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The Myth of Power, The Power of Myth: Science, Subversion and Fiction in Amitav Ghosh's *The Calcutta Chromosome*

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Abstract

This essay attempts to analyse how Ghosh creates a myth of subaltern figures who make their presences felt through silent workings, interpersonal transference and ghostly appearances, in *The Calcutta Chromosome*. While there is an engagement with the postcolonial and postmodernistic issues in the text, the analysis focuses on how the novel questions the monolithic narrative of rational western science being brought at the service of the natives.

Keywords: *myth, postcolonial, science, space, history*

I

Contemporary Postmodernist / Poststructuralist thought, looks at historiography in a new way which questions and problematizes the apparently common place categorizations of the rational and the irrational, fact and fiction. History has always been a major tool through which identity (individual or national) is carved out and negotiated. But there is a constant play of power in the writing of history and in postcolonial societies, this problem is further complicated by the fact that colonial historiography is almost always premised on the myth of the rational white man disinterestedly and almost with a missionary zeal, coming to the colonies in order to give the light of knowledge, the fruits of medicine and cures of diseases to the so called backward natives. Amitav Ghosh's *The Calcutta Chromosome*, first published in 1996, which is appropriately subtitled 'A Novel of Fevers, Delirium and Discovery' attempts to criticize this myth of colonial historiography and tries to document a silenced and sometimes bizarre and non-rational alternate history of the discovery of malarial parasite. Ghosh creates another myth of subaltern figures who make their presences felt through silent workings, interpersonal

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transference and ghostly appearances. The novel thus questions the monolithic narrative of rational western science being brought at the service of the natives.

Michel de Certeau in 'History: Science and Fiction' talks of how 'the "real" as represented by historiography does not correspond to the "real" that determines its production'. The 'real' of history is constructed, according to Certaeau, by hiding 'behind the picture of a past the present that produces and organizes it.' (De Certeau 199-221) Hayden White equates the historian and the novelist and while stressing the narrative elements of a historical account, says that the historian has the capacity to create a plausible story out of 'facts' and uses a faculty that has been described by Collingwood as 'constructive imagination'. There has to be an 'emplotment' similar to novels and plays to make stories out of events by a 'suppression or subordination of certain of them and the highlighting of others'. White suggests that cultures can attempt to make sense of public and private pasts by the 'encodation' of events in terms of plot structures. White refers to Levi Strauss who stressed the fact that the construction of a comprehensible story of the past can be made 'by a decision to "give up" one or more of the domains of facts offering themselves for inclusion in our accounts'. This leads to the conclusion that the '*explanations* of historical structures and processes are determined more by what we leave out than by what we put in' (White 81-100).

It is in the light of these arguments that we should analyse the attempts on the part of the characters, in Ghosh's novel, to unearth the 'Secret History'[1] (if any) of malaria research. The question that this science-fiction narrative asks, deals with the roots of power (or of violence and exploitation) in the history of the progress of science, especially in the postcolonial context. In the process there is a need to stress on the non-rational aspects behind the documentation of scientific history.

II

The novel begins in the lonely New York apartment of Antar, an employee of Life Watch, an organization which has recently been absorbed into the International Water Council. Antar is a completely marginal figure being one of those employees of Life Watch who has been 'assigned to an inconsequential "At Home" job to see him through to retirement'.(7) He has

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not once set foot in the New York offices of his employers. However, his needs to communicate are satisfied through his state-of-the-art computer named AVA/IIe.

It is in this apartment that Antar encounters the remnants of an identity card, information regarding which his computer is unable to process. Moving back towards the so-called 'Point of Origin', the computer succeeds in telling him that the card had been found in the city of Calcutta. Antar not only identifies the owner of the card as his erstwhile colleague at Life Watch, but also remembers that the file which provides most of the information was earlier prepared by him. His search thus becomes an exercise in human memory, not just machine memory, as Murugan becomes more than a mere subject of inquiry.

Murugan or Morgan, as he is referred to by his colleagues and friends, is a controversial employee of Life Watch. During his stay in Syracuse University he got interested in the medical history of malaria. He has a theory according to which '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' (31). In his research into the history of the discovery of the malaria parasite, Murugan charts the routes of Ronald Ross. Sometimes confused, sometimes overconfident, Ross's travails alert the reader not only to the difficulties involved in the process but also to the role played by chances and coincidences in steering Ross away from a wrong direction that he may have otherwise followed. This leads Murugan to the contention that far from engaging himself with a missionary zeal to eradicate a killer disease from the colonies, Ross's research was a collective enterprise and the known history, has concealed more than it has revealed. It is this alternative and silenced history that Murugan wants to address. No wonder this theory brands him as an eccentric and bars him from the scholarly circles concerned with the history of science. But Murugan is undaunted and in 1995 he expresses his desire to visit 'Calcutta, the site of Ross's discoveries' (32). He is desperate to reach the city 'before August 20, the day that Ross had designated 'World Mosquito Day', to commemorate one of his findings' (Ibid.).

On reaching Calcutta, one of the first things that Murugan comes across is the memorial arch framing a rusty iron gate of the Presidency General Hospital with the inscription: 'In the small laboratory seventy yards to the southeast of this gate Surgeon-Major Ronald Ross, I.M.S.in

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1898 discovered the manner in which malaria is conveyed by mosquitoes'. Apart from the 'medallion with Ronald Ross's head in profile', there are three verses from Ross's poem 'In Exile' engraved in marble.(34). The poem, similar in tone to the various other utterances from colonial times which try to establish the myth of how the altruistic activities of western scientists have brought the light of civilization and the facilities of modern science to the colonies reads:

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? (35)

Murugan laughs at the irony of the situation as he recites the other stanzas which characterize the colonies as a 'land of death' (35). The subtext of the celebration of the power of the White Man in delivering the dying native from the jaws of death is highly evident.

There is a simultaneous encounter with the allegedly strange and unfamiliar aspect of the city. In a 'gap where a few bricks had been removed from the back of the memorial arch' (36), Murugan finds a clay figurine. It is an image whose eyes seem to be 'staring directly' at him, 'fix[ing] upon his eyes, holding his gaze'. With a pigeon on one side, the arm of the figurine is found to hold a cylindrical metallic object that Murugan fails to identify (37). It is as though the central figures of the history of malaria research, the official and the hidden have both been awarded memorials, one revealed and the other concealed, in the very premises of the Presidency General Hospital.

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(UGC APPROVED E-JOURNAL, SL NO 118; JOURNAL NO 41668)

III

The two centres of the research on malaria in India that are highlighted in the novel are Secunderabad and Calcutta. The laboratory in Calcutta where Cunningham was engaged in research on the same subject witnesses various arrivals, which have significant bearings on the way in which the research into malaria progresses. Farley travels from America to the Indian town of Barich to serve in a charitable clinic. He journeys through the puzzles of medical research, the major contention being whether to credit the theory of Alphonse Laveran about a protozoa being the cause of malaria. In the letters that are exchanged between friends and colleagues and fellow scientists in India, it is revealed that Ross's research has failed to find traces of the parasite he hopes to locate, and Farley is directed to Cunningham's laboratory in Calcutta to continue his research.

It is in this laboratory that Farley encounters the other aspect of malaria research. His unease is initially caused by the fact that 'he … [is] being minutely observed by a saree-clad woman and a young man dressed in pajamas and a laboratory tunic'. (118) The information that Cunningham provides him with regarding these assistants at the laboratory are that the woman named Mangala was found in Sealdah Railway Station and the unnamed assistant was brought to the laboratory was from Renupur. It seems that the innocuous Sealdah Station, becomes the transit point from where these other entities enter the lives and work of the colonial scientists. The most striking instance of Farley's encounter with the other comes when, to his utter surprise, he notices how, in another room of the laboratory, Mangala picks up dying pigeons and smears their blood on to the slides. To his utter disbelief, it is these samples that show him the existence and the actions of Laveran's 'rods'. It is with the help of these strange individuals that Farley arrives at the conclusion which would eventually earn fame for his colleague. The 'mocking smile' on the face of Mangala and the tone of stern explanation in her voice with which she addresses her assistant and not Farley (128) point to a reversal of the power equations prevailing so far in the fields of medical and scientific research. It is a silent and secret victory for the subaltern subject who had, earlier, been discredited and typecast as the irrational other capable of tricks and deception. As Murugan points out later, Mangala had 'stumbled upon

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JANUARY 2018
(UGC APPROVED E-JOURNAL, SL NO 118; JOURNAL NO 41668)

some variant of a process that got a guy called Julius von Wagner-Jauregg the Nobel in 1927' (204): the process concerned curing or at least mitigating syphilitic paresis by inducing malaria, though the fruitfulness of the treatment remained to be tested. Claire Chambers says that these various alternatives point to the fact 'that medical science is a far more contingent discipline than its apologists would like to admit'. (Chambers 57-72)

Through the interactions of Farley, Mangala and her minion, the neat demarcations between science and counter-science get blurred. Where the Western scientist, Ross in particular, talks of divine blessings in the accomplishment of his scientific research, no efficacy is attributed to the quasi-religious rituals of chanting and sitting around a fire and uttering prayers that Farley notices on the outskirts of the laboratory. However Ghosh gives another twist to the incident when we learn that Farley never reached Barich after his encounter but had 'disembarked at a remote and rarely-used station called Renupur … [and] a young man was seen carrying his luggage' (129).The hint at a possible fatal outcome for Farley adds a sinister feel to the encounter. The aborted journey back to Barich continues to haunt the readers as do the lines, 'everything is other than what it appears to be, a phantom of itself' (Ibid.). Even Cunningham, for reasons explained only later, is reported to have left the laboratory in a hurry.

IV

At Secunderabad, the other centre for research, there is a similar interface between the knowledge of the primary investigator i.e., Ronald Ross and that of subaltern individuals. The immediate reason for Ross's travelling to India is to look for the vectors of malaria. Murugan points out, that there was a hunch in every culture having to deal with malaria about a possible link between the disease and mosquitoes. The experiments carried out on one of his patients help Ross to locate the parasite in his blood. But Ross loses direction and is directed by his superior, Manson, to a point from where he believes that malaria can also be transmitted through oral ingestion of dead mosquitoes. However, Lutchman, almost providentially arrives, and helps to clarify the doubt. On a visit to the Nilgiris, Ross himself gets malaria and Lutchman is instrumental in alerting him of the possibility that a particular type of mosquito may be responsible for the spread of the disease. Soon an unnamed Hospital Attendant draws Ross's attention to the anopheles mosquito and Ross succeeds in making the connection

CAESURAE: POETICS OF CULTURAL TRANSLATION VOL2: 2 (ISSN 2454 -9495)
JANUARY 2018
(UGC APPROVED E-JOURNAL, SL NO 118; JOURNAL NO 41668)

between the vector and the disease by locating plasmodium zygotes. Ross completes the final part of his research at the laboratory where Cunningham served before him. The final connections in his theory are made through a letter that he got in 1898 about MacCullum's findings. However, Farley already knew of these findings from his experience in Calcutta.

Ross's travails suggest the central premise in Murugan's arguments: '[Ross] thinks he's doing experiments on the malaria parasite. And all the time it's he who *is* the experiment on the malaria parasite' (67). Ross may have wanted 'everyone to know the story like he's going to tell it' (44), but the subaltern voice gains. The defiance on the part of these figures is evident in the words that Murugan puts in the mouth of Lutchman just after Ross makes the *discovery*. Lutchman is thought to have said, '"Whew!"... "Thought he'd never get it."' (66)

V

In all of these encounters, the motive of these individuals in helping Ross make the desired discovery, remains unexplained. Murugan clarifies that they were not after any honour or recognition but what he terms, 'the ultimate transcendence of nature' which he explains, eventually, as achieving immortality through 'a technology of interpersonal transference' (90). Eerily, he says, 'when your body fails you, you leave it, you migrate – you or at least a matching symptomology of your self. You begin all over again, another body, another beginning' (91). This journey has both spatial and temporal dimensions.

Murugan later provides detailed knowledge about the so-called Calcutta Chromosome, its modes of operation and the effects that it produces. He points out that Mangala had noticed certain personality disorders in the patients that she had treated. But 'they weren't really disorders but transpositions… [rather] a cross-over of randomly assorted personality traits from the malaria donor to the recipient'(206). This Calcutta Chromosome, it is explained, is either absent from every cell or is not isolatable because of its very deep encryption and is found in 'non-regenerating issue: in other words, the brain'. This is 'a biological expression of human traits that is neither inherited from the immediate gene pool, nor is transmitted into it'. Murugan says that the malaria bug 'has the capacity to "cut and paste" its DNA' (207) and explains:

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(UGC APPROVED E-JOURNAL, SL NO 118; JOURNAL NO 41668)

> Perhaps what Mangala chanced upon was just this: that the malaria bug, because of its recombinatory powers, can actually digest this bit of DNA by splitting it up and redistributing it. Then, when it's reintroduced in a patient whose blood / brain barrier's been made spongy, perhaps it can carry the information back and make some tiny little re-wirings … (208)

The reasons behind Mangala leading Ross to the correct direction are soon evident. She 'believed that link between the bug and the human mind was so close that, once it's life cycle had been figured out, it would spontaneously mutate in directions that would take her work to the next step' (208). Such a thesis can be related to what Murugan earlier claims as the motto of these 'fringe people, marginal types' (89):

> 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 have already changed what you know so you don't really know at all: you only know its history. (88)

In the narration of this unique journey through 'interpersonal transference', Ghosh employs scientific jargon. Claire Chambers points out that in addition to the existing ideas concerning 'the discovery of the malaria virus's ability to mutate, and the emerging technologies of cloning … Ghosh projects the possibility of the Hindu doctrine of reincarnation becoming a material reality in the future.' (Chambers 57-72)

However, the place where 'interpersonal transference' takes on its most fearful and ghostly aspect is in the so-called Laakhan stories that the Bangla writer Phulboni had written earlier in his life. This character or his avatars are probably the ones encountered most often in Murugan's research on malaria. He is present 'all over the map, changing names, switching identities' (74). These presences succeed in hinting at 'the idea of ghosts carrying the erased traces of violence and returning to trouble official history' (Bishnupriya Ghosh 117-138).

Phulboni's story describes many disconcerting and uncanny situations encountered by the author after reaching an unusually deserted station. In all of his experiences the character of Laakhan is a persistent ghostly presence. Phulboni learns later that the station has no stationmaster and that the switch-points have been unused and unusable for quite some time. A voice whispers in Phulboni's ear: 'at least you are still alive' (232). This is a fearful assurance and he learns the history of ghostly incidents at Renupur. The signal room had been home to a

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JANUARY 2018
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boy with a deformed hand named Laakhan, who was ill-treated by the then station-master, who even attempted to kill his subordinate by switching the tracks. But eventually, the station-master was killed when he tripped on the tracks and fell under a train. Laakhan, Phulboni is told, eventually went to Calcutta and a woman had found him a job in the city. There is a final reference to a foreigner who was seen at Renupur and the readers are reminded of the final piece of information regarding Farley.

The signal lantern has already made another appearance in the novel. Ross's guest Grigson enrages Lutchman by using his knowledge of the linguistic variations in the speech patterns of different parts of the country. From his pronunciation, Grigson finds out that Lutchman is actually Laakhan and that he does not hail from the immediate vicinity of the place where he works. Lutchman / Laakhan who had been cleaning a lantern 'used to stop trains at stations' (78), retaliates by leading Grigson to a near-fatal encounter with a train. This Lutchman too had four fingers in his left hand.

If the appearance of the Laakhan / Lutchman figure at various points in the history sounds unnatural if not impossible, the 'interpersonal transference' with regard to Mangala adds a new dimension to the entire range of confusing incidents. Both Mangala and Laakhan can be traced in the novel through history and archival research on the one hand and legends and stories on the other. Phulboni is the source of another story which concerns the curious image that Murugan had found in the walls behind the Ross memorial.

The story describes a drowning woman being saved when she found a foothold on an image similar to the one that Murugan saw earlier. Later, Phulboni is confused to find an artisan in Kalighat narrating a similar story to him. Phulboni finds himself in no position to tell the chronological sequence of the image's 'presence in mud; the writing of his story, the bather's discovery or the tale … in Kalighat' (190). Phulboni's cryptic question: 'Does a story come to be in the words that I conjure out of my mind or does it live already, somewhere, enshrined in mud and clay – in an image, that is, in the crafted mimicry of life?' (189) thus, has no definite answer.

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JANUARY 2018
(UGC APPROVED E-JOURNAL, SL NO 118; JOURNAL NO 41668)

Murugan and Urmila meet a young girl in Kalighat who identifies the image that Murugan earlier saw as that of Mangala-bibi. She also informs them that '[t]oday is the last day of the puja of Mangala-bibi … tonight Mangala-bibi is going to enter a new body' (194). This brings the entire chain of 'interpersonal transferences' to the present and further complicates the already confused chain of events.

While it is not easy to keep track of the various interpersonal transferences in the novel, one is forced to conclude that Ghosh is in fact suggesting that one valid form of travel is that from body to body, spirit to spirit. Just as the malaria parasite is transmitted to human bodies through the agency of the mosquito, various other kinds of psychic transfer also take place, and this realm of the uncanny is presided over by the figure of Mangala.

VI

Antar manages to track Murugan down to a mental asylum. Murugan had earlier pointed out that malaria affects the brain. But his appearance as an inmate of a mental asylum, instead of invalidating all his theories, points to the limits of western science and reason. In a conversation facilitated by AVA, Murugan once again sounds a warning: 'It's your funeral', he says and adds 'it's all in there, waiting for you to hit the button' (255). Antar realizes that 'someone had started loading the SimVis system at about the same time that Ava stumbled upon Murugan's ID card'. He starts watching the incidents of the novel unfold in front of him. The voices that cry out, 'We're with you; you're not alone; we'll help you across' (256), open up the possibility of Antar becoming the discoverer who is discovered, commencing his journey in the alternate world.

The novel suggests parallels between the virtual realm of cyberspace, the blood of 'carriers' and the supernatural realm of spirits. But the mythical or rational worlds lack firm groundings. The reader in the novel is 'invited…to play the role of hermeneutic detective, to piece together its numerous clues to arrive, if not at a solution, [then] at least at a possible version of meaning' (Thieme 128-141). Effectively challenging the 'rationality' of western science, *The Calcutta Chromosome* asserts the possibility, not of science fiction *per se*, but of counter-science, an

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anti-science fiction. Subverting the narrative triumphs of western science, the novel succeeds, in taking the readers to a space and situation where, in the words of Homi Bhabha,

> meanings may be partial because they are *in medias res;* and history may be half-made because it is in the process of being made; and the image of cultural authority may be ambivalent because it is caught, uncertainly in the act of 'composing' its powerful image. (Bhabha 1-7)

Note

1. Amitav Ghosh, *The Calcutta Chromosome* (New Delhi: Ravi Dayal and Permanent Black, 2004).31. Print. All subsequent references to the novel are from this edition and are indicated by page numbers, in parenthesis, within the text.

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