

**Modern Western Science and the Indigenous 'Other Mind': A Critical Reading of
Amitav Ghosh's *The Calcutta Chromosome***

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Abstract: The notion of scientific methodologies and new technologies has not only become corollary to the indicators of development and progress but also conceptualise the index of a 'civilised society' and cultural hegemony in the contemporary world. However, the binary created by the colonial discourse of the occidental superiority over the orient has instilled a view where west/whites has been identified as having scientific orientation and the east/non-whites linked to the irrational and dogmatic beliefs. The present paper endeavours to critically examine these binaries in Amitav Ghosh's *The Calcutta Chromosome* and analyse the epistemic positioning of the indigenous knowledge systems in comparison to the modern scientific system of the West.

Keywords: *East-West binary, the 'other mind', subject/object divide, colonial hegemony*

Introduction: In the modern world, new discoveries and inventions in the domain of science and technology has proven to be very successful and has laid a universal impact on human lives and changed the society and its components on almost all levels. Reflecting upon the emergence of Western science as a dominant base of knowledge systems, Paul Karl Feyerabend, the Austrian born philosopher of science, in his book *Against Method* points out to the hegemonic propagation of the colonial discourse and its exploitative power matrix: "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)"(Feyerabend 3).

Its effect can be noted in the classification of modern medical systems. Modern medicine or Allopathic medicine which is based on the principles of Western science is considered to be pure science but whatever falls out of the purview of a general understanding of western medical science it's branded as 'alternative medicine/ alternative medical systems' such as Yoga, Ayurveda, Unani, Siddha, etc. irrespective of their evolution over thousands of years of research wherein a more profound basic line of treatment is practiced by focusing on the root cause of the disease unlike the symptomatic line of treatment in modern medicine. The best possible way, however, should be the fusion of both knowledge systems for the

benefit of humanity— which unfortunately very few medical practitioners prefer and refer to as a ‘holistic approach’ towards healing. Paul Feyerabend had wisely asserted about the most successful researches that thinks out of the box and works with unusual methodologies to achieve their objective: “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” (1).

Analysis: As a postcolonial writer, Ghosh directs his critique against the epistemological and cultural hegemony of western knowledge societies in an endeavour to reassert the knowledgeable value and agency of the non-western world. As Dipesh Chakrabarty argues about the isolation of the non-western thought: “For generations now, philosophers and thinkers shaping the nature of social science have produced theories embracing the entirety of humanity; as we well know, these statements have been produced in relative, and sometimes absolute, ignorance of the majority of humankind i.e., those living in non-Western cultures” (Chakrabarty 2). In *The Calcutta Chromosome* Ghosh disrupts the binary formulation by (re)locating the silent-secretive native Indian community that follow a particular religious sect or cult in the centre of the narrative as subjects, the status which was denied to them during the imperial rule of colonisation and the colonial mindset in the postcolonial era. Martin Ideland further clarifies this viewpoint:

. . . a certain kind of human seen as “scientifically rational” is culturally made up in relation to the Other (Hacking 1995). This Other is either trusting “irrational things” (such as religion, traditional knowledge, post-truth) or simply not thought of as being subjected to scientific rationality or technological development (at all). Frequently, the latter depends on where the person is situated in the world. The practice of science, and the science-literate person, is thought of as connected to a certain place: the West. (Ideland 784)

Ghosh interprets orient's indigenous systems of knowledge as more advanced and developed than the conventional scientific system of West. Ghosh also champions the cause of the subaltern— the indigenous Indian secretive-silent community about whom the world's scientific community is ignorant and does not acknowledge its due contribution in the malarial research project and singularly awarded Ronald Ross as the discoverer. Furthermore, Ghosh endeavours to bridge the gap between the Western and Eastern systems of knowledge by closing the subject/object binary proportionality created by the colonial discourse of ‘otherisation’. Though in *The Calcutta Chromosome*, the Western scientific community represented by Ronald Ross is ignorant of this partnership, only the silent native Indian community represented by Mangala is aware of this confluence. This further signifies their advanced status though it is silent and secretive

The core of the novel lies in Murugan's pursuit of his own belief framed out of his analysis of the documented details mentioned in the diaries, memoirs and autobiographies of the celebrated Nobel prize winning scientists and their contemporaries namely Ronald Ross, Patrick Manson, Alphonse Laveran, Camillo Golgi, Farley and W.G. MacCullum Cunningham related in either way to research concerning mosquitoes and malaria. However, Murugan's primary concern is with the 'element of coincidence' mentioned in Ronald Ross's diaries at regular intervals during Ronald Ross's three years of research from 1895-1898 which silently and indirectly helped him to discover the species of mosquito responsible for spreading malaria – *Anopheles*, that earned him the coveted Nobel prize. The thrilling plot of these unlikely encounters captivates the readers to the enigmatic practices of orient episteme that counter the conventional contemporary modern day medicinal systems of the occident/west.

The suspense and thrill is heightened by the two parallels in the novel. On one side is the modern scientific discoveries in and around malarial research and on the other hand is the advanced knowledge of the indigenous community in the colonial India, a kind of religious sect that controls and guides particularly the malarial research involving the discovery of how malaria is spread by mosquito from one person to other persons, in order to serve their own purpose of some higher research, may be of 'chromosomal transference' to gain immortality. Through Antar recalling his meeting with Murugan, the readers are introduced to the fantastical world of the science and the counter-science explored primarily through Murugan. In his two research articles entitled – "Certain Systematic Discrepancies in Ronald Ross's account of *Plasmodium B*" and "An Alternative Interpretation of Late 19th Century Malaria Research: is there a Secret History?" (*The Calcutta Chromosome*, hereafter *TCC* 32). However, both received negative preliminary reports and were summarily rejected by the academia and branded him as an eccentric not to be taken seriously: "It was at about this time for instance, that 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" (*TCC* 33).

Ghosh emphasizes the premise 'what is invisible to us, it doesn't gives us the authority to say that it doesn't exists.' As Paul Karl Feyerabend, the philosopher of science rejects the idea of standard methods employed in scientific methodologies which has created a bipolar discourse based on the chauvinism of western science. Ghosh makes visible the limitations of scholarly scientific communities which require laboratory experimental data necessary to make any inference and can't work forward with a hypothesis based merely on the theoretical assumptions or speculations. Murugan's version of alternative interpretation of the late 19th century malaria research is motivated and influenced by the 'element of coincidence' incorporated in the diaries penned down by the scientists mainly Ronald Ross, his favourite. Through his readings of the writings of the famous scientist/bacteriologists Murugan is

surprised to note down the fact that while other scientists laboured too hard in laboratories but could not achieve what Ronald Ross achieved in a smoothly spent time period of three years very easily. The achievement of Ronald Ross was a surprising one as compared to other medical scientists who has been researching for quite a long time.

The indigenous religious sect comes into enigmatic action during Ross's initial start up with his scientific adventure on malaria research in Secunderabad when he got stuck up as he was unable to receive any blood sample infected with malaria despite his scheme to offer money for samples of malarial blood at the rate "one rupee per prick!" (*TCC* 62) and, that too in a place where malaria infected patients were in huge numbers. And, in those times one rupee is good handsome amount that "can buy a family of four enough rice to last a month" (63). Ross is here to collect enough malarial mosquitoes to work further in the direction of Dr. Manson proposition of 'mosquito-juice theory' which believed that malaria bug was transferred from mosquito to man through drinking water. But someone has spread a message that "this weird doctor's blown into town and he gets his rocks off putting naked guys into bed with mosquitoes" (63). This has a serious effect and no single patient goes to give his few drops of blood even in exchange of a handsome amount of money. But after some time when Ross gets hopeless and is losing interest in his research, at such a crucial point of time a perfect case of malaria patient walks himself to his laboratory and through him Ross gets enough malaria infected mosquitoes to carry forward his research.

Apparently, another favour of luck occurs as Ross is looking around for a healthy person to consume 'mosquito juice' and this time again Ross is lucky as he receives Lutchman who is ready to drink mosquito cocktail and ready to risk his life for malaria fevers, shivering and delirium. While Dr. Ronald Ross takes all this as his sheer good luck, but as per Murugan's research this is not the real truth. In fact, there is the 'other mind', an indigenous secretive community of Indians that belong to some particular religious sect who are indirectly monitoring Ross's work and who had also monitored the work of other pathologists and bacteriologists working in India but had only chosen to favour and guide Ronald Ross in the right direction. The reason Murugan cites is that the indigenous Indian community wanted the malarial research to be directed in the right path because that was very helpful for their more advanced research, possibly involving 'chromosomal transference' made possible by copying one person's chromosome and pasting it in another person through malaria bug. This indicates to a practise involving highly advanced science. The members of the silent community were aware about the pathology of the malaria parasite that spreads by this procedure from an infected person's body to other humans (which during that time was unknown to the modern scientific community). Hence, Murugan holds the belief that what Ross considers sheer good luck it was actually a calculated move by that secretive community which provided Ross with their men when he needed them the most and thus, also implanted them to properly guide his research in the right direction.

Ross thinks of the sudden presence of a jarful of mosquitoes into his little hospital lab as merely his good fate because he can't even imagine it in his dreams of a native colonised community highly advanced in medical science. Finally, on August 20, 1897 Ross makes his first major breakthrough: "he sees the placement of plasmodium zygotes in the stomach sac of *Anopheles Stephensii*. "Eureka" he says to his diary, "the problem is solved." "Whew!" says Lutchman, skimming the sweat off his face" (TCC 69). Ghosh here portrays the orient systems of knowledge as much ahead of the modern western scientific systems. In the expression of Lutchman's reaction Ghosh reflects the kind of tensed relief that finally their mission involving Ross is accomplished. He deconstructs the knowledge binary which propounded the European discourse to be developed and framed on the principle of reason and rationality while considered the ancient oriental discourse of some of the world's most ancient civilisations as merely fantasy and completely irrational and illogical.

Ghosh startles with this thrilling plot involving the silent cult of the native community and leaves it for the readers to mark lineages of landscapes and mindscapes. Furthermore, Murugan's investigation reveals that Mangala bibi was also worshipped as a goddess for the cure she provided to people who suffered from sexually transmitted disease Syphilis considered as incurable in those days. According to Murugan, Mangala bibi used Pigeons to artificially induce malaria parasite in her cure to Syphilis. Ghosh might be trying to give glimpses of the ancient belief systems of orient knowledge storehouses which believed in the theory of soul transfer from one physical body to another body which in Murugan's scientific terminology is 'the interpersonal transference through a new modified chromosome' which he calls 'the Calcutta chromosome.' Murugan's analysis of the silent community's assistance and guidance to Ronald Ross in the right direction highlights the 'other' indigenous secretive community's attempt towards enhancing their own advanced technology of the interpersonal transference of personality traits of an individual chromosomally, ". . . if all of that information could be transmitted chromosomally, from body to body? . . . Just think, a fresh start: when your body fails you, you leave it, you migrate – you are at least a matching symptomology of yourself. You begin all over again, another body, another beginning. Just think: no mistakes, a fresh start. . . ." (TCC 94-95)

Furthermore, the statement made about the superior science of the secret cult by Murugan that 'to know something is to change it' hints at the power structure of knowledge and the pragmatism of the age old Latin aphorism of 'scientia potentia est' meaning 'knowledge is power'. As Chitra Sankaran asserts in her essay, "By this logic *knowledge* itself becomes a contaminant, a tyranny that changes the course of history. And the only way to make use of that knowledge is to close the binary of subject/object divide." (Sankaran 115)

Conclusion: The narrative of *The Calcutta Chromosome* advocates for the serious consideration of the indigenous cult of the different communities which generally are not

represented truly owing to their silence, sometimes as part of their practice and many times due to their voice been subaltern. As Murugan comments, “What gets me about this scenario is the joke. Here’s Ronnie . . . He thinks he’s doing experiments on the malaria parasite. And all the time it’s he who is the experiment on the malaria parasite. But Ronnie never gets it: not to the end of his life” (*TCC* 69). 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” (Chambers 58).

In this sense Ghosh’s *The Calcutta Chromosome* propose and endorse Paul Feyerabend’s open-ended viewpoint “*There is no idea, however ancient and absurd, that is not capable of improving our knowledge*” (Feyerabend 5). To support this principle Feyerabend argues that there can be multiple ways of attaining knowledge and those influenced with Western scientific knowledge system which has a peculiar methodological way of understanding, diagnosing and approaching any objective must not exclude the other knowledge systems that are fundamentally non-Western in their approach but does work and are of high efficiency. Feyerabend questions and raises concern: “But is it desirable to support such a tradition [scientific tradition with strict uniform methodology] 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?” (Feyerabend 11).

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