tradition personifies the planet Mars. Mangala is also considered an incarnation of God Shiva in the cruel form.60 Tara is a powerful female God and can be found both in Hinduism and in Buddhist Tantric traditions. She is often considered to be the first female Buddha within the Tantric tradition and is frequently revered as the mother of all Buddhas61. Secrecy and silence are associated with her cult. The characters like Laakhan and Urmila also have resonances in the Hindu mythological tradition. Ghosh’s preference to name several characters bearing resemblances to the religious and popular mythologies in the Hindu, Buddhist and Arab traditions suggest the type of synthesis that he is looking for. It is also a pointer to the fact that silence and secrecy formed an important aspect of several religious and esoteric cults. The cult of silence has had a long lineage. The Pythagoreans and the Athenians are said to have valued silence and secrecy. To the Athenians, silence and secrecy acquired a theosophical dimension:

When secrecy was betrayed, the Athenians reacted with rage, but most interestingly, not so much at the revelation of secret knowledge as the breaking of the command of silence. This command may have had a theological basis; he who kept silence imitated the divine nature, while he

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who revealed the words and acts of the mystery cults violated the divine order.\textsuperscript{62}

It is the same theosophical principle that is at play with Mangala’s cult. Phulboni has to suffer in spite of the fact that he is an eloquent advocate of this cult of silence, because in a moment of weakness he had revealed a secret to Sonali’s mother. The idea of keeping such secrets was necessary for these cults to remain in a way invisible and also served to conserve their energy and dedicate it towards their goal. P. D. Uspenskiï, in his book, \textit{A New Model of the Universe}, also points out the significance of such esoteric practises:

The ability to keep silent includes the art of concealing oneself, not showing oneself. The “initiated” is always hidden from the “uninitiated” even though the uninitiated may deceive himself by thinking that he sees, or can see, the motives and actions of the “initiated”. The “initiated”, according to esoteric rules, has not the right to and must not disclose the positive side of his activity or of himself to anyone except those whose level is near his own, who have already passed the test and have shown that their attitude and their understanding are right.\textsuperscript{63}

The other interesting aspect is that in \textit{The Calcutta Chromosome}, it is the subaltern female who has all the power. It is a pointer to the fact that counter-religions and counter-epistemology are not so much inhibited by gender bias. In fact, it can be claimed that if Ghosh is doing history by using the medical history of Malaria, he is also doing history by researching on the religious traditions that practise the cult of silence and secrecy.

\textbf{Science Fiction and the Subaltern Agency}


\textsuperscript{63} P. D. Uspenskiï, \textit{A New Model of the Universe: Principles of the Psychological Method in its Application to Problems of Science, Religion, and Art} (Mineola, N.Y.: Dover Publications, 1997) 187.
The theological and the metaphysical traditions that are referred to or hinted at in *The Calcutta Chromosome* does not succumb to the gender bias, as does mainstream historiography or Western religious traditions based on orthodox Christianity. Mangala, the priestess of this secret cult, is almost beyond the narrative gaze. In her various manifestation and appearances, it is actually she who stares the other down. We have repeated references to the female gaze in the various transformations of Mangala. Murugan had recovered a figurine from the back of the memorial arch and he had to blink his eyes as he stared at the figurine.\(^{64}\) Urmila recalls the childhood incident when she first saw Sonali at Dutton’s nursery when “she felt someone’s [Mrs Aratounian] gaze boring into her.”\(^{65}\) On another occasion, Farley was too curious about the strange things that were happening in Cunningham’s laboratory and his curiosity angered Mangala and her group:

> The woman was watching him with a look of such piercing enquiry that he could not avert his gaze from her.\(^ {66}\)

In a brilliant rendering of the incident in the form of a photographic image, Farley is able to see mirrored in the convex surface of the glass tumbler the secret scene that was unfolding behind him. Within a single frame, the narrator captures Farley, Mangala and Laakhan. It is an image within an image, as Farley is able to sense the conspiracy that is taking place behind his back. The advocates both of Science and of Occult are rendered symbolically visible in one single frame. Mangala’s gaze has the power to put anybody off, although Cunningham thinks it to be harmless; observing Farley’s uneasiness,

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\(^{64}\) Ghosh, *Calcutta Chromosome*, 37.
\(^{65}\) Ibid. 53.
\(^{66}\) Ibid. 118-119.
Cunningham suggests to him that she loves to stare at other people. Farley tried to enquire about the assistant’s name when he met with Mangala stern’s gaze:

She was glaring at him from across the room, and such was the anger in her gaze that it sent a chill down his back.67

The repeated references to Mangala’s gaze in the novel suggest that the agency in the novel lies with her. She is ubiquitously present everywhere in the novel, although she is not given an active characterisation, which in a way suggests that she is even beyond the purview of the narratorial gaze. She is silent, and yet she is pervasive with her presence throughout the novel. Mangala thus functions as the ultimate symbol of postcolonial agency68 and, in many senses, transcends the women science dualism, as articulated by Haraway in her Cyborg Manifesto69. Several critics, like Suchitra Mathur, Christopher Shinn and others, have made a comparison between the Cyborg Manifesto and the women science dualism as well as between the Cyborg Manifesto and the Goddess connection in The Calcutta Chromosome.

In this subaltern quest for the transformation of human traits from one life to the other, the question of agency is further diluted, as the identities of characters in this novel are fluid in nature. The notion of selfhood and the social context become irrelevant to the secret cult of Mangala. Thus Ghosh not only restores agency to the subaltern, but suggests through an absent contrast that caste, creed, religion, nationality, in fact, any social context becomes irrelevant except for the only criterion of being the chosen one. The fluidity of the identities is evident in the way each of the characters undergo different

67 Ibid. 123.
changes in names. Murugan is called Morgan by most of his colleagues in Life Watch. Phulboni is the pseudonym of Saiyad Murad Husain. Laakhan is known by several names like Lutchman, Lucky etc. In a sense, the advocates of the counter-epistemology do not rely more on individual agency, but rather on their collective existence as a group. This is different from what isolated scientists preoccupied in their laboratories do without much impetus from the society outside. Claire Chambers rightly argues:

In *The Calcutta Chromosome*, Ghosh problematises the universalist claims of Western science and questions the widespread tendency of historians to view scientists as geniuses who work alone, fomenting epistemological revolution for the benefit of mankind.  

In such a secretive endeavour, even the individual role or the central agency is hidden in secrecy and silence. Either it is not pertinent to have a central role in such a quest or there might be a possibility of the importance of the discovery far exceeding the role of the discoverer. At nearly the end of the novel, we get a feeling from what Murugan says that Urmila is the chosen one. The novel has a series of parallel quests with each one interacting with the other. One of the purposes of the quest is to arrive at the perfect moment of discovery, when the discovery and the discovered will be known. The mystery remains unsolved and our expectations are belied, as Murugan and Antar are not the chosen ones, but rather, as Murugan thinks, it turns out to be Urmila, and this comes as a surprise to the readers. The agency of the narrator also cannot be trusted; thus the truth about the narration is also veiled in silence and the narrative in more ways than one problematises the role of truth-claims. The sub-title suggests that this novel is about fevers, delirium and discovery. The characters in the novel are all susceptible to fever and

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to delirium. Both the investigators, Antar and Murugan, have at some point of time suffered from Malaria. The distinction between the story-tellers and the readers/listeners has thus been reduced.

It is Mangala and her group who control the events that happen in *The Calcutta Chromosome* and, to be more precise, has a control over everything that is related to Cunningham’s laboratory, where Ross makes his discovery of the malaria vector. The power and the agency rest with them, because they, as a group, are not over-burdened with pre-existing methodologies, as a scientist like Ross would inevitably be. Ross is never aware of them and Cunningham thinks of them as helpless people incapable of doing any harm. Dr. Cunningham had found Mangala in the Sealdah station which is always full of people looking for jobs and a roof above their heads, and Mangala had brought the young man Lutchman. The fact that nothing much is known about her background actually provides her a more secure position than a conventional scientist like Ross. She has the privilege of watching others without being watched, because, according to the conventional social mores, she is not considered significant enough to draw others’ attention. Murugan compares her talent in microscopy to the mathematical skills of Ramanujan:

> And with Mangala we’re not talking about mathematics: we’re talking about microscopy, which was still an artisanal kind of skill at that time. Real talent could take you a long way in it—Ronnie Ross's career is living proof of that. With this woman we’re talking about a whole lot more than just talent; we may be talking genius here. You also have to remember that she wasn't hampered by the sort of stuff that might slow down someone who was conventionally trained: she wasn't carrying a shit-load of theory in her head, she didn't have to write papers or construct proofs.\(^7^1\)

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\(^7^1\) Ghosh, *Calcutta Chromosome*, 203.
In this novel, we thus find that Ghosh addresses one of the major issues faced by postcolonial theorists as well as the subaltern studies historians— that is of representing the subaltern agency in mainstream narratives, fictional or otherwise. The subalterns should be represented and understood within the periphery of their own domain, that is, in their own backyard, and not through the methodology of mainstream discourses. It is then imperative that we accept the possibilities of variant, alternative and counter-knowledge systems, whose aims and prerogatives are different from ours. So, to judge them through our ideological apparatus is a form of misreading and misunderstanding of the novel. Silence and secrecy, as opposed to documentation and information collection, can as well be an epistemological and metaphysical priority.

**Science Fiction and Alternative Epistemology**

Feyerabend argues that there cannot be only one methodology of approaching knowledge with all the other variants being excluded from its possibilities. He raises and discusses certain pertinent questions in this regard:

> It is thus possible to create a tradition [scientific tradition with strict uniform methodology] that is held together by strict rules, and that is also successful to some extent. But is it desirable to support such a tradition to the exclusion of everything else? Should we transfer to it the sole rights for dealing in knowledge, so that any result that has been obtained by other methods is at once ruled out of court?\(^{72}\)

By introducing a completely different religious quest based on possible scientific premises, Ghosh also raises the question of the possibility of alternative methodologies of gaining knowledge. There are two primary researchers in the novel. Antar is researching,

\(^{72}\) Feyerabend, 11.
or rather trying to locate one L. Murugan, who has been thought to be gone missing from Calcutta since August 21, 1995. L. Murugan is an employee of the erstwhile organisation called Life Watch of which Antar was also an employee. L. Murugan is a self-styled researcher and claims to be an authority on Ronald Ross who was awarded the Noble Prize in 1902 for his remarkable work on Malaria. Murugan, while researching on Ross and the medical history of Malaria in the nineteenth century, feels that there is something fishy about Ross’s discovery and so he proposes the notion of the ‘other mind’. He believes that this ‘other mind’ belongs to a completely different epistemological system and, therefore, their purpose behind assisting Ross is shrouded in a veil of secrecy and silence. This counter science as Murugan thinks is based on certain epistemological principles which can be enumerated in the following manner:

The First Principle:

‘Do you think that everything that can be known, should be known?’

It raises the issue of the necessity of knowledge as well as that of the transformative nature of knowledge, so that when one becomes involved in it, there is no escape and one has to endlessly pursue it.

The Second Principle:

‘…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 couldn’t hope to beat the scientists at that game anyway); it would also have to be secretive in what it did. It would 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 into language, would

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be to establish a claim to know—which is the first thing that a counter-science would dispute.\textsuperscript{74}

Silence and secrecy is not just a procedure to stop themselves from being discovered, but is actually a method and a procedure which, in a sense, questions the reliability of communication in terms of language.

The Third Principle:

This group believed that knowledge is self-contradictory:

\begin{quote}
‘Maybe this other team started with the idea that knowledge is self-contradictory; maybe 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. Maybe they thought that knowledge couldn’t begin without acknowledging the impossibility of knowledge.’\textsuperscript{75}
\end{quote}

This is a kind of knowledge that is not merely concerned with passing information from one person to another; rather it is a type of knowledge that will affect a mutation in the person in such a way that the knowledge will bring a permanent change in him and he will no longer remain the same person.

The Fourth Principle:

Murugan says that this group would wait for that perfect moment when the discoverer and the discovered are both revealed:

\begin{quote}
‘You see, for them the only way to escape the tyranny of knowledge is to turn it on itself. But for that to work they have to create a single perfect moment of discovery when the person who discovers is also that which is discovered.’\textsuperscript{76}
\end{quote}

\textsuperscript{74} Ibid. 88.
\textsuperscript{75} Ibid. 88.
\textsuperscript{76} Ibid. 253.
So even Murugan, Antar and the other central characters are not aware as to who would be the chosen one and when would the perfect moment arrive. The Knowledge that Mangala and her group seek has nothing to do with an immediate solution of the malaria problem; rather they are more concerned with a transformation of the self, so that personality traits can be transformed chromosomically from one body to the other, which would ultimately render them immortal. The religious idea of reincarnation is thus given a scientific vocabulary in Ghosh’s text.

The Knowledge that Mangala and her group seek is a collaborative activity, not an isolated one, where the individual researcher is confined within the precincts of the laboratory. Silence and secrecy are an epistemological priority and the novel is an acknowledgement of the possibility of non-rational forms of knowledge. It has been often pointed out that the knowledge of science and technology was used for imperial purposes during the colonial period:

‘The mid-nineteenth century was when the scientific community began to wake up to malaria. Remember this was the century when old Mother Europe was settling all the Last Unknowns: Africa, Asia, Australia, the Americas, even uncolonized parts of herself... And this was just about the time that new sciences like bacteriology and parasitology were beginning to make a splash in Europe. Malaria went right to the top of the research agenda.’

The knowledge of medicine was thus not intended or used for the general welfare of human kind; rather it was necessary for the expansion and maintenance of the empire. It was this politics of knowledge that had helped the scientist to get the desired funding. The Governments were preoccupied to provide funding to such endeavours, because, though they had the sufficient forces to conquer the natives, still, in order to maintain the

77 Ibid. 47-48.
empire, they required scientific knowledge so as to be able to control nature, that, the
snakes, the mosquitoes and the diseases. On the other hand, the type of knowledge that
Mangala and her group pursues is not the collection of information or facts, but
knowledge pursued independently for the transformation of the self. John Thieme rightly
points out:

The Calcutta chromosome and the possibility of effecting, the ‘interpersonal transference’ of knowledge occupies a
central role in this investigation, since such transference would erode the barriers between elite and subaltern
classes, between the purveyors and the recipients of knowledge. 78

The non-rational, non-Western knowledge that Mangala and her group posit is not based
on information and data collection; rather it is a knowledge that effects a mutation of
one’s inner being. In this type of knowledge the investigator and the investigated are both
implicated in the meaning-deriving process, and they are also transformed while doing
so.

Science Fiction and Ghosts

The elements of Ghost and supernatural are introduced into the text firstly through the
character of Laakhan, secondly through Phulboni’s encounter with Laakhan and
consequently his Laakhan stories. Laakhan and Mangala appear in their several
transformations throughout the novel, so that the notion of time becomes inevitably
mixed up into a sort of organic existence in such a way that the past, the present and the
future cannot be easily demarcated. Laakhan appears in the forms of Lutchman, Romen
and Lucky in the novel and Mangala becomes Mrs. Aratounian and Tara. Ghosh has

Khair (Delhi: Permanent Black, 2003) 128-141, 139.
often theorised the relevance of stories and story-telling as part of one’s world-view throughout his fictional world. Stories form an important aspect of *The Calcutta Chromosome*, as most of the major characters are telling stories as well as being implicated by and within the story. Diana Nelson, in her article “A Social Science Fiction of Fever, Delirium and Discovery: *The Calcutta Chromosome*, the Colonial Laboratory and the Postcolonial New Human” rightly observes that:

> Storytelling itself, the process of finding things out, is a central actant in *The Calcutta Chromosome*.  

The meta-narratives are, in a sense, also stories. Science is also culturally located with its own biases, prejudices and interests. Donna Haraway expresses the same idea:

> Scientific practice may be considered a kind of story-telling practice— a rule-governed, constrained, historically changing craft of narrating the history of nature. Scientific practice and scientific theories produce and are embedded in particular kinds of stories. Any scientific statement about the world depends intimately upon language, upon metaphor.  

The Wagner-Jauregg’s discovery that Murugan also refers to in the novel is a lucky and informed guess. In Science Fictions, ghosts have also served the role of the alien as something that is opposed to the natural. The character of Laakhan as well as the stories about him forms a very important aspect of the alternative epistemology as propounded by Ghosh. It also represents the mysterious ungraspable aspect of it. The character of Laakhan is informed by history, as he finds a mention in Ross’s letters as well as his

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79 Nelson, 247.  
80 Chambers, 58.  
Memoirs. The character, as Murugan rightly says, was the “point-man”\textsuperscript{83} for Mangala and, therefore, holds a significant position in this other group.

J.W.D. Grigson, a linguist, arrives to spend a weekend at Ross’s bungalow in Secunderabad. He immediately senses that something is not quite right with Laakhan. Grigson soon gets interested in the pronunciation of the word Lutchman and tries to find out his native place from the real pronunciation of his name. Grigson also notices that Lutchman has four fingers and no thumb in his left hand. This physical disability would be a clue for Murugan to understand Laakhan’s other transformations. From Laakhan’s pronunciation of the word ‘lalten’, he gets to know that the real pronunciation is Laakhan. Grigson puts everything into his diary and then goes away after making a narrow escape from almost being killed by a train. It is this Grigson episode which is a pointer to the fact that it is not Laakhan and Mangala who are watched, but rather Ross and the other scientists who are working at the Cunningham lab. Phulboni, the writer and one of the most eloquent advocates of the cult of secrecy and silence, had also written a series of short stories called *The Laakhan Stories*\textsuperscript{84} with Laakhan as the main protagonist. The stories are in the form of an elaborate allegory, where each character is different, yet also the same. The stories were supposed to be a shared message for the ‘other mind’ group. Sonali informs Urmila about two incidents related to Phulboni. One is the shooting incident, where Sonali found out that Phulboni was a good shooter, and the other is Phulboni’s encounter with Laakhan’s ghost. The incident happened in 1933 when Phulboni was young and was working for a British firm, Palmer Brothers. With the preciseness of date, Ghosh tries to build up a sense of credibility, as if these things had

\textsuperscript{83} Ibid. 74.  
\textsuperscript{84} Ibid. 93.
happened in the real world. Sonali’s mother had told her the story. Phulboni had to go to a place called Renupur during the monsoon season. He was astonished to find that everything was flooded when he reached the place. The station was one of the smallest that he had ever seen and when he got down from the train, the station was absolutely empty. The station of Renupur existed not for the needs of the local people but rather for engineering reasons. Railways regulations required that places with single track should have siding and the station of Renupur existed primarily because of the siding. In spite of the warnings of the station master, Phulboni decides to stay in the signal room. Like a detective novel, the ghost narrative here proceeds through certain clues which serve as connecting links with the rest of the narrative. It is the ‘lantern’ that leads him into trouble. The readers have already been informed about the existence of a lantern in the Grigson incident. As the ghost train sped past him, he heard an inhuman howl uttering a single word ‘Laakhan’. He later came to know from the Chief Engineer that there had not been a station master in Renupur for the last thirty years. The Guard of the station told him the story of Laakhan. Laakhan was an orphan who had somehow come to live in the signal-room of the station. Later on, an upper caste station master had contrived to drive the boy away from the station and kill him. The boy knew the station well and managed to escape. The station master subsequently tripped on a rail and died. The deformed hand, the signal lantern and Laakhan being an orphan are the clues that help us identify the several transformations of Laakhan and serve as the connecting links of the story. The stories related to Mangala and Lutchman are given a supernatural air quite in the tradition of the stories in Hindu mythology. The stories get revealed when they are needed to be revealed, so that somebody can make the right connections. In this cult of silence and
secrecy, the telling and the act of telling get implicated in the events that are to follow. The ritual that takes place in Romen Halder’s house takes the form of a Tantric ritual where human and animal sacrifice is given a radical transformation and an altogether different logic. Silence and secrecy is a religion to the group—so much so that when Sonali’s mother is able to coerce a story out of Phulboni, he is never able to pardon her and in the later part of his life becomes detached from her. There is an undercurrent which hints at his constant fear that he will not be the chosen one because of this one betrayal. In the stories about Laakhan, and by extension in the whole of *The Calcutta Chromosome*, each event and each story is implicated in another one, so that every story seems to haunt the other. The epistemology of silence requires a different telling. The linear causal narrative needs to be disrupted by the narrative of haunting, in such a way that an altogether different reality and even the claims to truth become difficult to articulate. Bishnupriya Ghosh rightly points out in her article:

…Ghosh’s postcolonial unraveling of an established colonial truth, then the very genre of truth-telling must suffer. Indeed, a great deal of “resourcefulness” is required to graft onto the body of a mystery another manner of telling more capable of visionary praxis; hence the traffic in ghosts.85

In this article, she discusses *The Calcutta Chromosome* suggesting that it generates a kind of “hauntological literary oeuvre”86. She discusses the novel in terms of the Derridean notion of ‘hauntology’. By introducing Ghosts in the novel, Ghosh is, in a sense, trying to escape the ghosts of the meta-narratives of history. He is also trying to articulate the subaltern silence in terms of its own methodological and epistemological apparatus.

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85 Bishnupriya Ghosh, 199.
86 Ibid. 197.
The narrative technique that Ghosh uses in the novel is a perfect example of the form echoing its constant. As I have already mentioned earlier, the narrative disrupts the time-space continuum, which is in keeping with the thematic logic of universal science posited against some important aspects of metaphysics. The dissolution of the ego from the narrative, in the sense that both Antar and Murugan as narrators are ultimately prone to the possibilities of being fallible narrators—narrators who can succumb to the fever and the consequent delirium—gives a lie to any truth claim, both scientific and religious. Ghosh also uses two important narrative devices, so as to disrupt the science-magic, science-counter-science, science-religion, science-ghosts binaries in such a manner that he does not privilege one type of telling over the other. The first aspect of this narrative technique is to use co-incidences. These co-incidences are not like divine interventions helping the narrator to wrap up the plot; rather they assist the thematic logic of disturbing and disrupting the hegemony of Western rationality and, in fact, suggest that this cult of silence and rationality has several tricks up its sleeves. The narrator, Murugan, often just stumbles upon precious information. He is lucky to be able to get an accommodation in Mrs. Aratounian’s guest house, which is in the same street where Ronald Ross had once stayed. The house also provides a vantage point from which he can overlook the happenings in Romen Halder’s place. He meets by chance both Sonali and Urmila in the auditorium in Rabindrasadan and hears Phulboni’s speech. All these characters whom he meets by chance play a significant role in his attempts at unravelling the mystery behind the ‘other’ mind’. The newspaper in which the rotten fish was wrapped helps Murugan to make the appropriate connections and trace down Cunningham’s movements. The several co-incidences in the novel also have a symbolic function in suggesting that somebody is
in control of the things that are happening and it is that person who is making the 
necessary connections—giving out the story, whenever it is required, so that it does not 
meet a dead end. The second narrative feature which is related to this aspect of story-
telling is that the narrative privileges the making of connections rather than pitting one 
against the other. Each character is trying her part to connect the missing narratives of the 
past and in that process they are also getting involved in the quest. Thus the narrative, 
rather than differentiating between them, privileges an inter-weaving between different 
branches of knowledge and between different characters. This is in keeping with the 
methodological procedure of the cult of silence, where this subaltern group uses science 
and scientists to further their own ends rather than being opposed to it. On the one hand, 
as subalterns they were not likely to be paid heed to by science and scientists; so, being 
secrective would then become a methodological necessity. We can also say, on the other 
hand, that this group is bound to secrecy and silence as a matter of choice, that is, to 
suggest that silence and secrecy becomes both a metaphysical priority as well as an issue 
of practical necessity to them. They, therefore, choose to manoeuvre the whole process 
instead of making desperate attempts to fall in line with mainstream discourses.

My argument in this chapter has been three-fold: firstly, I have addressed the 
generic silence in regard to the ‘othering’ of the alien and the ‘othering’ of the past in 
science fiction; secondly, I have shown how Ghosh evolves a narrative method of doing 
history by recuperating the subaltern agency within its methodological terrain; thirdly, in 
this chapter, I have shown how Ghosh almost suggests a metaphysics of silence in the 
 novel. Here, ‘silence and secrecy’ becomes an alternative way of knowing the world. The 
 novel is in a sense an acknowledgement of Feyerabend’s principle “There is no idea,
however ancient and absurd, that is not capable of improving our knowledge”\textsuperscript{87}. The knowledge that Mangala’s cult seeks is something that can question the nature of our ‘being’ as well as the nature of our ‘knowing’. This knowing is transformative in nature. It operates by affecting mutations in our ‘being’, so that when we come to acquire the knowledge, we no longer remain the same. The plot of \textit{The Calcutta Chromosome} affects the same sort of mutation that it preaches. This mutation is affected between theosophical literatures on the one hand and science and technology on the other; in addition, this mutation will affect a transformation in the human being. Silence in \textit{The Calcutta Chromosome} is not opposed to the world of ‘Logos’; rather it assists in knowing the world differently. It also acknowledges the ‘word’, for it is in the telling that silence gets its life and is animated as well.

\textsuperscript{87} Feyerabend, 5.