I. Counter Narrative in Amitav Ghosh's Writing: Introduction

The present dissertation seeks to analyze the narrative techniques of Amitav Ghosh particularly in his two novels The Circle of Reason (1986) and The Calcutta Chromosome (1996). Primarily, Ghosh's narratives present the critique of Eurocentric discourse about colonialism, migrancy, novelistic genres, science, and religion and above all knowledge production. Avoiding classical realism his writings are blended with fact and fiction focusing on creating the alternative realities through marginal perspective. Basically, his narratives in *The* Circle of Reason and The Calcutta Chromosome have exploited 'magic realism' and 'counter discourse' as the devices to resist the Western epistemological binaries that underpin the Western thought of discursive formation. Ghosh attempts to displace the realm of the hegemonic Western mode of being and narrates the world from non-Western sentiments. Giving voice to different subaltern characters prominently Alu and Zindi (from *The Circle of Reason*) and Mangala, Lutchman and Murugan (from *The Calcutta Chromosome*) who challenge the dominant narration and Western epistemology and try to assert their identities in post colonial society. Both novels' narration epitomizes what Helen Tiffin calls 'counter-discourse' to signify non-Western version of reality resisting Eurocentric modes of thinking through 'radically heterogeneous' reinventions based on bedrock of historical "fact" and current cross-cultural interactions between "west" and "non-west".

Both novels' use of narration and hand in hand to use 'magic realism' and 'counternarrative' as post colonial trope to subvert Western hegemonic mode of thinking with nonwestern "narratives of historical transition" (344). *The Circle of Reason* is critique of concept of
Reason, i. e. Western Enlightenment. Balaram's blind faith upon reason leads him to selfdestruction where as Alu, his grotesque nephew, abandons his craze for western rationality by
burning 'Life of Pasture' and eventually heading back home, India. *The Calcutta Chromosome* is

rewriting of Ronald Ross's history of scientific discovery of Malaria from subaltern subject Mangala's view point. The issue of re-writing marginal history through family narrative is incorporated in both novels. The narrative fragments of Alu's journey in *The Circle of Reason* and Lutchman's arrival at Ross's lab in Calcutta in *The Calcutta Chromosome* reinforce the part of family narration of post colonial India.

The Circle of Reason and The Calcutta Chromosome are the mirco-version of post colonial histories, to put in Dipesh Chakrabarti's words history as a form of "collective memory" (342), which gather, in a symbiotic fashion all that existed in the past into all that happens in the present. His narrative method combined with his treatment of history weaves delicate connections between different phenomena, so that no event becomes absolutely autonomous. The focus is not merely on privileged migrants but also on subaltern journeys as he charts the intricate networks and unequal modes of labour and capital flows across the globe. This generates the mobility with which history traverses past and present creating an acceptable fluid pattern of time which Chakrabarty calls "transition narrative" (341).

In the novel *The Calcutta Chromosome* two worlds of science and counter-science,
European rationality and Indian mythos are brought together against the backdrop of Calcutta's
streets and monuments. In so doing, the researcher (Murugan) is also attempting to read the
reality about people othered by Ross. Mangala's secret study of religio-scientific
experimentation unveils mololithic narration of Ross' official history. Rather her Hidoo practice
of Cult philosophy is used as device of resisting Western hegemony over science and knowledge.
In *The Circle of Reason*, science becomes an attempt to arrange the world into meaningful
patterns. But, Balaram, the school teacher, equally obsessed with theories of phrenology as with

the life of Louis Pasteur, is victim the western rationality. Zindi, an Egyptian migrant figure, enjoys subaltern subjectivity to control the circumstances around her in her favour.

Ghosh's writing is primarily concerned about writing against grain, i. e. writing something differently than usual Western practice. His story telling insinuates the aversion of grand narratives closer to counter narratives delineating distinct non-Western setting and characters. The Circle of Reason (1986), his debut novel, is about the geographical and ideological journey of a young weaver, Alu, who is brought up in a small Bengal village, Lalakpur at his uncle Balaram's house. After being falsely accused of terrorist activity, by Bhudep Roy, a cunning politician of village, thus he flees westwards to Calcutta, Goa, the fictional Gulf state of Al-Ghazira and finally to Algeria. It is the novel with magic realism to constitute a generic mixture of different threads connected to Indian life and culture. The Circle of Reason concentrates on the importance of narration and the power of language to signify and to create alternative realities. The symbol of weaving is used to create a counter narrative to the Western history of scientific development, expansion and industrialization by staging the loom as the agent of every new step in the grand narrative of modernization. Through weave narrative characters are presented in a relationship with each other while giving them voice and agency without appropriating them to any one discourse.

Similarly, Amitav Ghosh's fourth novel, *The Calcutta Chromosome (1996)*, unlike Victorian science fiction, is admixture of fantasy and realism. The story opens with a depiction of Antar, an Egyptian working in International Water Council, an INGO, in New York in near future. He finds an ID card of his former colleague, Murugan, who has disappeared in 1995, has always insisted that Ross's discovery had been manipulated by an Indian "counter- science' group. Antar becomes obsessed with idea of uncovering the secret of Murugan's disappearance

and this sets him off on a journey of encounters with characters from Egypt, India, America and Britain. Murugan realizes that Ross's discovery of malaria has been supported by Lakshman, his servant. This allows Ghosh to make the important point that science, technology and medicine were not conveyed to India by the British in a one-way process of transfer, but were in fact involved in complex series of cross-cultural exchanges, translations and mutations.

In similar fashion, Lutchman and Mangala from *The Calcutta Chromosome* and Alu and Zindi from *The Circle of Reason* have been given agency to voice their plight of fate. Zindi speaks and controls the reality around her and Alu is the only character that connects storyline of the novel from beginning to the end. All other characters struggle to survive in post colonial late capitalistic modern nation states. The protagonist of the novel *The Calcutta Chromosome*, Antar works on line at his apartment in New York in the early years of the twenty-first century to trace the adventures of L. Murugan, who reappears in Calcutta,, and is researching "Lakhan Stories", about the victim of Ross's experimentation. The story of Alu's adventurous journey itself suggests counter narrative to Western stereotype of Indian hero. He proves himself to struggle and survive in every hardship he faced. He is wrongly suspected of being a terrorist. He was chased from Bengal to Bombay and through the Persian Gulf to North Africa (Algeria) by a bird-watching police inspector, Jyoti Das. Alu encounters along the way a cast of characters as various and as colorful as the epithets with which the author adorns them. The reader is drawn into their lives by incidents tender and outrageous and all compellingly told. Ghosh is as natural a weaver of words as Alu is of cloth, deftly interlaces humor and wisdom to produce a narrative tapestry of surpassing beauty.

Even though Amitabh Ghosh was born in Bengal and educated at Oxford, writing in English from New York but his narratives are drenched with pastoral setting of south Asia. This

study not only concerns on the ethnographic and geographical details as narrated by the writer in *The Circle of Reason and The Calcutta Chromosome* but also to the fact that how these narratives configure non-Western supremacy over Western discursive formation. How Ghosh accomplish the task of foregrounding non-Western perspective? How does his knowledge of history of Western scientific development and innovations contribute to refute his hypothesis? How does he reread western epistemology to counter argue the value of binary oppositions? How the observation of these different cultures may work, which is necessarily informed and shaped by one's own reason and sense perceptions rooted in the culture he/she belongs to? The process of knowing, gaining knowledge about the unfamiliar and unknown is culturally biased, the different narrators produce a distinct version of truth in their respective accounts of India, Egypt, Algeria, the interior districts of Africa and the American cities. How these personal narratives altogether help to subvert the Western domination over east?

Many critics have commented on Amitah Ghosh's *The Circle of Reason* (1986) and *The Calcutta Chromosome* (1996) since their publication focusing on different issues and applying variety of theoretical perspectives. These novels do record the complexity faced by subaltern characters from south Asia especially India and Egypt. Ab Majeed Das comments on his writing style; "Amitav Ghosh is so scientific in the collection of data, semiotical in its organization and creative in the formation of fictionalized history" (181). These texts weave together narrative, ethnographic observation, and moral reflections on human society, on government, on science, on religion, on customs, on education, geography, and aesthetics. Elleke Boehmer, a renowned critic of post colonial theory, states about post colonial fictions that, "The fantastical or magic realist novel is believed to 'act out' the split perceptions of postcolonial cultures, and so to undermine purist representations of the worlds which have endured from colonial times" (236).

The subject of study of our novels to 'act out' post colonial cultural supremacy to undermine so called truth and its Western representation. He further says non-Western writers often use different strategies to alter their negative image into positive self image. He mentions; "Mixing, upturning, and dismantling negative representation, the strategic line of attack taken by the colonized was to turn the identities ascribed to them into positive self image" (105). He posits inbetweeness" in Ghosh's *The Circle of Reason*;

... a loosely structured picaresque, connects the Indian- Bangladesh border, the Persian Gulf city of al-Ghazira, and the Algerian Sahara. Mingling fantasy and naturalism, joining 'new "modern" worlds' with 'old, legend-haunted civilizations', breaking realist unities of time and space, restlessly crossing borders,... intensively exploits the double perspective or 'stereoscopic vision' that in-between position allows-. (235)

Boehmer hinted to 'hybridity' of the text in Homi K. Bhaba's terminology. Alu, doubly orphaned boy, embarks on a journey of migration, is a icon of disposed immigrant. He is 'grotesque hero' of picaresque novel, *The Circle of Reason*, just like Boehmer rightly says as he turns his negative identity (terrorist for Indian Bureaucrat) to positive self-image, a helper and rescuer to Zindi at last. Bohemer hints to magic realistic quality of the novel, "mingling fantasy and naturalism."

Giving analogy of weaving to narrative of the novel, Taumas Huttumen appreciates narrative style of Gosh. He comments:

Ghosh's first novel, *The Circle of Reason*, is above all, a celebration of stories and narration. It is also replete with metaphors, the most prominent being that of

weaving. Ghosh connects weaving with narration. The weaver uses the loom to create a beautiful cloth out of different threads. In a similar fashion, the writer uses words and narration to produce fictions that connect different times, places and ideologies. (30)

Taumas triggers to Ghosh's style of storytelling through the foregrounding of the stories.

Weaving the loom is compared to creating story. His narration can be categorized as presentation of "collective memory" to narrate Indian past and present to put in Dipesh Chakrabarty's word.

Similarly, Yumna Siddqi gives reason why this novel was enthusiastically received by Indian readers unlike westerners. She elaborates:

The Circle of Reason deserves more critical consideration by scholars of postcolonial fiction than it has received because it points to the state rationalities that shape postcolonial experience. Its conceptual focus on reason, as signalled by title, makes it a particularly suitable text through which to explore the ambiguous legacy of Enlightenment rationality in post colonial India. (177)

After decolonization India adopts state apparatuses according to Western pattern to use force through the police to control the citizen. But the ambiguity is whether it is appropriate to use similar method in post colonial India or not where family resides over state.

On the other hand, Amitav's fourth novel *The Calcutta Chromosome* (1996) has also drawn various critical comments from different critics. Suchitra Mathur, a critic from India, comments on the theme of *The Calcutta Chromosome* to blur the boundary between science and fiction. Talking about this novel as science fiction, she tells,

This novel of "fevers, delirium, and discovery" is a postcolonial science fiction that provides a re-visioning of science not only through a blurring of the lines between science, social science, and fiction, but also by elaborating the contours of a "counter science" that offers a fundamental epistemological challenge to dominant discourse of science. (131)

Mathur opens the post-modern aspect of the novel which blurs our vision of science and fiction as contradictory to each other. And the novel provides us convincing argument to make us believe that science is not merely collection of objective truth and fiction is entirely fanciful. Here, Diane M. Nelson rightly calls this novel as a "social science fiction". It is not purely like of classical science fiction that discloses secret at last. The story of the invention is already told by Ross through his autobiography *Memoirs* but the novel rediscovers highlighting the marginalized natives and giving voice to the silences of his narrative with new insight. The inadequate loopholes of history of Ross's discovery are completed through this novel. Thus, Diane M. Nelson compares the novel with science laboratory, as he takes colonies are laboratories of modernity. He further explicates,

Ghosh's *The Calcutta Chromosome* is a tropical laboratory about various forms of colonial laboratories. . . . It gives us technologies to work on new human emerging from the tropes and troops, through analysis of mechanist and sharper transformations- from alchemical networkings and interventions in the germline to immune-system defenses and forms of reproduction that circumvent the Darwinian bottleneck of heterosexuality. (294)

West has been experimenting over non-west to produce science, knowledge, and politics and so on. In this regard, the novel, *The Calcutta Chromosome* is as a lab to the Westerners. The prediction of the post colonial 'new human' through this novel is emerging issue of non-Western fictions. Claire Chambers in his article "Postcolonial Science Fiction: Amitabh Ghosh's *The Calcutta Chromosome*" presupposes the reason behind writing this novel, "Ross's high-handed treatment of his Indian patients and servants suggests one reason why Ghosh might have been angered into writing *The Calcutta Chromosome*. Ghosh reads against the grain of Ross's self-righteous account of his work given the *Memoirs*" (62).

Ghosh's anger is instigated by Ross's (mis)treatment of subaltern Indian subjects in his service. His interest is on Ross' servants who were victimized in his autobiography *Memoirs*. It is reinvented to read it against grain. Reading against grain means interpreting texts in such a way that helps and empowers us understand the social construction of knowledge and to question dominant beliefs and perspectives. Thus, he means to say, the novel questions truth claimed by subjective representation of Ross.

Similarly, the critic Hugh Charles O' Connell praises the openness of Ghosh's narrative in *The Calcutta Chromosome*. He says:

As such, *The Calcutta Chromosome* works to refute both the closeness of science-which holds the product of discovery as its ultimate goal-as well as implicitly closed form of conventional novel. Rather than being self—contained, the narrative of *The Calcutta Chromosome* constantly gestures toward other, occluded narratives that exist beyond the bounds of the novel, scientific knowledge, and the historical archive. (790)

I think O' Connell triggers to what Dipesh Chakrabarty calls this kind of narrative as "narratives of historical transitions" (344). The hitherto 'other' subject of the west is brought into forefront position to open new avenue of humanity.

Amitav Ghosh's novels implicitly suggest the need for coexistence and strong humanitarian ties across cultures overlooking personal, regional and political considerations. His novels evidence his commitment to a broadly defined, secular –humanist frame of values.

However, my argument is that his novels are tilted towards his Indian identity that highlights "non-western" world view is equal to Western world view.

It is true that non-western writers writing in English like Amitav Ghosh always tried to show their departure from canonical western writers on the level of form and styles. But it remains always post colonial writing as political debate of resistance. Being written in the language of Empire non-Western authors got received their writing as means to restore their dignity as they were made to suffer for hundreds of years from European domination. In this sense, Stephon Slemon's idea is relevant that "literary resistance" is a political and cultural aesthetic at work in culture" (104). No doubt post colonial authors attempt to speak of their own nation, culture and their mythic pasts. They demonstrate critique of Western hegemony over the dissemination of knowledge.

Although this research makes a profound use of the post colonial concepts emerged in the field of literary theory, it does not absorb a comprehensive analysis of the theory of Subaltern Studies. Rather, an engagement with the concept of post colonial resistance developed by Bill Ashcroft, Gareth Griffiths, Helen Tiffin, Homi K. Bhaba, Edward W. Said, Stephen Slemon, Sara Suleri, Wilson Harris, Paul Carter, Peter Humle, Derek Walcott Elleck Boehmer,

Charles Larson, Ranjit Guha, Gayatri Chakrabarty Spivak, Dipesh Chakrabarty, Simon Gikandi Michael Foucalut, Antonio Gramsci and Arjun Appadurai is taken into consideration. It initially takes support from the writings of Taumas Huttumen, Yumna Siddqi, Suchitra Mathur, Charlie Chambers, Diane M. Nelson, Hugh Charles O' Connell and Sulaja Singh that entail the primary tools of analysis. By doing so, this project delves into both novels' narrative styles to expose the conceptual framework for apprehending and appropriating each-other. The combinations of the ethnographic, anthropological, and aesthetic discourses in Ghosh's writings often contribute to resistance of European cultural authority at various junctures of contact with non-European cultures. Finally, this project adequately uses the vocabularies of post colonial theories and narratives as well.

This thesis entirely relies on a text based research which makes close readings of Amitav Ghosh's writing during 1990s. Particularly, a comparative study of *The Circle of Reason* (1986) and *The Calcutta Chromosome* (1996) in the light of postcolonial perspectives will be focused. Edward Said, a pioneer of Post colonialism, conceptualizes Orientalism to distinguish "non-west' as other of west, he writes, "Orientalism as a Western style for dominating, restructuring, and having authority over the orient" (25). Helen Tiffin's concept of counter-discourse and 'magic realism' are majorly the study tool for this research. "Counter discursive strategies", for Tiffin, "is a post colonial subversive way not to replace the dominant text rather to evolve textual reading of its own biases" (100). Elleck Bohemer's idea of "spiritual realism" is somewhat related with 'magic realism' that is fully inaccessible to Europeans, "untranslatable strangeness" (236) incorporated into Ghosh's novels. Homi K. Bhaba's notion of "inbetweeness", he defines, "an overlap or displacement domains of difference that the intersubjective and collective experience of *nationess* community value are negotiated" (2).

Stephen Slemons's idea of "literary resistance" as site of textual resistance and Dipesh Chakrabarty's theory of "transitive narrative" that paves the way for "radically heterogeneous" future world that Ghosh's both novels encompass. Meanwhile, Simon Gikandi's notion of 'transnationality' and Arjun Appadurai's vision of ideoscapes and ethonoscapes to avoid impact of globalization are also considered. Sara Suleri argues that rhetoric of English India must be reading against grain that creates counter-culture to show the contemporary critiques of alterity in colonial discourse" (107). Paul Carter's concept of 'spatial history' and Wilson Harris's challenge to scientific knowledge of history with 'literary imagination' paves the way for writing non-Western model of history. The researcher also uses Spivak's hotly debated idea of "subaltern agency" as a research parameter to investigative the degrees of subalternity of the characters in both the novels.

These ideas of various post colonial critics and theorists regarding the theory of post colonial resistance as internalized subversion rather than external protest will be used as methodological tool for this research project. All the critics' and theorists' idea is synthesized to constitute the methodology of the entire dissertation. This research is accomplished along with regular library visit and consultation of authentic internet sources regarding the issues and terminologies of post colonial studies.

This thesis embodies four chapters: as the first chapter is an introduction to issue and methodology, different critics' ideas relevant with main argument is synthesized. Majorly, Helen Tiffin's notion of 'counter-narrative' and 'magic realism' as well as various insights of post colonial resistance are brought into discussion to prove that these texts stage resistance to western hegemony of knowledge. The next second chapter is a discussion about how Ghosh's first novel *The Circle of Reason* is a text of post colonial resistance. The third chapter deals with

use of Counter-Discourse in *The Calcutta Chromosome* to challenge Western discourse of science and knowledge. The fourth chapter presents the analysis of the degree of subaltern subjectivity in *The Circle of Reason* and *The Calcutta Chromosome*. The last chapter concludes the contention that the research has oriented a comparison and contrast of *The Circle of Reason* and *The Calcutta Chromosome* to address post colonial issues.

II. Post Colonial Resistance in The Circle of Reason

Amitav Ghosh's debut novel *The Circle of Reason* (1986) foregrounds different discourses to resist hegemony of Western epistemology. It highlights issues of migration, colonialism, nationalism and fluctuations of subaltern identity in post—colonial society. The novel provides a critique of the rhetoric of belonging, identity and citizenship mobilized by nation state through its apparatuses. It is overt criticism of Western concept of rationality i. e. Enlightenment. With the non-Western setting and characters from this part of the continent, the novel valorizes non-western myth and culture over Western boundary of politics, nationalism and novelistic genre. To cite an illustration from the text, Balaram's blind faith upon reason leads him to self-destruction where as Alu, his grotesque nephew, abandons his craze for Western rationality by burning 'Life of Pasture' and eventually heading back home, India. Alu and Zindi's final decision to come back to India is symbolic of their love for native land. Resisting all forms of catastrophe these characters prove to be post colonial subjects survived in neo-colonial late capitalism.

Talking about the ambivalence of resistance in third world literatures, Stephen Slemon argues that purely anti-colonial resistance always "has effect of the contradictory representation of colonial authority" (105). At the same time he shows the possibility of resistance in literary commonwealth:

... the nation-based examinations of a variable literary Commonwealth, or a variable literary Third World, give way, to specific analyses of the discourse of colonialism(and neocolonialism), and where studies in cultural representatives and literary mimeticism give way to the project of identifying the kinds of anti-colonialist resistance that can take place in literary writing (103)

Slemon believes that literary writing can be a good means of resistance to any form of social power, where communities are subordinated by that power structure. Taking 'literary resistance' as form of textual resistance, he further examines:

Literary resistance can be seen as a form of contractual understanding between text and reader, one which is embedded in an experiential dimension and buttressed by a political and cultural aesthetic at work in culture. And 'resistance literature', in this definition, can thus be seen as that category of literary writing which emerges as an integral part of an organized struggle or resistance for national liberation. (104)

Resistance literature is sprung out of organized struggle for national heritage, culture and identity. In this context, Greenblatt regards writing as a means of resistance, she remarks, and "texts are the invisible bullets in the arsenal of empire" (93).

The Circle of Reason by Amitav Ghosh's is a critical resistance to Western hegemony of discourses of realism, migration, nationalism and rationality i.e. Enlightenment. Balaram's enthusiasm for phrenology, along with passion for reason, suggests critique of Enlightenment rationality. Alu, an orphan who comes to stay with his uncle, Balaram, is the protagonist of the novel. Alu's rejection for 'reason', earlier his obsession with Life of Pastuer which he finally burns, and hopefully turning the steps with Zindi back toward Indian subcontinent allegorizes his love for his birthplace. Giving voice to Alu, the novel delineates his physical and spiritual journey from Lalpukur through Calcutta and Al-Gazira to Algeria. This symbolic journey of Alu has functioned as "contact zones". Elleck Boehmer elaborates this 'contact zone' as a place where colonial subjects hatch the idea of resistance. He explicates that:

As early ventures in anti-colonial resistance and cross-nationalist interaction offer diverse instances of such interstitial emergence of how different ideas of resistance might be picked up and developed in cross-border contact zones (like the metropolis); or re-inflected and reinforced by being moved across border and then adopted to local contexts; of the extent to which a libratory politics represented a cross-hatching of different, often syncretized traditions. (114)

For him, 'contact zone' serves as fertile ground for resisting Western domination. He further elaborates, "The cross-border impulsions of their migratory make-up prompted them therefore to reach beyond cultural and geopolitical boundaries to discover ways of constituting a resistant selfhood" (114). In this connection Ghosh himself is product of this contact zone. Born in Calcutta and grew up in India, Bangladesh and Sri Lanka, Amitav Ghosh, has studied in Delhi, Oxford and Alexandria. His reputation as journalist-cum writer is manifestation of his "resistant selfhood". His spokesperson figure can be traced in the novel with the character of 'Alu' and 'Zindi'. It is Zindi's boarding house in the Ras al-Maqtu, in Al-Ghazira, that operates as a 'contact zone' for most of the immigrants. Although Zindi charges them more for tea and tobacco, they often come there. It is because, "They knew no café could match the stories and the tea that were to be had at Zindi's. It was a man learnt more about the Ras and Al-Gazira and even the world in one evening at Zindi's than from a month's television"(142). Zindi's can make them believe what she desires them to believe. She has good oratory skill despite being illiterate. All the immigrants are summoned when she speaks. The narrator explains:

they could never tire of listening to {Zindi} speak, in her welter of languages, though they knew every word, just as well they knew lines of songs. And when

sometimes she chose a different word or a new phrase it was like the pressure of a potter's thumb on clay changing the thing itself and their knowledge of it. (132)

It is the same place where they discussed and made plan to rescue Alu when he was buried under The Star, a tall business complex likely to be erected by Britisher and their colonial agent.

The Circle of Reason subverts western parameters of knowledge production. Ghosh is able to break the constraints of conventional realism. His etymological diversion privileged in oral mode of storytelling that distances and subverts the ideologies of empire and nation arguably inherent in the traditional novel genre. It blurs our vision of a novel with proper plot. Sara Suleri comments that such postcolonial texts lack coherent plot. It is the strategic technique of postcolonial writers to expose the demarcation between imperial power and the condition of post colonial society. They don't reinforce the hegemonic power rather support the periphery. Suleri believes:

For colonial facts are vertiginous: they lack a recognizable cultural plot; they frequently fail to cohere around the master-myth that proclaims static lines of demarcation between imperial power and disempowered culture, between colonizers and colonized. Instead, they move with ghostly mobility to suggest how highly unsettling an economy of complicity and guilt is in operation between each actor on the colonial stage. If such an economy is the impelling force of the stories of English India, it demands to be read against the grain of the rhetoric of binarism that inform, either explicitly or implicitly, contemporary critiques of alterity in colonial discourse.(107)

The novel, *The Circle of Reason*, can be read against the grain. Here, reading against grain means reading opposite to usual practice of European style. It presents enigmatic stories of different subaltern characters. These are more than twenty characters from Indian sub-altern society.. Ghosh's narrative is peculiar; most of characters are from common working class The central story is of Alu, potato headed boy, who restlessly shifts from Lalpukur, a refugee village in Bangladesh and then Calcutta and finally moving to the Middle East via Kerala when it reaches its denouement in a desert of shifting sand dunes. Zindi, a middle-aged woman, is peace maker for all immigrants in Al-Ghzira. She is a practical lady who serves as spokesperson for the rest of the guests at her boarding house. Jyoti Das, who comes Al-Ghazira to arrest Alu for the accusation of terrorist activity, returns bare handed. The character like Jyoti Das, an assistant sub-inspector of police and Bhudep Roy, a cunning politician, are from middle class who enjoy the power of state. Bhupdev accused Balaram for spoiling village with "Carbolic acid."

These stories of different characters are remotely connected with each other. Their stories of fragments constitute the plot of the novel. In an interview Amitav Ghosh has defined his novels in terms of the characters. He has said, "What makes a novel powerful, what makes it strong, what wins the reader for it in the end is the same: story-whether it is historical novel or whether it is any other kind of novel, it is the characters, the emotions" (101). The novel incorporates stories of Indian subaltern, without any background but emotionally attached to each other. The first part of the novel talks about Lalpukur, a village in north Indian sub-continents (now in Bangladesh) and the second part takes place in Calcutta, and the rest Al-Ghazira and Algeria(outside India). But basically, there are three stories interconnected with three characters. The first part of the novel unfolds the story of Balaram whose obsessive devotion to reason, i. e. Life of Pasteur, leads him to self destruction. The second part of the story revolves around Zindi,

a lady with stout figure and humane feeling, who brings together a community of Indians in the Middle East. Alu, the only survivor of Balaram's family, brings death and destruction by his attempts to create a cooperative community for Indians in the dunes of Al-Ghazira to reduce money problem. Finally, Mrs Verma's story eludes an Indian life while she performs Hindu death ceremony of Kulfi. The main source of continuity in the story is relationship of Alu and Jyoti Das, who is appointed to capture Alu as an extremist, and their familial bonding. Ghosh uses a unique way of storytelling engaging different time setting and characters. Moving back and forth, each stories are weaved together giving a fine experience of reading a post colonial novel. The novel, *The Circle of Reason*, substantiates it as post colonial text by its proper use of magic realism as rhetorical trope.

The use of magic realism is an appropriate tool to analyze rhetoric of this novel. Stephen Slemon defines 'magic realism' as post colonial discourse to deconstruct the mode of expression. He characterizes it as a technique for undermining the fixity of borders set by totalizing system of imperialism. In this work magic realism as post colonial discourse Stephen Slemon highlights the deconstructive impetus of this mode of expression. He characterizes it as a technique for undermining the fixity of borders of binarism imposed by the totalizing system of imperialism, and more broadly the imperialism of totalizing systems. Likewise, Homi K. Bhawa takes 'magic realism' as 'the literary language of the emergent post colonial world' (72). Similarly, Bill Ashcroft, Gareth Griffiths and Helen Tiffin in their book, *Key Concepts in Post colonial Studies*, defines magic realism as tool to undercut Western epistemological assumption. They argue that through magic realism, "the material so used is seen to interrogate the assumptions of Western, rational, linear narrative and to enclose it within indigenous metatext, a body of textual forms that recuperate the pre-colonial culture" (133).

The novel, as 'indigenous meta-text', offers the setting and stories of the characters with shifting and bizarre experience of life. They tune to new mood and atmosphere without any background and indication. The story seems realistic and believable with real characters but with haphazard setting, i.e. virtual time and place. The tension between demand of locality and metaphorical shapes runs through *The Circle of Reason*. It is refusal to inscribe too smooth a transition from the strange tranjectories of forced migration into a more clearly and cleverly shaped universal fable.

The beginning of novel is set at the backdrop of Lalpukur an imaginary place somewhere in northern India, probably in Bangladesh now. The creation of Bangladesh is signified by the slow swelling of village as starving refugees and their flow across the border. Lalpukur has become "dumping ground for the refuse from tyrant's frenzies". The narrator further states:

Long before the world had sniffed genocide in Bangladesh, Lalpukur began to swell. It grew and grew. First, it was brothers with burnt backs and balls cut off at the roots. Then it was cousins and cousins of cousins. Then it did not matter; borders dissolved under the weight of millions of people in panic-stricken flight from an army of animals. (36)

This deconstructs the distinction between indigenous and migrant people-decentring the concept of native and non-native. This resists any distinction between nation of a tradition of Western reason and mythic eastern tradition. It presents magical real sensibility of wild co-incidence against western teeming ideas of history. This allegorizes about the destruction of traditional village life by the modernizing influx of Western culture and subsequent displacement of non-European people by imperialism. These are permanently crossing illegal border for impermanent

settlements. The middle part of the story, where most of the narrative pages are spent for description, takes place in Al-Ghazira, an imaginary town somewhere in the Middle East. Jyoti Das is perplexed with this place. Ghosh describes with profuse about Al-Ghazira, a place of fantasy. The narrative exposes;

And, like one those of apples, Al-Ghazira rotated slowly below him, as the plane banked. He squinted down, through the glare of the midway sun on white gypsum-laden sand. Black roads cut through the expanses of whiteness; he picked out the radial patterns of planned roads at one end of the town, and a large square far away, with huddled, twisting lanes dribbling out of it. As the palne came in to land, blinded by the glare of the sun, he forgot the Barbary falcon and the Saker falcon and other birds he hoped to see, for he knew suddenly that *al-Ghazira* wasn't real place at all. (167, Italics: My Emphasis)

Although, Ghosh doesn't give the dates and doesn't name large historical events- but somehow the narrative generates a sense of historical period more obliquely. The time it captures is sinagled to post-partition and place in north-east India. The Indian setting is primarily foregrounded throughout the novel. The banyan tree is potrayed as a public sphere which has always been place of rest and shelter for Indians. The narrator describes:

The great banyan tree as its centre became a leaky shelter for dozens of families and their bundled belongings. Lalpukur burst its boundries and poured out, jostling with the district road a furlong away. . . The tea shop under banyan tree diversified in to selling rice and vegetables, and Bolai-da began to stock corrugated iron and sheets of tin beaten out of discarded kerosene-containers. (36)

According to Webster's College Dictionary 'magic realism' is an artistic style in which often fantastic images or events are depicted in a sharply realistic manner. The last scene of the novel substantiates magical incident of rehearsal of drama. It blurs distinction between reality and super-naturality. It happens when Chitrangada, a drama by Tagore, was set to perform by Indians to the Algerians in El Oued. Jyoti Das was supposed to act as Arjuna and Kulfi as Chitra. But Jyoti Das, in course of rehearsal, really fell in love with Kulfi because of her erotic acting and wants to marry with her. He says, "I'll marry you, if only tonight, just once" (256). Unfortunately, Kulfi died of heart attack at the middle of rehearsal. Mrs Verma said about her death, "... Three doctors sitting right in front of her, and there was nothing we could do. Nothing" (258). The readers are conscious, at the same time, about meta-fictional reality.

History is main source of Ghosh's novel. To understand the world, Ghosh suggests, it is necessary to understand history of cotton. When Shombhu Devnath sits down to explain the parts of machine to Alu, "He opens his mouth, he would speak, but Lo! The loom has knotted his tongue, so many names, so many words, words beaten together in he churning which created the world" (78). When does he speak, he insists that Alu memorizes each part of the loom in three languages. The narrator exclaims:

Kol-norod, Shombhu shouts, pointing with his cane, Kol-norod in Noakhali, natta-norad in Tangail, cloth beam in English.

Then his cane switches to the other end of the loom: bhim-norod in Noakhali, Pancha-norod in Tangail, and wrap beam in English. Understood? (262)

The first two languages on which Shombhu insists are vernacular languages of Bangladesh, now the languages of the diasporic village of Lalpukur. Moving from these local, ancestral-now travelling, obscurely diasporic languages in-between and words loaded with a more explicit sense of national belonging. In this connection, Bakhtin's idea of 'heteroglossia' is relevant to conjoin. Mikhail Bhaktin, in his Discoure in the Novel, elaborates about 'heteroglossia', as opposite to official language of its time, is polyphonic and parodic in its style. He explains:

When heteroglossia enters the novel it becomes subject to an artistic reworking. The social and historical voices populating language, all its words and all its forms, which provide language with its particular concrete conceptualizations, are organized in the novel into a structured stylistic system that expresses the differentiated socio-ideological position of the author amid the heteroglossia of his epoch. (47)

The novel relates to the heterotypic situation of diasporic writer Amitav Ghosh. The novel, *The Circle of Reason* comes out to be a novel of 'polyglot': mixing English vs non-English, oral vs written. The narrative moves through a representation of oral storytelling which lends a mythic dimension to the whole life of place, exceeding, and the regulating temporality of the traditional realist novel form. The encouragement of oil-town of Al-Ghazira is placidly described but the narration of the fall of the The Star is also equally underscored. The collapse of The Star metaphorically signals, the fall of empire. It seems impossible that Alu could have survived and yet he lives for four days without food and water under the collapse of The Star, a business Complex likely to be set by the Britishers in the Middle-east. Abu Fall asks to Alu, "Do you need food or water? But he said simply, "No, I'm all right" (150). Although he is trapped beneath a slab of concrete slab but still survived without any harm. The survival of Alu is very dramatic here. Ghosh's narrative sounds apparent magic realistic to describe the scene:

And still he lived through the fall of that whole building. Apparently- this is just hearsay- he lay flat on the floor with a huge block of concrete just inches from his chest. And that, too, for four days. It is no exaggeration to say that many people in that situation would have died of shock. And, far from being dead, he seemed to have come out a new man altogether, if such a thing is possible. (171)

Making Alu alive after this catastrophe, the narrative seems to show to non-western character's victory over Western. In the essay, "Resistance, Opposition and Representation", Edward Said, talks of secondary period of resistance as ideological resistance after primary resistance as recovery of geographical territory. Here ideological resistance, he means to say, "When efforts are made to reconstitute a shattered community, to save or restore the sense and fact of community against all the pressure of colonial system" (95). The colonial system subjugates colonized subjects to the periphery. And the novel presents recognition that all people can be traced back to histories of displacement and migration.

All the subaltern subjects in al-Ghazira are disposed migrants deprived of jobs and comfort of life. Thus, Alu wants to build a cooperative community so that through which he can fight against European capitalism. Ghosh narrates Alu's proposal of establishing a cooperative:

First, he said, he would open files, with a paper for every earning person in the Ras. Everyone would take their pay to him as soon as they received it, and the sum would be entered in the files against the man or woman's name. The money would go into a common pool. Once a week the professor and whoever wished to go with him would go into the Souq and buy everything that was needed in the Ras with that money. . . . In that way, he said, they would be able to do away

with shops, and no longer would the shop- keepers drain away their saving, their sweat, and their labour in profits. (176)

The need and necessity of community is provided in the novel with next incident as well. When Balaram, a retired high school teacher of Lalpukur, established Pasteur School of Reason to teach about weaving theoretically and practically. After opening The School of Reason in Lalpukur, Balaram tries to establish main two departments; the Department of Pure Reason and the Department Practical Reason. Neatly, to use the education for the welfare of people living in Lalpukur, Balaram opens the new Department, that is the Department of March of Reason. Balaram raises his voice explaining the task of this department. Ghosh narrates: "the first task before the Department of the March of reason, he explained, was to infect the village disinfect it so thoroughly that no trace of corrupting germ would surface in it again. And to that end the remaining three thousand rupees would be spent on purchasing carbolic acid. (74) His idea of serving society by killing germs with carbolic acid also reveals his communal feeling. Although he is killed by Bhupdep Roy, a cunning politician of the same village, but his successor (Alu) tries to follow him even in the foreign land. This is evident from his endeavours to control expenditure through the cooperative. Alu gets solution of money problem. A kind of community is constituted at Zindi's house to fight against European economic pressure. He shared with Abu Fall to wage war against money when he was buried under the collapse of The Star. Declaring himself an heir of Pasture, Alu makes a proclamation, "We will drive away money from the Ras, and without it we shall be happier, richer, more prosperous than ever before" (179). His idea of constructing a happier and an ideal society is sprung from his Hindu family background. As Hindu world view believes upon spiritual source of happiness unlike European pleasure in

physical amenities. And a step further, his pronouncement of waging war against money is metaphorically challenging western valorization of money, i. e. capitalism.

Elleck Boehmer also thinks magic realism as post colonial trope to "act-out' split perceptions of post colonial cultures so to undermine purist representation of the world which have endured from colonial times" (236). He intensifies hybrid phenomena of post colonial writing of which is not fully accessible to the European and American readers. This 'untranslatable strategem' in the work delineates borderline situation both within and without Western traditions. He named this kind of rhetoric "spiritual realism". He further elaborates it: "the genre itself represents the take-over of a colonial style. By mingling the bizarre and the plausible so that they become indistinguishable, postcolonial writers mimic the colonial explorers' reliance on fantasy and exaggeration to describe new worlds. They now demand the prerogative of 'redreaming' their own lands" (236). In this respect, Sara Suleri in her essay "The Rhetoric of English India" proposes idea of post colonial narrative technique "as idiom of dubiety." The narrative of English India, for her, claims new preeminence of historical facticity over cultural allegory which nevertheless illustrate that the functioning of language in a colonial universe is preternaturally dependent on the instability of its own facts. She further explicates;

the necessary intimacies that obtain between ruler and ruled create a counterculture not always explicable in terms of an allegory of otherness: the narrative of English India questions the validity of both categories to its secret economy, which is the dynamic of powerlessness at the heart of the imperial configuration. (107) Suleri's notion of counter-culture is his equivalent to Said's thought of rediscovering humiliating past through writing. Edward Said in his essay "Resistance, Opposition and Representation" explores tragedy of resistance that it contains already established culture of empire. In this context, Said praises third world writers for disclosing their past to pave the way for postcolonial future. He writes;

The postcolonial writers of the third world therefore bear their past within them-as scars of humiliating wounds, as instigation for different practices, as potentially revised visions of the past tending towards a post colonial future, as urgently reinterpretable and redeployable experience, in which the formerly silent native speaks and acts on territory reclaimed as part of a general movement of resistance, from the colonist. (96)

Edward Said is of the opinion that the non-western writers should revise the colonial past to heal the scars of humiliating wounds. Raising the voice of native, who are formerly silent, through the language of colonizers, is also a kind of resistance. And Ghosh, to some extent, is remarkable writer to substantiate the genuine experience of non-western people.

Alu's weaving of the loom can be seen as humiliating wounds of native Indians. But it is at same time prestigious experience for the Indians to get their livelihood. At Hajj Fahmy's house Alu keeps on weaving till night. Ghosh narrates; "Late in to the night –talk, talk, talk and weave, weave, weave." Although it is bygone typical Indian culture, Hajj Fahmy clarifies the reason of weaving; "When I do think myself fool, because in the past I wove because I needed the money, and now I weave because I have nothing else to do" (141). It is believable that Alu's skull and his skill of weaving has a good correspondent. Ghosh compares 'weaving' with 'reasoning'. He

says, "And so weaving, too, is hope; a living belief that having once made the world one and blessed it with its diversity it must do so again. Weaving is hope because it has no country, no continent. Weaving is Reason, which makes the world mad and makes it a human" (35).

The concept of home is 'reinterpretable' and 'redeployable experience' of colonial societies. Alu and Zindi make plan to return home and settle new life there. After they bid farewell to Jyoti Das they expect a ship to come to take them home, i.e. India. One of the Indian critics, Sulaja Singh, says "Reconstructed through scattered fragments of memory, home remains a site of an indelible present and impossible return for many of the subaltern characters in the novel" (5). But the novel shares, to my interpretation, hope of returning home. The ending one line paragraph of the novel- "hope is beginning" (277) corroborates this. Zindi is much upset after the death of Kulfi. She shares her melancholy with Alu and has fond desire to go home before the end of her life. She talks to Alu, indicating to Boss, her adopted son of Karthamma, "Boss and I are going back home. Alu. Boss is going to build me a house someday" (271).

The value of family is prime concern of non-western culture. *The Circle of Reason* also underscores the significance of "family life" throughout the novel. In an interview with T. Vijaya Kumar of Osmania University, Hydarabad, India, Amitav Gosh shared his view that the family as a displacement of the nation. He thinks definition of European style of nation-state is not appropriate to Indian sub-continent. He valorizes family as means of 'emotional satisfaction' over the state. He shares with the interviewer:

For, all those services-for welfare, for health, for everything- that are provided by nation, classically by the nation-state, are (in fact) delivered by the family; including something that nation state actually claims to deliver but can't deliver,

which is, as it were, an emotional satisfaction. But in India actually all that comes from the family. (103)

Alu himself is forced to migrate to his uncle's home after his father's death. The disposed immigrants are living in Zindi's house as surrogate family. Jyoti Das confesses that home can't be in foreign places. Jyoti Das, who actually follows Alu to arrest him, also finds solace in the home. He exposes bitter experience of immigrants living in abroad. He muses, "Foreign countries merely not home, or are they all that home is not?"(76). But it is the fact to say that all the characters have desire for home whether is possible or impossible for them.

The novel *The Circle of Reason* implicitly rejects European modernity. It makes non-Western reading of modernity. Like, Tsenay Serequeberhn in her essay 'The Critic of Eurocentrism' says:

It is the task of European-centered conception of humanity on which the western tradition of philosophy-and much more- is grounded. The one way proceeds in this reading is to allow the text to present themselves, as much as possible, and try to grasp them without 'anticipating the meaning' or superimposing on them the accepted reading which they themselves help to make possible. (92)

Western thinkers believe that Western modernity as phenomenon which blurs all the boundaries and ultimately guides the whole world. The monolithic concept of modernity of the west is critiqued by non-Western thinkers. Non-Western thinkers critique the Western concept of modernity to be monolithic and homogenous cultural entity. Ziauddin Sardar writes:

The universalizing principle of western civilization has always been to see its way as the only way and therefore the universal way. The west's use of the term

universal is an intentional statement of the becoming of the Other. Whenever it occurs it is a; lways intended to be an act of will and force. Even if human rights were desirable, even universal, their introduction in other cultures, by force or trying it to foreign aid if necessary, amounts to the continuation of the colonial belief that the perceptions of particular culture (about the God, Church, Empire, Civilization, Reason, Science, Progess, Modernity) inherently contain superior values giving them a moral right to spread them all over the planet. (68)

European modernity is in real sense is the Globalization of Europe. They call themselves 'real' in contrast to the unreality of the human existence in the non-European world. Tsenay Serequeberthan quotes Edward Said's idea of colonialism in her essay, The Critique of Eurocentrism.

Imperialism was the theory, colonialism the practice of changing the uselessly unoccupied territories of the world into useful new versions of the European metropolitan society. Everything in those territories that suggested waste, disorder, uncounted resources, was to be converted into productivity, order and taxable, potentially developed wealth. . . . The result was a widely varied group of little Europe's scattered throughout Asia, Africa, and The Americas, each reflecting the circumstance (90)

In the beginning, Al-Ghazira was a small town with the enormous oil resources. Thus, Europeans, especially Britisher reached there to buy land and set up big oil company. Ghosh with narrated with detail how they forced local Ghaziris to sell their land so that they could fulfill their mission.

Al-Ghaziri was a small then, an intimate little place; half-market town perched on the edge of the great hungry desert beyond, half pearling-port fattening on the lustrous jeevan pearls in its bay. It was a merchant's paradise, right in the centre of the world, conceived and nourished by the flow of centuries trade. Persians, Iraqis, Zanzibari Arabs, Omanis and Indians fattened upon it and grew rich, and the Malik, fast in his mud-walled fort on the top of the hill behind the town, smiled upon them, took his dues and disturbed a part of them in turn when British gunboats paid their visits to the little harbor. (137)

The 'thin-lipped' British white man forced the Malik to sign the oil treaty. The malik was kept in the Old Fort more or less as a prisoner, "thin lip virtually ran the town, and every seven years the Ant-frying was ritually performed" (157). This is clear evidence of how the Britishers made Middle East as a part of their business. How Europeans conquered over Ghaziri land and made it their own? The narrator continues to write:

The oiltown prospered and grew and the time came when they wanted more space. They took permission and went around al-Ghazira looking for some more land, and eventually they decided on a few acres at the far end of the next kingdom. It was marshy, sandy bit of land by sea. To them it was looked unsued, and assumed that they would have no trouble buying it- for more than it was worth, if need be. (157)

Within few years, thousands of people flocked to there from all the neighbouring kingdoms and the shop-keepers grew rich every year. The neo-colonizer sent Malik's brother, Amir, whom he hate the most, to America for study. Later on, he was appointed as Oil Minister and Minister of

Public Works by them. Ghosh narrates how Bristher entered into Oiltown. When they 'had found oil in some of kingdom around al- Ghazira, already that were rumours that al-Ghazira was just a speck of sand floating on a sea of oil. So the British, for the first time, set a resident to al-Ghazira, to make the malik sign a treaty which could let the British dig oil for oil'(155). The malik never signed a treaty. Ghosh has ironic characterization of white people in the novel. The white officer is parodied manners described as Goat's Arse. The narrator presents:

People liked him: he was a fat, round little man who laughed a lot and a lot. He liked fancy clothes and pomp and ceremony and parading soldiers. Everywhere he went in al-Ghazira hundreds of people followed him, because whenever he spoke he made his lips into a circle of such perfection that everyone who saw him held their breath waiting for a black, wonderfully rounded goat's turd to fall out. And so it was that he came to be known as Goat's Arse. (155)

But someday Goat was invited on Malik's birthday and publically denounced. There was, Jabal, the Mountanious Ennuch, to tip the oil over him and Goat's Arse was, "bruised but very alive" (155). The malik of Al-Ghazira was offered to double his share in oil money if he sold them that land but Malik rejected it. The narrator states, "people said that the Malik spat on treaty and drove them out of the Fort with a whip" (158).

The Circle of Reason can be read as a political treatise which undermines the Westernoriginated ideology of binaries. In binary construction each pole is ideally the opposite of the
other, not containing elements that are evident in the other side if the binary in question.

However, in the novel the purity of the two poles in binary constructions (such as science vs.
religion, body vs soul, East vs West, ideal vs practical etc.) is dismantled. As a consequence, new

connections transcending the binaries between the different poles within the binaries are formed. Reason is connected with the idea of the purity, represented by Balaram, a school teacher in a village. He is obsessed with idea of reason who is devotee of Pasteur and also a practitioner of phrenology. It is clearly seen when Balaram's use of carbolic acid to kill the germs in Lalpukur. His philosophy is continued by his nephew, Alu, in the next chapters. And in the final chapter Dr. Mishra seems to be rationalist who believes in pure creed of religion. When Mrs Verma asked Dr Sharma why she couldn't use carbolic acid in place of Ganga jal to clean the floor, Dr. Sharma said, "You can't just pour water from an artesian well down her mouth and pretend it's Ganga-jal. You can't. There are certain rules" (259).

This novel is an overt question to enlightenment rationality and its repercussion in post colonial Indian nation-state. Enlightenment is defined as Eighteenth century European Intellectual movement that celebrated human reason and its use in scientific development as tool for libration from the superstition and ignorance inherited from the past. Kant's vision is that proper use of reason can make us free from suffering. Kant talks about private and public use of reason, and prefers public use of reason, "The public use of one's reason must always be free, and it alone can bring about enlightenment among men" (16). European Enlightenment celebrated instrumental use of reason. But enlightenment project of basing authority on reason was wrong. In an essay entiled, "The Culture Industry: Enlightenment as Mass Deception", Theodore Adorno and Max Horkeimer argues that capitalist society's culture industry as an outcome of the Enlightenment has betrayed itself by allowing instrumental logic to take over human social life. Enlightenment has deceived the mass by commodifying culture with capitalist rationality. Thus, people under capitalism suffer the same fate of art under culture industry reduced to exchange value under with no specific traits of human freedom the enlightenment

dreamed. Enlightenment later on shapes the foundation of European modernity. Since Western modernity was rooted in the Enlightenment ethos it internalizes reason as indespensible entity of human life which in reaction demolishes basic social and cultural turns and ultimately turns human being as individualist robot. But non-Western culture valorizes everyday morality and social harmony with spiritual reality. In this connection, Homi K. Bhaba advocates about the possibility of inciting, what he calls, 'cultural translation' across minority discourses arises because of the disjunctive present of modernity. He alarms the intervention of post colonial critique for the transformation of the intersubjective realm based on new 'positive images'. He further clarifies the matter:

The challenge to modernity comes in redefining the signifying relation to a disjunctive 'present': staging the past as symbol, myth, memory, history, the ancestral- but a past whose iterative value as sign reinscribes the 'lessons of the past' into the very textuality of the present that determines both the identification with, and the interrogation of modernity; what is the 'we' that defines the pejorative of my present? (220)

The challenge to Western kind of modernity is evident from eastern practice of knitting loom and Alu's community banking. Alu luckily escapes from the blast at his meeting. It is not Alu who failed but his sense of rationality taught by Pasteur School of Reason. Although he appoints Samuel as an accountant who keeps recording of each in file, money started depositing in Ras. But Zindi is not happy with this as she argues the cooperative is not practical solution for them. She bemoans; "But now there's no money in the Ras; it's all in account and account books. But I wanted money. Cash. What's the use of account book? Can you pay for a bus with an account book? I have't been out of the Ras for more than a week and I'm going to the Souq

tomorrow? I need money"(184). Balram refused Bhudep Roy's settling of statue of Saraswoti in the school ground. He didn't accept it as Saraswoti, he says, "this is not a Saraswoti" (18). The instrumental use of reasoning is explicit when Gopal was elected as president of the Rationalists. When he tries to disseminate rationalism to the people of Hindoostan, he was questioned to use it with his own under wear which is dirty.

The Circle of Reason is against the conventions of classic detective fiction. In the some kind of old classical detective novel the pleasure lies at the domination of state over its citizen. The state uses its apparatuses to get the criminal caught. Ghosh's narration makes the reader convinced that Alu is not a criminal. In the later parts of the novel, Jyoti Das also has been reluctant to work as state-detective. He abandons his duty of detective-police to find the so called "extremists", which is opposite to western detective novel. Lal, Jyoti Das' agent, concludes himself not to take risk of arresting illegal Indian immigrants in Al-Ghazira. He tells reality to Jeevan Bhai:

There is nothing we can do. It's a very tricky situation. We can't alert the Ghaziri authorities. It would be a disaster if they found out that Indians are involved in this business. They'd probably stop giving new visas to Indian workers. They've done that kind of thing before. They might even expel the workers who are already here. That would mean a drop in remittances, and therefore in the foreign exchange reserves back home and soon and so forth. If anything like that happened, half the embassy here would be recalled in disgrace, with all their increments docked. We can't risk anything like that. We will just have to try to keep the whole thing quite. . . . (178)

Jyoti Das who came to arrest Alu, finally flees to Dusseldorf(Germany) in ship without any significant achievement. Ghosh captures the psyche of Das through these lines, "defeat at home, defeat in the world- and he shut his eyes, for he had looked on it for too many years and he could not bear to look on it any longer" (272).

Western critics claim to have universal experience while reading literature. But, Charles Larson unveils the canopy of so called universal experience in literature. For him, the Western tradition claiming universal experience of reading literature is actually "cultural response". He opines that the reality is that there can't be any universal experience as such. He writes:

For the most part, the term universal has been grossly misused when it has been applied to non-western literature, because it has so often been used in a way that ignores the multi-policy of cultural experiences. Usually, when we try to force the concept of universality on someone who is not western, I think we are implying that our culture should be the standard of measurement. Why else should we expect all peoples to react in the same way that we do? (78)

Larson has raised a genuine question to colonial reading to subvert it with postcolonial world. It is the wrong conception of western critics to see non-western 'text' with western eyes. Yumna Siddiqi reads, *The Circle of Reason*, as postcolonial novel exploring ambiguous legacy of enlightenment rationality. To quote her:

The Circle of Reason deserves more critical consideration by scholars of postcolonial fiction that it had received it points to the state rationalities that shape postcolonial experience. Its conceptual focus on reason as signaled by the title

makes it a particularly suitable text through which to explore the ambiguous legacy of enlightenment rationality in postcolonial India. (177)

However, my argument is that the novel rejects reason in its ethnocentric sense, enlightenment for liberation. Rather it focuses on non-western use of rationality, use of reason for communal good. Rather, the novel tries to incorporate non-western view of globality. The theoretical model to read society can be what Dipesh Chakrabarty calls 'radically heterogenous' world.

Non-western texts have lived experience of non-western people so this must travel into European mind that experience must be different. To quote Charles Larson again in this context,

What is important, it seems to me is that when we read a piece of non-western literature we realize that the interpretation we make of it may be widely different from what the artist intended, and contrarily, that we should not expect people who are not of our own culture and heritage to respond in the same way that we do to our own literature. The time has come when we should avoid the use of the pejorative term 'universal'. (79)

The novel The Circle of Reason captures non-Western setting and lived experience of its people. In this connection, Nivedita Majumdar praises Ghosh's success in capturing lived experience of Indians. She says in these novels that avow social realism,

Even in these novels that avow social realism, the representation of community functioning in various local and specific registers is sacrificed in favour of the anxiety to present a pan-Indian situation. Once again, the need to portray "Indianness" takes precedence over an engagement with the lived reality of community and individual experiences. (241)

Non-western texts obviously have lived experience of non-western people so this must travel into European mind that their reading experience must be different. There was blasting at the Ras when everyone was gathered there to discuss about their new plan. The subaltern migrants are much more vulnerable and desperate. Alu's friends were killed in an encounter with the police but he survived luckily with Zindi, Kulfi and Boss. Finally, they escaped to Algeria from Al-Ghazira. When Alu, Zindi and Kulfi avoided in El-Qued, boss gets fever. In the final pages of novel Alu, Zindi, Boss, who comprise of a 'holy family' of subaltern migrants, experience bitter reality of the world. Finally, readers' identify themselves, with the victims of the state; Das himself is puppet in its hands. All the characters, with the readers consequently are enmeshed with post colonial feeling. The ending of the novel is presented as the beginning, "hope is beginning" (272). It indicates the hope of immigrants, mostly Indian subalterns. Ghosh locates postcolonial agency in Alu's character, somewhere between state and society. Those characters are one way or the other way displaced by state. And they are fleeing across the border to escape the consequences.

The story of the novel is entitled into three parts: Satwa, Rajas and Tamas. Ghosh translates the Sanskrit terms through the sub-titles; Satwa: Reason, Rajas: Passion, Tamas:

Death. It might be re-reading Hindu philosophy blurring the boundary between time concepts.

Balaram's character is much controversial in this sense. He is passionate follower of reason, and practioner of phrenology. The protagonist of the novel, Nachiketa Bose, is named as Alu, after potato, is commonly categorized for more than a cliché in the novel. He is the only character who outsmarts all the antagonistic forces from beginning till end of the novel. Alu has attained some finely hones philosophical satisfying balance between the elements of life: Satwa, Rajas

and Tamas. In a sense, the plot of the novel revolves around Alu, a rescuer of all the immigrants, who travel cross borders without visas.

Stephen Jones assumes Indian novelists have open ended re-imagination of India. Quoting Jon Mee to survey Indian novels; he says, "In surveying the work of the most successful Indian novelists in English of the past two decades, Mee traces how the domestic drama, family romance, Indian myth and mock epic have all been delayed to re-imagine Indian and Indian-ness in terms of open-ended heterogeneity" (433). The novel ends with open-endedness and asserts Indian identity in a subtle manner through the characterization and theme. All the Indian immigrants s are struggling in dunes and desert of Middle East. Indianness is apparent when Kulfi's corpse is to be cremated according to Hindu rites. Mrs Verma gathered everything needed for the proper Hindu cremation process of Kulfi. Mrs Verma is liberal about the religious interpretation of culture. She insists that it is spirit rather than religious doctrine that matters. She says, "What does it matter whether its Gangajal or Carbolic acid? It's just a question of cleaning the place, isn't it?" But Dr Sharma has strict doctrinal understanding of religion and his excessive valorization of rationalization allow no room for human sentiments. At the direction of Dr Mishra, her husband, Mrs Verma collected holy things one by one needed for proper burial of the dead body. Gangajal, cow dung, woods from old furniture, and ghee everything was made ready and Alu set the fire in the pyre with shaven head. They even put the book; Life of Pasteur into the same pyre. It is metaphorically burning life of Pasturian School of reason, consequently European Enlightenment. Destruction of Psteur in the funeral pyre of Kulfi is symbolically destruction of Western rationality. The book was given to Mrs Verma, by her father, who is herself microbiologist, doesn't like to keep the book with herself neither Alu also wants to keep it with him. Mrs Verma said, "May be we could give it a funeral, too?" (267). The book was

handed over to Alu by his uncle Balaram. Once No-Dar Ma (Balaram's wife) set a blaze to all the books of his shelf but luckily he rescued that book from the fire. Therefore, the book is driving force to enlarge the plot of the novel, which is finally put with pyre of Kulfi. Indian religion is compared with western science as equal. Ghosh narrates:

There could no longer be any doubt that there were certain curious parallelisms between the ideas of the ancient Hindu sages and modern science. If that was true, and many very learned authorities believed it to be so, then it was definite proof that over the centuries those ancient and completely rational ideas had been perverted by scheming priests and bramins to further their own interests. (28)

Ghosh opens up potentially infinitely circular-and complexly inter-textual novel, inviting the readers to understand the novel as a commentary on or a re-writing of the lesson of Hidoo philosophy, resisting Western superiority over religion. Gopal has read Sankrit scriptures and concluded that "the Brahma is nothing but the Atom [. . .] as he says, "for the real Brahma, he was without attributes, without form, nothing but an essence in everything and nothing"(28). By parodying and subverting the discourses of police narrative, colonialism, rationalism, with the assertion of 'distinct identity' of Indianness, Ghosh conveys both challenges and opportunities of modern post colonial India. In this way, the novel *The Circle of Reason* highlights post colonial "situatedness" as challenge to hegemonic forms of representation in Western models of classical realism and technologies of the truth.

III. Post- Colonial Counter-Discourse in *The Calcutta Chromosome*

Amitav Ghosh's fourth novel, *The Calcutta Chromosome: A Novel of Fevers, Delirium and Discovery (1996)*, creates a counter-discourse to the history of malaria research that the Indian born British scientist Ronald Ross conducted in Secunderbad, seventy yards away from Calcutta. His memorial arch at the entrance of the P.G. Hospital is part and parcel of Calcutta. The inscription reads: "In the small laboratory seventy yards to southeast of the gate Surgeon-Major Ronald Ross I.M.S. in 1898 discovered the manner in which malaria is conveyed by mosquitoes" (13). The official history reads that Sir Ronald Ross, KCB, FRS (13 May 1857 – 16 September 1932), was a British medical doctor who received the Nobel Prize for Physiology or Medicine in 1902 for his work on malaria, becoming the first British Nobel laureate, and the first born outside of Europe . His discovery of the malarial parasite in the gastrointestinal tract led to the realization that malaria was transmitted by mosquitoes, and laid the foundation for combating the disease.

But the novel, *The Calcutta Chromosome*, offers an alternative interpretation of Ross' history of malaria discovery. The novel corrects history of malaria research through the valorization of counter-science group from India. Ghosh, in fact, uncovers the whole power politics of the West and gives credit to 'real heroes' behind malaria research. He argues that it is rather Ross' assistants and their team who guide him to find out the malaria solution which ultimately makes him win Nobel Prize for Medecine. The novel is set in Secunderbad, an Indian setting foregrounding Indian characters, correcting the lapses of Ronald Ross's self righteous autobiography, *Memoirs*. British government appointed him as doctor at Begumpett, Secunderbad not far from Hydarabad, but "Ross had taken it upon himself to begin an investigation into malaria- a disease of which he had no practical knowledge whatever" (79). L.

Murugan, a researcher and the protagonist of the novel, leaves his job at New York and arrives in Calcutta to research about Ronald Ross. Surprisingly, he finds Lutchman, an Indian orphan, to lead Ross to discovery, "Every time Ron went running off in the wrong direction, Lutchman was waiting to head him off and show him way to go" and actually "he was leading Ronnie by the nose" (136). The novel subverts the Western proclamation that Ross was only scientist to run the malaria project alone. The subversive power is generated through counter-discourse. Counter-discourse is a form of narrative resistance to Western discursive formation.

There are various forms of resistance against colonial authority and colonialist representation throughout the history. One form of counter-discourse is resistance against a dominant discourse of hegemonic culture. Helen Tiffin, in her essay "Post-Colonial Literature and Counter-Discourse" theorizes and highlights subversive quality in postcolonial texts. She introduces the term "counter-discourse" which means not replacing the dominant discourse rather engaging in textual strategy to expose loopholes of dominant discourse. She clarifies about post-colonial counter discourse in this way;

These subversive maneuvers, rather than the construction or reconstruction of the essentially national or regional, are what is characteristic of post-colonial texts, as the subversive is characteristic of post-colonial discourse in general. Post-colonial literatures/ cultures are thus constituted in counter-discursive rather than homologous practices, and they offer 'fields' of counter-discursive strategies to the dominant discourse.(99)

She further elaborates the matter, the operation of post-colonial counter-discourse is dynamic, not static: it doesn't seek to subvert the dominant with a view to taking its place, but to evolve

textual strategies which continually 'consume' their 'own biases' at the same time as they expose and erode those of the dominant discourse" (99). Thus, counter-discursive texts can not simply replace Western canonical discourse, since it is impossible to escape its influence and colonial legacy. The task then is to discover the underlying assumption of colonial discourse, expose its operations in maintaining cultural hegemony and bring these assumptions down by revealing inherent cultural structures. She argues the processs of decoloniazation in the shape of textual dismentaling of Western and hegemonic discourses are necessarily "hybridized" in nature. Here she means that since no pre-colonial condition is recoverable, the formation of national and regional identities in post-colonial societies must be understood as "dialectical relationship between European epistemology and the impulse to create or recreate independent local identity" (99). In this connection, Richard Terdiman's study, Discourse/Counter-Discourse: The Theory and Practices of Symbolic Resistance in Nineteenth-Century France, shows counter-discourse as "techniques and practices by which nineteenth-century intellectual and artists contested the dominant habits of mind and expression of their contemporaries" (12). He defines it as a passion "to displace and annihilate a dominant depiction of the world" and "the power of discourses-of a culture's determined and determining structures of representation and practice" (15). Although his discussion of discursive/counter-discursive practices was in the context of nineteenth-century France but it is still relevant even in the postcolonial context. Stephen Slemon notes that "a discourse like post-colonialism runs 'counter' to the established canon' (105) also proves Terdiman's analysis of counter-discourse "as the contestation and challenge of all hegemonic representations and master discourses"(14). Slemon believes counter discursive practice as:

> . . . anti-colonialist critical project with nation-based studies in Third- and Fourth-World literary writing comes about for good reason-for it has been, and always

will be, the case that the most important forms of resistance to any form of social power will be produced from within the communities that are most immediately and visibly subordinated by that power structure. (103)

The idea of counter-narrative or counter-discourse can be executed as mode of resistance against dominant cultural narrative or modes of culturally formed storylines. In this connection, Said's argument of Western supremacy over the eastern part of the world rests fundamentally upon the notion of representation. His foundational Orientalism examines the process by which Western discursive formation about East as Orient "as mode of discourse with supporting institutions, vocabulary, scholarship, imagery, doctrines, even colonial bureaucracies and colonial styles" (24). The representation in the form of colonial discourse acts, then, as the medium through which the marginalized, silenced and oppressed voices of colonized subjects are mastered by the dominant discourse.

Different critics use different concepts in their references to instances of colonial resistance, but 'anti-colonial resistance', 'counter-textuality' approaches and post-colonial "counter-discourse' all in gist amount to Slemon's idea of post-colonial "textual resistance" which is "buttressed by a political and cultural aesthetic at work in the culture" (104). This sounds like what Terdiman calls "textual revolution" directed to structural change of social formation (quoted in Tiffin:101). Tiffin quotes Michel Pecheux to clarify the intended function of literary revolution, "Literary revolution in postcolonial worlds has been an intrinsic component of social 'disindification' from the outset (101). For Tiffin, basically all postcolonial writing is engaged in counter-discursive strategies, since "it has been the project of post-colonial writing to interrogate European discourses and discursive strategies from the privileged position within (and between) two worlds; to investigate the means by which Europe imposed and

maintained its codes in the colonial domination of so much of the world" (99). She identifies two types of postcolonial counter-discourse: one which re-reads and re-writes canonical texts which she termed 'canonical counter -discourse', second which responds to colonialism in general terms, in its determining relations with its material situation. But both practices, for Tiffin, "are politically situated; sites of production and consumption that are inextricably bound up with the production of meaning" (100).

She gives example of Jean Rhys's *Wide Sargasso Sea* as "canonical counter-discourse" which re-reads and re-writes British canonical text (Charlotte Bronte's Jean Eyre) to subvert colonial assumption. Post-colonial counter-discursive strategies involve a mapping of the dominant discourse, a reading and exposing of its underlying assumption, and the dis/mantling of these assumptions from the cross-cultural standpoint of the imperially subjectified 'local' (101). However, my focus is here the second kind of reading which involves general kind of post-colonial reading of Amitav Ghosh's *The Calcutta Chromosome*, applying 'counter-discourse' to interrogate basic assumptions of Western discursive field concerning science, religion and globalization.

Therefore we can argue, the narration of Amitav Ghosh presents a disruption to Western discourses of science, colonization and globalization, far more than somehow conventionalized forms of post-colonial "writing back". It is subversion of western imperial scientific dominance for the correction of official narrative of Ronald Ross. It corrects the official narrative of Ronald Ross to counter-argue its Western imperial dominance over scientific invention. In gist, the novel, *The Calcutta Chromosome*, subverts of Ronald Ross's scientific history about malaria research. By questioning western authority over knowledge about science, it establishes an argument that Ross could do nothing without Indians' assistance and non-Western religion is

equal to Western science. In this reference Alfred North Whitehead's idea of science and religion as complimentary to each-other, he writes that "The progress of science must result in the unceasing codification of religious thought" (146). Surgeon Colonel D.D. Cunninggham, in the same lab in Calcutta, before Ross' discovery, was also assisted by the Indians. "No. Cunningham didn't have a clue" doing work, Murugan credits, "it was the people in the lab, Cunningham's servants and assistants" (137). Cunningham had brought them from Sealdah Station who could work according to his desire. Murugan discloses the reason, "Cunningham's assistants were a preety wild mix. You see, he didn't want educated college kids from Calcutta messing around in his lab, and asking questions and stuff. So what he did instead was he'd train his own assistants" (137). August 20, also marked as Musquito Day, title of the first chapter of the novel, 1897 Ronald Ross makes his major breakthrough: sees the placement of *Plasmodium* zygotes in the stomach of sac of Anoopheles stephensii. But Murugan makes fun of Ross, he says indicating to Ross, "He thinks he is doing experiments on the malaria parasite. And all the time it's him who is the experiment on malaria parasite. But Ronnie never gets it; not to the end of his life" (45). Murugan as a spokesperson of Ghosh puts Ross' scientific history into question. Dominant discourse of science is reinterpreted by Murugan through Mangala's point of view.

Mangala functions in the novel as the ultimate symbol of post-colonial agency who has been secretly practicing quasi-scientific experiments. The group of people led by Mangala, a counter-science group, achieved success in finding out the malaria parasite. Mangala and Lutchman are prominent in the group who "are so far from the mainstream." The narrative comments them as the marginal people "you can't see them from the shore" (60). The practice of counter-science serves as a corrective to the instrumentalizing reason of imperialism. Murugan who has undertaken research on Ross's career explains the idea of counter-science:

... The first principle of a functioning counter-science would have to be secrecy? The way I see it, it wouldn't just have to secretive about what is 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 principal have to refuse all direct communication, straight off the bat, because to communicate, to put ideas into language, would be to establish a claim to *know*- which is the first thing that a counter-science would dispute. (60)

The counter-science group among the servants in Cunningam's laboratory in Calcutta was the leader of Western scientist, D.D. Cunningam. Although, Mangala was an illiterate and 'dirt poor woman having hereditary syphilis' but she was one step ahead of him. Elijah Farley, another doctor who worked in same lab, mentions in the letter:

But there was this one person, a woman, who took to the lab like a duck to water. My guess is that within a few years she was a way ahead of Cunningham in her intuitive understanding of the fundamentals of the malaria problem. . . . But then the big question is: did Cunningham find her or did she find him? Anyway, Farley saw things happening in the lab that left him no doubt that she knew a whole lot more about malaria than Cunningham could ever have taught her. (137)

By asking question whether Cunningham finds Mangala or she finds him, Ghosh challenges and interrogates Western discourse of science. His use of non-western character Mangala as a trope to differentiate between 'western talent' and 'eastern intuition'. It is Mangala who sacrifices her intuitive understanding to make Ross popular. Mangala is portrayed as superior to Ross

throughout the novel. She was not preoccupied with any theory stuff unlike Ross who is bacteriologist. She was 'real genius' to push Ross to the finishing line. The narrator says:

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 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. Unlike Ross she didn't need to read a zoological study to see that there was a difference between culex and anopheles: she'd have seen it like you and I can see the difference between a dachshund and a Dobermann. She did't care about formal classifications. In fact she didn't even really care about malaria. That's probably why she got behind Roonie Ross and started pushing him towards the finish line. She was working towards something altogether different, and she'd begun to believe that the only way she was going to make her final breakthrough was by getting Ronnie Ross to make his. She had bigger things in mind than the malaria bug. (138)

Mangala used to practice Hindoo-cult practice "tantras". Mangala had developed a particular kind of Malaria that could be induced in pigeons. Now Mangala had also developed the technique of transferring malaria from a pigeon to a patient of syphilis. Secretly she started treating patients in Cunningham's laboratory. Her treatment produced strange side effects. The patients often developed weird personality disorders. These symptoms in the patients were actually 'randomly assorted personality traits' which the patient imbibed from the Malaria donor i.e., the pigeon. Actually this process hinted at the freak chromosome, which had earlier been described as the unique calcutta chromosome. Her series of controlled experiments introduce a strain of malaria

to render the carrier pigeon a host that transports genetic information from one body to another by producing changes in chromosomal structure. Mangala "didn't know what it was and didn't even have name for it" (140) but she found it. In order to find out the reality that link between malaria being and human mind she takes help of Ross (141).

Ghosh deconstructs the rational premises of Western knowledge production about science. We encounter in *The Calcutta Chromosome* where the "facts" of sciences are punctured by counter scientific experiments. In the novel, medical discourse and its attendant literary genres are contaminated by meditations on religio-philosophical truths. To put the matter in simple terms science is brought under inspection as a subject of indeterminacy. Rather a counterscience opens up a new avenue of post-colonial relationship with "empire". Science was not solely Western invention rather also assisted by eastern philosophy of healing therapy. His narratives makes an argument that science and medicine were not merely defined and conveyed to India by the British in a one-way traffic of transfer but were in fact involved in complex series of cross-cultural exchanges, translations and mutations. Hindoo philosophy of "tantra" is corroborated through Mangala's practice. Murugan explains:

Then she seemed to come to a decision; she reached into a cage, and took one of the shivering birds into her lap. She folded her hands over it and her mouth began to move as though muttering a prayer. Then suddenly a scalpel appeared in her right hand: she held the bird away from her and with a single flick of her wrist beheaded the dying pigeon. Once the flow of the blood had lessened, she picked up the clean slides, smeared them across the severed neck, and handed them to the assistant. (86)

She ordered the assistant to give it to doctor. As soon as Elijah Farley, a doctor in Cunningham's lab, checked up those slides he noticed the familiar granules of malarial pigment in pigeon's fresh blood that he had been unable to get for a long time. Farley has mentioned his reliability on assistant, who suggested the fresh slide, clearly in his letter, "in haste: much that I feared has been confirmed in these last hours. . . . it was Cunningham's young assistant. He told me —oh so many things. . . . has promised to reveal everything to me if I would but accompany him to his birthplace" (87). Here, 'He' refers to no doubt Laakhan who assisted him to complete the research.

To take the help of Helen Tiffin's idea again, in the broader field of the counter-discursive many sub-groupings are possible and are already being investigated. These include "magic realism" as post-colonial discourse and the re/placing of carnivalesque European genres like the picaresque in postcolonial contexts, where they are carried to higher subversive power (100). The picaresque novel depicts the adventures of 'rouge hero' of low social status who lives by his wits in a corrupt society. Laakhan is no doubt picaresque hero of the novel *The Clacutta Chroosome*. Bill Ashcroft quotes Jacques Stephen Alexis defining magic realism as "a tool for revolutionary social representation, with recognition that in many post-colonial societies a peasant, pre-industrial population had its imaginative life rooted in a living tradition of the mythic, the legendary and magical" (132). Webster's College Dictionary defines magic realism; an artistic style in which often fantastic images or events are depicted in a sharply realistic manner. The incident is Murugan couldn't sleep because of disturbing mosquitos. Ghosh describes the scenario magic realistically. He writes:

The fan became a blur; the mosquito net melted into a milky fog. He was floating outside it now, looking in, at people knew, knew very well, even if only through

books and papers. And now he was in again, inside the net; he was one of them too, lying on a hard hospital charpoy, stripped, naked, watching the English doctor uncork test tube full of mosquitoes into his net. In his fist he still clutched the coins he had been given at the hospital gates. He held on to them tightly, savouring their feel, their reassurance; they were so cool to the touch, so hard edged; they made everything so simple, clean: a handful of coins, a rupee, for handing on the thing that lived in his blood, for safekeeping, to the doctor. (88)

Ghosh imagines post-colonial setting of the novel, *The Calcutta Chromosome*, through his extensive research. He confesses to a journalist in his interview about the location of the novel. He states:

Secunderabad is one of the rare places I have actually written about without seeing it. In case of Secunderabad, it wasn't so difficult because Ronald Ross has left very detailed descriptions. The other thing is that I corresponded with many people and they told me that actually the buildings that Ross worked in aren't there anymore. (100)

In the novel, the narrative line, "Our Ronnie doesn't give a shit: he gets out of bed one sunny day in Secunderabad or wherever. . . ."(33), it explicitly reveals that Ghosh is not worried about the real place Secunderabad to set the novel. There are so many illustrations of magic realistic descriptions in the novel. When Sonali went to Romen's house at the middle of the night, the scene is vividly described:

She pushed herself closer to the archway and figures began to take shape in smoky glow ahead of her. They were sitting cross-legged on the floor, with their

backs to her, facing in the other direction. She saw a couple of heads first, and then more, and more, until the whole room seemed to be filled with people. They were chanting something and some were keeping time with drums while others were beating little hand-held cymbals. (92)

To quote Bill Ashcroft again, in the magic realistic narration the material so used is seen to interrogate the assumptions of Western, rational, linear narrative and to enclose it within indigenous metatext, a body of textual forms that recuperate the pre-colonial culture (133). In this regard, Ghosh's novel, *The Calcutta Chromosome*, is "indigenous metatext" which blurs the linear narrative style of the West and foregrounding the non-Western culture of worshipping Gods. Ghosh's use of magic realism as a rhetorical device is to foreground non-western world-view. It is substantiated when Urmila describes her childhood-dream to Murugan a meeting with gods in this way:

I dreamt I would open the front door of our flat one day and find a small group of gods and goddesses outside, ringing the bell with the tips of their clay fingers. I would open the door and welcome them, hands folded, and they would float in on their swans and rats and lions and owls, my mother would lead them to little formica-topped table where we ate. They would seat themselves on our chairs while my mother ran in and out of the kitchen, making tea and frying luchis and shingaras, while we watched in awe, our hands joined in prayer. We would offer sweets to the swam and the owl, and Ma Kali would smile at us wih her burning eyes, and Ma Shoroshshoti would play a note or two on her sitar and Ma Lokhkhi would sit crossleged on her lotus, holding up her hand, looking just as she does on the labels of ghee tins. (130)

Ghosh promotes the use of imagination and narration as subversive of hegemonic representation on political and epistemological level. The writer Phulboni, often seen as Ghosh's alter ego, seems to privilege power of language over reality comes into being through narrative. Although he is less certain of his way; "I have never known whether life lies in words or in image, in speech or sight. Does a story come to be in 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"(128)?

Ghosh's narrative privileges the native subjects in this novel *The Calcutta Chromosome*. Ghosh has convinced us that it is the people of Calcutta (non-western, lower-caste, female, subaltern and earlier colonized) that count that these people should ultimately return to a privileged space, i. e. their own. Murugan disappeared in 1995, and the International Water Council [earlier, LifeWatch], presumes him to be dead. However, when he reappears in Calcutta, his native town, on Antar's computer in New York, he shakes the whole world through his research. Antar, an Egyptian and the protagonist of the novel is from cosmopolitan metropole. On the other hand, homeless Mangala and rural migrant Lakahan are the post colonial Indians subaltern subjects. Mangala and her followers (formerly colonial subjects) subvert the triumph of Western knowledge and science and propose a radical possibility of post-colonial subjectivity. They have been supposed, as are brought from Sealdah train station, Murugan quotes Cunningham saying where he get these servants, "that's the place to go if you need a willing worker: always said so- it's full of people looking for a job and a roof over their heads. See for yourself the next time you're there" (83). Murugan has spent many years on his extensive research. His clues indicate that Ross's discovery was only a small part of the overall project of Mangala to attain immortality through the Calcutta Chromosome. By 1897 Mangala had run into

a dead end. She tried again and again to stabilize and catch the chromosome in the process of transmission. But she failed, "that's why she was so desperate to have Ronnie figure the whole thing out and publish it. Because she actually believed that the link between the bug and the human mind was so close that once its life cycle had been figured out it would spontaneously mutate in directions that would take her work to next step" (141). She needed more information on the Malaria bug, that's why she needed Ross's help, "she is not in this because she wants to scientist. She's in this because she thinks she's god" (141). Mangala wants to tell her own history of experiments, "And what that means is that she wants to be the mind that sets things in motion. The way she sees it, we can't even know her, or her motives, one anything else about her. She's got to try and tell us about her own history: that's part of experiment too"(141).

For the British colonial scientist malaria stands for a disease to ba accounted for and coped in the discourse of Western medicine as something encountered during colonization Indian subcontinent and Africa. But for Mangala "death is which completes life" (126). Mangala is a prototype, an untrained genius who, in pursuit of the little-known scientific discovery that the malaria bug could be used to regenerate decaying brain tissue in the last stages of syphilis. Even today, she is being worshipped as Goddess in India. This is evident when Urmila and Murugan went to Kalighat to find the fact about Mangala. They met a girl playing with clay-doll. The girl shared with Urmila, "Today is the day of puja of Mangala-bibi. Baba says that tonight Mangala-bibi is going to enter a new body" (132). Mangala's counter-science, regardless of scientific constrains, is a 'genuine discovery' that enables her to immortality. By the end of the novel, it becomes clear that Mangala, alive in the twenty-first century but in a different body with same name. As Christopher A. Shinn rightly suspects here, "In fact, Urmila appears as Tara, both of whom are perhaps the latest reincarnation of Mangala herself (151).

Ghosh makes non-western perspective visible to the West the ghostly body of vernacular writing eclipsed by the glamorous literary stars of South-Asian writers in English. *The Calcutta Chromosome*, offers partly realistic and partly fictive story of medicine history, re-defining Ross's official narrative about the invention of the cause of Malaria. Ghosh is mainly interested with intention behind colonial power. Although the real research was orchestrated by Mangala and her associates, the puppet discoverer got Nobel Prize. Murugan presumes that the folk medicine practitioners needed specific lab but they lacked the resources to produce change. This imaginative historiography has been salient emblem of Ghosh's writing. Ghosh recollects and credits all the contributors behind the history of malaria. He clearly asserts that it was not the Britishers who started the business rather already started when Ross was just a child. The narrative exposes:

The Empire did everything it could to get in his way. Besides, when it came to malaria the British were non-starters: the front-line work was being done in France and the French colonies, Germany, Italy, Russia, America-anywhere but where the Brits were. But you think Ross cared? You've got to hand it to the guy, he had balls, that motherfucker. There he is: he is at an age when most scientists start checking their pension funds; he knows sweet fuck all about malaria (or anything else); he is sitting out in the boonies somewhere where they never even heard of a lab; he hasn't set hands on microscope since he left medical school; he has got a job in this dinky little outfit, the Indian Medical Service, which gets a couple of copies of Lancet and nothing else, not even *The Transactions of the Royal Society of Tropical Medicine*, forget about the *Johns Hopkins Bulletin* or the *Annales* of the Pasteur Institute. (32-33)

These above lines illustrate that there is no base for Ross and Brits to boast about the invention. Malaria was right to the top of research agenda in mid-nineteenth century in Europe.

Government began to pour money into malaria research in France, in Italy, in US; everywhere except England(32). By giving list of the European medical scientists Ghosh exposes the scientific discovery as a collaborative and cumulative enterprise rather than lone project. He gives credit to unknown heroes of malaria research which 'official story' of Ross has been bypassing.

Forget about Leveran, forget about Robert Koch, the German, who's just blown into town after doing a number on typhoid; forget about Russian duo, Danilewsky and Romanowsky, who've been waltzing with this bug since when young Ronald was shitting himself in his crib; forget about the Italians who've got a whole goddam pasta factory working on malaria; forget about W. G. MacCallum out in Baltimore, who's skating on the edge of a real breakthrough in hemtozan infections in birds: forget about Bignami, Celi, Gogli, Marchiafava, Kennan, Nott, Canalis, Beauperthupy; forget about the Italian government, the French government, the US government who've all got a shitload of money out there chasing malaria; forget them all. (33, Italics: My Emphasis)

To talk about Ronald Ross alone, we can read the plight of his mind in the beginning phase of the research. Murugan quotes Ross's writing in his diary, "Dear me, I don't know what I am going to do with myself today, think I'll go and solve the scientific puzzle of the century, kill a few hours" (33).

Ghosh's narration is about the discursive power of post-colonial realities. *The Calcutta Chromosome* critiques the very operations of knowledge that necessarily extends colonial boundary. Ghosh implies that we can only know the world through language, through the act of knowing, we can change the world projecting into the ideologies inherent in words. He clearly mentions, "to know something is to change it, . . . to make something known would be one way of effecting a change? Or creating a mutation, if you like" (122). In this connection, the novel subverts the claim of knowledge production, construction of particular discourse through language, a mode of oppression through master narrative. Murugan claims throughout the novel that he is one of the world's foremost experts on Ross. In this regard, Murugan seems to be alterego of the writer himself. Anyway, he discloses the fact that knowledge is 'self-contradictory' which doesn't begin 'without acknowledging the impossibility of knowledge' (60). He further credits Mangala's team work to bring mutation by knowing its contradiction:

Not making sense is what it's about-conventional sense, that is. May 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. (60)

Similarly, Phulboni, the local Bengali writer also expresses the uncertainty of knowledge. He discloses value of language over life, although he is less sure about this: "I have never known. . . . whether life lies in words or in images, in speech or sight. Does a story come to be in the words that I conjure out of mind or does it live already, somewhere, enshrined in mud and clay- in image, that is, in the crafted mimicry of life?" (128).

The subaltern characters are comodified and circulated in colonial modern practices. This is refutation against instrumental use of colonial subject by colonial regime. The change in the character of Murugan from LifeWatch employee (colonial agent) to a detective and finally to postcolonial archivist is driving force in plot development. Mangala's insights lose the sensuousness in the transfer to Ronald Ross's lab and its incumbent colonial mystique. The use value of finding the malaria bug's ability to cut and paste DNA remains mundane in Mangla's routine soul transfers, but the malaria bug is Ross's ticket to fame. Hence the discovery acquires mystical value; his cure is a treasured commodity in the colonial rationale for government.

Despite his critique of colonial appropriation Ghosh in his fictional world re-imagines "an outside" of these systems where the secrecy of Mangala's ritual practice retains the use value of Calcutta chromosome.

The Calcutta Chromosome is basically a science fiction yet with social thriller. Diane M. Nelson has rightly told it as a 'social science fiction'. Science of social relationship is presented through the different tales either real or supernatural. Ghost stories are the tales of betrayal, and Ghosh uses them as literary device for raising ethical question of exclusion and coercion that trouble the native colonial and post-colonial bureaucrat. The novel, The Calcutta Chromosome, uncovers the "facts" leading us to a series of ghost stories that supposedly explain the puzzle set up in the opening pages of the mystery. These fragmentary pieces are the "Lakhaan Stories" published in an obscure Bengali literary local writer Phulboni. Ghosh's postcolonial unraveling of the established canonical truth is revealed here. The writer Phulboni as marketing representative of Palmer Brothers, a British Company, while going to Renupur encounters a ghost. Refusing the station-master's invitation to go his home, Phulboni stays at signal-room. He was scared by ghost at night; the ghost was of old station-master whom Laakhan has pushed into

train for taking revenge. Laakhan an orphaned boy "with a thin, wasted body and a deformed hand" had made the signal-room a home but old-station-master disliked and condemns him as "a child of prostitute; that his mishappen left hand was mark of hereditary disease" (156). The new station-master narrates, "On a moonless Amavasya night, during a storm, the stationmaster tried to kill the boy by switching the points and leading him before a train. But no one knew the station better than Laakhan and he managed to escape. Instead it was the stationmaster who tripped on a rail and fell before the train"(156).

Ghost for Ghosh is a device to undo certain discursive limits. Every character in *The Calcutta Chromosome* has some trade with ghost. A virtual ghost appears before Antars's screen demanding the investigation of Murugan who disappeared from LifeWatch. Mangala and Murugan are syphilitic patients hunted by the ghost of Calcutta chromosome. Urmila has a quest for these 'ghost stories' to be famous journalist /literary critic of *Calcutta* magazine. The glamorous Sonali Das is in search of her natural father Phulboni or Phulboni's ghost and Phulboni himself is in search of immortality as a writer. Murugan doubts over anonymous force, ". . .someone is trying to get us to make some connections; they are trying to tell us something; something they don't want to put together themselves, so that when we get to the end we'll have a whole new story"(121).

The main pursuers of truth in this novel figure out the counter scientific writing in magic realism. Murugan rejects the institutional parameters of discovery and he begins to supplement the fissures of the colonial story with fragments of other unconventional knowledges. Murugan has to take and analyze ghost stories to understand what ghostly presences are doing in narrative of Ross's discovery. Literary practices edges closer to the truth of counter science than scientific explanation. Scattered vernacular ghost stories in *The Calcutta Chromosome* exert an uncanny

pressure on any reader familiar with tradition of vernacular ghost fiction, a tradition that Ghosh clearly claims as a central to understanding the contemporary post-colonial perplexity. The vernacular ghost fiction presents a certain native record of the colonial presence, its violence upon the colonized world. The hunted station in Renupur, lies somewhere between Berich and Darbanga, is a sign of colonial presence in India. The setting of the train symbolizes the reach of empire in remote countryside of India during the nineteenth century. Phulboni was appointed to field visit of Renupur by a well-known British company, Palmer Brothers, the company that makes soaps and oils and other household goods. Renupur was small village-turning-out-to-be town 'boasted a railway' station, "a train that connected Calcutta to cotton market of Barich passed through it every other day" (144). Railway nexus exhibits the story of origin of Lakhan story. Lakahn is poor rural migrant who is violently handeled by the agent of empire, the stationmaster, who treats him as an outcast drifter of suspect parentage. Living in a railway station he is caught in transition between the village and the modern city. He becomes a recursive ghost of the postcolonial state- a blow to British India. Therefore, the Lakhaan story in The Calcutta Chromosome is a tale of vegenance where "Lakhan" takes revenge with old stationmaster, imperial agent who tries to kill him.

The value of family is always at prime concern in non-western culture. Urmila was only breadwinner of her joint family. She comes home late working as a reporter in magazine called *Calcutta*. She has burden of her family and office work at a time. When her mother, an asthma patient, said her that her brother Dinu is going to get First Division Contract for playing cricket, she was not hopeful. Her mother blames her for not taking care of family. She says, "You just don't care about us anymore. All you think about is that awful job of yours." Then Urmila

answers, "Ma, if I didn't have the job, How would you get by? How far would Baba's pension go?(75) This shows an Indian way of family life, family affection and interrelatedness.

Ghosh with a strong nationalist vein tries to establish Indian supremacy in the world of knowledge and science. The novel begins from a particularly Indian postcolonial locale and thus could perhaps be said to institute a particularly postcolonial Indian vision of the future, ultimately breaking the Western vision of nationalities and decentering Western grip on leading future world. The novel ends up with indeterminate conclusion puzzling the readers opposite to detective fiction that claims secret answer. Unlike other detective story the novel discloses a medical mystery which is already disclosed. Ghosh's novel suggests that tackling of the difficult question of the place for a subaltern voice and knowledge requires a radical reconception of humanity. By delinking the vision of future from the hegemony of Western discourses the novel at the end adapts, what Chakrabarty calls, 'radically heterogeneous world' a radical sense possibility that subverts the imperial monolithic world.

Dipesh Chakrabarty in his essay 'Post-Coloniality and Artifice of History' proposes history as a discourse produced at the institutional site of university. The way Europe calls it sovereign theoretical of all histories, Indian 'collective memory' becomes anti-historical and anti-modern for Europeans. But Chakrabarty argues that so-called "master narrative" of Western European history which helps define Europe as modern are simply "cultural specific" and therefore only belongs to European Culture. He makes history visible in narrative forms for 'human solidarity'. His radical ideas of history is:

This is history that will attempt the impossible: to look toward its own death by tracing that which resists and escapes the best human effort at translation across

cultural and other semiotic systems, so that the world may once again be imagined as radically heterogeneous. This, as I have said, is impossible within the knowledge protocols of academic history for the globality of academia is not independent of the globality that European modern has created. To attempt to provincialize this 'Europe' is to see the modern as inevitably contested, to write over the given and privileged narratives of citizenship other narratives of human connections that draw sustenance from dreamed-up pasts and futures where collectivities are defined neither by rituals of citizenship nor by the nightmare of 'traditional' that 'modernity' creates.(344)

The novel, *The Calcutta Chromosome*, is history of collective memory. Unlike official history it is admixture of Indian and Egyptian histories. Antar, an Egyptian widower, remembers his childhood across Niles and Lakhan an orphaned Indian boy working as 'dhooley-bearer' (sweeper) in Ross's lab. Murugan bespeaks the reality behind his risky project of doing research in Ross's self-righteous *Memoir*. When Antar showed curiosity to listen the story of Ross, Murugan tells Antar "I'll turn a few pages for you, but remember, it was you who asked. It's your funeral" (34). In 1987 he wrote summary of his research article entitled "*Certain Systematic Discrepancies in Ronald Ross's account of Plasmodium B*' but his colleagues gave negative remarks and suggested to revise before going to press. And he revised it as "*An Alternative Interpretation of Late Nineteenth-Century Malaria Research: is there a Secret History?*" After it was published it got hostile reception and his European fellows in New York branded Murugan as a 'crank and eccentric.' Murugan's attempt to discover Ross's history makes him 'anti-historical' for European so he called 'ecentric'. But Murugan continued his

mission at the cost of his job and life. Murugan's mission is to find loop holes of Ross's narrative and write its reversal.

The protagonists are in self betrayals, who are working for globalization, International Water Council, in the age where "river doesn't flow through the city" (134). The bizarre experience of Ghosh's writing is what Chakrabarty termed, "narrative of historical transition" (344). Ava is analogous to imperial regime. As she controls the movement of Antar, an Egyptian national lives in New York City who works as a data analyst for INGO, International Water Council. His job is to monitor Ava but the situation is reverse. Ava- shortcut of Hindi word Avatar, controls Antar homonymous to English word Ant. The novel also posits through the character of Ava the ongoing instrumentalizing of technology in the post-colonial phase of globalized world. Even though Antar's company is International Water Council, he is jobless in the office. His boss in office says, "there is no work at all, now that the river doesn't flow through the city anymore" (134). According to him 'shelter' comes before 'water', he says, "the only thing everyone could agree on was the shelter idea. So that's what I do now, I run a shelter" (134).

Diane M. Nelson compares the novel with science laboratory, as he takes colonies are laboratories of modernity. He believes, "Ghosh's *The Calcutta Chromosome* is a tropical laboratory about various forms of colonial laboratories" (294). Lakshman was made 'a guinea pig' an object of experiment in Ross's Lab by Europeans. A healthy young fellow Lutchman was injected with malaria parasite but Ross is much worried to be suspected of murder. It is because Murugan says,

Lutchman is that he's a "dhooley-bearer". In other words the British government pays him to shovel shit. Ronnie knows Her Imperial Majesty wouldn't be too pleased about this little experiment of his if she got to hear of it up in her castle on London Bridge or wherever. Later he covers his tracks by writing Doc Manson: "Don't for heaven's sake mention Lutchman at the British Medical Association. .

he is a government servant. To give a government servant fever would be a crime!" (43)

Lutchman/Laakhan worked in Ross's Lab for three years, as a cleaner by profession. But, Murugan claims that "he (Lutchamn) was leading Ronnie by the nose"(136). Murugan also believes that Mangala and Laakhan did succeed in transplantation of the Calcutta chromosome. In fact Laakhan himself is a living example of interpersonal transference of the Calcutta Chromosome. This malevolent coming back to Mangala and Laakhan, we cannot ignore the fact that both of them are from the very lowest rung of Hindu caste system.

Murugan has decided to quit his job at LifeWatch and was self-convinced to go to Calcutta for research. Antar alarmed Murugan not to leave the job at Lifewatch showing him economic prospectus, he says, "You'll barely have enough to support yourself if you go ahead with this" (28). But Murugan is adamant and determined about his decision, he says, "I want to do something with my life" (28). That something was his research about Ross. He boasts his knowledge as only living person to be expert on Ross. The narrator writes Murugan saying,

I've tracked him through every single one of those five hundred days altogether working on malaria. And you know what? I've tracked him through every single one of those five hundred days: I know where he was, what he did, which slides

he looked at; I know what he was hoping to see and what he actually saw; I know who was with him, who wasn't him. Its like I was looking over his shoulder. (30)

Antar another protagonist of the novel, working for international water tracking company, is in a sense an imperial agent. The International Water Council is an INGO attempting to control the global resources of water which has only command centre for Asia in Lhasa. It's similar to Antonio Negri describes new global form of empire: structural hegemonies perpetuate the neo-imperialist ambitions of multinational corporations, turning the so-called natives into docile, subservient labourers(65). The International Water Council aims to privatize access to the world's water supplies, advancing a border corporist vision to control all life. Antars exposes about them, "they saw themselves making history with their vast water-control experiments: they wanted to record every minute detail of what they had done, what they would do" (3). Antar, as a programmer and system analyst, is supposed to control Ava, his computer but Ava controls him instead. Ava, a metaphor of neo-colonialism, commands over him. Antar works online for his company and has been given warning; "his pay had been docked because of 'declining productivity' (2). Sarcastically, Antar takes Ava as Addaad al-Turaab, a dust counter. When Ava translated different languages and dialects Antar commanded "Stop showing off". He orders, "You don't have to show me you know everything there is to know. Iskuti; shut up"(3). The narrator tells, "But it was Ava who silenced him instead, serenely spitting the phrases back at him. Antar listened awestruck as 'shut up' took on the foliage of the Upper Amazon" (3). At the ending lines of the novel, when Murugan revealed everything about Ronald Ross, Antar is helpless drowned into sharp noise of his room. "There were voices everywhere now, in his room, in his head, in his ears, it was as though a crowd of people were in the room with him. They were saying: 'We're with you; you are not alone; we'll help you across' (172). These sympathetic and

consoling words are of European whites referred as 'we' in sentence that suggests their failed attempt to use Antar for their purpose. Antar has tried his best to prohibit Murugan going to Calcutta in the beginning.

IV. Subaltern Subjectivity in The Circle of Reason and The Calcutta Chromosome

Subaltern's history discarded the so called universal model of European history writing. With the intervention of non-western historiography, the objective view of history as the collection of fact is challenged. For Bill Ashcroft, Gareth Griffiths and Helen Tiffin history as a discipline was used to control the subjects of non-European world. They substantiate this, "the emergence of history in European thought is conterminous with the rise of modern colonialism, which in its radical othering and violent annexation of the non-European world, found in history a prominent, if not prominent, instrument for the control of the subject people" (317). In this connection, Derek Walcott suggests the need for a new beginning to postcolonial history, one which dispenses with the imperial history together. In his 'Muse of the History', he argues literature serves historical truth that the New World societies and their histories as "literature of recrimination and despair" (329). Rejecting the imperial idea of history, Paul Carter introduces the concept of 'spatial history' as non-linear writing; as a form of history, "the spatial forms and fantasies through which a culture declares its presence" (334). Ashcroft by citing Wilson Harris' essay "The Limbo Gateway" claims that literary writing can be appropriate means to authorize otherwise forbidden entries in to the intellectual battlefield of European thought. With the example of limbo dance, Harris puts value of arts over history, "a philosophy of history may well lie buried in the arts of imagination" (336). In this connection, Ashcroft comments, "in postcolonial societies the term 'literary' may well operate in its traditional canonical way, but more often it has come to operate as a mode by which the objectivity of narrative is contested, and particularly the narrative of history"(318).

History was/is as means to have legitimate existence. Foucault questions "our modernity" being different from all other forms of humanity (quoted in Bill Ashcroft 317). Hayden White

interrogates 'history as scientific discipline' to convey single narrative truth, closet possible representation of events. White identifies the emergence of the discipline of history with a strategic moment of choice between possible discursive options, in which the apparently neutral narrative form succeeded by virtue of its resemblance to the purity of scientific disciplines(quoted in Bill Ashcroft 317). History writing was nineteenth century European phenomenon which calls others 'anti-historical' and 'anti-modern'. Dipesh Chakrabatry advocates the notion of 'Indians' representing themselves in 'history', "Indian history itself is in position of subalterneity, one can articulate subaltern position in the name of this history" (340). For him, 'collective memory' of Indian people can be split into: modernizing elite and a yet-tobe modernized peasantry. What he calls the project of provincializing Europe, which is made universal due to joint venture of modern imperialism and (third-world) nationalism, now is the time to know equally "pasts of the majority of mankind" i. e. the non-West. He suggests the solution: "Yet the understanding that 'we' all do 'European' history with our different and often non-European archives opens up the possibility of a politics and project of alliance between metropolitan histories and subaltern peripheral pasts" (341).

The formation of subaltern studies group is not a sudden or an abrupt phenomenon.

Ranajit Guha initiated this group in 1982 when a collective of South Asian scholars in Britain especially Partha Chatterjee and Dipesh Chakraborty, initiated publication of a book titled
Subaltern Studies. The most prominent writers of the subaltern scholars are Ranajit Guha, Partha Chatterjee, Dipesh Chakrabarty, Gayatri Chakrabarty Spivak, Gyan Pandey, Edward Said,
Gautam Bhadra, David Hadriman, Shahid Amin, Sudipta Kabiraj etc. Studying history of these
groups comes under the term subaltern studies. Subaltern Studies is considered as History from
below. The concerning scholars of Subaltern Studies Group tried to fill the gaps of history,

which is written by elites or the west, by distinguishing, recuperating, streamlining and identifying the stories of non-elite, subjugated and marginalized people.

The study of subaltern subjectivity is originally started from non-West and spread out to western academia. Dr. Taralal Shrestha's study *Power*, *Artists and Subaltern* (*Sakti*, *Srasta ra Sualtern*) shows that "Subaltern studies is a campaign most controversial, debatable and critical which is typically originated first ever powerful campaign from non-Western part of the world" (xv). He advocates for writing subaltern history by the intellectuals. He says, "It's enough of worshipping power centered history. Now, it's time to begin writing new discourse devoted to subalterns" (xv).

Subaltern subjectivity is very complex matter to distinguish and give its definite meaning. Gayatri Chakravorty Spivak, a pioneer theorist in Subaltern Studies, in her essay "Can the Subaltern Speak?" raises many issues regarding subaltern historiography and subaltern's agency. Spivak defines 'subaltern as a person without lines of social mobility' (28). She means to say the class of people who are denied access to 'hegemonic power'. In this sense, subaltern classes may include peasants, on-wage workers, woman and other groups who can't enjoy facility of state. But she talks about the inevitability of representation-'there is no unrepresentable subaltern subject that can know and speak itself' and that 'the intellectual's solution is not to abstain from representation' (32). Subaltern cannot represent themselves they must be represented. So our task as the critic is not to avoid representation. With this rhetorical question "Can the subaltern Speak?" Spivak suggests that silence is the critical characteristic of subaltern identity. But Amitav Ghosh's works strongly confirm to the notion that the subaltern can speak in contrast to Spivak's concept of 'subaltern cannot speak' if given a proper chance and with an appropriate

employment of the discourse. Synthesizing Spivak's idea, Bill Ashcroft formulates the job of subaltern study researcher: "the task of research is to investigate, identify and measure the specific nature of the degree of deviation of [the dominant indigenous groups at the regional and local level from the ideal [the subaltern] and situate it historically" (218). Therefore, Ghosh purposefully brings subaltern characters into stories and focuses on personal histories of these individuals to situate them historically. The marginalized characters help us perceive life, events and issues from their own point of view.

Amitav Ghosh tries to write peripheral pasts of Indian subalterns. Ghosh in these two novels, The Circle of Reason and The Calcutta Chromosome, has expressed his concerns for the downtrodden people of non-Western (namely Indian and Egyptian) society. Such an intricate plot insists on not only the comprehensibility and agency of the subaltern, it also dismisses arbitrary and essentialist dichotomies between the West and India. Subaltern agency allows the subaltern to regain his/her silenced role in the narrative of history. His sympathetic attitude towards the subaltern subjects can be easily perceived. The problems of alienation, migration and existential crisis in life of unprivileged class of the society are explored through his fiction. The voice of the subalterns, their struggle and sacrifices get a prominent placement in the fiction in a distinct level and different way. In these novels Ghosh has faithfully exposed the pathetic situation of the subaltern coping up with evil faces of poverty, homelessness, exploitation and subjugation by seen and unseen forces of empire. Through his writings he provided subalterns center stage by making them as the pivotal character of his fiction so that they can raise voice against the oppressive forces of their society. Most of the characters and prominently like Alu and Zindi (from The Circle of Reason) and Lutchman and Mangala from (The Calcutta *Chromosome*) are the subject of my discussion in the light of subaltern subjectivity.

Amitav Ghosh has taken the theme of his fiction from the history as well as real journey of life. The stories of the common people, who have been the sufferers to the maximum of these historical upheavals or political crisis, have been taken as a subject of the fiction. These characters from the marginalized sphere are in the main lead of his stories. By providing the centrality to the marginalized characters, Ghosh also answers the dilemma of the postcolonial intelligentsia regarding the ability of the subaltern to speak. Sometimes entering as a narrator, without becoming a representative and other time allowing the subaltern characters to represent themselves by providing the narrative stage, Ghosh rewrites subaltern historiography. His novels can be called "voice of the voiceless" for the documentation of 'lived experience' of those whose history has been silenced by different power mechanisms.

Ghosh shows an abiding interest in marginalized and silenced individuals and their predicament. He says in an interview: "I think what is interesting about, say, history in terms of a novel is that history gives us particular predicaments which are unique predicaments, not repeatable in time and place" (101). Ghosh's rhetoric encompasses "story of subalterns" through the discourse of subaltern writing. Mainly staging the marginalized group at the centre of novel and raising their plight through representation.

The Circle of Reason is the novel where subalterns are on move- the process of their construction and representational discourses, (national-political and migration, bureaucratic) attempt to constitute them. All the sublaltern characters attempt to constitute themselves through everyday tactics and survival but also by setting up alternative micro-economies. Alu, (Nachiketa Bose) is doubly orphaned; once when his father died and next time when his Uncle Balaram died. Jyoti Das seems to enjoy power but his condition is depicted no better than Alu and Zindi. Lal, his junior, tells him that they couldn't do anything against the tricky situation. He exposed

about their inability to do anything in Al-Ghazira, "There is nothing we can do. It's a very tricky situation. We can't alert the Ghaziri authorities. It would be disaster if they found out that Indians are involved in this business. They'd probably stop giving new visas to Indian workers" (178). Jyoti Das flees to next country feeling remorse for "defeat at home, and defeat in the world" (272). Karthamma's desire to have signed paper before the birth of her son shows innocence of getting state facility.

Indian writer writing in English, credits Ghosh with his ability to return to history-as agency and plot- to the colonial subaltern. The charge of elitism against writers gets aligned with the representation of subaltern peoples but also with the status of the English language itself in relation to which regional languages are seen as occupying a subaltern status in the intricate economy of advances, distribution and prizes. Nivedita Majumdar remarks Ghosh's rejection of Commonwealth nomination to solidarity of vernacular languages. She writes, "By doing so, Ghosh helps resolve the long conflictual relationship between IEL and literature in regional languages" (256).

In his first novel *The Circle of Reason*, almost all the characters be it Alu, Shombhu Debnath, Rakhal, Toru Debi, Rajan, Zindi-al-Aiffaha, Kulfi, Karthamma, Jeevanbhai Patel, Haji Fahmy, Zaghloul, are all belonging to lower strata of society and forming the subaltern group. Shobhu Devnath, father of Rakhal and Laxmi, is master of weaving. The struggle of these characters and their survival issues are central to development of the plot. It is noteworthy that *The Circle of Reason* came into existence before the author's involvement with Subaltern Studies Group. However, it sets the writer's interest in the lives of people from marginalized class.

Subaltern issue is related to core idea of self as defining subject and other as defined object. The concept of 'self' and 'other' is at the heart of post-colonial debate. Self is dominant in relation to other, that means; other is always sidelined from main stream silencing his/her voice for the development of society. Edward Said, a prominent scholar of post-colonialism, identifies a European cultural representation of 'Other'. He theorizes in his book *Orientalism* the process identifying the East as Other and inferior to the West. He writes a book Orientalism which "tries to show that European culture gained in strength and identity by setting itself off against the Orient as a surrogate and even underground self' (25). Emphasizing the construction of binary opposition between the Orient and the Occident, he mentions that West as self is considered to be the supreme the main source of knowledge and learning, while East as Other is represented as a place of ignorance, superstition and illiteracy. The non-west, i.e. Orient exists as static, ignorant and cut off from the progress of Western history so do not have even the capability to represent themselves. Thus West is always being superior take the responsibility of representing the orients, Other in the form of literary text. These Others are basically the marginalized group who are considered being the suppressed, therefore are allotted 'sub' or 'secondary' space in the society called Subaltern.

Subaltern is the term that refers to the inferior rank or person from the below strata of society. Antonio Gramsci first used the word subaltern in the essay 'On the Margins of History' that can be associated with the people of those group in the society who are the subject to the hegemony of the ruling classes. Subaltern classes may include the people who have been denied access to hegemonic power come under this category like farmers, workers or woman. Gramsci claims that the history of the subaltern classes is just as complex as the history of the dominant classes, although the history of the latter is usually accepted as official history (216). The history

of subaltern group is generally fragmented and episodic, since they are always subject to the activities of the ruling groups, even when they rebel. They have less access to the authorities of social, cultural, and political institutions by which they may control their own representation, and less access to cultural and social institutions. Thus they have no power to represent themselves. Foucault stated that History always dominated and written by elites, those who exercise power. The ruling class is having the control on these institutions and they constructed the Other according to their own perception. So History will be the tool in the hands of elite and they projected their own perception while writing History. History is disseminated through different discourses in media to acclaim it as truth. He hays, "Truth is linked in a circular relation with systems of power which produce and sustain it, and to effects of power which it includes and extend it" (1145). History written till now is one-sided, partial and biased. This kind of history is not able to show the true picture of the member of lower strata of society. History should be unbiased and impartial. True history is not restricted to superior group but it is also related to common people.

The people or the subaltern is a group defined by its difference from elites. 'The true subaltern group' Spivak further elaborates, 'whose identity is its difference' (32). But one can't construct a category of the subaltern that has an effective voice clearly and unproblematically identifiable as such, a voice that does not at the same time occupy many other possible speaking positions. Then there arises a question, "Can the subaltern (as woman) speak?" Spivak cleverly answers "The subaltern as female can't be heard and read" (35). Western feminism continues and displaces the battle over the right to individualism between women and men in situations upward class mobility but opposite to this non-western female condition is "double silencing." Spivak traces the reason behind this, she elaborates:

For Indian women are historically double marginalized: first as an object of colonialist historiography and next as a subject of insurgency, the ideological construction of gender which keeps male dominant. If, in the contest of colonial production, the subaltern has no history and cannot speak, the subaltern as female is even more deeply in shadow. (32).

Even though, non-western women have no history. But to Ghosh most of the female characters are privileged with agency to speak. One third of novel's narrarion is controlled by Zindi in *The Circle of Reason*. She is Egyptian prostitute but the novel has no neagative representation of her. Zindi is 'speaking subject' with power to control reality around her with her humanitarian life skills. Everybody is fond of listening to her:

They had lived through everything Zindi spoke of and had heard her talk of it time and time again; yet it was only in her telling that it took shape; changed from mere incidents to a palpable thing, a block of time which was not hours or minutes or days, but something corporeal, with its own malevolent willfulness.

That was Zindi's power: she could bring together empty air and give it a body just by talking of it. (132)

She is practical woman with humble heart. The immigrants learn more about the Ras, Al-Gazira and the world in one evening at Zindi's boarding house than from a month's watching television (142). Despite being illiterate also Zindi chooses word according to taste of her audience. The narrator describes: "they could never tire of listening to {Zindi} speak, in her welber of languages, though they knew every word, just as well they knew lines of songs. And when sometimes she chose a different word or a new phrase it was like the pressure of a potter's thumb

on clay changing the thing itself and their knowledge of it" (230). Sulaja Singh also explores the issue of subaltern agency in this novel, "Various discourses both construct and represent the subaltern in the novel: discourses of global migration, national power as bureaucratic fetishism, science as social mission. . . . explore the relationship between subaltern subjectivity, global itineraries and knowledge production in Ghosh's first novel *The Circle of Reason*, published in 1986"(47).

Similarly, in *The Calcutta Chromosome*, Ghosh privileges the subaltern and tries to articulate their agency through the Counter-Science Group of Mangala. Mangala and Lakhan though belonging to subalterns helped Ronald Ross hand in hand to complete his research on malaria. Their quasi-religious practices seem quite contrary to the scientific research for Malaria but they provide direction to the research as foundational but scattered information leading Ross towards the final discovery. Thus, it establishes that the power established its discourse on the agency provided by the subaltern. Subalterns have their own mechanism that saves them from being eradicated. Here, Laakhan and Mangala achieved the positions of power as manipulators of knowledge. Ghosh managed to evade from the Western and Eastern gap, by formulating a plot in which subaltern helped in directing and producing the final results of scientific research. Laakhan, a dhooley-bearer by profession, but when "Ron went running off in the wrong direction, he was leading Ronnie by the nose" (136).

Mangala, a syphilitic patient, enjoys power of her cult practice. Normally lady like

Magala are misbehaved in the Indian society but she has especial power in the novel everyone is

waiting for her charismatic power of treatment 'with waning light of hope in their eyes' (85). She

possesses power to mock at Elijah Farley, a doctor at Ross's lab. Mangala suggested Farley to

check the fresh blood slide where he sees malarial pigment. Mangla says in mocking tone to doctor, "tell him that what he sees is the creatures member entering the body of its mate, doing what men and woman must do" (87). She is revered as Goddess and worshipped even after death. Mangala is the ultimate figure of post-colonial subaltern woman who is heard and spoken of in the novel.

Ashcroft says it is sometimes been interpreted to mean that there is no way in which oppressed or politically marginalized groups can voice their resistance or that the subaltern only has a dominant language or dominant voice in which to be heard. But, Amitav Ghosh belongs to the International school of writing that successfully deals with the post-colonial ethos of modern world sacrificing the ancient histories of the separate lands. Ghosh perfectly blends fact and fiction with magical realism. He weaves his magical realistic plots with non-western themes. He has successfully mastered over the genre called 'magical realism' which was largely developed in India by Salman Rushdie and in South America by Gabriel Garcia Marquez. Ghosh perfectly weaves fact and fiction with magical realism where he re-conceptualizes the concept of society and history.

Thus, the term Subaltern can be used as an umbrella term for all those who are marginalized and underprivileged and deprived off the voice to speak. The term subaltern refers to the suppressed group that belongs to the lower strata of life, or the woman, who have been intimidated for many years. Subaltern can be meant as overlooked, neglected, disregarded, and treated with unconcern and indifference.

Amitav Ghosh's writing truly exhibits the manifestation and implications of the term 'subaltern' in contemporary writings.. Ghosh in his works talks about the alternative histories

and practices of people. Subaltern as an approach that represent marginalized as they have the inability to speak and empowers them to represent the marginalized people and their issues.

In this context, Homi K. Bhabha has emphasized the importance of relation of social power while defining subaltern groups. According to his notion about subalternity the presence of these oppressed minority groups was vital to the self-definition of the majority group. Subaltern social group were also in a position to subvert the authority of those who had hegemonic power. This can be well exemplified by Mangala in *The Calcutta Chromosome*. These are the issues of Indian females in that scenario who are already known as doubly marginalized class. The "ghost stories" of Phulboni traces Lakhan's origin which speaks for the unwritten stories of doubly subaltern people- people who were lower in rank within a colonized society.

Ghosh purposefully brings subaltern characters into stories and focuses on personal histories of these individuals. The marginalized characters help us perceive life, events and issues from their point of view. The themes evoked in his works are in tune with the concerns of subaltern theory. Amitav Ghosh's novels covertly suggest the need for peaceful coexistence and strong humanitarian ties across cultures overlooking personal, regional and political considerations. Dissolving the boundary between the physical and spiritual truths and setting background for imaginative reconstruction of past through his novels Ghosh opens a new avenue of humanity. His novels evidence his commitment to a broadly defined, secular –humanist frame of values, what Simon Gikandi says as post-colonial "global identity." She says, "Citizen of the postcolony are more likely to seek their global identity by invoking the very logic of Enlightenment that postcolonial theory was supposed to deconstruct" (475). Ghosh's novels in

my view has deconstructed western monolithic epistemology and presented the new world of "radically heterogeneous" human society. Thus, Ghosh's novels, in Spivak's terminology, can be said the "constructed counter-narrative of woman's consciousness, thus woman's being, thus woman's being good, thus the good woman's desire, thus woman's desire" (33).

To sum up, Ghosh's writing in his appropriation of the term subaltern and subaltern subjectivity in these novels incorporate that the characters quest to trace their customs and identities to their native location, an absorbing play of center and margins, enmeshing of cultural identities, a demonstration of the fact that the subaltern can speak for themselves or can be spoken about either through making them speak their own stories or by creating stories on and around them in his writings. Thus, his writings are a demonstration of connotations and manifestations of the subaltern voice in contemporary post-colonial writings.

V. Magic Realism, Counter-Discourse and Subaltern Subjectivity in Ghosh's Narrative

This dissertation explored that Amitav Ghosh's writing are enmeshed with non-western sentiments and perspective to counter Western discursive formations. This research is confined to only two novels by Ghosh: *The Circle of Reason* and *The Calcutta Chromosome*. So it would be hasty generalization to conclude that Ghosh is primarily writing to reject western premises of knowledge production. It may be because of his diasporic situatedness, born in India and living and writing from New York. However, by using post-colonial rhetorical trope of 'magic realism' and counter-discursive narrative technique these novels do resist Western hegemony over discursive formations. His novels basically try to challenge the Western parameters of discourses like rationalism, nationalism, religion, science and migration. Both novels present non-Western world view to lead the future world with 'radically heterogeneous' society. Ghosh equally attempts to rewrite peripheral history of subaltern through his narratives. Either by providing narrative space to the subalterns or representation them through the stories Ghosh gives voice to the issues of downtrodden non-western subalterns.

Amitav Ghosh's the first novel, *The Circle of Reason* is an overt critique to instrumental use of reason i.e. Enlightenment. Balaram Bose's obsession with rationalism and his fanatical study of phrenology leads him to his self-destruction. Balaram's death and burning of *Life of Pasteur* is suggestive to failure of Enlightenment rationality. The novel narrates the story of a potato-headed boy, Alu, who encounters different cast of characters in his journey from Lalpukur to Algeria. His physical and spiritual journey is suggestive of countering to the pressure of rationalism, colonialism and its repercussions evident in national bureaucracy. His faith in weaving loom is metaphoric to equalize the technique of weaving to reasoning. Ghosh believes weaving is hope, a living belief that having made the world one and blessed it with its diversity it

must do so again" (22). Bhudep Roy and Jyoti Das represented 'elite' Indians who seem to enjoy bueaurocatic power but their characterization is too sympathetic. Jyoti Das is reluctant to do his job and suggested by his own assistant (Lal) not to bother about finding terrorist in Al-Ghazira. At last he is narrated as "defeat at home, defeat in the world" (272) that came to arrest Alu at the accusation of terrorism returned bare handed. The plot line is not in linear form following the conventions of realism. The disjunctive narrative constituted through fragmented stories is a blow to Western smooth plot of realistic novels. Readers feel awestruck with detailed description of characterization and plot development. The story mixes history and fantasy to make it indigenous non-western text.

Alu's escape from burying under The Star, a tall business complex likely to be built by Britisher and their colonial agent is a victory over imperial authority. His idea of community banking is worthy vision of freeing the immigrants from money problem. Finally, after wandering over dunes of Al-Ghazira and small Saharan village of North Africa (Algeria), Alu and Zindi decide to come back to India. Their decision to step back to India is allegoric to their love for native land. This generic mixture of myth and reality is an emblem of Ghosh's writing. Magic realistic scenes are narrated throughout the novel to undermine and displace realism in novelistic writing. We visualize the place and character through Ghosh's pictorial narration. The researcher used 'magic realism' as a study tool to explore and deconstruct the various European discourses. The Western thinking of realism, nationalism and knowledge is subverted through this. Ghosh' manipulation of this rhetorical technique is seen to undermine the fixity of borders set by totalizing system of imperialism, rationalism as means of freedom and realism to draw true picture of society. By mixing up modern-Western with mythical non-Western Ghosh

addresses the "hybridity" of post-colonial society. The novel doesn't give definite ending rather tells 'hope is the beginning' (272) advocating equality between 'west' and 'non-west'.

Ghosh's fourth novel, The Calcutta Chromosome, offers an alternative interpretation of Indian-born-British scientist Ronald Ross' history of malaria research. He explores the colonial intention of silencing subaltern subjects who helped Ross to his discovery. By the use of counterdiscourse as study tool the researcher has found out that it was imperial motive to subside the contribution of counter-science group of Indians towards his Nobel Prize. The novel doesn't merely exposes the lapses of objective history of Ross's *Memoirs* rather opens new space for future heterogeneous world for humanitarian globe. The novel opposite to classical detective fiction unveils the real heroes who were forced behind by the colonial power-politics. The counter-discursive narrative of Ghosh explores the real story of Laakhan and Mangala to displace truth claim of Western Science. It undercuts Western epistemological assumption about science as purely western invention. Mangala's religio-philosophical cult-practice is to replace Western hegemony over science by non-Western valorization of religion. In this connection, Alfred North Whitehead's idea about science and religion is worthy to note. He finds science religion not contradictory to each-other rather subsidiary. Whitehead in his essay "Religion and Science" demonstrates science and religion are complimentary to each-other, he writes, and "conflict between science and religion is a slight matter which has been unduly emphasized" (146). His proposing can be like west should adopt non-western method of healing, he says, "The progress of science must result in the unceasing codification of religious thought" (152). Magic realistic presentation of the collective histories of non-Western people is brought to the forefront to asset that western science and eastern religion are complimentary to each other. By mixing of science with myth Ghosh here also addresses the hybrid character of post-colonial culture.

Ghosh's interest in rewriting subaltern historiography is clearly evident through these two novels: The Circle of Reason and The Clacutta Chromosome. The blending of subaltern history and fantasy is forgrounded by exploiting 'magic realism' and 'counter-discourse' as narrative techniques. The stories of the common people, who have been silenced either by colonial discourse or nationalistic discourse, have been taken as a subject of the fiction. By providing the centrality to the marginalized characters, Ghosh answers to the dilemma of the postcolonial intelligentsia 'Can the subaltern to speak?' Either by narrating or by giving narrative agency to voiceless people Ghosh documented peripheral past of Indians. Lakhan, a dhooely bearer by profession in Ross's lab was actually "leading Ronnie by the nose" (136). Lakhan is heroic figure who is made 'guinea-pig' by Westerners for their experimentation. He survives in every struggle like Alu in *The Circle of the Reasons*. Both can be said as example of "grotesque hero" of picaresque novel, who survives by overcoming all sorts of evil forces of unjust society. Both have physical deformity: Alu's head is unnecessarily large like poatato and Lakahan's middle finger in left palm is missing. Mangala is iconic subject to represent voiceless strata of Indian society. Like Zindi in the *The Circle of Reason* she controls the reality in her surroundings. Both of them are illiterate and connected to prostitution. Mangala has become myth in present day world and worshipped as Goddess unlike Ross who is packed up in history books.

This thesis has been time-bound project so detailed study of Ghosh's writing has not been possible. The researcher was concentrated to specific texts and theoretical insights related to post-colonial resistance so no minute study of theory of Subaltern Studies was impossible. However, this thesis opens new areas of study for a researcher to explore different issues in Amitav Ghosh's writing such as writing of nostalgia, diaspora, globalization, political, aesthetic and post-modernist multi-cultural and multi-ethnic texts and etc to be explored and researched.

Works Cited

- Adorno, Theodore and Marx Horkheimer. "The Culture Industry: Enlightenment as Mass Deception." *Critical Theory Since 1965*. Eds. Hazard Adams and Leroy Searle. Florida: Florida State Uniersity Press. 2005. 230-247.
- Ashcroft, Bill, Griffiths, and Helen Tiffin.eds. *The Empire Writes Back: Theory and Practice in Post Colonial Literature*. New York: Routledge, 1995.
 - ---eds. The Post- Colonial Studies Reader. New York: Routledge, 1995.
 - ---eds. *Key Concepts in Post- Colonial Studies*. London and New York: Routledge, 2004.
- Bhaktin, Mikhail M. Discourse in Novel. *Critical Theory Since 1965*. Eds. Hazard Adams and Leroy Searle. Florida: Florida State Uniersity Press, 2005.Pp33-47.
- Bhaba, Homi K. The Location of Cultures. New York: Routledge, 1994.
- Boehmer, Elleke. Colonial and Postcolonial Literature: Migrant Metaphors. New York: Oxford University Press, 2005.
 - --. "Networks of Resistance." *The Post- Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 113-115.
- Carter, Paul. "Spatial History". *The Post- Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 333-335.

- Chakrabarty, Dipesh. "Postcoloniality and Artifice of History." *The Post- Colonial Studies**Reader. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York:

 Routledge, 1995. 340-344.
- Chambers, Charlie. "Postcolonial Science Fiction: Amitav Ghosh's *The Calcutta Chromosome*."

 Journal of Commonwealth Literature. Manoa: University of Hawaii, 2015.
- Foucault, Michael. "What is Enlightenment? *Critical Theory Since 1965*. Eds. Hazard Adams and Leroy Searle. Florida: Florida State Uniersity Press, 2005. 286-297.
 - --. "Truth and Power". *Critical Theory Since Plato*. Eds. Hazard Adams and Leroy Searle. Florida: Florida State Uniersity Press.1134-1145.
- Gosh, Amitabh. The Circle of Reasons. Great Britain: Hamish Hamilton Ltd. 1986.
 - ---. The Calcutta Chromosome. Canada: Alfred A. Knopf, 1995.
- Harris, Wilson. "The Limbo of Gateway". *The Post- Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 336-339.
- Huttumen, Toumas. Narration and Silence in the Works of Amitav Ghosh. World Literature Written in English, 2000. Vol.38.2. 28-42.
- Jones, Stephen. "Polylingulism and Magic Realism in Amitav Ghosh's *The Circle of Reason*."

 Bulletin of the School of Oriental and African Studies. University of London, Vol. 66, No 3.2003. 431-441.

- Kant, Immanuel. "An Answer to the Question: What is Enlightenment?" *Critical Theory Since*1965. Eds. Hazard Adams and Leroy Searle. Florida: Florida State Uniersity Press. 2005.
 225-229.
- Larson, Charles. "Heroic Ethnocentrism: The Idea of Universality in Literature." *The Post-Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 77-79.
- Majumdar, Nivedita. "Shadows of the Nation: Amitav Ghosh and the Criique of Nationalism." *Ariel.* Apr-Jul., Vol. 34, Issue 2/32003. Pp 237-256.
- Mathur, Suchitra. "Cought Between the Goddess and the Cyborg: Third-World Women and the Poltics of Science in Three Works of Indian Science Fiction." Manoa: University of Hawaii, 2015.
- Nelson, Diane M.. "A Social Science Fiction of Fevers, Delirium and Discovery: The Calcutta Chromosome, the Colonial Laboratory, and the Postcolonial New Human." Science Fiction Studies. Vol 30, 2003.
- O' Connell, Hugh Charles. "Mutating Toward the Future: The Convergence of Utopianism,

 Postcolonial SF, And The Post Contemporary Longing for Form in Amitabh Ghosh's *The*Calcutta Chromosome." Modern Fiction Studies.USA: John Hopkins University Press,

 2012. Springs Vol.58.774-795.
- Said, Edward W.. "Orientalism." *The Post- Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 24-27.

- --. "Resistance, Opposition and Representation." *The Post- Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 95-98.
- Sardar, Ziauddin. "ABCD(and E) of Ashis Nandi." *Alternative Modernities*. London: Pluto Press, 1998.
- Serequerberhan, Tsenay. "The Critique of Eurocentrism." *The Post- Colonial Studies Reader*.

 Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 89-92.
- Shrestha, Taralal. Shakti, Shrasta ra Subaltern (Power, Artist and Subaltern). Kathmandu:

 Discourse Publication, 2068B.S.
- Shinn, Christopher A. "On Machines and Mosquitos: Neuroscience, Bodies, and Cyborgs in Amitav Ghosh's *The Calcutta Chromosome*. MELUS, Vol.33. Number 4, Winter, 2008.
- Siddiqi, Yumna. "Police and Postcolonial Rationality in Amitav Ghosh's *The Circle of Reasons*". *Cultural Critique* 50. Winter 2002: University of Minnesota, 2002.175-21.Web. http://muse.jhu.edu/journals/cul/summary/v050/50.1siddiqi.html
- Slemon, Stephen. "Unsetting the Empire: Resistance Theory for the Second World." *The Post-Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 102-106.
- Spivak, Gayatri Chakravorty. "Can the Subaltern Speak?" *The Post- Colonial Studies Reader*.

 Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 28-35.

- ---. "Three Women's Texts and a Critique of Imperialism: A Critical Inquiry". *Race,* Writing, and Difference. 12.1. (1985): 243-261. JSTOR. Web. 26 April 2010.
- Suleri, Sara. "The Rhetoric of English India." *The Post- Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995.107-108.
- Terdiman, Richard. Discourse/ Counter-Discourse: The Thoery and Practices of Symbolic

 Resistance in Nineteenth-Century France. London: Cornell University Press, 1985.
- Tiffin, Helen. "Post-Colonial Literatures and Counter- Discourse". *The Post- Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 99-101.
- Walcott, Dereck. "The Muse of History". *The Post- Colonial Studies Reader*. Eds. Bill Ashcroft, Gareth Griffiths, and Helen Tiffin. London and New York: Routledge, 1995. 329-332.
- Whitehead, Alfred North. "Religion and Science." Essays on Western Intellectual Tradition. EdsShreedhar Lohani, Krishna Chandra Sharma, Arun Gupto and Anand Sharma.Kathmandu: M. K. Publishers, 2010. 139-157.