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The Subaltern's Power of *Silence* and *Alternative History*: Amitav Ghosh's *The Calcutta Chromosome*

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## Abstract

Amitav Ghosh's *The Calcutta Chromosome* is an attempt to rewrite the subaltern history. In this essay I would like to explore that how Amitav Ghosh makes the subaltern speak through silence. According to Gayatri Spivak the subaltern cannot speak or are not allowed to speak. She suggests that to make them speak, literary scholars should "speak to them." Amitav Ghosh makes the subaltern speak through their silence. I will also explore how the unsolved mysteries indicate towards the science-fictional Utopian dream, the posthuman, and immortality. Ghosh shows a group of subaltern people who manipulate a scientific discovery. By placing science and counter-science together Ghosh challenges the Western scientific knowledge and the biased colonial history. We see Mangala and Laakhan who belong to the subaltern class of the contemporary society and for them "silence" is religion; however, through their "silence" they come to speak and play the influential roles. Ghosh also challenges the Western ideas of "fixed identity;" we see the subaltern characters of the book often change their identities. Though Ghosh represents two contradictory ideas, "superstition" and "science" together, at the end we see the fusion of these ideas. Ghosh represents the subaltern in a new way and challenges the biased history and takes an attempt to rewrite the subaltern's alternative history. He combines the counter-science with scientific investigation to promote the subaltern's own kind of science and *modernity*. The subaltern, who do not have access into the biased history (the revised history) are shown to have a history of their own and to have great influence on the Western scientific discovery.

**Keywords: Postcolonialism, subaltern, silence, voice, alternative history, alternative modernity, science, counter-science, posthuman.**

## Introduction

Amitav Ghosh, a Bengali Indian Author is mostly known for his award winning novels *The Glass Palace*, *The Shadow Lines*, *Sea of Poppies*, *In An Antique Land*, and *The Hungry Tide*. *The Calcutta Chromosome* is also one of his less known but still very important novels and award winning works of science fiction. He was born to a Bengali family in Kolkata, India and he is very interested in Indian history. Ghosh is well known for his interest in the Indian colonial history and the contribution of the English language in the postcolonial world. In *The Calcutta Chromosome* he points towards an “alternative” history that makes me interested to work on this book. Ghosh’s writing style is very much inspired by the other Bengali Indian writers such as Rabindranath Tagore or Phanishwar Nath Renu. His childhood was spent in Calcutta and his representation of the geographical picture of Calcutta in the novel *The Calcutta Chromosome* is also influenced by his personal experiences.

*The Calcutta Chromosome* is known as his famous “postcolonial” work of science-fiction. This novel contains the idea of “alternative” history which is about “subaltern” people and of course a history of Ronald Ross, the famous doctor and Nobel Prize winner for his discovery about malaria transmission. The novel is mostly centered on the “subaltern” people, their silence and their history.

The novel starts with the appearance of a character Antar who belongs to the most technologically advanced world and works with his advanced computer Ava. He is the protagonist who, with the help of Ava, is looking for one of his missing colleagues Murugan. Murugan is one of the most important characters, a *voice of rationality*. He does research on Ronald Ross and comes with a doubt about the *untold* history. According to Murugan and his research, Ronald Ross does not really discover the malaria transmission but he is strongly

manipulated by a “subaltern” group. The leader of that group is a woman Mangala and the other character, Laakhan who helps her. Murugan believes that these people are looking for “immortality”. The narrative consists of three parts; by an omniscient narrator, by Murugan and by Sonali Das. Ghosh places science and counter-science, fiction and reality together and through such representation Ghosh provides an “alternative” history to the subaltern.

The issue of subaltern people as a subject of writing and *representation* is always controversial and of course challenging. Amitav Ghosh takes this challenge eagerly and opens a new way of thinking about the subaltern. He also challenges the Western hegemony of knowledge and science and provides an *alternative history* of India and Indian knowledge of *alternative science* and technology. He represents postcolonial India in a new way. I argue that I find a connection between Ghosh’s writing strategy about “subalterns” and Gayatri Chakravorty Spivak’s essay “Can the Subaltern Speak?”. He brings up the idea of subaltern voice and their “silence”. We see the subaltern characters of the novel are maintaining strict “silence” and “secrecy”. In the novel Murugan says that silence is religion for that subaltern group; through this statement we get a clear indication and importance of “silence” while talking about “subalterns”.

Immortality and the subaltern are two ideas that come together through Ghosh’s novel. Ghosh wonderfully establishes a strong connection between these two ideas. I argue that behind the idea of “immortality” Ghosh gives a message of “subaltern consciousness,” their “silent” voice, against “Western and national irrationality.” This quest to reach the immortality came with the “posthuman” hologram of Murugan on Ava’s monitor.

In this essay I will discuss the connection between science and counter-science and its representation in the novel. I will examine, why Ghosh chooses the theme of the “posthuman” to “rewrite” an “alternative history” of subaltern.

I argue that Ghosh’s novel shows silence as the power of the subaltern to overcome their oppression and power politics; the subaltern’s own kind of *alternative* science comes up with a result of, the *posthuman*, a science-fictional utopian dream, that proposes a new and *open ended* way of rethinking subaltern modernity and history.

## Literature review

Amitav Ghosh is mostly known for the postcolonial plot of his novels. Among all of Amitav Ghosh’s novels, *The Shadow Lines* and *In An Antique Land* are the most famous and the postcolonial contexts of those books get the attention of most critics. The issue of “identity politics” of these books is also an interesting matter of discussion among many critics. According to Anshuman A. Mondal, these books criticize the European idea of fixed identity and also colonialism. Several critics argue that these two books are Amitav Ghosh’s attempt to recover lost and parallel histories. Amitav Ghosh is very interested in “untold” history and Indian historiography. *The Calcutta Chromosome* is, however, less discussed than these other books. The scholars who talk about it are mostly interested in it as a work of science-fiction. Indian historiography and postcolonialism are two important issues in this book as well. Science-fiction is used as a weapon to make a connection between untold postcolonialism and Indian historiography.

However, some scholars are more interested in the technology based science-fictional representation in this book. Mike Frangos, in his essay “The End of Literature: Machine Reading

and Amitav Ghosh's *The Calcutta Chromosome*," states that this book is "famously difficult to classify" (Frangos 2). It contains history, the future (posthuman), machine reading, the possibility of cultural history and so on. He mainly focuses on the representation of science and the "machine" reading of the novel and how digital technology is shown in this novel. According to Frangos, "the novel imagines a future of the digital in which the digital archive's capacity for nearly infinite storage allows the reader, in this case Antar, to achieve the perspective of the posthuman future" (Frangos 7). He also states that digital technology, memory and digital archives are related to historiography in this novel.

Christopher A. Shinn emphasizes the representation of "biopower" in this novel. He argues that Ghosh's representation mostly directs the readers' attention towards the biological process of human evolution. According to Shinn biopower refers to the biological power of human beings which is more important than technology and machinery based human characteristics. Shinn states that technology is shown just as an "instrument" of biopower and biopower is not really dependent on technology. Technological influence is unavoidable because DNA is one of the most important biological terms that plays an important role in the novel and can also be manipulated by medical technology. However, he also says that it is impossible to think of the "posthuman," or as he states it, "politics of hope" only with technology and without the influence of biopower. Rather, he emphasizes human experiments on machines.

Diane H. Nelson writes that this novel makes the reader think about the "human" in new ways, a new human that seems to have more technology-based characteristics. She also argues that in Ghosh's novel it is very clearly suggested that "machine is using human" and human activities are fully influenced by machines. However, she focuses more on Ghosh's representation of the enrichment of colonial science laboratories and their use of advanced

technology. According to her, not only the West is advanced in science and technology but also British colonies are advanced too. Though she praises science and technology for making human life easier she criticizes Western scientific history and the Western colonizers' representation of the British colonizers as "scientist" and colonized as "mice and guinea pigs" (Nelson 254). She suggests Western people not deny the colonized people's participation in scientific history.

The most important theme of the novel, postcolonial history, becomes the focus of many critics. One example is Claire Chambers, who argues that Ghosh intentionally "pushes the marginal characters" into the center of the novel's plot to include them in colonial history. She states that this novel is an attempt to re-write Ronald Ross's (the Western scientist who discovers malaria parasite) medical history of Malaria discovery. She also argues that Ghosh tries to clarify the issue that colonial scientific discoveries include the equal participation of colonizers and the colonized. She argues that Ghosh's idea behind the whole story of "subaltern" and "science-fiction" is to prove that Ross's success is manipulated by indigenous knowledge. Like Nelson she also criticizes the portrait of Ross in the novel and Ross's attempt of using Indian people illegally as guinea pigs.

Although Ghosh attempts to make us rethink the subaltern's alternative history, Gyan Prakash criticizes Ghosh for mixing up subaltern history and science-fiction together. He argues that the "subaltern" issue is too sensitive to be mixed up with fictions. According to him the way Ghosh chooses to write about the subaltern through science-fiction is really problematic for the genre of science-fiction as well as for "subaltern studies," because subaltern issues never fit together with fiction. However, Charles O'Connell argues that the novel offers an answer to the question "whether the subaltern can imagine the future" and this future points out toward the utopian dream.

Bishnupriya Ghosh argues that Ghosh tries to question the vernacular history of India as written by the British colonizers. She also argues that Amitav Ghosh's writing style and the idea of choosing middle class people as the subject of writing are mostly influenced by other Indian writers' writing styles. She states that Ghosh is "not only interested in unearthing the parallel histories but he sees the colonial narrative of discovery as an exercise of power" (Ghosh 203). Here, by saying parallel histories, she points towards both Colonial and untold subaltern histories. She discusses how Amitav Ghosh reveals the postcolonial unrevealing/untold history through ghost stories. Her discussion is mostly focused on the theme of ghosts that Ghosh uses to "unearth the real history through the form a postcolonial Utopianism" (Prakash 777).

Interestingly, Ghosh has been criticized also for his representation of subaltern women through the character Mangala. Suchitra Mathur argues that Ghosh's representation of the subaltern woman is problematic in the novel. Mangala, the subaltern woman character, seems to be silent in the whole novel and Laakhan's participation in the scientific discovery is more visible and clear. Though, some other critics such as Huge Charles O'Connell, Bishnupriya Ghosh, Claire Chambers, James H. Trall argue that Ghosh's representation of the "subaltern" subject in the novel is very important for postcolonial studies and history, Mathur somehow denies their thought. According to her, Mangala is not even shown as a human figure but as a "figurine, a crude painted-clay figure" (Mathur 134). She says that Mangala's experiment would also be impossible without Laakhan's help. She criticizes Ghosh from a feminist point of view for showing Mangla less active and less important for scientific discovery than a "male" marginalized character.

Although Amitav Ghosh sometimes is criticized for mixing up "fiction" and "subaltern" issues and their history together he wants to explore something new about untold subaltern



history. Writing an “alternative history” of the subaltern through science-fiction is a productive way. Science and the subaltern people are shown to be strongly connected to each other in this novel and this makes this book a successful postcolonial science-fiction novel. Margery Sabin also argues that by such a fictional way of writing literary scholars can come into a conversation with subalterns and can represent subalterns. I argue that though Mathur criticizes Ghosh for Mangala’s confusing appearance in the novel, this silent and mysterious appearance of Mangala seems to be suitable for her character as a leader of a “subaltern” group. The fusion of “science” and “counter-science” provides the essence of a “mysterious” situation and makes readers curious to know the solution to those unsolved mysteries. These unsolved mysteries refer to the open ended plot of the novel and it enables the reader to think about the “subaltern” and their history in an open ended way.

### **Theoretical Framework**

In Ghosh’s novel, the idea of colonialism, subaltern history and colonial history of India are combined together with science-fiction. We find that the novel points towards the future and that this future belongs to the “subaltern” people; Ghosh writes alternative colonial history through fiction. As mentioned above, according to some critics the “subaltern” issue and “science” and Western knowledge cannot be fitted together, the “subaltern” issue is very sensitive matter of discussion in postcolonial studies.

Since the early seventeenth century the Indian subcontinent was one of the most important British colonies. Though India achieved independence in 1947, the consequences of colonialism are still very visible in this country. According to many postcolonial scholars colonized people’s history is determined by their colonizers. The colonized people cannot get rid

of the impacts of their colonizers. The colonial creation of the “I” and the “other,” the “colonizer” and the “colonized,” the “oppressor” and the “oppressed,” the ruler, the native bourgeoisie, the working class or middle class, the lower class and most importantly the “subaltern” became the subjects of postcolonial studies and several scholars. Western people’s imposition of their own superiority on the colonial people and colonized people’s sufferings get the attention of post colonial scholars.

Thomas Babington Macaulay, in the “Minutes of Indian Education,” (2<sup>nd</sup> February 1835) writes about Western superiority in a dramatic way and criticizes Indian “history” and their “tradition” and their “modernity” as well. He claims that Western science and education are “rational” and Indian science and education are “irrational.” According to him Western languages are languages of science and knowledge. Macaulay says very clearly that he just wants a group of people to be educated in English language, (Western) and science and knowledge in the future who will work as the representatives of Western colonizers. That group of people belong to the “elite” class in the society who have power, wealth and Western education. Afterward, that “elite” society, which includes the privileged people, repeat the same actions of the Western colonizers. The historiography of the nationalist movement in India is also determined by the “elite class.” According to Ranajit Guha, “the historiography of Indian Nationalism has for a long time been dominated by elitism- colonialist elitism and bourgeois-nationalist elitism” (Guha 39). Here he refers to both the elite class, colonizers and the native privileged bourgeoisie class. According to Rosalind C. Morris, “subaltern was born both inside and outside the domain of colonial governance and nationalist politics” (Morris 84). Thus the politics of power is introduced by the Western colonizers and has been continued by their successors.

Subalterns and their participation in postcolonial studies are crucial issues because they are considered as marginal people. “Subaltern” is a term first adopted by Antonio Gramsci; he was interested in the historiography of the subaltern. The meaning of the term “subaltern” is “of inferior rank” and in postcolonial studies it refers to the “most inferior class” in society.

Subaltern groups include peasants, workers, and, most importantly, the subaltern women and the unprivileged people of a country and society who do not have access to hegemonic power. In postcolonial studies, subaltern studies cover an important part as subalterns belong to the lowest class of the society and do not have access to history. They are not allowed to raise their voice against the colonial or native brutality and violence. Subalterns are believed to be uneducated by their oppressor (both Western and native), having no sense of knowledge and science, more devoted to religion, superstitious and spiritual practices and so on. Ranajit Guha, Gayatri Chakravorty Spivak, Dipesh Chakrabarty, Partha Chatterjee, David Hardiman and Gyan Pandey are the most influential writers on (postcolonial criticism) subaltern studies.

The voice of subaltern people, their capability of speaking and their history are important issues in subaltern studies. Gayatri Chakravorty Spivak, in her essay “Can the Subaltern Speak,” argues that the subaltern cannot speak because others are “speaking for them” (Spivak 91). According to her to recover the voice of the “subaltern” is quite impossible. She criticizes this matter of trying to be their re-presentative, because it is impossible for people to represent subalterns who are in a privileged position of the society and cannot unlearn their own privilege. Rosalind C. Morris argues that some scholars believe that “by digging afresh into the archives they will be able to somehow recapture the authentic voice of the subaltern” (Morris 83). However, Morris points out that subaltern history is determined by their rulers and this history is biased. Several scholars argue that the history of the subaltern is not even clear to themselves.

Guha argues that they do not have access to written history because the history is written by the privileged rulers. According to Spivak, they have different levels of oppressors, not only the colonizers but also the natives are their oppressors. They belong to the lowest level of the oppressed classes and cannot even speak for their own rights. Spivak suggests that the West should have an “effective” way of “unlearning privilege” to study the “other” and to discuss the the subaltern. She suggests that to represent them, postcolonial scholars should unlearn their privilege and they must “speak to” the subaltern rather than “speaking for them” (Spivak 106). By this she suggests scholars not to try to be the voice of subaltern but to make a conversation with them through unlearning privilege.

According to Ranajit Guha the subaltern’s participation in various nationalist movement has not been included in the Indian historiography. Subaltern people cannot even enter in the era of “modernity;” modernity is defined first by the Western people. However, Dipesh Chakrabarty, in his *Provincializing Europe* proposes a new kind of modernity, modernity which belongs to this subaltern group of people. This new kind of modernity includes their faith, belief, and their own practices which also have a different definition of modernity for the subaltern.

Spivak warns the postcolonial scholars not to romanticize or homogenize the “subaltern” subject while writing about them. Her suggestion is to “speak to them”, to bring them into a conversation, instead of “speaking for them.” Margery Sabin, in her essay “In Search of Subaltern Consciousness” argues “for the value to historical study of the more dramatic, speculative, and open-ended ways of representing subaltern consciousness that literature can contribute, even to revisionary history” (Sabin 177). Postcolonial scholars can rethink subaltern history and subaltern consciousness and the participation of subalterns in the activities in their society, such as nationalist movements.

Amitav Ghosh chose science-fiction to write a fictional subaltern history of the participation of the subaltern in the scientific discoveries. Science-fiction is a term first used in the 1926 by Hugo Gernsback. Most science-fiction points towards the future and Amitav Ghosh pick up the science-fictional utopian issue and connects it to the postcolonial utopian dream. Science-fiction is a genre of literary fiction and science-fiction novels by Indian writers is not so rare; for example, *The Simoqin Prophecies*, *The Manticore's Secret* and *The Unwaba Revelations* by Samit Basu, *The Prophecy of Trivine* by Damini Majumder, *Memories With Maya* by Clyde DeSouza, *Sultana's Dream* by Rokeya Sakhawat Hussain, *The Ultimate Revelations* by Jamshed Akhtar and so on. However, Ghosh combines postcolonial history with science-fiction successfully. He uses the term "counter-science" in a new way and connects it to science. Such fusion of science and counter-science becomes the center of the novel. The subaltern utopian dream is projected by this fusion of "counter-science" and science. According to Hugh Charles O'Connell, the genre of "postcolonial SF would seek to imagine not only the place of the subaltern in the future, but also what a subaltern or postcolonial conception of the future would be" (O'Connell 782).

Most importantly O'Connell also brings up the science-fictional issue of the "posthuman" because the posthuman is connected with the future of the subaltern. "Posthuman" is a term that some people "traced back to the cybernetic movement of the 1940s, and, more specifically, to the writings of Norbert Wiener" (Gane 431) and it begins to spread in the 1990s. This term was used in Donna Haraway's "Simians, Cyborgs, and Women: The Reinvention of Nature" (1991). However, she does not mention this term explicitly in her work and names it as "cyborg," which is a new hybrid creature. And Haraway introduces this hybrid creature as,

[E]ntities made of, first, ourselves and other organic creatures in our unchosen

‘high- technological’ guise as information systems, texts, and ergonomically controlled, labouring, desiring, and reproducing systems. The second essential ingredient in cyborgs is machines in their guise, also, as communications systems, texts, and self-acting, ergonomically designed apparatuses. (Haraway 01)

By saying this she refers to the combination of human self and technology. Haraway argues that both human and machine are needed to become a posthuman rather than only contribution of technological advancement. She also claims that the posthuman is controlled.

Nicholas Gane argues that posthuman bodies are no longer tied to nature and they are the technological transformation of the human body. By saying this he points towards the issue that this new human is no longer influenced by nature but is determined by technological advancements such as *robots*. Frances Fukuyama argues that this new biotechnology is threatening for basic “human nature” such as “the environmental factors, the uniqueness of human language, human consciousness and emotions” (Fukuyama 130). However, Kathrine Hayles N. emphasizes more the “form of subjectivity that are born out of the interface between bodies and computer based technology rather than hyperreality or of the possibility of downloading mind and consciousness into a machine” (Gane 432). Hayles argues that the posthuman is the combination of the artificial intelligence and human, something beyond humanity and controlled; however, it would not be the ultimate ending to “humanity.”

Some other scholars also raise the question about posthuman ability of *speaking*. Judith Halberstam and Ira Livingston argue that “posthuman” *cannot speak* because they are always spoken by the stories that somebody has already told. According to them,

Speaking is always already something done to us or for us by others whose

presence as antecedents, as authorities, as interpretation, over-powers ours, even when one inhabits the most privileged of positions- that of the Western, educated, middle-class professional. [...] Posed between action and representation, posthuman bodies [...] are bodies living outside national, sexual, economic borders. They exceed and override borders by turning bodies into acts and actions into representation. So the posthuman, alien, and marginal like subaltern, probably cannot speak. (Halberstam and Livingston 98)

They claim that the posthuman is marginal like the subaltern and cannot speak as well and therefore, it is important to keep in mind that “posthuman” can be related to the subaltern and their voice. Posthuman is an idea that comes up as a result of the new hope of better future of human entity.

According to Judith Halberstam and Ira Livingston the posthuman body is a result of the quest for postmodernist power and pleasure because the posthuman body “is a technology, a screen, a projected image, [...] a techno-body, a queer body” (Livingstone 3). The posthuman is considered as a scientific utopian dream. It comes out through this quest of getting rid of oppression and achieving equality. However, Fukuyama warns that though it is assumed by many scholars that the posthuman world may look like a better life- “free, equal, prosperous, caring, compassionate” (Fukuyama 218)- it may be something worse than our expectation. He says it may be “full of social conflict as a result.” Moreover, according to Stephen G. Post “no technological modifications can provide us with genuine purpose, happiness, wisdom, compassionate love, and similar virtues that make for a good life” (Post 36). Therefore, the posthumanism is also considered as the ending of humanism. The posthuman may be utopian or dystopian and the term is really controversial. However, Amitav Ghosh in his novel connects this

science fictional dream to the postcolonial utopian dream of *immortality*, also the quest for getting rid of *power politics* and quest for *equality* of position in the colonial society. He connects the subaltern experiments with the modern science fictional term, the posthuman. The posthuman, in this novel, is also used to show the subaltern having the controlling power.

## **Analysis**

Amitav Ghosh's novel introduces the alternative story of the subaltern and their "utopian dream" of achieving the ultimate test of immortality; it is connected to the science-fictional and philosophical term "posthuman." We get to see new views of the posthuman, importantly in this novel, Amitav Ghosh suggests a new way of thinking about subaltern history and future. He places science and knowledge and subalternity together to propose an alternative history. According to the British colonizers, science and advanced knowledge belonged to Western people and all the invention and scientific discoveries were the result of their superior knowledge. However, Amitav Ghosh introduces a new way of thinking about the written history of those discoveries and the untold histories behind them. He rewrites the history of discovery of the Malaria bug in colonial India and includes the subaltern as the main subject of this alternative history. This alternative history provides an open ended way of thinking about subaltern futures as well. For that purpose, science-fiction is an influential way to rethink the future.

It is important to keep in mind that "subaltern" history is a crucial issue of postcolonial studies and this crucial issue plays a vital role in Ghosh's novel. Mangala, the leader of a subaltern group comes into the center of the plot through the description of a Western character, Murugan, who seems to be the voice of *rationality*. In this novel we get to see a group of



subaltern people and their story is told by Murugan and the third person narrator, who do not belong to that group. However, through Murugan's representation we get to know something more than what the written history of the subaltern and also the history of science contain. The character of Murugan appears mysteriously from the very beginning of the novel and through the whole book he remains mysterious and a bit unusual. Calcutta is not new to Murugan. He is an India-born American who works in LifeWatch and a colleague of Antar; Antar is the protagonist. His early childhood was spent in Calcutta. He is an American and Indian hybrid and his name is also a bit strange because it is not a typical American name and not even an Indian one but still has an Indian kind of tone. His accent of language is also a little bit strange and unusual that Urmila and Sonali do not understand him. His appearance in the novel is also strange; his outfit is described as, "green cap, his little goatee and his mud-spattered khaki trousers" (Ghosh, 26); he names himself as "mad scientist." He introduces the subaltern group and he calls them a "counter-science" group.

The subaltern group consists of Laakhan, Magala and some other people. According to Murugan, Mangala, the subaltern woman, is the leader of the group. The story starts with the appearance of an Egyptian character, Antar, who belongs to the future, and works with his super advanced computer Ava. He looks for the owner of a lost ID card that belongs to a corporation named International Water Council who wants to control everything. Eventually Antar comes to know that that ID card belongs to his former colleague Murugan, who disappeared when he went to Calcutta in 1995. Antar is interested in the ID card because he wants to know the mystery behind Murugan's disappearance and Ava wants him to find Murugan. It seems, the corporation is interested in Murugan and his research; the corporation itself wants Antar to look for Murugan and the mystery.

All of the characters of this novel seem to be looking for something; such as Antar for Murugan, the corporation for subaltern success in finding out immortality, Murugan for the subaltern and their invention, Ross for the malaria bug, Phulboni for Laakhan's stories, Sonali for Romen Halder and her father Phulboni, the subalterns for immortality and so on. The quest of knowing the untold truth leads them to search for each other's mystery.

We get to know that Murugan himself is doing research on Ronald Ross (1857-1932), the British award winning scientist, who discovered almost one hundred years ago in India that malaria is transmitted by the mosquito bite. Murugan's story about the subaltern is mostly influenced by Ronald Ross's *Memoirs*, published in 1923, almost twenty years after Ross's malaria discovery. Claire Chambers states that, "[t]he *Memoirs* was a hybrid text, which provided highly selective excerpts from primary sources – mostly letters that passed between Ross and his mentor Patrick Manson during the years 1895–9, and also some selections from Ross's diary – interspersed with Ross's later reflections on these" (Chambers 60). Ghosh's novel provides an alternative life story for both Ronald Ross and the "subaltern group." Ross's *Memoirs* works as strong piece of historical evidence for Amitav Ghosh to write about "untold" Indian history during the colonialism.

The narrative of the novel is a bit complicated to define. There are three narrators in different parts of the novel, first a third person narrative, then Murugan himself and the other is Sonali Das. Sonali Das is an Indian female character, who is an actress and tells the "ghost" story in Renupur. The flow of the narrative is a bit complex however; this is a trick to attract the readers as well. Because of this combination, Ghosh's representation of science comes to be seen in three parts, where we see effective blending of fiction and realism. According to Patrick Parrinder this blending of fantasy and realism is the most important part of science-fiction

(Chamber 59). Ghosh's three-part scientific representation includes, first, the future and the advanced technology, secondly, the counter-science group and Ross's discovery, and finally the science-fictional utopian idea of the posthuman. This juxtaposition of different features of science-fiction comes to provide a mysterious impact on the novel. Moreover, Murugan introduces the scientific and also fictional term, "interpersonal transmission," which is very vital to the plot of the novel. Through this fictional term he establishes the idea of counter-science in the novel. Moreover, through this term, counter-science, the subaltern comes to enter the plot as well.

Beside history, the Indian context of the novel is also interesting. Through the novel's description the readers can even visualize the events that happen through the novel. The typical Indian family, traditions, religious belief, faith, rituals, even the geographical picture of Calcutta are very interestingly shown in this novel. His description of the roads in Calcutta is very authentic and the readers come to visualize the picture of Calcutta by themselves. The statue of Ross in front of the hospital and the roads and the bending of the roads are, interestingly, entirely real. Moreover, we come to see the typical West Bengali characters such as Sonali Das, Urmila Roy, Romen Haldar and so on. However, all of them are symbols of modernity. We see Sonali as an actress, Urmila as a journalist, Romen as a rich builder and all of them are related to the subaltern characters. Even the description of the dresses and their everyday life styles give a West Bengali effect to the plot of the novel.

The story begins in the future where Antar appears with his super fast computer Ava. Interestingly, the omniscient narrator mentions Ava as "she," a female figure and the main subaltern character Mangala is also a woman. Ava acts like a human figure and also as a machine through the entire novel. Ava makes Antar think about Murugan and makes Antar believe all the

stories told by Murugan. Through Ava all the evidence and events related to Murugan and the mysterious situation are represented in the novel's plot. Ava is the *person* or *machine* who wants Antar to investigate more on Murugan and to find out the subaltern group. Most importantly, Ava is also responsible for the first appearance of Murugan's lost and burnt ID card and also for the recovery of the deleted email of Murugan, and the emails he sends to Antar regarding his research. It is stated in the novel that,

The message might still be found, Ava told him. It would just take a while. It had been typed on one of those old-fashioned, contact-based alphabetical keyboards. The electronic signals emitted by the keys were probably still traceable. It was simply a question of matching the electronic "fingerprint" of Murugan's E-mail message to every electronic signal that was still alive in the ionosphere. (Ghosh 127)

Antar tries to find out the mystery behind Murugan's sudden disappearance in Calcutta and the truth behind those events that happened in Calcutta as well, during Ross's research on the malaria bug. According to Murugan there is something more behind the history that is written about Ross's research on the Malaria bug. He claims that there are some other people who want Ross to be successful on the path of Malaria discovery. Murugan states that those people belong to a subaltern group in *Calcutta* and initially he introduces them as Luchman and Mangala. However, we come to see Luchman, appearing as Laaakhan, Lakkhan, Lakshman, Lucky, Romen Halder and Mangla as Mrs. Aratounian. Murugan says about Laakhan that, "he was all over the map, changing names, switching identities" (Ghosh 86). Moreover, in the final phase of the book Murugan predicts that Urmila will be the soul bearer of Mangala. Murugan writes

articles about his research on Ross's discovery, and he names one of them as "An Alternative Interpretation of Late Nineteenth-Century Malaria Research: Is There a Secret History?"

According to Murugan these people already have invented that Malaria is caused by mosquito bites and the cure for this as well. Mangala and her team are looking for something more than this invention, and Murugan names it "Calcutta Chromosome" which will help them to get the ultimate pleasure of immortality. Murugan describes the "Calcutta Chromosome" and says

[I]t's not symmetrically paired. And the reason why it's not paired is because it doesn't split, into eggs and sperm. And guess why that is? I'll tell you: it's because this is a chromosome that is not transmitted from generation to generation by sexual reproduction. It develops out of a process of recombination and is particular to every individual. (Ghosh 247)

Murugan, through this speech, introduces the uniqueness of the chromosome. According to him this Calcutta Chromosome is very special and non-transmitted one. As he names this special chromosome followed by Calcutta, it points towards the uniqueness of the city *Calcutta* itself as well.

Ronald Ross himself is aware that the people in the lab who are helping him are not that usual. Though they are illiterate, they perfectly remember all the slides' names and where they are placed in what seems unusual to Ross and he writes about this in his *Memoirs*. However, Ross does not even know many things about Laakhan. According to Murugan when Ross is asked about where Laakhan is from he says, "[N]ever asked. Guess he is from around here" (Ghosh 89). However, Laakhan is the person who comes to Ross willingly and allows Ross to do all kinds of experiments on him and finally he brings up the specific species of mosquito

Anopheles that is responsible for malaria infection. Mysteriously, in Ross's *Memoirs* he states that sometimes he could not even remember the person's name who was helping him.

Ronald Ross himself is even aware of the issue that doing experiments on human beings is not a legal thing; he wants to keep the issue of experiments on Lutchman secret. Ross says to Doc Manson that, "Don't for heaven's sake mention Lutchman at the British Medical Association ... he is a government servant. To give a government servant servant fever would be a crime" (Ghosh 72). Ross's statement makes it clear that he uses Indian lower-class people as guinea pigs. Ranajit Guha discusses that the biased history does not include all the truth of the colonial period; we come see such truth through Ross's confession. This truth makes us understand the crucial colonial past of India. However, Murugan states that Luchman/Laakhan comes to Ross willingly and sacrifices himself for his own purpose, helping Mangala to get immortality. According to Murugan, Murugan himself and Mangala both have syphilis and Mangala has already invented the cure for this disease. Interestingly, Murugan's description introduces a subaltern woman, Mangala, as an intellectual person who knows more than the contemporary Western scientists. According to Ranajit Guha's argument the subaltern's participation in the nationalist movement is not included in the *elitist* historiography; interestingly Ghosh picks up Guha's argument and adds a new thought into it about the subaltern's participation in the scientific discovery and about subaltern intelligence. Ghosh, through his novel, argues that the story of the subaltern's intelligence and their participation in the scientific research in colonial India is not included in the biased *elitist* history.

This untold history also includes the possibilities of rethinking the subaltern future. Murugan's quest to know the untold history makes him come to Calcutta and search for the truth

behind history. He is the person who thinks that the participation of the subaltern people, who help Ross and whose story is not included in the written history, is more important than Ross's participation. He claims that this invention would not be possible for Ross without the help of that subaltern team.

Mangala, the leader of the subaltern group appears with silence and secrecy. Murugan claims that silence is religion for those people. They do not want people to know what they are doing and looking for. That is why they use Ross to be the medium of conversation. I argue that they come into a conversation through their silence. Their actions are more important than their voice. They do not want people to listen to their voice and this is their own way of representing themselves by being behind the scene.

According to Murugan, for the subaltern people knowledge has a different meaning. He states that through this new idea of knowledge they come to choose silence as their power. Murugan says, that for the subaltern people,

[T]he knowledge is self-contradictory; may be they believe that to know something is to change it, therefore in knowing something, you've already change what you thin you know so you don't really know it all: you know only its history. Maybe they thought that knowledge couldn't begin without acknowledging the impossibility of knowledge. (Ghosh 104)

They believe that knowledge is something open ended and it cannot be defined by words. Nobody can claim to know everything, because they believe that knowing means to change things. Moreover, for them communication means "to put ideas into language, that would be to establish a claim to know" (Ghosh 103). Therefore, they *reject* language and choose silence as

their strength. Here we come to see new thoughts about subaltern silence as their strength rather than their oppression.

Ross thinks that he is having experiments on these people; however, Ross himself becomes the tool of experimentation to Mangala and her group. They have much more intelligence than the Western scientist does. They might not have access in the laboratories unless they work as servants of the Scientists. Here we also come to see them as marginal in the colonial society.

The character of Phulboni is also crucial to describe the subaltern silence. Most Indian Bengali writers do have pen-names; it is very common to them and it is same for Phulboni as well. Phulboni's real name is Saiyad Murad Husain and he uses Phulboni as a pen-name. Moreover, he is the person who the subaltern people chose to write about themselves because he faces the mysterious ghostly situation created by Laakhan and he starts writing Laakhan stories. He speaks about the silence of the city of Calcutta and subaltern people on his award winning ceremony and he says:

The silence of the city has sustained me through all my years of writing: kept me alive in the hope that it would claim me too before my ink run dry. For more years than I can count I have wandered the darkness of these streets, searching for unseen presence that reigns over this silence, striving to be taken in, begging to be taken in across before my time runs out [...]; to appeal to the mistress of this silence, that most secret of deities, to give me what she has long denied: to show herself to me ... (Ghosh 31)

Through this speech he introduces the silence of Calcutta. I argue that by looking for “the



mistress of this silence” he points toward Mangala. Interestingly, in the end of the novel we get to see him joining the subaltern group as well.

The term “counter-science” Murugan uses is really very interesting because *counter-science* refers to something that is quite opposite to science. Murugan introduces this term and says,

You know all about matter and antimatter, right? And room and anterooms and Christ and Antichrist and so o? Now, let’s say there was something like science and counter-science. (Ghosh 103)

He introduces the term counter-science as something anti to Western science. However, this counter-science is the subaltern’s own kind of science. It is interesting that, rather than calling it *superstition* or *rituals*, Murugan calls it counter-science to make its connection with science. This word *counter* is used to criticize the historical interpretation of the subaltern and their lives. Ross and Mangala both do experiments on human and animal lives. However, Ross’s experiments are considered as scientific, Mangala’s as counter-science though she uses some scientific equipment while doing experimentations. We see Mangala using a scientific instrument such as a “scalpel” while doing experiments on the pigeons. According to Murugan, that is the way through which Mangala invented the cure for syphilis. Moreover, she is found to be sacrificing Laakhan and the pigeon’s lives in different phases of the novel. Experimenting on lives is not very unusual in scientific research. Though the ways of experimentation are a bit different Mangala does all these experiments to come up with a successful result towards her invention. At the end of the novel we see the result of her experiments which come out with Murugan’s holographic picture on Ava’s screen. I argue that their experiment to find immortality, finds out the “posthuman” as a result. She sacrifices Laakhan’s body to make him

able to change his physical identity and because of this he appears as different persons with no fixed identity as Laakhan, Lucky, and Romen Halder. Through the quest to invent immortality Mangala also challenges the idea of fixed identity and comes up with a new thought of *changing identity*. The burnt ID card of Murugan is also a symbol of his lost identity and he appears as a posthuman figure with a new kind of identity.

Mangala and Laakhan's mysterious participation challenges Western scientific history as well as colonial subaltern history. Margery Sabin argues that writing about the subaltern subject in literature will be a possible way to rethink the subaltern past and future. Amitav Ghosh writes about the subaltern through science-fiction. I argue that Ghosh makes the subaltern characters *speak* through their *silence* and *secrecy*. The subaltern group, in this novel, speaks only a few words but their actions make them speak through their silence and secrecy. Their actions are much stronger than their voice and words. I argue that this is a new way of rethinking subaltern *silence* and their own kind modernity. We see Mangala as a silent character who even appears physically only twice in the novel but her actions make Murugan think and do research on them. Murugan claims that Mangala is far more intelligent than Ross or anybody thinks about her. He says,

With this woman we're talking about a lot whole more than just talent; we may be talking genius here. [--] she wasn't carrying a shit-load of theory in her head...

Unlike Ross she didn't need to read zoological study to see that there was a difference between culex and anopheles: she'd have seen it like you or I see difference between a dachshund and Doberman. (Ghosh 243)

Through this statement Murugan argues that Mangala, the subaltern woman, is more talented than the contemporary Western scientist. Such representation of the subaltern and their own kind

of knowledge opens up the way of thinking about *alternative modernity*. We get to find a new version of modernity and knowledge that belongs to the subaltern people.

I argue that the term counter-science refers to the combination of science and religion. The experiments the subaltern people do are based on their religious and spiritual beliefs. Moreover, we get to see that the name Mangala belongs to the Hindu goddess Kali<sup>1</sup>. According to Tammy Laser

Kali, in Hinduism, is the goddess of time, doomsday, and death or the black goddess. Kali's iconography, cult, and mythology commonly associate her with death, sexuality, violence, and paradoxically in some later traditions, with motherly love. (Laser 82)

She says that in India goddess Kali is often considered as “geographically and culturally *marginal*” (Laser 82). Interestingly, Mangala appears as women and the other members of her cult, including Laakhan, are seen to be worshipping her. Here we see Mangala appears as a goddess figure. Murugan states that it is Doctor Farley who first suspects Mangala and her team including Laakhan; when he follows them he comes to see something very strange. Murugan describes the scene as, “First the assistant went up to the women, Mangala, still regally ensconced on her divan, and touched his forehead to her feet” (Ghosh 151). The same scene repeats in front of Antar when he sees from his kitchen window that Lucky also touches his forehead to Tara's feet in a way of worshipping her. In this scene Tara appears as Mangala and Lucky as Laakhan. Tara is Antar's neighbor and Lucky is Tara's friend. Interestingly, in the novel, Mangala also deals with death like the Hindu goddess Kali and switches her identity from

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<sup>1</sup> feminist scholars consider Kali as a symbol of “feminist empowerment” (Laser 83)

body to body. Kali also changes her avatar and the goddess Durga is her other avatar. While visiting Kalighat Murugan and Urmila come to know the *belief* of the local people about the goddess Kali who is also called the Mangala-bibi; they meet a girl who states that, “Today is the last day of the puja of Mangala-bibi. Baba says that tonight Mangala-bibi is going to enter a new body. [...] The body she’s chosen, of course, [N]o one knows whose it is” (Ghosh 233). Here we again come to see the sign of secrecy that is very common for the subaltern woman Mangala as well.

Although Ghosh does not praise religion and spiritual beliefs, I argue that there are some similarities between science and religion that are shown in the novel. The novel raises a question about the rationality of the scientific research that takes place in colonial India. I find in the book an answer to the question that the relation between science and subaltern people is possible if religion can be interpreted as related to science. Though religion and science are seen as opposite terms, I argue that these two terms seem to be related to each other in Ghosh’s novel. Though Ghosh does not praise religion or criticize science, he raises a question about the rationality of biased history of the marginal people. Ross and the other scientist go through the scientific experimentation to find out the reason behind malaria infection; however, Mangala and her group come to the solution earlier through their own kind of experimentation which is a combination of science and religion. Metaphorically, again we can consider the scene when Mangala does her experimentation on the *pigeons* with the *scalpel*. I think this scene is most important because it establishes the mystery or spiritual thing with science to establish a connection.

Spivak suggests to bring the subaltern into conversation and to *speak to them* and Amitav Ghosh takes the attempt to bring the subaltern into a conversation through their actions. Here we

come to see, their silence is much stronger than their voice. They speak through their silence and secrecy. Their silence is introduced as their power rather than their weakness. *Speaking*, here, means to reveal, however, that the subaltern group likes to hide their secret actions rather than reveal them to others. Silence seems to be their tool that they use to hide their actions and motives. Moreover, they get the opportunity of doing experiments on their oppressors. Such representation of silence and secrecy of the subaltern provides an open ended way of thinking about their voice. Margery Sabin also suggests to write about subaltern consciousness in new and innovative ways through literary technique. Ghosh uses her suggestion to discuss the subaltern voice in a new way through science-fiction.

According to Dipesh Chakrabarty subaltern's own kind of modernity, which he names "alternative modernity," is influenced by their religious faith. He claims that, "peasant rebellions in British India between 1783 and 1900, [...] which called upon gods, spirits, and other spectral and divine beings were part of the network of power and prestige within which both the subaltern and elite operated in South Asia" (Chakrabarty 14). He also argues that their practices are not really backward but are the subaltern's own kind of *modernity*. Chakrabarty states that

The peasant was a real contemporary of colonialism, a fundamental part of the modernity that colonial rule brought to in India. Theirs was not a 'backward' consciousness- a mentality left over from the past, a consciousness baffled by modern political and economic instructions and yet resistant to them. Peasants' reading of the relation of power that confronted in the world, [...], were by no means unrealistic or backward-looking. (Chakrabarty 13)

Interestingly Mangala and her group's experimenting process is also very much influenced by their religious belief, rituals and supernaturalism. Chakrabaty's interpretation of the subaltern's alternative modernity helps Amitav Ghosh to name the subaltern's own kind of experiments "counter-science" rather than calling them *superstitions*. Their own kind of modernity and religious practices, that are called *counter-science*, seem to be more powerful than scientific research; according to Murugan, by using such kind of modernity the subaltern people become much faster than the scientist. It is during colonialism and according to Murugan they already have invented the path to the posthuman. Interestingly, Murugan, an Indian-American man, becomes their tool of experimentation. Because none of the subaltern characters appear as a posthuman figure but Murugan does. However, I argue that it is not Murugan who wants to become the tool of their experiments but it is the LifeWatch corporation where both Murugan and Antar works that wants Murugan to run after the mystery of the subaltern people and their experimentation. Ava plays the role of a medium between the corporation and the subaltern mystery and also wants Antar to look for Murugan and the subaltern. I argue that all the events that happen and make Antar look for Murugan and believe Murugan's story about Mangala and her group is manipulated by the corporation and Calcutta as well. The corporation wants to reach the subaltern group to reveal the mystery of immortality that the subaltern people were looking for and to know the result the subaltern group came up with through their experiments. The corporation uses Ava to control Antar and uses Antar to reach subaltern mystery. However, Calcutta helps subaltern people to keep their secret hidden and makes Ross and Murugan, the Western characters, the tool of experimentation of the subaltern people. Interestingly, we see Murugan having an outfit as a colonial traveler or "discoverer" in the beginning of the novel as I already mentioned above.

Moreover, we come to see the subaltern people reach to the path of immortality. They only switch their selves or identities from body to body and this way of switching identity or selves proposes a new way to think about immortality. Because, here immortality does not point out toward the physical immortality but to the immortality of their *selves*. It comes up with the new hypothesis that immortality can be achieved by switching the self identity from body to body which is called the “interpersonal transmission.” Such hypothesis also comes up with a new thinking about the posthuman. The subaltern people came up with a new thought that the rebirth of the body is not needed; self entity can be moved from one body to the another body of a living human being, without dying, which is immortality for them and it is connected to the idea of reincarnation. According to subaltern people their self identity can be changed from body to body through the special chromosome, *Calcutta chromosome*, and and the subaltern people chose the body that will be their identity bearer.

According to Murugan it happens through an *interpersonal transmission* of a unique chromosome and he names it “Calcutta chromosome.” It is also vital to give attention to the title of the novel which introduces a scientific term, “chromosome,” which is connected to an Indian state “Calcutta.” Through Murugan’s description the readers can visualize Calcutta and come to see the prominent differences between the colonial Calcutta and the new city Calcutta after liberation. It is very interesting that all the events happen in Calcutta are very mysterious and it seems just like Ava, Calcutta is also playing a role like a human being in the novel. It seems Calcutta is also connected to Ava and both of them want all the characters to focus on the subaltern people who become central to the novel. The geography of Calcutta is very visual in the novel. The descriptions of Rabindra Sadan, the edge of Lower Circular Road, Harish Mukherjee Road, P.G. hospital, Kalighat, Gariahat, Chowringhee and many more places in

Calcutta are so obvious and real that we come to visualize them. Such representation proposes an open ended way to rethink Calcutta as a mysterious city. All the time Calcutta seems to be very active in the novel and reacting as well. It is Calcutta itself that wants Murugan to meet Urmila and search for the subaltern mystery with the help of Urmila. The way he meets Urmila and Sonali is mysterious and I argue that it is totally well planned by the city of Calcutta. Murugan gets into the Rabindra Sadan auditorium where the award giving ceremony of Phulboni is going on just because a heavy rain comes; here he meets Sonali and Urmila (Ghosh 23). It seems it is preplanned by Calcutta and the rain comes because Calcutta wants it to. During the colonial period Calcutta was the capital of India and most of the important actions such as Ross's scientific discovery took place in Calcutta. Calcutta itself seems to be manipulating all the characters and it wants Murugan to come to here and do research on the untold histories. Calcutta wants to reveal the untold subaltern history through Murugan's voice. I have already discussed that Calcutta itself plays a role like a human character in the novel and helps the subaltern to save their secrets; moreover, Murugan mentions Calcutta as a female figure through allegory. Murugan calls Urmila "Miss Calcutta" as she disagrees to tell him her name, and he says, "So what shall I call you, then, since I'm going to be granted the honour of an introduction? Miss Calcutta? Or perhaps even just Calcutta, or would that be too intimate?" (Ghosh 187). It is very important to remember that Calcutta is very crucial in the book because it is connected to the scientific term chromosome and it is a female figure. I argue that Ghosh does it to establish a connection between women and science. Suchitra Mathur argues that in most of the Indian science-fictional novel the representation of women and science seems to be problematic because the participation of women in science is shown as a minor one. Moreover, she criticizes Ghosh for Mangala's only a few physical appearances in the book. However, I argue that novel's main



plot is woman centered and just like the voice Mangala's actions play a stronger role than her appearance.

Finally, we come to see the posthuman figure of Murugan which is the result of the experimentation of the subaltern group. We already have discussed in the theory section that the posthuman is a combination of human and machine and it can be both utopian and dystopian; however, the subaltern people came up with the posthuman on the path toward the invention of immortality. I argue that as they already have invented immortality, the posthuman figure of Murugan is the result of another experimentation. This time their experimentation is to invent the bodily immortality and they came up with the posthuman figure of Murugan who is, incidentally, a syphilis patient as well. I argue that the posthuman body of Murugan is a cure to his syphilis and the subaltern people's way to get rid of oppression. In the field of philosophy, for instance David Roden describes the posthuman as a way to think about immortality, the subaltern people use it in the same way. However, their own way of experimentation through using religion and ritual activities such as sacrificing Murugan's body comes up with the idea of posthuman. Fukuyama argues that this posthuman is threatening for the basic human natures such as *humanity*, consciousness and emotions and humanist entity can be destroyed by this. Interestingly, we see Murugan's posthuman hologram which is also a bit strange and not similar to natural human bodies. Murugan's posthuman figure is described as,

Sitting gnomelike in the middle of the living room was a naked man. A blanket of mitted, ropy hair hung halfway down a swollen, distended belly; his upper body was encrusted with dead leaves and straw, his thighs were caked with mud and excrement. His hands were resting in his lap, bound together by pair of steel-cuffs. (Ghosh 291)

I argue here “steel-cuffs” are use as a sign of controlling things; Murugan’s posthuman body seems to be controlled by the subaltern group.

## **Conclusion**

Ghosh brings up science and counter-science together to rewrite subaltern history and to propose an open ended way to rethink subaltern voice. We also get to see the reflection of Dipesh Chakrabarty’s idea about the “alternative modernity” for subaltern people. The meaning of modernity is something different to the subaltern; their own kind of modernity is based on religious and spiritual belief. Amitav Ghosh makes readers think about the alternative subaltern modernity in a new way. He establishes a connection between the subaltern’s own kind of modernity and science. We all know the subaltern as history tell us. However, according to Ranjit Guha this history itself is biased and elitist history. Therefore, Ghosh wants us to think about subaltern past and future, more than whatever history tells us, in an open ended way. This new way of thinking raises a question of the rationality that comes to ask whether the Western scientific research and its history is rational and superior or the Western hegemony makes us believe it.

Ghosh ends the novel with the posthuman also to propose a future to the subaltern people where they seem to have the controlling power. Thus Ghosh’s novel deals with the subaltern history, their voice, and their future as well.

I argue that the term posthuman is also used to point towards the utopian dream for the subaltern. Gane discusses that the posthuman is also considered as a scientific utopian dream and this scientific utopian term get involved to the colonial utopian dream in Ghosh’s novel. For the subaltern it seems to be one possible way to reach their utopia and get rid of oppression.

According to Judith Halberstam and Lira Livingston the posthuman helps people to get rid of power politics of the society. Because, the posthuman is considered to be a possible future of *liberal democracy* (Gane 432). Ghosh used their idea to propose an alternative future to the subaltern, the future that may help them to overcome oppression through the posthuman. I also argue that Ghosh makes this connection of scientific and colonial utopian dreams together to show the untold participation of the marginal people of the colonial society as their story of their contribution is never told and not included in the biased history either.

Interestingly, with all this experiments and inventions of the subaltern people through their own silence and secrecy they come to have a voice. In the ending phase of the novel *Antar* comes to listen the voices and I argue that these voices belong to the subaltern who want *Antar* to help to overcome the corporation's manipulation; the corporation that wants to control everything. The novel ends with the appearance of the voices. *Antar* sees *Tara* and *Maria* with *Murugan* and *Tara*, once who appears as *Mangala*, says to *Antar* that-

Keep watching; we're here; we're all with you.' There were voices everywhere now, in his room, in his head, in his ears, it was as though a crowd of people was in the room with him. They were saying: 'We're with you; you're not alone; we'll help you across. (Ghosh 306)

Through silence and secrecy, the subaltern people get their voice in their posthuman life and they wanted *Antar* to listen to their voice. The subaltern people choose their listeners by themselves and in the end finally they choose *Antar* to listen to their voice.

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